

December 18, 2007

To: Susan Roberts, Ph.D., Director, Ocean Studies Board, National Research Council,
National Academy of Sciences

From: Corey Goodman, Ph.D., member, National Academy of Sciences

**Re: VIOLATIONS OF WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY
POLICY (OSTP): FEDERAL POLICY ON RESEARCH MISCONDUCT**

**(1) THE CASE FOR SCIENTIFIC MISCONDUCT INCLUDING INTENTIONAL
FABRICATION AND FALSIFICATION BY NATIONAL PARK SERVICE
SUPERINTENDENT DON NEUBACHER AND STAFF SCIENTIST SARAH ALLEN**

**Alleged Violations of Sections I.1 and I.2 of the OSTP Federal Policy on Research
Misconduct**

**(2) THE ATTEMPT TO COVER-UP THE NPS MISCONDUCT AND PREVENT ITS
INVESTIGATION BY NATIONAL PARK SERVICE PACIFIC WEST REGIONAL
DIRECTOR JON JARVIS AND REGIONAL CHIEF SCIENTIST DAVID GRABER**

**Alleged Violations of Sections III.3, IV.1, IV.3, IV.4, V.1, and V.2 of the OSTP
Federal Policy on Research Misconduct**

**(3) THE FAILURE TO PROPERLY INVESTIGATE THE MISCONDUCT IN AN
OBJECTIVE AND TIMELY FASHION BY THE DEPARTMENT OF THE INTERIOR
SOLICITOR'S OFFICE INCLUDING ATTORNEY MOLLY ROSS**

**Alleged Violations of Sections III.3, IV.3, IV.4, V.1, and V.2 of the OSTP Federal
Policy on Research Misconduct**

In response to a request from Point Reyes National Seashore (PRNS) Staff Scientist Sarah Allen to help her edit her "response to Goodman" report (later called the September 18 "clarification" document), National Park Service (NPS) Visiting Chief Scientist Gary Davis suggested in writing on July 12, 2007 that Allen include:

"Science is a guiding principle of the National Park Service."

That sentence – and its lofty goal – became the first sentence of Allen's conclusions in one draft of the NPS document, but ultimately it got deleted from the final document, just as it got ignored by NPS decision-makers considering Drakes Estero. Honest science has not been the guiding principle at the PRNS/NPS, but rather it was replaced by Superintendent Neubacher's pre-determined agenda to eliminate Drakes Bay Oyster Company (DBOC) from Drakes Estero. This case describes Neubacher's scientific misconduct. His intentional scientific misrepresentations included falsification,

fabrication, and selective omission. This happened because a pre-determined agenda rather than good science became Neubacher's guiding principle.

In the summer of 2006, the National Park Service (NPS) formally updated and adopted their "Management Policies, 2006, National Park Service". Their second general principle addresses "Scientific, Technical and Scholarly Analysis" and states:

"Decision-makers and planners will use the best available scientific and technical information and scholarly analysis to identify appropriate management actions for protection and use of park resources."

Superintendent Neubacher failed to follow that principle. Decision-makers did not use the best available scientific information, but rather misused science due to a pre-determined agenda.

The Department of Interior Code of Scientific Conduct (3/16/04) states:

I will be responsible for the quality of any data I collect, interpretations I make, and the integrity of conclusions I draw in the course of my scientific activities.

I will place quality and objectivity of scientific activities and reporting of their results ahead of personal gain or allegiance to individuals or organizations."

This case is about four NPS employees – Don Neubacher, Dr. Sarah Allen, Jon Jarvis, and Dr. David Graber -- who broke that Code of Scientific Conduct, and in so doing, engaged in scientific misconduct.

In addition, this case is also about how these same four NPS employees, along with attorney Molly Ross in the Department of the Interior (DOI) Solicitor's Office, violated the Federal policy on research misconduct as established in 2000 by the White House Office of Science Technology and Policy (OSTP). These NPS and DOI employees were faced with serious written allegations against Neubacher and Allen by a member of the National Academy of Sciences (Dr. Corey S. Goodman). Neubacher and Allen allegedly participated in the primary scientific misconduct of intentional fabrication and falsification. But Jarvis, Graber, and Ross did not properly investigate these serious allegations in an objective and timely fashion, and thus are also allegedly in violation of multiple sections of the OSTP Federal policy as well.

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1. Federal Policy on Research Misconduct

Concerning the definition of scientific misconduct, most scientists would agree that they know it when they see it. For example, Dr. Peter Gleick, member of the National Academy of Sciences, President of the Pacific Institute, and an expert on scientific misconduct, testified to the Senate Committee on Commerce, Science, and Transportation on February 7, 2007, that scientific misconduct was:

“The violation of the standard codes of scholarly conduct and ethical behavior in professional scientific research, including:

Fabrication (the fabrication of research data and observations)

Falsification (manipulation of research data and processes or omitting critical data or results)

Failure to Acknowledge and Correct Errors”

The community has debated the precise definition of scientific misconduct for the past several decades. The National Academy of Sciences (NAS) proposed a standardized definition in 1992. In 2000, based on a four year study and thorough process, the White House Office of Science and Technology Policy (OSTP) standardized the federal policy for research misconduct. The OSTP policy applies to all federally funded research, including all of the NPS-supported studies, databases, testimony, and reports that form the basis of this case.

The NAS 1992 report, entitled *“Responsible Science: Ensuring the Integrity of the Research Process”*, was written by the Panel on Scientific Responsibility as commissioned in 1989 by the Conduct of Research Committee of Science, Engineering, and Public Policy (COSEPUP). They proposed three categories of behaviors: misconduct in science, questionable research practices, and other misconduct. They defined misconduct as follows:

“Misconduct in science is defined as fabrication, falsification, or plagiarism, in proposing, performing, or reporting research. Misconduct in science does not include errors of judgment; errors in the recording, selection, or analysis of data; differences in opinions involving the interpretation of data; or misconduct unrelated to the research process.”

During the 1990’s, there was considerable debate concerning this definition, its enforcement, and how to apply a standardized definition to all federally-funded research. After four years of study, including a year of public comment, on December 6, 2000, the OSTP released its *“Federal policy on research misconduct”* (Federal Register 65:76260-76264). The OSTP press release that day defined the purpose of this policy as follows.

“Today the Administration issued the final, government-wide policy addressing research misconduct. The policy, developed by the National Science and Technology Council, defines research misconduct and establishes basic guidelines for the conduct

of fair and timely investigations of alleged or suspected infractions. The policy will apply to Federally-funded research regardless of where the research is conducted or by whom.

Agencies will have one year to implement this policy. Once implemented, the policy will establish uniformity among the Federal agencies' definition of research misconduct and consistency in their processes for responding to allegations of research misconduct. Additionally, the policy provides clear guidance to the research community about the government requirements needed to sustain public trust in our publicly-funded scientific and engineering enterprise."

This Federal policy on research misconduct has six sections, of which the first two are shown below in their entirety. Sections III-V define the way in which Federal agencies and research institutions should behave when confronted with an allegation of scientific misconduct (see Appendix 7 for complete policy).

"I. Research Misconduct Defined

Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

- *Fabrication is making up data or results and recording or reporting them.*
- *Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.³*
- *Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.*
- *Research misconduct does not include honest error or differences of opinion.*

II. Findings of Research Misconduct

A finding of research misconduct requires that:

- *There be a significant departure from accepted practices of the relevant research community; and*
- *The misconduct be committed intentionally, or knowingly, or recklessly; and*
- *The allegation be proven by a preponderance of evidence.*

III. Responsibilities of Federal Agencies and Research Institutions

IV. Guidelines for Fair and Timely Procedures

V. Agency Administrative Actions

VI. Roles of Other Organizations"

Prior to releasing their final Federal definition of scientific misconduct in December of 2000, in October of 1999, the OSTP released its proposed new definition for public comment. Given the importance of this issue to the NAS, and the role the NAS played in beginning to focus the debate in 1992, in response to the OSTP proposed policy, Bruce Alberts, President, National Academy of Sciences, stated on December 10, 1999:

“Although we have suggested a number of minor modifications in our letter to OSTP dated November 29, 1999, we believe that the proposed common definition of misconduct and the procedures outlined for handling such allegations are a major step forward. We greatly appreciate the years of effort that have gone into development of this sound policy.”

As documented in the remainder of this report, Neubacher and Allen violated sections I.1 and I.2 of the OSTP Federal policy by their intentional fabrication and falsification in their reporting of scientific data. Regional Director Jon Jarvis and West Regional Chief Scientist David Graber, and others in the NPS and DOI including attorney Molly Ross in the Solicitor’s Office, violated various subsections within sections III, IV, and V of the OSTP Federal policy by not investigating the allegation of scientific misconduct in an objective and timely fashion. Instead they tried to cover-up the misconduct and went further to release an intentionally misleading document (purported to be peer-reviewed by objective outside scientists) to retaliate against the National Academy of Sciences member who brought the allegation forward. All of this was in violation of the OSTP Federal policy.

From Neubacher and Allen to Jarvis and Graber to Ross, many employees of the NPS and DOI at various levels of these agencies tried to avoid dealing with section II of the OSTP Federal policy – the finding of scientific misconduct – and in so doing tried to avoid sections V.1 and V.2 leading to agency actions appropriate to the seriousness of the misconduct. Thus, we are now turning to the NAS to make a finding supporting or refuting the allegation of scientific misconduct under the OSTP Federal policy.

The NPS asked the Oceans Board of the National Research Council of the NAS to conduct an evaluation of the effects of DBOC operations on Drakes Estero ecosystems, but this is not what was agreed upon at Feinstein’s July 21 Olema meeting with NPS Director Bomar. The NPS has avoided asking the NRC to examine the case for scientific misconduct by NPS employees. I do not know which sets of their questions were actually shared with the NAS prior to their final submission on October 24th (see Appendix 4). Fortunately, the Oceans Board is now considering investigating the right questions. The issue is straight forward: a member of the NAS has alleged serious scientific misconduct by the NPS. The NPS and DOI have avoided investigating these allegations in an objective and timely fashion. The Oceans Board should examine the scientific claims in the NPS first-authored newspaper article on April 26th, the NPS public testimony of May 8th, the May 8th and May 11th versions of the NPS Drakes Estero Report, and the September 18th NPS “clarification” document, compare them to the NPS data in both NPS-sponsored research and the NPS harbor seal database, and determine whether the NPS indeed has misrepresented their own data in the form of fabrication and falsification, and whether these misrepresentations rise to the threshold of scientific misconduct as defined by the OSTP Federal policy.

2. Scientific Misconduct by NPS Superintendent Don Neubacher and Others

This case focuses on scientific misconduct by NPS Point Reyes National Seashore (PRNS) Superintendent Don Neubacher and his Senior Staff Scientist Dr. Sarah Allen. It also focuses on the ensuing attempt to cover-up this misconduct by NPS Regional Director Jon Jarvis and his Chief Staff Scientist David Graber. Along with DOI Solicitor's Office Molly Ross, Jarvis and Graber failed to initiate a proper investigation.

This scientific misconduct is apparent in false or misleading scientific claims made in the following public testimony and published and publicly-released documents during the months of April and May 2007:

- (1) PRNS Staff Scientist Sarah Allen's first-authored article on April 26, 2007 in the Point Reyes Light entitled *Coastal Wilderness*;
- (2) The May 1, 2007 article in the Coastal Post entitled *Save Drakes Estero* by the Sierra Club Marin Group, Environmental Action Committee (EAC), National Parks Conservation Association, and others, using scientific data (some of it unpublished) and scientific claims provided by the PRNS;
- (3) The May 8th public testimony of Superintendent Don Neubacher and Staff Scientist Sarah Allen at a hearing of the Marin County Board of Supervisors;
- (4) The many versions, including in particular the May 8th and May 11th versions, of Don Neubacher's official NPS Report (*Drakes Estero – A Sheltered Wilderness Estuary*) (May 8th given to Marin County Board of Supervisors and May 11th posted on the PRNS/NPS web site) herein called the NPS Drakes Estero Report;
- (5) Dr. Sarah Allen's April 13 and April 26 Trip Reports; and
- (6) Don Neubacher's and Sarah Allen's new PRNS map in April/May 2007 showing an altered boundary to the harbor seal haul-out and pupping areas in Drakes Estero (which was not provided to DBOC), compared to the two nearly-identical previous maps: the 1992 map by the National Marine Fisheries Services (NMFS, NOAA) and PRNS, and the 2005 PRNS map provided to DBOC.

This case also involves misleading corrections and retractions in July and September 2007 by Neubacher and his supervisor Regional Director Jon Jarvis:

- (1) *Acknowledgment of corrections to previous versions of the Park News document "Drakes Estero – A Sheltered Wilderness Estuary"*, posted on the PRNS/NPS web site on July 25 (the NPS Drakes Estero Report was taken off the web site on July 23 at the request of Senator Feinstein and NPS Director Bomar at Feinstein's July 21 Olema meeting with Regional Director Jarvis, Superintendent Neubacher, and others); and

- (2) *NPS Clarification of Law, Policy, and Science on Drakes Estero*, unsigned, dated September 18, 2007 (released by Jon Jarvis and Don Neubacher; the science section of this document is a revision of Sarah Allen's "response to Goodman" draft document from July 2007).

This case also clearly involves similar communications Neubacher and Allen had with government agencies and elected representatives. For example, the California Coastal Commission (CCC) relied heavily on Neubacher's and Allen's claims, and ultimately on Allen's April 26 Trip Report in making policy decisions. This impact is highlighted in:

- (1) Letter from Peter Douglas, Executive Director, California Coastal Commission, to Kevin Lunny, owner of Drakes Bay Oyster Company, on June 5, 2007; and
- (2) *Effects of Oyster Mariculture on the Natural Resources in Drake's Estero*, by Dr. John Dixon, California Coastal Commission, September 11, 2007.

2.1. Summary of the Case for Scientific Misconduct

In April and May of 2007, Neubacher and Allen claimed that they had overwhelming evidence to show that Drakes Bay Oyster Company (DBOC) was causing grave harm to the ecology of Drakes Estero. Neubacher said so to elected officials and government agencies. For example, Neubacher said so to Marin County Supervisor Kinsey on April 5th. Allen said so in an article in the Point Reyes Light newspaper on April 26th. They both said so to local environmental groups which resulted in an article in the Coastal Post newspaper on May 1st. They both said so at the May 8th hearing of the Marin County Board of Supervisors.

However, their NPS database and published reports did not support those claims. Moreover, Allen wrote an email on April 24th, copied to Neubacher, in which she stated that they had "no direct observations" to support those claims. The NPS claims were in conflict with the NPS data, and they knew it. This was intentional scientific misconduct.

As May 8th approached, Neubacher and Allen increasingly focused their claims of harm caused by DBOC in the form of disturbances to harbor seals. These claims included an 80% decline in harbor seals, and a dramatic decrease in the number of seal pups in 2007. They claimed that oyster bags had been moved into seal pupping areas, and that these bags were negatively impacting the seal pups. They claimed that oyster bags were placed outside the defined lease area. They claimed clear data to support their accusations of negative impact on harbor seals, and they claimed clear cause and effect.

Analysis of the NPS data reveals, however, that Neubacher and Allen had no such data, and Allen admitted as much by email on April 24th. Their NPS database did not support their claims. Their harbor seal claims were false, and they knew it. They claimed a crisis of national significance, when no such crisis existed. Evidence is presented here to show that during April and May of 2007, Neubacher and Allen

committed scientific misconduct, and along with Regional Director Jarvis and his Chief Scientist Graber, they have tried to cover up that misconduct ever since. Although accused of misconduct by a member of the National Academy of Sciences, the NPS has done everything other than properly investigate that claim in a timely fashion.

The evidence presented here will show that before early April 2007, there was little data to support Neubacher's claims that DBOC had caused significant ecological harm to Drakes Estero. The NPS accusations focused on five major areas (harbor seals, oyster feces in the sediment, fish, eelgrass, and invasive tunicate), the most significant of which were the harbor seal claims.

The NPS maintains an official database with published procedures in which they make daily entries of field observation data of numbers of seals, seal pups, and disturbances of the seals. The most serious kind of disturbance occurs when a seal or pup during the pupping season gets flushed into the water (designated "FW"). During the entirety of the Lunny DBOC ownership from 2005 up to early April 2007, there were plenty of records of seals getting flushed into the water from numerous sources, but there were no records in the NPS database of seals getting flushed into the water (i.e., no FW's) by the oyster farm including its boats and workers. During the harbor seal pupping season (March-May) for the nearly three years of DBOC existence (2005 to early April 2007), the official NPS database recorded observations of over 2000 seals getting flushed into the water by Park visitors (hikers, horseback riders, clammers, kayakers), birds, predators, and aircraft, but not one of these seals was flushed into the water due to the oyster farm.

NPS-funded studies provided no evidence for a major problem of oyster feces in the sediments (Anima, 1991; Elliott-Fisk et al., 2005). NPS-funded studies showed that there was no evidence of any significant impact of DBOC on the fish communities in Drakes Estero (Weschler, 2004). A joint project between NPS and California Department of Fish & Game (CDFG) showed that the eelgrass had doubled in coverage from 1991 to 2007 and was thriving, particularly in the arm of the estero that contained most of the oyster racks (quantitative photographic analyses were provided to me by CDFG).

Between early April and May 8, 2007, the claims against DBOC escalated dramatically, climaxing in the May 8th testimony, particularly focusing on disturbances of the harbor seals. New claims appeared, and new harbor seal "data" appeared, much of it suspicious, and some of it likely to have been fabricated. Supporting the false claims and suspicious data was an equally suspicious new map with an altered boundary.

NPS had over 25 years of experience mapping the harbor seal haul-out areas in Drakes Estero. A map of the haul-out areas was established in 1992 by the National Marine Fisheries Services (NMFS, NOAA) in collaboration with NPS. That 1992 map had been reaffirmed to DBOC in 2005 when NPS gave Lunny a harbor seal protocol map. But a new Drakes Estero harbor seal haul-out and pupping area map appeared attached to Sarah Allen's April 13 Trip Report (when either the map or April 13 Trip Report was prepared is unknown; on November 21st, Neubacher asserted in writing to DBOC that

the PDF of the map was created on April 27th and declined to provide any scientific data supporting it) with a disturbingly altered boundary that differed from the 1992 and 2005 maps. But the 2005 map came from Sarah Allen and the PRNS a few weeks after Lunny and Allen met on March 17, 2005.

After the Lunny family purchased Johnson's Oyster Company in 2005 and renamed it Drakes Bay Oyster Company (DBOC), they contacted Sarah Allen because she had over 25 years of hands-on experience with the harbor seal population in Drakes Estero. Kevin Lunny contacted her and requested protocols and sensitivities on how DBOC should function in relationship to the harbor seals, especially during pupping season. As a result, on behalf of NPS, Allen discussed the protocols and prepared a map of the harbor seal haul-out and pupping areas that she gave to DBOC in 2005. The NPS 2005 protocols and map were consistent with their 1992 NMFS/NPS counterparts.

Oyster bags are one of two main types of oyster mariculture in the estero. According to the 1992 and 2005 maps, the oyster bags were not in the harbor seal haul-out area. In particular, on island UEN, the harbor seals haul-out on the east sandbar adjacent to the deep channel; they do not go near the west side of the island which is surrounded by shallow water. In contrast, the oyster bags are largely placed on the west side away from the harbor seal haul-out area. This arrangement has existed for decades, and has been approved by multiple Federal and State agencies and scientific experts.

But in April and May of 2007, Neubacher and Allen changed that boundary on the map without notifying DBOC or CDFG (which oversees the oyster farm lease) and without citing any evidence or new science for why they changed the map. Do they have new data showing specific changes in harbor seal haul-out behavior between 2005 and 2007? After many decades of not doing so, do harbor seals now suddenly swim out of the deep channel and into the shallow waters to haul out on the west side of island UEN? Nothing in the NPS database supports this change. No data are provided to support the new map (e.g., change in seal haul-out locations). On November 21st, Neubacher declined to provide Lunny with any recent data or documentation supporting the new boundary.

Why alter the map in April/May 2007? This altered boundary allowed Neubacher and Allen to falsely testify and publish that DBOC recently put oyster bags in the seal nursery area, causing major disturbance of seal pupping, when in fact the oyster bags were not moved (and were placed where they had been for decades) and the oyster bags were not disturbing the seals. Rather Neubacher and Allen changed the map boundary in order to create the appearance of wrong doing and thus to manufacture this false claim. They never gave the new map to DBOC or CDFG which oversees the oyster farm lease. Their own NPS database shows more seals, not fewer, this year on the east side sandbar of island UEN adjacent to the deep water channel and separate from the oyster bags; nothing in the database indicates that the seals moved to the west side of island UEN this year. The number of seals at UEN went up in 2007; it is sandbar A where the number of seals went down, and that had nothing to do with DBOC.

By the time Neubacher and Allen gave testimony at the May 8th hearing, the harbor seal claims and alleged data loomed largest. The claims built to a crescendo in their May 8th testimony. Yet the NPS database reveals that every single one of their May 8th harbor seal claims was fabricated or falsified. It is a stunning case of scientific misconduct.

On June 13th, in response to my FOIA requests for the harbor seal data (in which all data requests were rejected), two pieces of paper mysteriously appeared that I had not requested: Sarah Allen's April 13 and April 26 Trip Reports. Both Trip Reports included the new map with the altered seal haul-out boundary (although I did not realize this at the time). If the April 13 Trip Report is real, then it would represent the first appearance of the altered map. Five months later on September 11, the April 26 Trip Report became the prime evidence for harm to the harbor seals used by the California Coastal Commission (CCC) to insist on restricting the boundary of DBOC's oyster bags to keep them out of the haul-out area. It appears as if the CCC did not know they had been given an altered map. Moreover, these Trip Reports are not in the NPS harbor seal database. They were not cited in the extensive May 8th testimony by Neubacher and Allen, much of it focused on the harm by DBOC to the harbor seals. And they were not cited in the May 8th or May 11th versions of the NPS Drakes Estero Report.

What was most important on May 8th and 11th was not mentioned on September 11th, and what was most important on September 11th was not mentioned on May 8th or 11th. And none of the claims from May 8th, May 11th, or September 11th were supported by the NPS harbor seal database.

On April 26th, May 8th, and May 11th, Neubacher and Allen made false claims of oyster bags in seal nursery areas, an 80% reduction in seals, and the loss of many seal pups in 2007, all caused by DBOC. None of those claims are supported by the NPS harbor seal database (known as the inventory and monitoring database). California Coastal Commission staff scientist Dr. John Dixon filed a report on September 11th on the impact of the oyster farm on Drakes Estero. Dixon mentioned nothing about these NPS public accusations from April and May, but instead exclusively cited Allen's April 26 Trip Report as his sole evidence of harm to the harbor seals. Evidence will be presented here to show that the April 26 Trip Report may have been fabricated; at the very least, it is not in the NPS database and is inconsistent with the NPS protocols for data collection and entry.

Neubacher testified on May 8th that the negative impact on the harbor seals is a "*national issue*". Allen then testified that it has "*national significance*". These federal officials also claimed serious negative impacts on sediments, fish, and eelgrass in Drakes Estero. Allen presented their claims in a newspaper article on April 26th. Neubacher and Allen presented their claims in public testimony on May 8th, in the different versions of their official NPS Drakes Estero Report on May 8th and May 11th (the May 8th version given to the Marin Supervisors and the May 11th version posted on the PRNS/NPS web site), and in communications with various agencies including the Marine Mammal Commission (MMC) and the CCC. They presented their claims to

local supporters who then blindly repeated these claims in local newspapers (e.g., May 1st article in Coastal Post) as if they were based on vetted facts.

As documented in this case report, the simple truth is that these NPS claims were not supported by NPS data. There was no data to support these claims prior to April 13th. And the little data that appeared from April 13th until May 8th is very suspicious and very little of it is in the official NPS database. Neubacher's and Allen's scientific misrepresentations include fabrication, falsification, and selective omission of data.

This case of misconduct is about facts, not opinions or interpretations. Months later, the NPS tried to minimize their misconduct by saying that Neubacher and Allen misinterpreted some of their previous NPS-sponsored studies or NPS data. This is a distortion of the word 'misinterpretation', and is a distortion of the evidence in this case. There is only one set of facts – the data on Drakes Estero from NPS, USGS, CDFG, and U.C. Davis studies commissioned by NPS and funded using Federal dollars, and the data in the NPS harbor seal database. The NPS misrepresented the facts, and in some cases made them up. This is scientific misconduct.

They also try to minimize their misconduct in their May 8th and May 11th false claims by retracting them on September 18th in a cleverly worded "clarification" document that disguises the retractions as a validation, and even a peer-review, of their claims.

Neubacher's and Allen's misrepresentations exceed the threshold of the OSTP Federal definition of scientific misconduct, and violate numerous Office of Management and Budget, Department of the Interior (DOI), and NPS management policies and directives, including the 2006 NPS Management Policies and 2004 DOI Code of Scientific Conduct.

Neubacher, Jarvis, and Molly Ross (staff attorney in DOI Office of the Solicitor) were informed of the alleged misconduct repeatedly from May to September in a series of written statements by a member of the National Academy of Sciences (see Appendix 3 for a list of my written materials, and section 5 for my background and credentials). Although these allegations are very serious, the NPS does not appear to have (i) locked down the data notebooks or database (as would be typical in an institutional investigation), (ii) reviewed the data and/or studies in question, and (iii) asked an outside group of objective scientists to review the allegations.

NPS Pacific West Region Chief Scientist David Graber by his own admission never personally examined the primary harbor seal database to see if NPS data had been misrepresented. On August 17th, months after I first made my concerns public, Jon Jarvis asked me to email David Graber to request the missing harbor seal data. I did so on August 18th. On August 20th, David Graber sent me an email (and copied Jon Jarvis) in which he stated:

"Regarding your requests below: I am not familiar with the data you describe, and have only a passing familiarity with the negotiations between you and NPS regarding these data and other matters. What I can offer, with your patience, is to obtain a copy of the data you were

provided and to take a good look at it so we're on the same page. As I'm booked solid for the next two weeks, the earliest I will be able to respond will be the first week in September."

As of the submission of this case report to the National Research Council (NRC) on December 18, Graber has never contacted me about the harbor seal data (see Appendix 6 for my email to Graber and Jarvis on August 18th and Graber's email back to me - cc'ed to Jarvis - on August 20th).

Rather than investigate the allegations of scientific misconduct, Jarvis and Graber instead participated with Neubacher in a cover-up of this misconduct. They abused the FOIA process to prevent access to the data that would either confirm or refute Neubacher's public claims. They tried to prevent the NRC independent outside panel from reviewing these allegations (particularly concerning the NPS Drakes Estero Report) and in lieu of that, tried to recommend that Lunny's operation be the subject of that independent investigation. And finally, they participated in an attempt to discredit me, the person who brought forward the allegations. They went after the independent National Academy of Sciences member who brought these charges forward, instead of investigating the alleged violations. These actions are in violation of multiple subsections of Sections III, IV, and V of the OSTP Federal policy on research misconduct.

The elements of Neubacher's and Allen's scientific misconduct are listed below, including NPS claims that are disproved by NPS data or NPS-sponsored studies:

- (1) NPS claims of negative impact on the harbor seals were fabricated.
- (2) NPS claims of negative impact on harbor seal pups were fabricated.
- (3) NPS claims that oyster bags were in the seal nursery area were based on an arbitrarily altered map that was fabricated.
- (4) NPS claims that oyster bags had been moved into seal pupping areas were fabricated.
- (5) Key NPS harbor seal data that refuted the NPS claims and showed that disturbances were mostly from PRNS visitors were selectively omitted.
- (6) NPS claims that the harm to harbor seals by the oyster farm were so significant as to be of national significance were fabricated.
- (7) NPS April 26 Trip Report provided to the CCC is not in the harbor seal database, is inconsistent with NPS database protocols, is inconsistent with other facts, and may have been fabricated.
- (8) NPS claims that a USGS researcher (Anima, 1991) showed that oyster feces were the primary source of sediment in Drakes Estero were fabricated.

- (9) NPS assertion that Anima quantified the amount of oyster feces in Drakes Estero selectively omitted that the data came from a 1955 study in Japan.
- (10) Harbin's and Elliott-Fisk's 2005 NPS-funded study showing oyster feces are not a primary source of sediment in the estero was selectively omitted.
- (11) NPS selectively misquoted Wechsler's 2004 NPS-funded study on the impact of the oyster farm on fish populations in Drakes Estero; NPS claims of negative impact on the fish populations were fabricated.

2.2. NPS Admitted on April 24th That They Had no Data

On December 11, 2007, Ken Miguel of ABC7/KGO news in the San Francisco Bay Area made a stunning announcement on the evening news by revealing an email (dated April 24, 2007) that he had obtained through the Freedom of Information Act (FOIA) from the NPS. In it, Sarah Allen wrote to Joe Cordaro of the National Oceanic and Atmospheric Administration (NOAA), and copied her boss Superintendent Don Neubacher, that as of April 24, 2007, the park service had "no direct observations" of the oyster farm disturbing the harbor seals.

As described later in this report, the Park's own database supports that conclusion. But this Sarah Allen email made the stunning admission of "no data" to another federal agency several weeks (19 days) after Don Neubacher told Supervisor Kinsey that he had overwhelming data to show that the oyster farm was harming the harbor seals, and that this represented criminal and civil misconduct. And this stunning admission came just two days before the April 26, 2007 Trip Report (the one that is not in the database and in which the oyster workers and boat could not have been present as described). Moreover, less than two weeks later, Sarah Allen told the Marin County Board of Supervisors on May 8th just the opposite when she said:

"Over the past few weeks we have documented oyster operations disturbing mothers with pups and oyster bags left on sandbars where seals would normally give birth and nurse their pups."

The full text of Sarah Allen's email of April 24, 2007 to Joe Cordaro, NOAA, copied to Don Neubacher, is as follows:

*"Hi Joe;
Here is the trip report on the drakes estero harbor seal colony – the oyster operation clearly is disturbing and displacing seals but we have no direct observations – bags are located on seal haul out sand bars and there are far fewer seals hauling out there.
Does he need an IH permit? Can you write a letter to him reminding him about the MMPA? He refuses to acknowledge that the park has jurisdiction over his permit from CDFG for the aquaculture.
Thanks for your help.
Sarah
Attachment: Trip Report-4-13-07.doc"*

Many of Allen's assertions to Cordaro in that email we now know were intentional misrepresentations. The NPS had no data and no record in the NPS database to support the conclusion that *"the oyster operation clearing is disturbing and displacing seals ..."* There was no data to support the conclusion that *"[oyster] bags are located on seal haul out sand bars."* There were no oyster bags on sandbar A. Finally, there was no evidence to support the conclusion of *"fewer seals hauling out there"*. Sandbar A had fewer seals, but this had nothing to do with the oyster farm. Sandbar A is outside the oyster farm lease area. The disturbances at sandbar A came from hikers, clammers, kayakers, and predators, among others, but not from the oyster farm.

Two days after this April 24th email, Sarah Allen was first author on an article in the Point Reyes Light entitled *Coastal Wilderness*. That article would have been submitted in its final form no later than April 24th. In it, Allen wrote:

"This year, hundreds of oyster bags are located on harbor seal pupping sites and seal presence there has dropped dramatically."

That statement is clearly false, since on the same date she admitted to NOAA and Neubacher that they had *"no direct observations"*. And she was right in her email to NOAA: the NPS database shows no data to support these claims. There were no oyster bags on harbor seal pupping sites. And the only place where seal presence had dropped dramatically, sandbar A, was far from the oyster operation, was outside the DBOC operation lease area, and was disturbed by Park visitors. This is all clearly shown in the NPS database.

Upon hearing of this April 24th Sarah Allen email, and the serious questions concerning the April 26 Trip Report, from Ken Miguel, Senator Dianne Feinstein said to ABC7 news as broadcast the next evening on December 12, 2007:

"If the Park Service did in fact manipulate data, this is a serious matter, which should result in disciplinary action."

This April 24th email is a stunning admission of *"no direct observations"*. It serves as a striking confirmation of what I have been saying for many months: NPS data do not support NPS conclusions. Until this past week, we did not know that the NPS said the same thing in writing on April 24th. It shows that Allen and Neubacher knew that they had no data throughout April and leading up to their May 8th testimony and report.

2.3. NPS Purported Outside Review of the NPS Drakes Estero Report

On May 8th and May 29th, I provided written documents to the Marin County Board of Supervisors (copied to the PRNS/NPS) that revealed a repeated pattern of scientific misrepresentations of data by the PRNS. In my more detailed May 29th analysis, I concluded that Federal laws and NPS/DOI policies had been violated.

On July 21st at Senator Feinstein's Olema meeting, given the seriousness of these accusations of scientific misconduct, Senator Feinstein persuaded NPS Director Bomar

to take the NPS Drakes Estero Report down from the NPS web site, and to get it reviewed by an independent scientific panel. Present at the meeting were Superintendent Neubacher, Regional Director Jarvis, myself, and many others. At the time, we discussed having the many different versions of the Drakes Estero Report reviewed by the National Research Council.

At the July 21st Olema meeting, I told Feinstein and Bomar that I had heard that the PRNS was about to issue a rebuttal against my May 8th and May 29th documents. Jarvis confirmed that this was correct, and moreover that it included a review and validation of the NPS Drakes Estero Report. Jarvis said that the PRNS had sought review of the Drakes Estero Report and Goodman's reports from 9 outside scientists, and that a PRNS rebuttal report would be forthcoming. Given the seriousness of the accusations against the NPS, Feinstein insisted that they not release the new report in which they had reviewed themselves, but rather that we get the Drakes Estero Report reviewed by a truly independent outside panel, and moreover that they provide the names and reviews to me so that I might see who they used, what they were provided and asked to do, and what they had said.

On July 22, 2007, I emailed Jarvis and summarized our action items from the July 21st Olema meeting including amongst others that (i) he, me, and Moore work together to get the Drakes Estero Report properly reviewed by an independent outside panel, (ii) he not release the PRNS review and rebuttal, and (iii) he provide me with the 9 outside reviews collected by the PRNS. On July 30, 2007, Jarvis emailed me and said that outside scientists had "*reviewed the Drakes Estero document ...*" and told me he would get me their reviews, confirming the same statement and promise he made to Feinstein and me at the July 21 Olema meeting. On August 17, 2007, at a meeting in his office, Jarvis handed me a list of 11, not 9, peer-reviewers. Two of those 11 peer-reviewers were NPS employees who were sitting in the room with me (David Graber and Gary Davis), but neither one of them said a word. I was surprised to see that although the 11 (originally 9) peer-reviewers had been represented to me and others at Feinstein's July 21 Olema meeting as outside reviewers, nearly half were NPS employees or collaborators or co-authors. Jarvis told me he was working on getting me the reviews (claiming privacy issues that he said required getting each reviewer's approval).

My next surprise was when Jarvis' office sent me the September 18 "clarification" document. It was the document that Feinstein insisted they not release on July 21st, and that they agreed not to release. Along with the "clarification" document came what they called the "reviews". Rather than scientific peer-reviews of the kind with which the NAS and scientific community have familiarity, these so-called peer-reviews were instead in the form of a random set of personal emails back and forth with Sarah Allen and revisions of Allen's "response to Goodman" document (which became the "clarification" document). Moreover, these were not reviews of the NPS Drakes Estero Report as had been represented to me and others at Feinstein's July 21 Olema meeting.

Within days, the "clarification" document was given to the local press and political supporters. Jarvis and Neubacher coordinated the release of the September 18

“clarification” document to the local press and environmental groups, a document which has confused many in the public to believe that this new report represents a true peer review, which it does not, and that it vindicates Neubacher’s claims and official report, which it does not. The September 18 clarification document is a cleverly worded retraction of Neubacher’s earlier claims (saying that they do not have sufficient data and need more studies) disguised as a repudiation of Goodman’s May 8th report.

Although Jarvis told Feinstein and others at the July 21 Olema meeting, and again told me by email on July 30th, that these reviews and resulting document present a review of the NPS Drakes Estero Report, the “clarification” document is nothing of the kind. It is a cleverly disguised retraction of Neubacher’s and Allen’s previous claims. It appears as if none of the 11 outside reviewers (it is still unclear how many were asked to participate) was asked to review the official NPS Drakes Estero Report. It appears as if the NPS Report was not sent to most or all of them for review. The first sentence of the “clarification” report says that it is in response to Goodman’s May 8th and May 29th Reports. Nevertheless, it is unclear whether any of them was sent the more detailed May 29th Report. Some were provided Goodman’s May 8th Report. All were provided Allen’s “response to Goodman” draft document, and asked to help rebut Goodman’s criticisms. We are not told what they received.

Evidence exists for at least 13 people approached to help edit Allen’s “response to Goodman”, including two not listed on the first page of the September 18th “clarification” document -- Roberto Anima at U.S.G.S. and Peter Moyle at U.C. Davis. I do not know if there were others. The process has not been transparent. Peter Moyle is listed as a reviewer in one draft of the document, and his comments were sent to me, but his name is not listed among the 11 reviewers of the final document. We don’t know for sure who was approached, what they were sent, or what they were asked to do. Were they all sent the same documents? Many of the reviewers are NPS employees. Others are current or past collaborators or NPS-sponsored scientists. Some are local supporters or Sarah Allen co-authors. Others still are former colleagues who have worked at PRNS. Are any of them truly independent? It appears as if many of the outside reviewers did not have access to the NPS database. None were apparently given Anima’s 1991 USGS report. None appear to have reviewed the NPS Drakes Estero Report. This is not peer-review as defined by the NPS, it is certainly not peer-review as defined by the NRC, and it is clearly not good scholarly practice as required by NPS management policies.

In the September 18 “clarification” document from Jarvis and Neubacher, they finally completely retracted the harbor seal, oyster feces, and fish claims, but embedded the retractions in an 18-page attack on me. Jarvis and Neubacher used cleverly twisted syntax to disguise the fact that this was a retraction of most of Neubacher’s and Allen’s May 8th and May 11th major claims. Local supporters have implied that this document is peer-reviewed and that it validates the NPS Drakes Estero Report. A reader has to dig through 18 pages of straw man attacks on me to find the retraction statements.

This document is cynical in its design: it disguises their retractions from the public, and even misleads them to think that a group of independent outside scientists had validated the Park's claims, while burying the Park's retractions in a fashion that allows them to say to a scientific review panel or outside investigation that they corrected their mistakes. This document is in violation of the OSTP Federal policy on research misconduct because it masquerades as an objective peer-review and investigation when it was not.

2.4. National Research Council Review of the NPS Drakes Estero Report

We recently have had confirmed just how seriously Senator Dianne Feinstein takes the charges of scientific misconduct by Neubacher and Allen. On December 12, 2007, she appeared on the ABC7 evening news in San Francisco and said:

"If the Park Service did in fact manipulate data, this is a serious matter, which should result in disciplinary action."

Feinstein has been concerned about the allegation of scientific misconduct for many months now. At Feinstein's Olema meeting on July 21st, Feinstein and Bomar asked Jarvis, Goodman, and Tom Moore (CDFG; he oversees the DBOC lease) to set up and oversee an independent outside review of the NPS Drakes Estero Report to investigate the charges of scientific misconduct. On July 23, Neubacher took down the Drakes Estero Report and replaced it with a notice that says that the Report is under scientific review.

For August and September, Jarvis and Graber did everything possible to make sure that the NPS Drakes Estero Report never got reviewed. They posed, and announced they would submit to the NRC, a set of questions that had nothing to do with reviewing the NPS Drakes Estero Report and the accusation of scientific misconduct. It was only intervention from Feinstein's office and the DOI Inspector General's office that began to turn this process around in October. Although more appropriate than what they proposed to submit in August and September, the questions that were submitted by the NPS to the NRC on October 24th are still not focused on scientific misconduct.

Given the initial accusation of scientific misconduct in the May 8th public testimony and May 8th and May 11th versions of the NPS Drakes Estero Report, and the further scientific misconduct in the release and false representation of the "clarification" document on September 18th, the questions should now include an evaluation of scientific misconduct for both sets of documents.

I request that the NRC Oceans Board focus their efforts on answering the following questions:

I. Concerning the NPS May 8th public testimony and May 8th and May 11th versions of the NPS Drakes Estero Report (Drakes Estero – A Sheltered Wilderness Estuary):

- 1. What is the body of scientific studies and NPS databases on the impact of the oyster farm on Drakes Estero that preceded the NPS testimony and Drakes Estero Report in May 2007, and what did these studies and databases show?*
- 2. In the NPS testimony and Drakes Estero Report, did they draw the correct conclusions from these scientific studies and databases, and did they present these data and conclusions correctly to the public?*
- 3. If you find that the NPS testimony and Drakes Estero Report did not draw the correct conclusions from these scientific studies and databases, did these misrepresentations rise to the threshold of Section I of the OSTP Federal policy of research misconduct?*

II. Concerning the NPS September 18th “clarification” document:

- 1. Does the NPS “clarification” document represent independent peer-review?*
- 2. Is it an objective outside review of the NPS Drakes Estero Report, and if so, does it represent a correct validation of the NPS Drakes Estero Report?*
- 3. If you find that the NPS “clarification” document is misleading and not an objective peer-review of the NPs Drakes Estero Report, does it rise to the threshold of Sections III, IV, and V of the OSTP Federal policy of research misconduct?*

The questions above concern Neubacher, Allen, Jarvis, and Graber. In addition, on July 21st, I handed a copy of my first report of scientific misconduct to attorney Molly Ross in the Office of the Solicitor, Department of the Interior. The Solicitor’s office has not followed up on these allegations of scientific misconduct in an objective and timely fashion as mandated by Federal policy. They also have not provided me with some of the key data and other documents that I requested by FOIA. In ignoring these claims of scientific misconduct, and not investigating them, I believe that they too have violated Sections III, IV, and V of the OSTP policy.

3. Harbor Seals

At the May 8th hearing of the Marin County Board of Supervisors, PRNS Superintendent Don Neubacher and his staff scientist Dr. Sarah Allen made a series of provocative claims about the negative impact of the oyster farm in Drakes Estero on the harbor seals and their pups. More than any other of their claims that day about the oyster farm, the one about the seal pups played on everyone’s emotions. The Superintendent then repeated these same claims in the May 11th republished version of

his official NPS Drakes Estero Report. During this period, the same or similar claims were made to the California Coastal Commission and Marine Mammal Commission.

If the DBOC was indeed abusing the seals and harming their pups, then we would all agree that something should be done. But are Neubacher's and Allen's claims supported by his own NPS data? The answer is no. Neubacher and Allen misrepresented the harbor seal data in their own NPS database. These claims were fabricated.

3.1. NPS Harbor Seal Claims

The issue of the impact of the oyster farm on the harbor seals first appeared publicly in local newspapers on April 26th and May 1st, in the run-up in the few weeks prior to the May 8th Marin County Supervisors meeting.

In the April 26, 2007 article in the Point Reyes Light entitled *Coastal Wilderness* by Sarah Allen (PRNS staff scientist), Jules Evens, and John Kelly, they wrote:

"This year, hundreds of oyster bags are located on harbor seal pupping sites and seal presence there has dropped dramatically."

The claims got more specific one week later. In the May 1, 2007 article in the Coastal Post entitled *Save Drakes Estero* by the Sierra Club Marin Group, Environmental Action Committee (EAC), National Parks Conservation Association, Audubon, Wilderness Watch, and others, they wrote:

"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 to about fifty in 2006 and less than 10 pups so far in 2007."

On July 19, Fred Smith, Executive Director of the EAC, at a meeting in my office, told me that the claims and quotes of data in the May 1 article co-authored by EAC came from the PRNS.

At the May 8th public hearing in front of the Marin County Board of Supervisors, in talking about the oyster farm and his reasons for withholding the DBOC permit, Superintendent Neubacher gave even more dramatic testimony:

"To highlight this point, we believe because of recent actions taken, that the harbor seal pupping area in Drakes Estero is seriously threatened now. Dr. Allen is going to discuss this, but we have some major problems because you can see from your handout that pup bags [sic: he is referencing oyster bags and does so later in the testimony] have been recently put in pupping areas, you'll get statistics, but it's amazing how many pups we probably lost this year. We have a serious problem right now"

"I mean it's that complex, because now you're talking about the Marine Mammal

Commission – wrote us a letter this morning, they're going to take it up. This is a national issue. They're going to take it up on a national level. Now here's another reason why the permit is not available at this time."

"We could have a serious problem with our harbor seal population because of the recent activities. So we would hope that the Supervisors would meet with Coastal Commission staff and really get their perspective on the issue. They're an important player."

Neubacher was followed by staff scientist Dr. Sarah Allen who further testified:

"Over the past few weeks we have documented oyster operations disturbing mothers with pups and oyster bags left on sandbars where seals would normally give birth and nurse their pups. The harm is resulting in abandonment of one area where more than 250 seals, including 100 pups two years ago occurred in that spot, this year chronic disturbance and placement of bags on the nursery area has caused an 80% reduction in the seals dropping to around 25 this last Saturday. I was out there on Saturday. This issue has been raised, has been received and recognized by the Marine Mammal Commission and we've received a FAX today from the executive director of the Marine Mammal Commission because they've just heard about this which I will provide to you. And they're going to bring it up in their next commission meeting because it has national significance."

The previous Saturday was May 5, and inexplicably there is no entry in the NPS harbor seal database for that date. What she observed was of national significance, but it did not rise to the level required for her to enter it into the NPS database. Data supporting her claims was requested by FOIA, but no data was provided supporting the May 5th claim. Also inexplicable in Allen's May 8th testimony is the complete absence of any reference to her April 26 Trip Report, her major claim of data showing disturbances to the harbor seals by the oyster operation, and the only data referenced a few months later in September by the California Coastal Commission (although this observation too is not in the NPS database).

In the May 8th and May 11th versions of the official NPS Report entitled *Drakes Estero: A Sheltered Wilderness Estuary*, Neubacher and Allen wrote:

"Disturbances to resting and breeding seals increased dramatically in 2007. Since March, park biologists documented oyster boats disturbing mothers with pups, and they noted that oyster bags were located on sandbars where seals would normally give birth and nurse their pups. One area where 250 seals nursed more than 100 pups two years ago, have around 50 total seals including around 25 pups in 2007, an 80% decline."

Only in the May 11 version of the official NPS Report entitled *Drakes Estero: A Sheltered Wilderness Estuary*, Neubacher and Allen wrote:

"In 2007, oyster bags and disturbance have reduced one sub colony by 80%."

In the July 2007 issue of the *Yodeler*, the newspaper of the San Francisco Bay Chapter of the Sierra Club, Gordon Bennett, Chair of the Sierra Club Marin Group, wrote:

“As many as 300-500 seal pups used to be born annually in the Estero, 100-200 using the middle sandbars. Expanded oyster operations and oyster bags placed in seal nursery areas have reduced baby seals on the middle sandbars to about 50 in 2006 and less than 10 so far in 2007.”

In summary, Neubacher and Allen, and local environmentalists including Gordon Bennett, made some alarming claims about the impact of the oyster farm on the harbor seal populations, and in particular on the seal pups. They claimed clear data on serious declines in seals and seal pups in 2007 due to the oyster farm. They claimed that oyster bags were placed in seal nursery areas and were harming the seals. They claimed that oyster bags were placed on sandbar A and had caused the seals to leave that location. They claimed clear cause and effect. These were powerful statements. And they were wrong. None of these claims are supported by the NPS harbor seal database. This is scientific misconduct.

3.2. NPS Harbor Seal Claims Influenced Other Agencies and Scientists

Timothy Ragen, executive director of the Marine Mammal Commission, wrote to Neubacher on May 4:

“It has been brought to my attention that activities associated with commercial shellfish operations (oyster farming) are leading to the disturbance of harbor seals in Drakes Estero in PRNS.”

At the May 8th hearing, Susan Adams, one of the Marin County Supervisors, commented on Neubacher’s and Allen’s testimony when she said:

“I would not be interested in supporting an operation that is destroying seal habitat or creating invasive species that are disrupting our environmentally sensitive areas.”

Peter Douglas, executive director of the California Coastal Commission, wrote to Kevin Lunny, owner of DBOC, on June 5:

“The science advisor to the NPS, who has amassed 25 years of continuous data about the harbor seal nursery at the Estero, has documented evidence of recent adverse impacts to harbor seals in intertidal areas affected by oyster and/or clam culture operations.”

Prof. Edwin (Ted) Grosholz (U.C. Davis), one of the scientists invited by Allen to help her revise her “response to Goodman” (the September 18 “clarification” document), on July 15, 2007 wrote to Allen:

“However, the location of the pupping sites within the Estero and behavioral data documenting harassment of harbor seals by boats may be a more sensitive indicator of the impacts of oyster culture activities. I have not had access to this report, so my comments cannot extend beyond this.”

Everyone was moved by these harbor seal claims. But are they true? No.

3.3. NPS Harbor Seal Claims vs. NPS Data

Having read these claims concerning the harbor seals in the April 26th and May 1st newspaper articles, and having heard these claims first-hand from Neubacher and Allen at the May 8th hearing, as a scientist, I wanted to see the data.

Tom Moore from California Department of Fish and Game is the State expert on the oyster farm in Drakes Estero. Moore has spent a quarter of a century overseeing the oyster farm operation on behalf of the State, and continues to oversee the current DBOC lease. I talked to Moore by telephone just before the May 8th hearing, and he told me that from 2005 to 2007, PRNS never notified him, or to his knowledge Lunny, about the data or claims of the alleged negative impact of the oyster farm on the harbor seals in Drakes Estero. Moore told me that he first heard about this urgent issue in the popular press on April 26th and May 1st. If this was such an emergency, he wondered, then why wasn't he or DBOC notified, shown the data, and directed to adhere to the existing protocols or take steps to modify their operational protocols? Moore assured me that the DBOC continues to follow protocols established for the oyster farm originally in 1992 by NMFS and NPS, and that nothing changed in 2007. The oyster bags, Moore said, were placed at the same locations as they had been for decades. Oyster bags, he assured me, were not placed in nursery areas, and were not displacing seals. I asked him whether he was planning on attending the May 8th hearing and Moore answered "no", that there was no reason to testify since he had never been notified by PRNS of any problems.

To better understand the basis for the NPS claims, on May 9th, I emailed Sarah Allen and asked to see the data supporting those claims. I got no reply. As a result, on May 12 and May 13, I emailed two FOIA requests for harbor seal data to Don Neubacher. Responding for Neubacher, Jon Jarvis denied my request for harbor seal data on June 13 citing FOIA's "*deliberative process privilege*" even though "data" is specifically excluded from DOI FOIA exemption #5. Moreover, Neubacher and Allen testified at public meetings about this same data, and made claims about it in their official Drakes Estero Report, and thus it was no longer pre-decisional. In addition, they provided some of this same harbor seal data to local supporters. Gordon Bennett and other local supporters were given access to some of this harbor seal data prior to their May 1st Coastal Post article. And yet on July 31st, I was still denied access, and to this date, still do not have all of the data I requested on May 12th and 13th.

I appealed the denial on June 27th to the Department of Interior Solicitor. On July 31st the DOI responded that they would not process my appeal (they said they did not have time) and that I could seek judicial review, hardly what a scientist expects to hear when seeking data, and not the response that is required by the law.

Nearly three months later, on October 22, I received a phone call from Darrell Strayhorn from the DOI FOIA office asking whether she could close my appeal. She told me that the PRNS had claimed to her that they had sent me all of the data I had requested. I told her that the NPS still had not provided all of the data requested on May 12th and

13th. Missing was the legacy harbor seal data from 1973 to 1996. She said she would look into it and get back to me. As of December 18th, I have not heard back from her. Again, this is hardly what the law requires. It is now seven months since I filed by FOIA request for data, and a major portion of that data continues to be withheld.

This database was created with tax dollars and is intended to be available to any interested scientist. At Senator Feinstein's Olema meeting on July 21, the Senator and Mary Bomar, NPS Director, agreed that all of the data I requested should be released to me within 2 weeks. As a result of Feinstein's Olema meeting, I now belatedly have some of the data I requested, but not all of it. I still only have some of the requested data, and what I do have arrived without the necessary key to interpret its abbreviations. As of December 18th, full access to the database was still being denied. They supplied data from 1997 to 2007, but denied the existence of their data from 1973 to 1996, even though it is cited in multiple Sarah Allen publications (e.g., Sydeman and Allen, 1999) and called the legacy database in NPS reports. An inventory and monitoring program document (Hester et al.) states that the "legacy databases" (i.e., those prior to the new system in 1997) are available in Excel and MS Access.

The conclusion from analysis of the 1997-2007 data in the NPS database is that Neubacher and Allen repeatedly misrepresented their own harbor seal data in their public testimony, published reports, and presentations to government agencies. They committed scientific misconduct, and they did so repeatedly.

NPS claim #1: the number of seal pups was down dramatically in 2007 in Drakes Estero due to the oyster farm, and this is a national emergency.

NPS data: the number of seals and pups in Drakes Estero was normal in 2007 and within the NPS 25% threshold of normal fluctuations. Some other seal colonies along the PRNS coast had greater fluctuations (>25%) in pup numbers than did Drakes Estero. Thus, there is no factual basis for Neubacher's testimony that this is a "*serious problem right now.*" In summary, this claim was fabricated.

NPS claim #2: the number of harbor seals in one subcolony is down by 80% in 2007 compared to 2005 in Drakes Estero due to the oyster farm, and this is a national emergency.

NPS data: of the 8 subsites in the Estero, one of them - the middle sandbar A which is attached to the mainland - was indeed down this year, while others were up. Neubacher's 80% number in the NPS Drakes Estero Report is true for this subsite, and Bennett's numbers in the Yodeler are quite accurate. However, Neubacher and Bennett neglected to tell us that this difference did not reflect a change in the number of seals in Drakes Estero, but just a shift in where they chose to haul out: fewer seals hauled out at mainland sandbar A, but instead more seals hauled out at island UEN across the channel and several hundred yards away. The overall number of harbor seals and seal pups was normal in 2007 in Drakes Estero. The seals simply shifted where they hauled out.

What's more, Neubacher, Allen, and Bennett omitted critical information when they failed to tell us that the oyster farm had nothing to do with this relocation. Sandbar A – the subsite that the seals avoided this Spring – gets the largest number of disturbances, mostly from Park visitors (hikers, horseback riders, clammers, kayakers), and also the most disturbances by predators (coyotes). There are no records in the NPS database of disturbances by the oyster farm at sandbar A because it is outside their lease, far from their leased area, and thus hundreds of yards from their oyster bags and boats.

According to the NPS database, the seals moved to the east shore of island UEN which has many fewer disturbances and is protected from Park visitors and predators. The east shore of island UEN is along the deep water channel that the seals prefer. The west shore of island UEN has many oyster bags on it (most nearly ½ mile away from the seals), consistent with the CDFG lease and with historic practice. The oyster bags and harbor seals have been peacefully coexisting on different sides of island UEN for decades. Thus, there is no factual basis for Neubacher's, Allen's, and Bennett's claim that the oyster farm has caused an 80% reduction of harbor seals at a sub colony of Drakes Estero in 2007. In summary, this claim was fabricated.

NPS claim #3: DBOC placed oyster bags on sandbar A in 2007, by doing so the oyster bags have displaced and disturbed the seals, and this is a national emergency.

NPS data: there are no oyster bags on sandbar A. DBOC oyster workers have not placed oyster bags on sandbar A. DBOC oyster boats have no reason to even go to sandbar A. And the NPS harbor seal database has no records of oyster bags or disturbances by oyster workers at sandbar A. According to the NPS database, sandbar A is the site the seals abandoned in 2007 due to disturbances from PRNS visitors. There has been no change in the placement of oyster bags in 2007 as compared to previous years. Neubacher and Allen fabricated this claim of cause and effect by oyster bags. At the May 8th hearing, Allen's testimony falsely placed the oyster bags on sandbar A, the haul-out location where the decline occurred in 2007. In summary, this claim was fabricated.

NPS claim #4: DBOC placed oyster bags in harbor seal haul-out areas on island UEN in 2007, by doing so the oyster bags have displaced and disturbed the seals, and this is a national emergency.

NPS data: the oyster bags on island UEN are located on the west side of the island where they have been for decades. According to DBOC and CDFG, the oyster bags were not moved this year. The harbor seals haul-out on the east side of the island where they have been doing so for decades. The harbor seals have not moved this year. Rather, Neubacher and Allen altered the boundary of the haul-out area on their map so that it now included the west side of the island and included the oyster bags. In summary, this claim was fabricated (see section below on the altered map).

There was indeed a change this year in that the harbor seals largely abandoned mainland sandbar A and instead moved across the channel the island UEN. But DBOC

had nothing to do with this change. If Neubacher and Allen are interested in protecting the harbor seals at sandbar A, then they should do something about the disturbances from PRNS visitors, and stop falsely blaming the movements from one subsite to another on the oyster farm. The PRNS visitors, and possibly predators, appear to have chased seals off of the mainland sandbar and onto the protected island. The NPS data show that the oyster farm had nothing to do with it. There are no oyster bags on sandbar A. In fact, there have never been any oyster bags on sandbar A.

In conclusion, the PRNS made one false accusation after another in terms of the impact of the oyster farm on the harbor seals. This is not an issue of interpretation, but rather it is an issue of deliberate and flagrant misrepresentation of the facts. For example, PRNS took one data point -- the 80% reduction of seals at sandbar A in 2007 selectively compared to 2005 -- and misrepresented this reduction as caused by the oyster farm, which it was not, and as being of national significance, which it was not. None of their claims is supported by their own NPS database.

The PRNS failed to point out that the overall number of seals and pups in Drakes Estero was normal in 2007 as defined by NPS data management protocols. Other harbor seal colonies along the PRNS coast had greater fluctuations in 2007 than did Drakes Estero. Selective omissions are as important as misrepresentations.

Neubacher claimed that the number of pups was seriously down in 2007, which it was not, and that this decrease was due to the oyster farm, which it was not. NPS data show that the overall number of pups was normal in 2007. Thus, the Superintendent and his own NPS data are in conflict.

Blaming the oyster farm for the 2007 relocation of seals from mainland sandbar A to island UEN was not a simple error of interpretation. When an institution's conclusions conflict so obviously with its own data, it is impossible to dismiss as an honest error. False claims were made about the NPS data, and false claims were made about cause and effect. This was fabrication and falsification.

One additional note. On May 8th, Neubacher and Allen said the impact on the harbor seals was a national emergency, that they had alerted the Marine Mammal Commission, and that the MMC would take up the issue at their next meeting. But Neubacher and Allen never provided data to the MMC. When the Commission next met on August 28th and 29th, Drakes Estero was not on their agenda. Was their interaction with the MMC just for dramatic effect on May 8th? If this was an urgent issue of "*national significance*", then they should have followed up immediately, and if it wasn't, then they should not have made these false claims at the May 8th hearing.

3.4. Neubacher's Altered Harbor Seal Haul-Out and Pupping Map: the Oyster Bags Haven't Moved, but the Boundary on the Map Has Moved

Neubacher and Allen kept saying that the oyster bags had moved into harbor seal haul-out and pupping areas this year. Is that true? The answer is no. This claim was

fabricated.

There is no record in the NPS database of DBOC having moved the location of oyster bags into the seal pupping area. Moreover, Lunny and Moore have each assured me that DBOC had not changed the location of the oyster bags in 2007 as compared to previous years. The bags were not moved.

Rather, the PRNS changed a boundary in one very interesting location of their map, and then distributed the altered map to various government agencies. Much of the Drakes Estero map remained the same, but there were several key changes, including the boundary for the harbor seal haul-out area on island UEN which was altered. The boundary inexplicably expanded from its 1992 and 2005 location that included the east side of island UEN (next to the deep water channel) to include the west side of the island, the side that has historically contained oyster bags, and that the harbor seals have not used (likely because the water surrounding it is shallow), according to Sarah Allen's 2005 harbor seal haul-out map.

Neubacher and Allen kept saying that the oyster bags were moved (and implied that this was a new change in their operations), which they were not. They knew that the only thing that had changed was the boundary on their map, which they arbitrarily drew. They made the change to the map, and then gave the altered map to the Marin County Board of Supervisors, the California Coastal Commission, and perhaps others. Inexplicably, they never provided the new map to Kevin Lunny, owner of DBOC, or to Tom Moore, CDFG, who oversees the oyster farm lease. The map also appeared incorporated into Sarah Allen's April 13 and April 26 Trip Reports. The first time these Trip Reports appeared was on June 13 when they were sent to me, and as described below, they are suspicious, and thus we do not know when the map was actually altered. It was certainly altered by the May 8th hearing.

In 1992, the National Marine Fisheries Service (NMFS, NOAA) and NPS collaborated on producing a map of the harbor seal haul-out areas. In 2005, Allen and the PRNS met with Lunny and gave him a map consistent with the 1992 map. This contemporary map showed the boundary of the haul-out areas relative to the oyster bags and oyster racks. This map was based on 70 years of commercial oyster farming, and three decades of Allen's professional observations of the harbor seals. Allen is the expert on where the harbor seals haul-out and where they pup. She gave Lunny the map in 2005 showing the boundary between the oyster bag area on the west side of island UEN and the haul-out pupping area on the east side of the island. But suddenly, sometime in early 2007, PRNS changed the map, and DBOC and CDFG were never told.

The first that Lunny knew that the PRNS/NPS had changed the map was when he requested and was given copies of the documents that Neubacher submitted to the Marin County Board of Supervisors on May 8th. This altered map, it is now known, is also incorporated into Allen's April 13 and April 26 Trip Reports. The April 13 Trip Report marks the earliest "date" on which the altered map turns up in the record. Lunny had told me about the different maps in June or July. But the first that I saw that

Neubacher and Allen had changed the map was the day of the July 21 Olema meeting when Lunny showed me the two maps for comparison. I was stunned. This was another case of scientific misconduct.

When Neubacher and Allen altered the boundary on the map, this enabled them to make a false claim that the oyster bags were now located in the seal nursery area. The April 13 Trip Report, which included the altered map, served as the basis for accusations that DBOC placed oyster bags within the haul-out and pupping area. Allen suggested that Lunny had changed where he placed his oyster bags, when in fact, the bags had not moved but the PRNS has changed the boundary on the map, without disclosure to DBOC or CDFG.

Neubacher's testimony on May 8th to the Marin Supervisors gives a very interesting insight into why he created the new altered map – to influence the environmental analysis he was conducting. Neubacher testified:

"We have to do an environmental analysis. We're pretty much complete. All those maps are basically developed for the environmental analysis. We didn't know there were that many bags in the pupping area. ...So there are some serious issues related to this and what we're going to do now based on the level of deeper review that we're doing, we have to decide whether there's going to be an EA done or an EIS for this project."

When Neubacher testified that they did not know there were that many bags in the pupping area, he was manufacturing his accusation, because he and Allen manipulated the boundary on the map to make it so. Neubacher arbitrarily and secretly changed the map of the pupping area to include the oyster bag area. The altered map became a key part of an undisclosed environmental review that NPS was conducting. Thus, Neubacher used an altered, secret map to manipulate the NPS internal environmental analysis. This altered map was given to the Marin Supervisors. But the altered map was never given to DBOC or CDFG. There is nothing in the database that suggests that the seals moved their pupping area to include the historic oyster bag area on the west side of the island. Everything is as it has been for decades. No scientific data have been presented to support this altered map. But suddenly on May 8th, Neubacher claimed that he never knew there were so many bags in the pupping area, and this might require them to do an EA or EIS. This is another example of scientific misconduct.

On October 23, 2007, Kevin and Nancy Lunny, owners of DBOC, wrote to Superintendent Neubacher asking him, amongst other related questions, when and why the new map with the altered boundary was created. On November 21, 2007, Neubacher responded. When asked why the map was undated, he answered in writing that it was created as an insert to the April 13 and April 26 Trip Reports. When asked when it was created, he parsed his words carefully when he answered that the PDF of the map was created on April 27th. When asked why the boundary was drawn as it was, he answered that the updated map represented fluctuations in harbor seal haul-out areas. When asked if any documentation existed to support the new boundary, he answered *"No formal documents exist. The change was made based on field observations and*

expert opinion.” Neubacher admitted that the new map was neither provided to DBOC nor to CDFG, and said it was not provided because it was simply part of the Trip Reports.

3.5. Allen’s April 13 and April 26 Trip Reports are Suspicious and are Likely Fabricated

When Jon Jarvis responded to my FOIA requests on June 13, he provided none of the requested harbor seal data, claiming FOIA’s deliberative process privilege exemption #5. But he did send me what appeared to be two random bits of so-called data -- “Trip Reports” by Sarah Allen from April 13 and April 26. At the time, this seemed odd, and I didn’t know what to make of these two random pieces of paper. I had not asked for them. I wondered why they sent me two reports, when if these were typical of their daily observations, then there must be many hundreds if not thousands of observations in the harbor seal database for the Lunny years 2005 to 2007. Why send two random reports? Why not send the data I requested? According to the published NPS protocols, this is not the standard NPS format for the management of harbor seal data. Evidently, these are relatively unique documents – thousands of daily Trip Reports do not exist. As described below, they are not in the NPS database.

On September 11, California Coastal Commission staff scientist Dr. John Dixon sent a report to Alison Dettmer of the CCC entitled *Effects of Oyster Mariculture on the Natural Resources in Drake’s Estero*. This report formed the basis of CCC policy decisions involving DBOC. On page 7, at the end of Dixon’s section reviewing the data on the oyster farm and its impact on Drakes Estero, Dixon wrote:

“In Drake’s Estero, both human presence and boat operation are potential sources of disturbance to birds and harbor seals. For example, an oyster operation boat was observed to disturb 90 hauled out harbor seals, of which 7 adults and 7 pups flushed into the water, and around 300 black brant, which were flushed from an eelgrass bed where they were feeding (Allen 2007).”

This reference to “Allen 2007” is Dixon’s exclusive piece of data supporting the claim that the oyster farm was negatively impacting the harbor seals. He did not repeat any of the claims from the May 8th hearing and May 11th NPS Drakes Estero Report. For example, he made no claims of an 80% reduction in seals caused by the oyster farm, or of hundreds of seal pups lost this year due to the oyster farm, or of oyster bags being placed in the seal pupping area. What happened to those claims? Why were the May 8th claims, made four months prior, dropped?

The citation to “Allen 2007” is a reference to Allen’s April 26 Trip Report, one of the two pieces of paper I was sent on June 13. In September, this Trip Report was the ONLY piece of data supporting the claim of negative impact of the oyster farm on the harbor seals. A single anecdotal 75-minute observation became the CCC’s exclusive harbor seal data.

Right after the reference to Allen 2007, Dixon provided his Summary and Recommendations, and suggested seven mitigation measures. The first is:

“1. Oyster mariculture should not occur on tidal flats that are harbor seal haul-out and pupping sites.”

This recommendation is based on Allen’s April 26 Trip Report in combination with the altered map appended to that Trip Report. The second and third recommendations were equally restrictive on the oyster farm to presumably protect the harbor seals. These three recommendations were based on the single April 26 Trip Report and the altered map. But is the April 26 Trip Report real or fake? Did Dixon examine the NPS harbor seal database? Does he realize the NPS database does not support this claim? According to Kevin Lunny, at a meeting with Dixon on October 15, Dixon said he never looked at the NPS database, never collected his own data, had relied on the NPS, and that fabricating data would be the worst possible offense in his world.

Did Dixon realize that his recommendations were based on a “doctored” map? The boundary of the haul-out and pupping sites on the altered NPS map that was provided to Dixon was different from the map given to Lunny in 2005. Allen has continuously monitored the harbor seals from 1973 to the present. What she observed for more than 30 years led her to draw one boundary in 2005 separating the oyster bag area from the haul-out and pupping area. What had she learned since 2005 that led her to change her map so dramatically? Had the harbor seals moved? There is nothing in her database to suggest such a move. Yet Neubacher and Allen drew a new map, gave it to CCC’s John Dixon to influence his recommendation, but withheld it from Lunny and Moore.

For comparison, the April 13 Trip Report claims to record observations by Sarah Allen (alone) from 3:45 pm to 5:00 pm on April 13, 2007. Although the NPS database contains records from another observer for 2:30 pm that day, there is no entry for the time period 3:45 pm to 5:00 pm for April 13, 2007. Allen writes that there were two reasons for the April 13 Trip Report: to count seals, and to count oyster bags. The harbor seal data should have been recorded in the NPS database, but it was not. The April 13 Trip Report is the first time that the altered map is known to appear, and it is the first appearance of the claim that the oyster bags were placed within the pupping area (when in reality they had not moved).

The April 26 Trip Report claims to record observations by Sarah Allen (alone) from 3:45 pm to 5:00 pm on April 26, 2007. The April 26 Trip Report does not read like a field observation, and is surprisingly identical in certain sentences and wording to the April 13 Trip Report. They both report on precisely the same time: 3:45 pm to 5:00 pm. That seems like an odd coincidence.

The April 26 Trip Report alleges that between 4:10 pm and 5:00 pm on April 26, two oyster workers were observed to *“disturb 90 hauled out harbor seals, of which 7 adults and 7 pups flushed into the water.”*

The “observation” date, locations, and times of the April 26 Trip Report can not be verified and conflict with DBOC records, raising serious questions about the authenticity and integrity of this Trip Report. Moreover, this “observation” was never entered into the official NPS harbor seal database, in violation of NPS protocols. Thus, as a single anecdotal observation, the NPS April 26 Trip Report does not represent the kind of scientific data that should guide public policy.

If this Trip Report was so important, then why wasn't it shared with DBOC or CDFG in April and administrative action taken to halt alleged violations of the protocols and modify procedures if necessary? The pupping season was not yet finished. DBOC could have modified their procedures if indeed they were doing something wrong. Why wasn't it in the NPS database? Why wasn't it mentioned at the May 8th hearing? Why wasn't it mentioned in the May 8th or May 11th versions of the official NPS Drakes Estero Report? Why was it stealth until June when it was provided to me in response to my FOIA request (although I never requested it)?

The April 26 Trip Report stated that on that date, a white oyster boat about 20' long was observed disrupting the harbor seals. Kevin Lunny told me that DBOC does own and operate a 16' white boat. DBOC records show that this white boat was not operational on April 26th due to engine problems. DBOC owns a second boat, but DBOC records show that it was not near islands UEN or OB on April 26th. DBOC records show that the engine on the white boat was being repaired on April 26th; repairs were not completed until the morning of April 27th. It thus appears that the DBOC white boat was not in the Estero that day. Moreover, Lunny told me that DBOC payroll records show that the oyster workers had clocked out when Allen claims to have observed them in the estero. Lunny provided all of this information to the CCC in a letter dated September 26th.

As a scientist, I wanted to confirm or refute the April 26 Trip Report by looking at the NPS harbor seal database. On August 13, I received a CD from NPS (as a partial response to my FOIA requests) with the harbor seal disturbance data from 1997 to 2007. There is no record of this April 26 Trip report or the data allegedly generated from it. In fact, there is no entry of any kind for April 26, 2007 in terms of either seal counts or seal disturbances. Moreover, the number and facts mentioned in this April 26 Trip Report do not correspond to data entered for any other March, April, or May 2007 date in the database.

This NPS Trip Report fails to adhere to the NPS Data Management Plan which sets forth how harbor seal data is collected, managed, and reported. The April 26 Trip Report begins by stating that was conducted to count harbor seals during the peak pupping season. Yet if indeed these observations were really made, and were part of the harbor seal monitoring program, NPS policies required that data be collected on a specific form, and then get entered into the official database in a timely fashion. Yet this is the one piece of data that John Dixon cites when concluding for the California Coastal Commission that the oyster farm is having a negative impact on the harbor seals.

The NPS April 26, 2007 Trip Report is not in the NPS database. It is overlooked in the NPS May 8th testimony. It is not shared with the Marine Mammal Commission. It is not in the May 8th version of the NPS Drakes Estero Report. It is not in the revised May 11th version of the NPS Drakes Estero Report. This is especially inexplicable since this Trip Report records 90 seals being disturbed, and 14 seals getting flushed into the water due to the oyster operation, the first recording to date during the two and a half year ownership of DBOC by Kevin Lunny, and the largest reported disturbance from DBOC prior to the May 8th hearing.

If indeed this first observation of seal flushing by the oyster operation actually occurred at the time and place reported, then we would have expected it to be recorded in the database, which it was not, and reported in the early May testimony and reports, which it was not. Suddenly this NPS Trip Report was provided to the CCC as the primary evidence of environmental mismanagement on the part of DBOC – many months after the fact. Equally surprising, none of the May 8th and 11th claims were provided to them.

The April 26 Trip Report is suspicious and its authenticity is questionable. As described below, the oyster farm is certainly not a serious source of harbor seal flushings. The CCC was intentionally misled.

3.6. In Contrast to NPS Claims, the NPS Database Shows the Oyster Farm is not a Significant Source of Harbor Seal Disturbances

Once I discovered that the April 26 Trip Report was not in the database, I next wondered whether the oyster farm is or is not a significant source of disturbances to the harbor seals as Neubacher and Allen have claimed. According to NPS, an event causing a harbor seal to “flush” from a sandbar into the water is considered the most serious – and most detrimental – of disturbances. The April 26 Trip Report focused on seal flushings for this reason. Since the April 26 “data” were not in the database, I wondered whether there were other records of the oyster farm causing seals to flush into the water.

The NPS harbor seal database reveals that during the three-month pupping season (March-May) for the Lunny years 2005-2007, 95% of harbor seal flushes came from Park visitors, aircraft, hikers, kayakers, birds, predators, and other non-oyster farm disturbances.

Until April 29, 2007, and during its then two and a half years oyster farm ownership, there is not a single seal flush observation in the NPS database attributed to DBOC operations. The harbor seal disturbances were a major part of Neubacher’s claims to Supervisor Kinsey on April 5 (see later section), and the harbor seal disturbances became Neubacher’s major claim in his testimony on May 8th, but there was no data in the NPS database until April 29th. If we assume the accuracy of the May 8th entry, then the NPS database reveals that fewer than 5% of the seal flushes (i.e., FW’s) were attributed to DBOC during the pupping seasons in 2005-2007, and all of those disturbances by DBOC occurred on only two dates: April 29 and May 8, 2007 (i.e.,

during the week or so leading up to and including the day of the May 8th hearing). Let's examine the data.

The NPS database reveals the following. Park visitors alone accounted for more than 1,111 of the 2,864 flushing events (38.8%) recorded in the NPS harbor seal database for the 2005-2007 pupping seasons. Aircraft accounted for 25.9%. Birds accounted for 16.8%. Predators accounted for 5.7%. The oyster farm has caused very few of the seal disturbances. In an NPS published harbor seal report, Sarah Allen reported that in one instance alone, a single coyote killed 10 seal pups.

The first recording in the NPS database of flushing attributable to DBOC is on April 29, 2007 indicating that five seals were flushed into the water. On its own, this record is trivial: 5 seals getting flushed represent 0.2% (or 1/500th) of seal flushes that occurred during the 2005-2007 harbor seal pupping season.

The next and only other recording in the NPS database of the oyster farm causing seal flushing is on May 8th, the very day of the Marin County Board of Supervisors hearing (the coincidence factor is troubling). The NPS database records 113 seals getting flushed into the water by an oyster boat on that morning. But the May 8th observation has some other peculiarities in addition to the date. The time is odd. The event starts at 8:45 am, about 2 hours before low tide, when observations are normally made around low tide. But the real oddity is the simultaneous timing.

The observers report an oyster boat (or boats?) simultaneously causing seals to flush on three different islands: UEN, OB, and UEF. UEN and UEF are over one mile from each other. Was it one boat at all three locations? This seems physically impossible. Or was it three different boats? But Lunny doesn't have three different boats. There are no other records of disturbances for another 2 hours, and then from 10:40 am until 11:25 am, right around low tide (the normal time for observations), there are 6 additional records of disturbances (mostly by an aircraft). The aircraft landed on sandbar L between 10:55 am and 11:00 am, causing over 400 seals to flush into the water. Over the past three years, aircraft have accounted for an order of magnitude more seal flushes than has DBOC. Why have Neubacher and Allen failed to report or correct the problems caused by Park visitors and aircraft?

Thus, assuming the accuracy of the May 8th entry into the database, the oyster farm accounted for only 4.1% of the recorded seal flushings during that three-year period 2005-2007. Interestingly, 96% of those flushes attributed to the oyster farm occurred on May 8th (the day of the County hearing), and this record is suspicious. The May 8th entry is suspicious because it seems improbable that a single oyster boat could have caused seals to flush from three different islands that are over one mile apart at precisely the same time. If we discount the May 8th entry, then the oyster farm accounted for only 0.2% of the seal flushings from 2005-2007.

In summary, the NPS database shows that harbor seals are indeed getting flushed into the water, but it is mostly by Park visitors. Seal disturbances from DBOC are, at best,

statistically minimal compared to other more important sources of disturbances. Moreover, the April 26 Trip Report is not in the database. The first recording during the three-year period is April 29, and the only other recording is May 8th, the day of the Marin Supervisors hearing. Prior to April 29, 2007, the NPS database contained no data of seals getting flushed into the water during the pupping season by the oyster operation. Of course, Sarah Allen's April 24th email to Joe Cordaro of the National Oceanic and Atmospheric Administration (NOAA) (see section 2.2 above), and copied to her boss Superintendent Don Neubacher, made exactly the same point, that as of April 24, 2007, the park service had "no direct observations" of the oyster farm disturbing the harbor seals. Thus, NPS data did not support NPS claims.

3.7. Neubacher's and Allen's May 8th Testimony vs. the NPS Database Shows that Their Harbor Seal Claims were Fabricated and Falsified

Neubacher's May 8th testimony. Below I separate sentences from Neubacher's May 8th testimony and compare them to the NPS database. Every one of his claims is falsified or fabricated.

"To highlight this point, we believe because of recent actions taken, that the harbor seal pupping area in Drakes Estero is seriously threatened now."

NPS data: there were no "recent actions" by DBOC (e.g., no change in the location of oyster bags). There is no evidence showing that the harbor seals are "seriously threatened now."

"Dr. Allen is going to discuss this, but we have some major problems because you can see from your handout that pup bags [sic: he is referencing oyster bags and does so later in the testimony] have been recently put in pupping areas, you'll get statistics, but it's amazing how many pups we probably lost this year. We have a serious problem right now"

Oyster bags were not recently put in pupping areas. Rather, Neubacher and Allen changed the boundary of the pupping area of the map that they gave the Supervisors on May 8, and then used the altered map to manufacture this false claim. The NPS database shows no evidence for an amazing number of pups being lost in 2007, and shows no cause and effect due to DBOC. There is no evidence for a "serious problem right now."

"I mean it's that complex, because now you're talking about the Marine Mammal Commission - wrote us a letter this morning, they're going to take it up. This is a national issue. They're going to take it up on a national level."

Allen called the Marine Mammal Commission (MMC) several days prior to the May 8th hearing. In response, the MMC wrote to Neubacher asking for data to back up the NPS claims. Neubacher and Allen provided them with no data. When the MMC next met in late August, Drakes Estero was not on their agenda because PRNS never provided the requested data.

"Now here's another reason why the permit is not available at this time."

In later Q&A with the Supervisors, Neubacher denied that he was holding up the permit process for DBOC, but in his earlier testimony, he clearly stated that the harbor seal disturbances – which we know now to have been a false claim -- are "another reason why the permit is not available at this time."

"We could have a serious problem with our harbor seal population because of the recent activities. So we would hope that the Supervisors would meet with Coastal Commission staff and really get their perspective on the issue. They're an important player."

The NPS database shows that there was no change by DBOC and no recent activities. There was no serious problem with the harbor seal population. But Neubacher had made these same claims to the CCC, and we know from the letter from Peter Douglas, executive director of the California Coastal Commission, to Kevin Lunny, owner of DBOC, on June 5, that Neubacher's and Allen's false harbor seal claims had a profound influence on the CCC. Neubacher had negatively influenced the CCC, and now wanted the Marin Supervisors to consult with them.

"We have to do an environmental analysis. We're pretty much complete. All those maps are basically developed for the environmental analysis."

Neubacher stated that the altered map he had given the Marin Supervisors, the map with the arbitrary altered boundary for the seal pupping area that now includes the oyster bag area on island UEN, was made for the ongoing environmental analysis. This map has never been given to DBOC or CDFG.

We didn't know there were that many bags in the pupping area.

This is not true, and Neubacher knew it. He knew there was no change in the placement of oyster bags, and he knew that there were no bags where seals were pupping. He manipulated the boundary on the map so as to include the oyster bag area. The oyster bags are where they have been for decades. There were no oyster bags on sandbar A. But with Neubacher's new altered map, he acted surprised and concluded that many bags were now in the pupping area.

Allen May 8th testimony. Neubacher was followed in his testimony on May 8th by staff scientist Sarah Allen. Below I separate sentences from Allen's May 8th testimony and compare them to the NPS database. Every one of her claims is falsified or fabricated.

"Over the past few weeks we have documented oyster operations disturbing mothers with pups and oyster bags left on sandbars where seals would normally give birth and nurse their pups. The harm is resulting in abandonment of one area where more than 250 seals, including 100 pups two years ago occurred in that spot, this year chronic disturbance and placement of bags on the nursery area has caused an 80% reduction in the seals dropping to around 25 this last Saturday."

The NPS database does not contain the documentation of the oyster operations disturbing mothers with their pups during the few weeks prior to May 8. There is no evidence that oyster bags were moved to the sandbar areas where seals would normally give birth and nurse their pups. The oyster bags were located where they had always been. According to the NPS database, the area that was abandoned by the seals in 2007 was mainland sandbar A. The NPS database also shows that the disturbances at sandbar A were due largely to PRNS visitors. There is not a single record of disturbances by the oyster farm on sandbar A. There were zero oyster bags on sandbar A. There is absolutely no evidence that the oyster farm had anything to do with the 80% reduction in the seals on sandbar A.

“... dropping to around 25 this last Saturday. I was out there on Saturday.”

Allen refers to the last Saturday, which was May 5. The NPS database contains no record for May 5. If these observations were important, then they should have been entered into the database. Even if she had made observations on May 5, she knew that there were no oyster bags on sandbar A, and thus the claim of “placement of bags” causing an “80% reduction” is fabricated.

“This issue has been raised, has been received and recognized by the Marine Mammal Commission and we’ve received a FAX today from the executive director of the Marine Mammal Commission because they’ve just heard about this which I will provide to you. And they’re going to bring it up in their next commission meeting because it has national significance.”

As mentioned above, the Marine Mammal Commission asked Neubacher and Allen for data supporting their claims, and when no data was provided to them, the issue of Drakes Estero never appeared on the agenda of their next commission meeting in late August.

In summary, when we dissect Neubacher’s and Allen’s May 8th testimony concerning the alleged negative impact of the oyster farm on the harbor seals, we find that each claim is false or fabricated. The NPS database does not support a single one of the harbor seal claims they made that day in their public testimony.

4. Oyster Feces

Oysters generate waste matter called feces or pseudofeces. Neubacher’s and Allen’s official NPS Drakes Estero Report claimed that oyster feces are the primary source of sediment in the estero and that this sediment is smothering native species and ruining the ecology of the estero.

4.1. NPS Oyster Feces Claims

In the April 26, 2007 article in the Point Reyes Light entitled *Coastal Wilderness* by Sarah Allen (PRNS), Jules Evens, and John Kelly, they wrote:

“Research has identified oyster feces as the primary source of sediment in the Estero, and this sediment smothers native species.”

In the May 1, 2007 article in the Coastal Post entitled *Save Drakes Estero* by the Sierra Club Marin Group, Environmental Action Committee (EAC), National Parks Conservation Association, Audubon, and Wilderness Watch, they wrote:

“Furthermore oyster feces add sediments to the eelgrass beds of the Estero. Researchers from the U.S. Geological Survey identified the feces of oysters – as much as a metric ton per 60 meter square oyster raft – as the primary source of sedimentation, which degrades eelgrass habitat and its ability to support abundant marine life.”

As previously referenced, Fred Smith, Executive Director of the EAC, told me in my office on July 19 that they relied on the PRNS for these claims and data.

In the early 2007 version of the official NPS Report entitled *Drakes Estero: A Sheltered Wilderness Estuary*, Neubacher and Allen wrote:

“A USGS researcher stated that a primary source for sediment fill in the estero was from oyster feces and from structures trapping sediment.”

The word “primary” got dropped from this sentence in the May 8th version. But the word “primary” remained in all versions in the following statement. In the early 2007, May 8th, and May 11th versions of the official NPS Drakes Estero Report entitled *Drakes Estero: A Sheltered Wilderness Estuary*, Neubacher and Allen wrote:

“USGS (Anima 1990) collected sediment cores from the estero and identified pseudo feces of oysters as the primary source for sediment fill, as has been seen in studies elsewhere. An estimate of 0.6 to 1.0 metric tons of fecal matter can be produced per year by a 60 m square oyster raft.”

In the July 2007 issue of the *Yodeler*, the newspaper of the San Francisco Bay Chapter of the Sierra Club, Gordon Bennett, Chair of the Sierra Club Marin Group, wrote:

“Oyster feces add sediments to the eelgrass beds. The USGS identified oyster feces as much as a metric tonne per 60-meter-square oyster raft as a primary source of sedimentation degrading eelgrass habitat and its ability to support abundant life.”

As described below, all of these claims concerning oyster feces in the sediments in Drakes Estero are wrong. The USGS researcher never studied oyster feces.

4.2. NPS Oyster Feces Claims Influenced Other Agencies

The NPS oyster feces claim appeared in a letter from Peter Douglas, executive director of the California Coastal Commission, to Kevin Lunny, owner of DBOC, on June 5. Douglas wrote:

“Oyster farming has a number of impacts on eelgrass: it reduces the amount of light

available to eelgrass beds because of shading of racks; it increases the amount of sedimentation and turbidity due to deposition of oyster pseudo-feces and trapping sediment ..."

In summary, Neubacher and Allen, and local environmentalists including Gordon Bennett, made claims about the impact of oyster feces on sediments in the estero, and on smothering the eelgrass beds and other native species. They claimed that Dr. Robert Anima, a USGS research, had shown this in his 1991 USGS study sponsored by the NPS. They led local environmentalists and other agencies to believe that oyster feces were a serious problem in Drakes Estero. Are these statements true? Did Anima study oyster feces in sediment cores from Drakes Estero? The answer is no.

4.3. NPS Oyster Feces Claims vs. NPS Data

The NPS kept making this claim about oyster feces smothering the eelgrass in Drake's Estero, and others kept repeating it. But it is not true. The USGS researcher referenced in all of these quotes is Dr. Roberto Anima, and the study cited is Anima (1991) (incorrectly cited as 1990 in the PRNS report). Anima's USGS study was commissioned by the PRNS to study the impact of the surrounding ranches on the levels of sediments, herbicides, pesticides, and nutrients in Drakes Estero. In scientific reports and publications, data are presented in the results section of the papers. In the 55 pages Anima devoted to presenting his data (his "results"), he never mentioned the word "feces" once, because he never studied oyster feces. This claim was fabricated.

Anima found that the rate of sedimentation in Drakes Estero is similar to other west coast estuaries that lack oysters such as Abbott's Lagoon. He found that there are no significant levels of herbicides or pesticides in Drakes Estero. He found that there are no significant nutrients flowing into the Estero from the surrounding ranch lands. Although the study set out to find negative impacts from the ranches, Anima found none. The PRNS never told the public the truth about what Anima found because it doesn't support their agenda. This is a case of selective omission.

Anima never studied oyster feces. But in his concluding comments, he recommended that in the future, someone should study their impact on the sediments in Drake's Estero.

In all versions of the official NPS Drakes Estero Report, Neubacher and Allen wrote:

"An estimate of 0.6 to 1.0 metric tons of fecal matter can be produced per year by a 60 m square oyster raft."

They placed this sentence just after a reference to Anima's paper, and just before another reference to the same paper. This cleverly makes it seem as if Anima not only studied oyster feces in Drakes Estero, which he did not, but that he also produced quantitative (and shocking) numbers on the amount of oyster feces produced in Drakes Estero, which he did not. Since no other reference is given to this sentence, the reader is

left to assume that these numbers come from USGS research Anima and that they come from Drakes Estero. The local environmental groups repeated these numbers and attributed them to Anima and Drakes Estero on May 1st in their Coastal Post article, and again in July in their Yodeler article. On July 19th, Fred Smith, executive director of the Environmental Action Committee, told me that the EAC and other groups relied on PRNS for the claims, data, and references in their May 1st Coastal Post article.

Do these quantitative numbers come from USGS researcher Robert Anima? Nothing could be further from the truth. This is not data collected by Anima. It is not data from Drakes Estero and is not from a USGS study. This quote does not come from Anima's data, but rather can be found in his recommendations section at the end of his paper, and is attributed to a completely different 1955 study (Ito and Imai, 1955) of an oyster farm in Japan. Anima (1991) wrote:

"Ito and Imai (1955) calculated that in Japanese waters a raft of oysters 60 m square would annually produce 0.6 to 1.0 metric tons (dry weight) of fecal material."

Neubacher and Allen misled the reader by selectively omitting a key part of the sentence from Anima's paper. They eliminated the citation and any mention of Japan, and thus led the reader to think that this referred to Drakes Estero. And when they read articles by local supporters repeating this misquote (e.g., on May 1st), they remained silent; Neubacher and Allen did not correct the record. Thus, in quoting quantitative numbers of oyster feces, the PRNS misrepresented Anima's study, misled the reader, and did not stop others from inadvertently repeating this false claim in local newspapers.

Dr. Sarah Allen should have known that Anima did not study oyster feces, and did not identify oyster feces in sediment cores from Drakes Estero. Allen has a PhD in marine ecology. All she had to do was read Anima's 1991 paper that she quoted in the NPS Drakes Estero Report.

However, Allen was also told. Jill Baltan (California Department of Public Health) told Kevin Lunny (owner of DBOC) on June 9, 2007 that during the previous summer (August 2006) she told Allen that the NPS was misquoting Anima's USGS study. Baltan told Lunny that she told Allen that Anima did not study oyster feces and that Allen was misrepresenting Anima's study. But Allen did not correct that misrepresentation, and she continued to make this same false claim in her April 26, 2007 article in the Point Reyes Light, and in the May 8th and May 11th versions of the official NPS Drakes Estero Report. Although Jarvis and Neubacher stated in their September 18th "clarification" document that when they find errors they correct them, this has not been the case.

Neubacher and Allen were informed of their many misrepresentations, including the way in which they were misquoting the Anima USGS study, in my May 8th testimony (in their presence) and my detailed reports on May 8 and May 29, 2007. Although they published revised versions of their NPS Drakes Estero Report on May 8th and May 11th,

they neither corrected this misquote concerning oyster feces in their NPS Drakes Estero Report nor retracted their public claims.

Their refusal to retract their misrepresentation of Anima's paper runs deeper than that. On May 21, I telephoned Dr. Anima and spoke with him about his study on Drake's Estero. Anima told me that the PRNS had misquoted his report. He also told me that Sarah Allen had called both him and his supervisor the week after I released my first report on May 8th (the week of May 14-18). He described to me how he had told Allen that the PRNS references to his study were wrong. Why did Allen call his supervisor? He told me that during that same week, Allen had emailed him the quotes about his study, had asked for his support, and that he had emailed back saying that these were misquotes.

I requested those emails, as well as notes of their phone conversations, between Roberto Anima and Sarah Allen in my 3rd FOIA request on May 29, 2007 (item 3 in that request). On August 8, long after the 20 day FOIA deadline, Jarvis finally responded to my FOIA request, and sent copies of a series of emails between Anima and Allen, including one on May 15. But missing was the key initial email exchange between Allen and Anima on May 15 (or possibly the day before on May 14).

Jarvis sent me an email from Allen to Anima on May 15. This email begins "*Many thanks for your quick reply.*" Where is his reply email being referenced, and what is he replying to? Those are the two key emails that likely show her sending him the misquotes of his paper, and him saying that he was being misquoted. They are what I was seeking, and these two key emails are conspicuously absent. This is yet another example of a selective omission: Jarvis refused to send the key emails that I requested by FOIA.

Allen and Neubacher did not change their official NPS Report in May or June or most of July, even though they had been told by Baltan, Goodman, and Anima that they were misrepresenting Anima's study. They knew they had fabricated claims about what Anima studied and found, but no corrections were made. Neubacher only took down his NPS Drakes Estero Report on July 23 after Senator Feinstein insisted that he do so at her Olema meeting with Director Bomar on July 21.

When interviewed by Thomas Yeatts of the Point Reyes Light on June 12, Sarah Allen confirmed "*that Anima did not collect samples looking at oyster feces.*" Then why did she and Neubacher misquote Anima in their official report? Why did they repeat this claim to local environmental groups and the CCC? Why did they leave their report with false claims on their web site until July 23 when Feinstein and Bomar forced them to take it down?

Not only did Neubacher and Allen misquote Anima's 1991 study and falsely claim that he had studied oyster feces in Drakes Estero, but they failed to quote another PRNS/NPS study (Elliott-Fisk et al., 2005; on which Allen is a co-author) that did in fact

study oyster feces in Drakes Estero, and found no problem. In other words, they combined fabrication with selective omission.

The PRNS did ultimately follow Anima's suggestion to study oyster feces in the Estero. The PRNS funded a study by UC Davis professor Deborah Elliott-Fisk and master's student Angie Harbin, to answer this question. A 2005 summary report by Elliott-Fisk, Allen, Harbin, and others refers to Harbin's thesis when it concludes:

"Although pseudofeces from the suspended oysters may contribute to the amount of organic matter below the racks, adding to the system, the amount of organic matter resulting from eelgrass decomposition is likely far greater considering how expansive and dense the beds are within the estuary, making any significant organic inputs from the oysters undetectable in this study (Harbin 2004)."

Although the PRNS commissioned and collaborated in these studies, the official PRNS report never mentioned the fact that Elliott-Fisk and her students found no impact of oyster feces on the sediments or eelgrass.

In summary, Neubacher's and Allens' oyster feces claims combined fabrication of Anima's NPS-sponsored study with selective omission of Elliott-Fisk's NPS-sponsored study. This is another example of scientific misconduct.

5. NPS Fish Claims vs. NPS Data

In their official NPS Drakes Estero Report, Neubacher and Allen claimed that the oyster farm was having a serious negative impact on the fish populations in Drakes Estero. In the report they concluded:

"Schooner Bay, where there are many oyster racks, supported a different fish community than Estero de Limantour where no mariculture occurs."

The NPS report attributes this statement and other misleading statements about the impact of the oyster farm on the fish to Jesse Wechsler's masters thesis from U.C. Davis under the guidance of Professor Elliott-Fisk and supported by PRNS/NPS. But Wechsler's data supports just the opposite claim, and Goodman reminded Neubacher and Allen of this in his May 8th oral testimony and his May 8th and May 29th written reports. The oyster racks take up a small percentage of the area of Schooner Bay. Wechsler showed that the fish communities in the majority of Schooner Bay away from the oyster racks are identical to the fish communities in Estero de Limantour. For example, he wrote: *"Similar numbers of eelgrass dependent fish were observed in all sites."* Wechsler concluded:

"I found no statistically significant differences in fish abundance or species richness among the sampling locations, which indicated that the oyster farm had not exerted a noticeable effect on the ichthyofauna of Drake's Estero."

In the NPS report, Neubacher and Allen also misled the reader to think that there is a problem in Drakes Estero with the lack of herring. They wrote:

"Wechsler (2004) detected few Pacific herring; even though this species was historically found in high numbers and spawns in eelgrass beds (Blunt 1984)."

Thus, the herring are mentioned as something that Wechsler should have found, but did not, suggesting trouble with the eelgrass beds. Of course, the eelgrass-dependent fish are thriving in the arm of the Estero that contains oyster racks. So how about the herring? Because most of his samples were outside the seasonal (December-January) period in which schools of herring enter the Estero to spawn, Wechsler missed the herring season all together. He trapped only one herring in Limantour (the estero without oyster racks) and none in Drake's Estero.

The reader will no doubt know that the difference between 1/1242 herring to total fish trapped in Limantour vs. 0/840 herring to total fish trapped in Schooner Bay is not significant. This is a "red herring". In his master thesis, Wechsler made no comment about herring because he did not sample during the brief herring season. All of the regular eelgrass fish are thriving and their numbers are as good in Drake's Estero as they are at Estero de Limantour. Wechsler knew that he had nothing meaningful to say about herring because he never made a point about the herring. It is only the PRNS that grasped this difference (1 herring in Limantour vs. 0 herring in Schooner Bay) and made it into a conclusion worthy of their official NPS report on the NPS/DOI web site. This is a case of selective omission. They neglected to tell the reader that so few herring were found in Limantour that nothing could be concluded.

In summary, Neubacher's and Allens' fish claims were fabrications of Wechsler's NPS-sponsored masters. This is another example of scientific misconduct.

6. Correction of NPS Drakes Estero Report on July 25, 2007

On May 8th and May 29th, I issued reports which detailed how the NPS was misrepresenting Anima's paper and intentionally misleading the public and officials to think that there was a problem with oyster feces in Drakes Estero. I wrote the same in the July 1 issue of the Coastal Post.

At Feinstein's July 21 Olema meeting, the Senator and NPS Director Bomar insisted that Neubacher take his NPS Drakes Estero Report off of the PRNS/NPS web site, post a correction, and they asked me, Jarvis, and Moore (CDFG) to oversee getting the Report reviewed by an outside panel. On July 23rd, Neubacher took the Report down from his web site and posted the statement that it was under scientific review. On July 25th, Neubacher posted a correction on his web site. He corrected only those two claims that had been the focus of my May 29th report: the misrepresentations concerning oyster feces and fish.

Neubacher's correction is cleverly worded. Instead of saying that he misquoted Anima's USGS study, he wrote: *"The NPS incorrectly interpreted the report ..."* and thus confused misrepresentations of facts with an error of interpretation.

Neubacher's correction never clearly stated that Anima never studied oyster feces. He wrote: *"Although, Anima did not quantify sedimentation related to the oyster farming, he*

references another study ..." and then gave the Japanese reference to Ito and Imai (1955). Here too he leaves the reader thinking that perhaps Anima really did study oyster feces, but he just did not quantify them. This misleading correction remains on the PRNS/NPS web site as of the writing of this case report.

In the July 25th correction, Neubacher discussed the fish claims when he wrote:

"Fish research in Drakes Estero conducted by Jesse Wechsler, a geography graduate student at UC Davis, resulted in his Master's thesis (Wechsler 2004) and contributed to a report to the National Park Service (Elliott-Fisk 2005). The NPS incorrectly interpreted that the Estero de Limantour supports a different fish community than Schooner Bay. To clarify, the fish found at sampling sites in Estero de Limantour were most different from sites associated with the oyster racks in Schooner Bay, not the entirety of Schooner Bay. Although not tested for statistical significance, Wechsler reports that "Four of the five indices used to assess the similarity of the fish assemblage showed the greatest compositional divergence was between Estero de Limantour and Schooner Bay Adjacent."

Once again, they describe their error as one of "interpretation" rather than of misquote of facts. Neubacher and Allen misrepresented Wechsler's study and misquoted it as saying just the opposite of what Wechsler actually reported.

Neubacher ended his July 25 correction with the comment:

"NPS acknowledges the errors and will periodically update information when corrections and new information are available."

There has been no further update since July 25, even though they essentially fully retracted the harbor seal, oyster feces, and fish claims on September 18 (see below). They never updated this correction concerning the harbor seal claims, even though those too were retracted on September 18. They only corrected the two issues that were the focus of my May 29th report, and they did so in a misleading fashion.

7. Retraction of Neubacher's and Allen's May 8th and May 11th Claims in the September 18 "Clarification" Document

In section 9 below, I discuss the issues leading up to the September 18 "clarification" document from Jarvis and Neubacher, how it was made public contrary to Senator Feinstein's directive at the July 21 Olema meeting, and how it was part of a public relations campaign to discredit the National Academy of Sciences member who had brought forward the allegations. Here we will examine the cleverly disguised retractions in that document.

In the September 18 "clarification" document from Jarvis and Neubacher, they finally completely retracted the harbor seal, oyster feces, and fish claims, but embedded the retraction in an 18-page attack on me. Jarvis and Neubacher used cleverly twisted syntax to disguise the fact that this was a retraction of most of Neubacher's and Allen's May 8th and May 11th major claims. Local supporters have implied that this document

is peer-reviewed and that it validates the NPS Drakes Estero Report. A reader has to dig through 18 pages of straw man attacks on me to find the retraction statements.

On May 8th, the Superintendent claimed clear evidence that the oyster farm was negatively impacting the harbor seals and seal pups, and said that it was a national emergency. Four months later, knowing about my allegations of scientific misconduct, and of course knowing that they had (reluctantly) given me the NPS database for 1997-2007, Neubacher and Jarvis cleverly retracted these claims. But they disguised their retraction as an attack on Goodman and a validation of their claims.

Concerning the harbor seal claims, they retracted their claims when they wrote:

“More focused analyses are required to determine if oyster operations are affecting seal distribution and productivity within Drakes Estero. The overall Drakes Estero and regional population declined in 2007, but not necessarily in response to the oyster farming operation.”

Nowhere in the September 18 “clarification” document do they talk about an 80% decline due to the oyster farm (which was their exclusive harbor seal conclusion in their May 11th NPs Drakes Estero Report). Nowhere do they talk about the loss of seal pups. Nowhere do they talk about oyster bags being placed in seal nursery sites. Nowhere do they claim cause and effect. Nowhere do they claim a national emergency. This is a clear retraction of their strong harbor seal claims from their May 8th testimony and May 11th official NPS report.

Concerning the oyster feces claims, they retracted their claims when they wrote:

“Dr. Goodman correctly points out errors or oversights by NPS regarding interpretation of a report by a USGS researcher (Anima 1990).”

“The NPS incorrectly interpreted the report by Dr. Roberto Anima (1990) that he had detected oyster pseudofeces in sediment core samples, that he estimated the amount of fecal matter produced by oyster rafts, and that he considered oyster farming as the primary source of sedimentation in the estero. NPS acknowledges the errors and clarifies here what Anima (1990) reported.”

“The Elliott-Fisk et al. (2005) report notes oyster feces are not a problem in Drakes Estero.”

Concerning the fish claims, they retracted their claims when they wrote:

“Dr. Goodman’s review of Wechsler’s thesis does point out several inconsistencies between Wechsler’s results and the PRNS Park News publication, “Drakes Estero – A Sheltered Wilderness Estuary.”

“In summary then, Wechsler’s thesis indicates that when he conducted his study prior to DBOC’s operations, mariculture in Drakes Estero had no measurable effects on fish species abundance, diversity, or richness, but may have had an effect on fish composition.”

In summary, in the September 18 “clarification” document, Jarvis and Neubacher retracted all of their major claims from May 8th and May 11th. Note their choice of words. They refer to Neubacher’s errors as ones of “interpretation” rather than ones of misquoting (i.e., fabricating) facts and selective omission.

In the “clarification”, Jarvis and Neubacher make the following statement:

“When we (NPS) become aware of errors, oversights, or new information, we update park publications, as we did with this publication while it was on the park website.”

Nothing could be further from the truth. It was two and one half months after I gave my May 8th public testimony and report that they finally took their Report down and posted a misleading correction. They did so because Senator Feinstein insisted they do so at her July 21 Olema meeting. And they still have never corrected their harbor seal claims. They finally issued the September 18 “clarification” with retractions of all of their claims, but cleverly disguised these retractions so that the public does not realize what they have done. Moreover, Jill Baltan told Allen in August of 2006 that NPS was misquoting Anima’s USGS study. It was eleven months from Baltan’s conversation to their July correction.

In issuing this cleverly disguised retraction on September 18th, Jarvis and Neubacher failed to follow the Department of Interior Code of Scientific Conduct (3/16/04).

8. Neubacher’s and Allen’s NPS claims vs. NPS data

In their public testimony on May 8th and in the May 8th and May 11th versions of their official NPS Drakes Estero Report, Neubacher and Allen misrepresented their own NPS data in making claims of negative impact of the oyster farm on Drakes Estero, and they did so repeatedly. The only reasonable conclusion is that these false claims were intentional. They were informed on multiple occasions that their accusations were false, and repeatedly failed to correct them. They also provided these false claims to local environmental groups who repeated them in newspaper articles. They made the same false accusations to other federal, state, and local agencies to influence public policy. Neubacher’s false claims had an impact on other agencies as can be seen in the various statements from the Marine Mammal Commission (MMC) and the California Coastal Commission (CCC). They have had a profound influence on policy decisions by the CCC.

Here is a summary of the NPS claims vs. the NPS data:

- (1) NPS claims of negative impact on the harbor seals were fabricated.
- (2) NPS claims of negative impact on harbor seal pups were fabricated.
- (3) NPS claims that oyster bags were in the seal nursery area were based on an arbitrarily altered map that was fabricated.

- (4) NPS claims that oyster bags had been moved into seal pupping areas were fabricated.
- (5) Key NPS harbor seal data that refuted the NPS claims and showed that disturbances were mostly from PRNS visitors were selectively omitted.
- (6) NPS claims that the harm to harbor seals by the oyster farm were so significant as to be of national significance were fabricated.
- (7) NPS April 26 Trip Report provided to the CCC is not in the harbor seal database, is inconsistent with NPS database protocols, is inconsistent with other facts, and may have been fabricated.
- (8) NPS claims that a USGS researcher (Anima, 1991) showed that oyster feces were the primary source of sediment in Drakes Estero were fabricated.
- (9) NPS assertion that Anima quantified the amount of oyster feces in Drakes Estero selectively omitted that the data came from a 1955 study in Japan.
- (10) Harbin's and Elliott-Fisk's 2005 NPS-funded study showing oyster feces are not a primary source of sediment in the estero was selectively omitted.
- (11) NPS selectively misquoted Wechsler's 2004 NPS-funded study on the impact of the oyster farm on fish populations in Drakes Estero; NPS claims of negative impact on the fish populations were fabricated.

Neubacher's and Allen's misrepresentations are based upon fabrication, falsification, and selective omission of NPS data. These false claims influenced public policy decisions. They appear to exceed the threshold for the NRC and nearly-identical Federal definition of scientific misconduct. They have had major negative harm on Kevin and Nancy Lunny, their family, their oyster farm, and their ranch.

In this report, I have only described the most egregious examples of their misrepresentations of NPS data. There are others. But I hope that the examples focusing on harbor seals, oyster feces, and fish populations are sufficient to make the case that in their zeal to claim a negative impact of the oyster farm on Drakes Estero, Neubacher and Allen intentionally misrepresented their own NPS data.

In the May 8th and May 11th versions of their official NPS report, they concluded:

"Specifically in Drakes Estero, ecological function has been degraded and altered over the past several decades due to activities associated with oyster farming and ranching."

Neubacher and Allen did not have the data to support that claim. In fact, the NPS data suggests that the oyster farm and ranches have not harmed the ecology of Drake's Estero.

Prof. Edwin (Ted) Grosholz (U.C. Davis), in reviewing Sarah Allen's "response to Goodman" document (which became the September 18 "clarification" document), on July 15 wrote:

"In closing, I agree with Dr. Goodman that there are precious few data on which to base an assessment of the impacts of oyster mariculture on the ecological health of Drake's Estero."

Although they extensively quote from him, this quote from Grosholz never made it into the September 18 "clarification" document, just as PRNS never clearly stated that they do not have the data to support the claims they made in April and May. Neubacher and Allen never said there was little data upon which to base any conclusions. Neubacher and Allen claimed clear evidence of the oyster farm disturbing the harbor seals. Neubacher and Allen intentionally misrepresented the NPS science and committed scientific misconduct. This misconduct caused harm to the Lunny family.

When this misconduct was pointed out to NPS by a member of the National Academy of Sciences, Jarvis and Graber participated, along with Neubacher, in a cover-up of this misconduct, refusing to investigate the alleged misconduct, preventing the NAS member from gaining access to the data, allowing a misleading "correction" to be posted on the NPS web site, and reviewing and releasing a "clarification" report that disguised Neubacher's retraction of their May 8th and May 11th claims while attempting to discredit the NAS member, effectively trying to discredit the National Academy of Sciences member. They also abused the FOIA process.

9. Neubacher Claimed Environmental Harm by DBOC on April 5th Before Any Data Supporting his Claims Existed

This case for scientific misconduct has its roots in a meeting that took place at PRNS between Superintendent Don Neubacher, Supervisor Steve Kinsey, and his aide Liza Crosse on April 5, 2007. Kinsey then met with Kevin and Nancy Lunny (owners of Drakes Bay Oyster Company, DBOC), a representative from Senator Feinstein's office, and other advisors on April 11. At the April 11th meeting, Kinsey described the previous meeting with Neubacher. I learned of the April 11th meeting on May 13th when I met with Kevin Lunny, members of his family, and David Weiman (a consultant to DBOC) for the first time to discuss this issue. What I learned on May 13th put the May 8th hearing into better perspective. What Neubacher told Kinsey on April 5, and what Kinsey reported to Lunny on April 11th, shocked everyone involved. Given the timeline of the NPS-sponsored reports and NPS data, it is more shocking today. It sets the stage for the misconduct that transpired in April and May.

Lunny recounted to me on May 13th that on April 11th, Kinsey told him how Neubacher, in what Kinsey called the "war room" (full of photos alleging ecological harm by DBOC), had said that he was "going to war" against DBOC and the Lunny family. Neubacher told Kinsey that the "evidence" for ecological harm was so great (he called it "overwhelming") that it warranted extreme measures that would include "civil and criminal" action and "cease and desist" orders. Permit discussions were over. He said the

California Coastal Commission (CCC) was fully on board with the NPS. Kinsey was told that the Center for Biological Diversity might get involved. Lunny said his family felt terrified and under assault. Kinsey later repeated Neubacher's claims to his fellow Supervisors.

Although not present at the April 11th meeting, I have heard about it from four people who were present. Moreover, I was present at Senator Feinstein's Olema meeting on July 21st where Supervisor Kinsey confirmed his April 5 conversation with Neubacher. At the July 21st Olema meeting, Neubacher denied making these threats towards DBOC, and as a result, Kinsey turned to face Neubacher across the table and said "*Don, don't you remember ...*" It was a chilling moment. Neubacher was speechless. Kinsey confirmed for all of us the threats towards DBOC made by Neubacher in early April. By his silence, Neubacher confirmed everything that Kinsey said.

What is striking about the April 5 meeting and Neubacher's pronouncements of grave ecological harm is the timeline. As of April 11, there was no evidence of ecological damage to Drakes Estero by DBOC, not in the NPS harbor seal database, not in the NPS harbor seal monitoring reports, and not in various NPS-sponsored reports and publications. If we look back at the timeline, there was no scientific basis for making those statements on April 5. On April 24th, Sarah Allen sent an email to Joe Cordaro of NOAA, and copied to Don Neubacher, saying that they had "no direct observations" of the oyster farm disturbing the harbor seals. Yet by May 8, claims of "data" had suddenly appeared. The harbor seal claims loomed largest in Neubacher's and Allen's May 8th testimony, yet as of April 5th, there were no records of seals getting flushed into the water by the oyster farm, even though there were over 2000 seal flushings to date during the 2005 to early April 2007 Lunny ownership. The NPS "evidence" began to appear immediately after April 5th. Neubacher's accusations of ecological harm and his pronouncement of "war" pre-dated the fabrication of the seal claims and data. And they predated Allen's stunning admission by email of "no direct observations."

10. The Ensuing Attempt to Cover-up Neubacher's Misconduct by Neubacher, Regional Director Jon Jarvis & Chief Scientist Dave Graber

Pacific West Regional Director Jon Jarvis, Neubacher's supervisor, had many opportunities to investigate these allegations and make sure that false claims were retracted in a timely fashion, but he did not. When a member of the National Academy of Sciences (NAS) accuses a NPS Superintendent of intentional scientific misconduct, and provides multiple detailed written reports documenting that allegation, one would ethically expect the Superintendent's supervisor to take these allegations seriously and to investigate them. In academia, if a scientist is accused of fraud by a respected member of the community, the institution and granting agency would immediately lock down the data and notebooks, and set up an independent panel to look at the data and investigate the allegations.

But in the case of Superintendent Neubacher, Jarvis did not do any of this. On May 8th and May 29th, I provided detailed written reports documenting Neubacher's intentional

misrepresentations. There is no evidence that Jarvis did anything about these reports other than to begin a carefully orchestrated rebuttal and attempt to discredit the National Academy of Sciences member that culminated in their September 18 “clarification” document.

No one from NPS contacted me about the allegations made in my May 8th and May 29th reports. As a result, on July 21st, I handed a PowerPoint presentation to Solicitor Molly Ross describing an initial part of the case for scientific misconduct (“A Case of Scientific Fraud” focused on the misrepresentations of Anima; Goodman’s misconduct report #1) and told her that as a member of the NAS, I took the implications of my allegations very seriously and asked her to do the same. On July 22nd, I provided the same document to Jon Jarvis. Molly Ross never got back in touch with me. Jarvis told me on August 17th that he had not investigated the claims vs. the data. To date, no one from NPS has contacted me about these allegations.

Jarvis’ Chief Scientist, Dave Graber, in an email to Sarah Allen on July 13th, addressed her “*Hiya*”, and gave her suggestions to help her rebut Goodman’s criticisms so that certain points would get “*gently hammered home.*” Wasn’t it Graber’s ethical responsibility to investigate this allegation of scientific misconduct by locking down the data and notebooks and examining the data himself? There is no evidence that Graber ever did a hands-on investigation of the allegations. However, the DOI Code of Scientific Conduct required that Graber place objectivity of scientific activities ahead of allegiance to individuals or organizations. Unfortunately, he did not do so.

He admitted to me by email on August 20th that he knew nothing about the harbor seal database, suggesting that he never investigated the primary harbor seal data, even though I had questioned the validity of their harbor seal data as early as May 8th. He acted as if his role was to help Sarah Allen blunt my criticism, when his role should have been to take the allegations seriously and investigate them. On August 20, Graber told me he would find out about the 25 years of excluded data, and the database key, in early September, and get back to me. I’ve never heard back from him since about it.

When I submitted FOIA requests on May 12th and 13th seeking data referenced in Neubacher’s and Allen’s public testimony to further analyze this misconduct, Jarvis used a questionable exemption (deliberative process privilege) to deny access to data. However, DOI policy excludes data from FOIA exemption #5. Thus, the denial of data using this exemption was inappropriate. Moreover, the NPS had testified publicly about this data, and thus it was no longer predecisional. In addition, certain environmental groups had been given access to the same harbor seal data.

When I received the FOIA denial letter dated June 13 from Director Jarvis, I first considered whether there might be a misunderstanding that could be clarified by a telephone call. On Wednesday June 20th, I contacted Holly Bundock, Jarvis’ Regional FOIA Officer, explained that I had requested data, that I received no data, and asked her if she and/or Director Jarvis had been unclear as to what I was requesting, and if so, if further clarification might change their response. She assured me that she needed no

further clarification, that she knew that I had requested “data”, that she knew the definition of “data” from the DOI FOIA Handbook, and that she knew that exemption 5 does not apply to “data”. Rather, she explained, there was nothing that she could do, that the decision of what information was provided to me had been made not by her office, but rather by the PRNS staff (even though Jarvis signed the letter), and that my only recourse was to appeal to the DOI. Jarvis and his staff abused the FOIA process to prevent access to data that Neubacher and Allen had publicly quoted. Jarvis and his staff also inappropriately denied data and misused exemption 5: deliberative process privilege.

Jarvis and Graber did not do their jobs by examining the primary data, but instead tried to prevent me from further investigating this misconduct. Senator Feinstein ultimately prevailed at her Olema meeting on July 21st in getting NPS to send me some but not all of the requested data on August 13th. On August 8th, Jarvis denied the existence of certain data (harbor seal legacy data from 1973 to 1997) that clearly exists and has been referenced in numerous Sarah Allen publications. When I asked Jarvis about the missing data on August 17th, he told me that Graber would get me the missing data, but nothing has ever arrived. Seven months later, I still do not have all of the data I requested on May 12th and 13th. And I also do not have all of the documents requested on May 29th.

I was surprised when Jarvis’ office sent me the September 18 “clarification” document, but it now appears as if this was part of an orchestrated attack on me. Gordon Bennett from the Sierra Club submitted a FOIA request and got the September 18 document within a few days. How did he know it existed? Neubacher’s office gave it to a local newspaper reporter (Ian Fein of the West Marin Citizen) within a few days, on the grounds that it had been released to Gordon Bennett after a FOIA request. Local supporters of PRNS have gotten other documents by FOIA within a few days. Gordon Bennett was given access to harbor seal data that was denied to me. Yet five months after submitting two FOIA requests, I still do not have key published data. This pattern suggests that Jarvis and Neubacher have abused the FOIA to hide certain data while selectively leaking other documents to supporters or reporters. It is a double standard use of the FOIA process.

Jarvis diverted attention away from his Superintendent and instead participated in an active public relations campaign to discredit Goodman, the scientist and National Academy of Sciences member who brought forward the allegations. Rather than investigating his Superintendent (as would be expected in such circumstances), Jarvis has instead worked in coordination with Neubacher to cover-up the misconduct, discredit the accuser, and blunt the public criticism. Most important, all of these actions have continued to harm Kevin Lunny, his family, and his oyster farm.

Jarvis and Neubacher coordinated the release of the September 18 “clarification” document to the local press and environmental groups, a document which has confused some in the public to believe that this new report represents peer review, which it does not, and that it vindicates Neubacher’s claims and official report, which it does not. The

September 18 clarification document is a cleverly worded retraction of Neubacher's earlier claims (saying that they do not have sufficient data and need more studies) disguised as a repudiation of Goodman's May 8 report.

On July 30, 2007, Jarvis emailed me and said that outside scientists had "*reviewed the Drakes Estero document ...*" and told me he would get me their reviews, confirming the same statement and promise he made to me after the July 21 Olema meeting. The reviews, in the form of a random set of emails and revisions of Allen's "response to Goodman", appeared in my mail on September 11th along with the "clarification" document.

Jarvis told me at the July 21 Olema meeting, and again in his email on July 30, that these reviews and resulting document present a peer-review of the NPS Drakes Estero Report, but the "clarification" is nothing of the kind. It is a cleverly disguised retraction of Neubacher's and Allen's previous claims. It appears as if none of the 11 outside reviewers (it is still unclear how many were asked to participate) was asked to review the official NPS Drakes Estero Report. It appears as if the NPS Report was not sent to most or all of them for review. The first sentence of the "clarification" report says that it is in response to Goodman's May 8 and May 29 Reports. Nevertheless, it is unclear whether any of them was sent the May 29 Report. Some were provided Goodman's May 8 Report. All were provided Allen's "response to Goodman", and asked to help rebut Goodman's criticisms. We are not told what they received.

Evidence exists for at least 13 reviewers, including two not listed on the first page -- Roberto Anima at U.S.G.S. and Peter Moyle at U.C. Davis. I do not know if there were others. The process has not been transparent. Peter Moyle is listed as a reviewer in one draft of the document, and his comments were sent to me, but his name is not listed amongst the 11 reviewers of the final document. We don't know for sure who was approached, what they were sent, or what they were asked to do. Were they all sent the same documents? Many of the reviewers are NPS employees. Others are current or past collaborators or NPS-sponsored scientists. Some are local supporters or Sarah Allen co-authors. Others still are former colleagues who have worked at PRNS. Are any of them truly independent? It appears as if many of the outside reviewers did not have access to the NPS database. None were apparently given Anima's 1991 USGS report. None appear to have reviewed the Drakes Estero Report. This is not peer-review as defined by NPS, and it is not good scholarly practice as required by NPS management policies.

Finally, the September 18 "clarification" document concludes:

"No data have been presented to support the claim of ecological benefits to Drakes Estero from the DBOC."

An earlier version of the document started that sentence with "*Goodman has presented no data to support ...*" This is what is called a straw man argument. A straw man is defined in Wikipedia as an informal fallacy based on misrepresentation of an opponent's

position. To set up a straw man argument is to create a position that is easy to refute, and then attribute that position to the opponent. It is an intentional misrepresentation that may succeed in persuading people but is in fact misleading.

Bottom line: I never made such a claim of positive impact, and only quoted NPS-sponsored studies. Rather, I simply said that NPS did not have the data to claim a negative impact. Their misconduct was fabricating and misrepresenting reports and data to make such a claim. In my May 8 report (the one the “clarification” attempts to refute), I concluded:

“The scientific record is clear: there is no evidence that Lunny’s oyster farm is having a negative impact on the eelgrass, sediment, or harbor seal pups.”

This is just another intentional misrepresentation by Neubacher and Allen, but this time with help from Jarvis. In this case, it is not NPS data they are misrepresenting, but rather my May 8th report. By the way, on two different occasions – after the July 21 Olema meeting and when we met in his office on August 17 – Jarvis tried to get me to make such a declaration of positive impact of the oyster farm on Drakes Estero. In each case, I told him that he was misquoting me, that I had never made such a statement, and would not do so. Is it just a coincidence that the unsigned NPS “clarification” document was being revised during July and August?

In summary, Director Jarvis has not investigated his Superintendent, but instead has participated, along with Chief Scientist Graber, in a cover up to protect Neubacher.

11. Conclusions

This case is about four NPS employees – Don Neubacher, Dr. Sarah Allen, Jon Jarvis, and Dr. David Graber -- who violated the White House Office of Science Technology and Policy (OSTP) Federal policy on research misconduct as established in 2000. This Federal policy applies to all Federally-funded research. Neubacher and Allen allegedly participated in the primary scientific misconduct of intentional fabrication and falsification. Neubacher, Jarvis, Graber, and Department of the Interior (DOI) Solicitor’s Office attorney Molly Ross did not properly investigate these serious allegations in an objective and timely fashion, and thus are also allegedly in violation of multiple sections of the OSTP Federal policy.

In summary, National Park Service Superintendent Don Neubacher and Staff Scientist Sarah Allen allegedly violated sections I.1 and I.2 of the OSTP Federal policy on research misconduct. Pacific West Regional Director Jon Jarvis, Regional Chief Scientists David Graber, and Superintendent Neubacher attempted to cover-up this NPS misconduct, and in so doing allegedly violated sections III.3, IV.1, IV.3, IV.4, V.1, and V.2 of the OSTP Federal policy on research misconduct. Finally, by failing to properly investigate the misconduct in an objective and timely fashion, attorney Molly Ross of the DOI Solicitor’s Office allegedly violated sections III.3, IV.3, IV.4, V.1, and V.2 of the OSTP Federal policy.

12. Epilogue

I am a scientist. I am an elected member of the National Academy of Sciences. I am a resident in West Marin. And most of all, I have a deep interest at the interface of science and public policy, which is why I served for six years as Chair of the Board on Life Sciences of the National Research Council, and today serve on the California Council on Science and Technology. I care deeply about the role of science in public policy. My focus is to seek the truth.

On April 26 and May 1, 2007, I read articles in the Point Reyes Light and the Coastal Post that, to me, simply weren't credible. I went to the sources. I read the NPS science. I reviewed NPS-funded reports. As a scientist, I am trained to seek the facts. I searched for the truth. But I found distortion. I realized this was scientific misconduct.

I elected to write my findings down, and present an abbreviated version of them verbally, in the form of public testimony to our elected officials in Marin County on May 8th. That same day, I listened to NPS employees make even more provocative claims, and I warned the Supervisors to be suspicious of new claims based on unpublished data. Copies of my testimony, letters, and FOIA requests were submitted to NPS during the month of May. They were not answered. They were ignored. Data was not provided. Senator Feinstein invited me to a meeting on July 21st in Olema. NPS Director Mary Bomar attended, as did Regional Director Jarvis, Superintendent Neubacher, and attorney Molly Ross from the DOI Solicitor's Office. Feinstein directed the NPS to provide me with the data. Some but not all of that data arrived. What it revealed was shocking: the NPS data did not support the NPS claims.

A PowerPoint presentation (*A Case of Scientific Fraud: A pattern of intentional misrepresentation of science by the PRNS in its claims of negative impact of the oyster farm on Drakes Estero*) was submitted to Ross on July 21st and a day later to Jarvis. Since my May 8th testimony, May 29th supplemental testimony, July 21st PowerPoint, and numerous articles, not one individual from the DOI Solicitor's Office, or the NPS has contacted me -- even once -- to inquire about what I analyzed, how I did it, and what my findings were. Not a single call. Not a single email. Not a letter. Instead, silence. In early September, I published a second document alleging further scientific misconduct by NPS employees, based largely on the harbor seal data I obtained after Feinstein's July 21st Olema meeting. Again, not a single email or letter. Only silence.

There is either a distinct lack of curiosity at the Department of Interior and the National Park Service or an unspoken cone of silence imposed on this matter. I expected more professionalism from my government. I expected them to lock down the databases and notebooks and do an objective and timely investigation. None of this happened. Then on September 18th came a new document attacking me. No investigation. Just an attack on the National Academy of Sciences member who brought forward the allegations.

This is not how allegations of scientific misconduct are meant to be investigated. The White House Office of Science and Technology Policy (OSTP) issued the Federal policy

for research misconduct in December of 2000 which defines misconduct and how it should be investigated. None of these rules were followed by NPS or DOI. Certain NPS employees violated this Federal policy in their primary scientific misconduct. They and other NPS and DOI employees appear to have further violated the Federal policy in their cover-up of this misconduct and failure to properly investigate it.

The National Academy of Sciences weighed in on this issue and proposed a standardized policy defining scientific misconduct in 1992. The NAS supported the final OSTP Federal policy in 2000. This is why I am asking the NAS to investigate these allegations. The NPS and DOI are not willing to do so. If no one investigates these allegations, then the Federal policy, with its roots in the 1992 NAS report, will have no meaning and will invite violation. It will be a defeat for scientific integrity.

The citizens of our country deserve better. Our scientific community deserves better. We entrust the National Park Service with our sacred lands. We expect them to tell us the truth. We expect to be able to trust what they tell us about their scientific studies. If my allegations are correct, then this is a stunning example of fabrication and falsification.

Through the pending review, the National Academy of Sciences can provide clarity and integrity to this issue. It could be cleansing for the National Park Service to have it's misconduct exposed, if indeed it took place as I have alleged, and to have recommendations made for how it should clean up it's handling of scientific reports and testimony in the future, how it should conduct peer-review, and how it should communicate its findings with the public. Good science should lead policy, not pre-determined policy leading bad science. Even though this case involves an oyster farm, this case is not about oysters and oceans. Rather, it is about scientific misconduct.

cc:

Kevin and Nancy Lunny, owners Drakes Bay Oyster Company

Don Neubacher, Superintendent PRNS, NPS

Sarah Allen, Senior Staff Scientist PRNS, NPS

Jon Jarvis, West Regional Director, NPS

David Graber, West Regional Chief Scientist, NPS

Molly Ross, Solicitor's Office, Department of the Interior

Dianne Feinstein, U.S. Senator

Lynn Woolsey, U.S. Congresswoman

Mary Bomar, Director NPS

Steve Kinsey, Supervisor, Marin County

Peter Douglas, Executive Director, California Coastal Commission

Appendix 1. Timeline of events surrounding scientific misconduct

- 1991 Dr. Roberto Anima, U.S.G.S., files report 91-145 on Drakes Estero; does not study oyster feces in sediments; studies impact of ranches, finds little impact
- 1992 National Marine Fisheries Service (NMFS, NOAA) and NPS provide the oyster farm with protocols for oyster production during harbor seal pupping season, and a map of harbor seal haul-out and pupping areas
- 2004 Jesse Wechsler masters thesis at U.C. Davis on Drakes Estero; studies impact of oyster farm on fish; concludes no noticeable effect on fish in Drakes Estero
- 2005 Lunny family purchases oyster farm; PRNS gives Lunny protocols and a map of harbor seal haul-out and pupping areas vs. oyster bag areas that is consistent with the 1992 protocols and map
- 2005 Prof. Deborah Elliott-Fisk, Dr. Sarah Allen, and others file assessment of oyster farming in Drakes Estero; file completion report for NPS grant; found oyster feces negligible in sediments compared to decomposed eelgrass; oyster racks to have no pronounced impact on eelgrass; eelgrass healthy
- 08 06 Jill Baltan, CDPH, informs Allen of her errors in misquoting Anima; tells Allen that Anima never studied oyster feces (as she told Lunny on 06 09 07)
- 09 06 NPS Drakes Estero Report published (to my knowledge = version 1); contains misquote of Anima's USGS study, claiming he studied oyster feces in estero
- 12 06 NPS Harbor Seal Monitoring Report, by Manna, Roberts, Press, & Allen; no mention of any problem with oyster farm in Drakes Estero; disturbances due to Park visitors (hikers, clammers, kayakers), predators, and birds
- 10 23 06 NPS Drakes Estero Report republished (version 2) (version cited by Bennett)
- 02 07 NPS Drakes Estero Report republished (version 3)
- 03-05 07 At no time during Mar-May harbor seal pupping season of 2007 did NPS contact Lunny @ DBOC or Moore @ CDFG about harbor seal disturbances
- 04 05 07 Neubacher informs Supervisor Steve Kinsey (and his aide Liza Crosse) that permit actions are over, NPS is proceeding with "*civil and criminal*" charges against Lunny; evidence of ecological harm warrants extreme actions; "*going to war*" with Lunny; disturbances to protected marine mammal – harbor seals – are criminal
- 04 11 07 Kinsey informs Kevin and Nancy Lunny & Feinstein's office of Neubacher's accusations & threats

- 04 11 07 NPS harbor seal database and monitoring reports to date show zero seal flushes by oyster farm during seal pupping season (Mar-May) for 2005-2007
- 04 13 07 Allen Trip Report to count seals & count oyster bags (not in NPS database)
- 04 24 07 Allen sends email to Joe Cordaro of NOAA, copied to Don Neubacher, saying that the park service had “no direct observations” of the oyster farm harming the harbor seals in Drakes Estero; she includes the April 13 Trip Report
- 04 26 07 Allen co-authors article in Pt. Reyes Light with claims against oyster farm
- 04 26 07 Allen Trip Report says 14 seals flushed by oyster boat (not in NPS database); report is suspicious – late in day, boat not operational, workers gone for day
- 04 29 07 First record in 3 years in NPS database of seals getting flushed by oyster farm
- 05 07 Allen publishes May 2007 Harbor Seal Monitoring Report; no mention of oyster farm disturbances; no mention of Apr 26 Trip Report; similar to 2006 Report; vastly different from May 8 testimony and May 8 & 11 NPS Report
- 05 01 07 Sierra Club & EAC article in Coastal Post with claims against oyster farm; describes alleged negative impact on harbor seals revealing access to data
- 05 04 07 Marine Mammal Commission responds to Allen contact and shows interest in harbor seal disturbances in Drakes Estero
- 05 05 07 Allen testifies on May 8 that on Saturday May 5 she observed massive harbor seal problems caused by oyster farm (not in NPS database)
- 05 08 07 2nd and only other entry in NPS database over 3 years of oyster farm causing seals to flush into water; three simultaneous observations at 8:45 am at three different sandbars one mile apart involving hundreds of seals flushing; observation was 2 hours before low tide which is unusual for database; there are numerous discrepancies about this record
- 05 08 07 Neubacher and Allen testify to Supervisors, report that many seal pups lost this year, 80% decline in seal population, all due to oyster farm; claims 80% decline in one area due to oyster bags in haul-out and pupping areas (where no bags exist or have ever existed); no mention of Apr 26 Trip Report
- 05 08 07 Neubacher submits version 4 of NPS Drakes Estero Report to Marin Supervisors; he also submits new harbor seal map with altered boundary of haul-out area; Lunny not given the new map; has never seen the new map
- 05 08 07 Dr. Goodman provides testimony & report #1 to Marin Supervisors; challenges NPS science claims on negative impact of oyster farm on Drakes Estero; testifies that NPS data does not support NPS claims

- 05 11 07 NPS Drakes Estero Report republished on PRNS/NPS web site (version 5) with changes since May 8 version given to Marin Supervisors
- 05 14-15 Allen emails and phone call with Anima of U.S.G.S.; Anima says misquoted by NPS
- 05 21 07 Goodman phone call with Anima of U.S.G.S.; Anima says misquoted by NPS
- 05 29 07 Goodman sends report #2 to Marin Supervisors; focuses on NPS misquote of Anima
- 07 21 07 Feinstein Olema meeting with Bomar, Jarvis, Neubacher, CCC reps, Kinsey, Lunny, Goodman and others; agree to take down Drakes Estero Report and get it reviewed by an independent outside panel; agree to get Goodman all requested data and documents within 2 weeks; agree to not release new rebuttal attack until Drakes Estero Report is properly reviewed
- 07 21 07 Goodman gave Solicitor Molly Ross by hand a copy of Scientific Misconduct Report #1; focused primarily on Anima misquote
- 07 22 07 Goodman emails Jarvis summary of science-driven action items from Olema meeting; Goodman emails Scientific Misconduct Report #1 to Jarvis
- 07 23 07 Neubacher takes Drakes Estero Report off of NPS web site, saying it is under "scientific review"; as of October 21, no scientific review has been initiated
- 07 25 07 Neubacher posts "correction" of Drakes Estero Report; only corrects two claims; correction is incomplete and misleading
- 09 11 07 Dr. John Dixon of California Coastal Commission files 13 page report on impacts of oyster farm on Drakes Estero; only evidence for impact on harbor seals is Allen's Apr 26 Trip Report; no mention of NPS claims from May 8; nevertheless, first three recommendations based on harbor seal disturbances
- 09 12 07 Dr. Dixon's Sept 11 report is sent to Lunny by California Coastal Commission
- 09 19 07 Goodman posts Scientific Misconduct Report #2 on ALSA web site; focused primarily on harbor seal database misrepresentations in May 8 and May 11 claims
- 09 20 07 Goodman publishes article in Pt. Reyes Light on NPS harbor seal claims vs. NPS data, and refers to Scientific Misconduct Report #2
- 09 21 07 Goodman receives letter & Sept 18 unsigned "clarification" report from Jarvis office; is rebuttal report that NPS agreed not to release at Olema meeting on July 21; in reality, this report is a stunning retraction of previous NPS claims

from May 8 and May 11, but worded in twisted syntax to appear to be validation of NPS claims; straw man attack on Goodman reports

- 10 02 07 Ian Fein from West Marin Citizen calls me to ask about “clarification” report, says he got it previous week from PRNS because Gordon Bennett had requested and received it by FOIA, and PRNS was anxious to give it to Fein
- 10 03 07 California Coastal Commission sends Lunny Cease and Desist Order based in large part on Dr. Dixon’s report
- 11 21 07 Neubacher responds in writing to Lunny’s questions concerning the new map with the altered seal haul-out boundary. Neubacher claims the map was made on April 27th and says that no formal documents exist to support the new boundary.

Appendix 2. Timeline of FOIA requests and responses

- 05 09 07 Goodman emails Allen asking for access to seal data claimed May 8 (no reply)
- 05 12 07 Goodman files FOIA #1, primarily asking for harbor seal "data" 1973-2007
- 05 13 07 Goodman files FOIA #2, primarily asking for harbor seal "data" 1973-2007
- 05 29 07 Goodman files FOIA #3, primarily asking for Anima & Thompson emails
- 06 13 07 Jarvis responds to FOIA #1 & #2, denies data based on FOIA exemption 5: "*deliberative process privilege*"; inappropriate use because data does not apply; moreover, NPS already made public presentations of claims based on data
- 06 27 07 Goodman appeals non-response and denial to Solicitor Bernhardt; basis for appeal is inappropriate use of exemption 5
- 07 19 07 Goodman provides supplement to appeal concerning differential access; asks why local supporters of NPS get access to data while Goodman does not
- 07 21 07 Feinstein lunch meeting at Olema Inn with Bomar, Jarvis, Neubacher, CCC reps, Kinsey, Lunny, Goodman and others; agree to take down Drakes Estero Report and get it reviewed by an independent outside panel; agree to get Goodman all requested data and documents within 2 weeks; agree to not release new rebuttal attack until Drakes Estero Report is properly reviewed
- 07 31 07 Solicitor's office informs Goodman that no time to review appeal and thus he can seek judicial review
- 08 08 07 Jarvis responds to FOIA #3, does not provide key emails, provides irrelevant emails; claims no seal data prior to 1997 even though Allen has published it
- 08 13 07 Neubacher provides 3 CD's with seal data from 1997-2007; 1973-1997 missing
- 08 17 07 Jarvis and Goodman meet to discuss outside scientific review of NPS Drakes Estero Report as decided at Olema meeting; Tom Moore is not invited by Jarvis, but instead NPS scientists Graber and Davis are invited. Jarvis asks Goodman to email Graber to get missing database key & missing '73-'97 data
- 08 20 07 Graber emails Goodman that he is unfamiliar with seal database, but will find out about it and get back about missing key and data in first week of Sept; Graber never sends Goodman the missing database key or missing seal data
- 10 22 07 Goodman has not received 1973-1997 harbor seal data and other documents requested by FOIA on May 12, 13, and 29; first contact from DOIA since July 31 letter; phone call from Strayhorn at DOI saying PRNS claims has sent all requested data, asking if FOIA requests are complete; Goodman answers: NO

Appendix 3. Key documents

The scientific claims under review here can be found in NPS documents, testimony, and published articles in the local press:

1. PRNS Staff Scientist Sarah Allen's first-authored article on April 26, 2007 in the Point Reyes Light entitled *Coastal Wilderness*;
2. The May 1, 2007 article in the Coastal Post entitled *Save Drakes Estero* by the Sierra Club Marin Group, Environmental Action Committee (EAC), National Parks Conservation Association, and others, using scientific data (some of it unpublished) and scientific claims provided by the PRNS;
3. The May 8th public testimony of Superintendent Don Neubacher and Staff Scientist Sarah Allen at a hearing of the Marin County Board of Supervisors;
4. The many versions, including in particular the May 8th and May 11th versions, of Don Neubacher's official NPS Report (*Drakes Estero – A Sheltered Wilderness Estuary*) (May 8th given to Marin County Board of Supervisors and May 11th posted on the PRNS/NPS web site) herein called the NPS Drakes Estero Report;
5. Dr. Sarah Allen's April 13 and April 26 Trip Reports; and
6. Don Neubacher's and Sarah Allen's new PRNS map in April/May 2007 showing an altered boundary to the harbor seal haul-out and pupping areas in Drakes Estero (which was not provided to DBOC), compared to the two nearly-identical previous maps: the 1992 map by the National Marine Fisheries Services (NMFS, NOAA) and PRNS, and the 2005 PRNS map provided to DBOC.

This case also involves misleading corrections and retractions in July and September 2007 by Neubacher and his supervisor Regional Director Jon Jarvis:

- (3) *Acknowledgment of corrections to previous versions of the Park News document "Drakes Estero – A Sheltered Wilderness Estuary"*, posted on the PRNS/NPS web site on July 25 (the NPS Drakes Estero Report was taken off the web site on July 23 at the request of Senator Feinstein and NPS Director Bomar at Feinstein's July 21 Olema meeting with Regional Director Jarvis, Superintendent Neubacher, and others); and
- (4) *NPS Clarification of Law, Policy, and Science on Drakes Estero*, unsigned, dated September 18, 2007 (released by Jon Jarvis and Don Neubacher; the science section of this document is a revision of Sarah Allen's "response to Goodman" draft document from July 2007).

This case also clearly involves similar communications Neubacher and Allen had with government agencies and elected representatives. For example, the California Coastal

Commission (CCC) relied heavily on Sarah Allen's claims, and ultimately on Allen's April 26 Trip Report in making policy decisions. This impact is highlighted in:

- (3) Letter from Peter Douglas, Executive Director, California Coastal Commission, to Kevin Lunny, owner of Drakes Bay Oyster Company, on June 5, 2007; and
- (4) *Effects of Oyster Mariculture on the Natural Resources in Drake's Estero*, by Dr. John Dixon, California Coastal Commission, September 11, 2007.

These NPS claims are compared to NPS data:

- (1) *Pollution Studies of Drakes Estero, and Abbotts Lagoon*. 1991 U.S.G.S. report 91-145 by Dr. Roberto Anima, supported and commissioned by PRNS/NPS;
- (2) *Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, Point Reyes National Seashore*. 2004 U.C. Davis masters thesis by Jesse Wechsler, under the guidance of Professor Deborah Elliott-Fisk, supported by NPS grant to Prof. Elliott-Fisk and Dr. Sarah Allen;
- (3) *Assessment of Oyster Farming in Drakes Estero, Point Reyes National Seashore. Final Completion Report*. 2005 report filed by Prof. Deborah Elliott-Fisk, Dr. Sarah Allen, and others, including three masters students Harbin, Wechsler, and Press, as completion report for NPS-funded research on Drakes Estero; and
- (4) *Harbor Seal Monitoring Data, PRNS, Drakes Estero Subsites, 1997-2007*, NPS data on 3 CDs provided to Dr. Goodman by Superintendent Neubacher on August 13, 2007, as an incomplete response to two FOIA requests from May 12 and May 13;

Discussions that pointed out science misrepresentations to PRNS/NPS:

- (1) August 2006 discussion between Jill Baltan, CDPH, and Sarah Allen, PRNS, in which Baltan told Allen that she was misquoting Anima's USGS study; and
- (2) May 14-15, 2007 emails and phone calls between Sarah Allen and Roberto Anima from USGS in which Anima claims to have told Allen that she had been misquoting his USGS study and that he had not studied oyster feces.

Documents that pointed out science misrepresentations to PRNS/NPS:

- (1) *Drakes Bay Oyster Company has little impact on estero*. Article in Pt. Reyes Light on May 18, 2006 by reporter Peter Jamison reviewing Jesse Wechsler's masters thesis and false claims made by PRNS concerning DBOC;
- (2) Report #1 from Dr. Corey Goodman to Marin County Board of Supervisors on May 8, 2007, 12 pgs. Called "Goodman report #1". Consider all major negative claims about impact of oyster farm on Drakes Estero. Accompanied shorter public testimony which made same points;

- (3) Report #2 from Dr. Corey Goodman to Marin County Board of Supervisors on May 29, 2007, 22 pgs. Called "Goodman report #2". Focuses primarily on claim of oyster feces in sediments; also considers certain fish claims;
- (4) *A Local Assault on Reason: Seeking the Truth about Drake's Estero*. June 8, 2007 article in the Point Reyes Light by Bill Wigert, Corey Goodman, and Mark Dowie. Mis-use of science sections written by Goodman;
- (5) *Park misleads public on oyster farm research*. Article in Pt. Reyes Light on June 15, 2007 by reporter Thomas Yeatts reviewing false science claims in May 8 testimony and May 8 and May 11 Drakes Estero Report;
- (6) *Drake's Estero: Everyone is entitled to his own opinion, but not his own facts*. July 1, 2007 article in the Coastal Post by Corey Goodman. Focuses primarily on claim of oyster feces in sediments, and on denied FOIA requests for harbor seal data;
- (7) *A case of scientific fraud: a pattern of intentional misrepresentation of science by the PRNS in its claims of negative impact of the oyster farm on Drakes Estero*. Corey Goodman's misconduct report #1 handed to Solicitor Molly Ross on July 21 and emailed to Regional Director Jon Jarvis on July 22;
- (8) *The case for scientific misconduct: Part II - the harbor seals*. Goodman's September 16 misconduct report #2 posted on the ALS web site on Sept 19 and cited in Corey Goodman's Sept 20 Pt. Reyes Light article; and
- (9) *NPS Harbor Seal Claims Versus NPS Data*. Article in Pt. Reyes Light on Sept 20, 2007 by Corey Goodman.

Appendix 4. Jarvis and Graber Tried to make sure that the Outside Panel Would Not Review the Drakes Ester Report which NPS Claims is Under Scientific Review

On July 21 at the Feinstein Olema meeting, given the accusations of scientific misconduct, Senator Feinstein persuaded NPS Director Bomar to take the NPS Drakes Estero Report down from the NPS web site, and to get it reviewed by an independent panel. Feinstein and Bomar asked Jarvis, Goodman, and Tom Moore (CDFG; he oversees the DBOC lease) to set up and oversee the review. On July 23, Neubacher took down the Drakes Estero Report and replaced it with a notice that says that the Report is under scientific review. But is it? For August and September, Jarvis and Graber did everything possible to make sure that it never got reviewed. It was only intervention from Feinstein's office and the IG's office that began to turn this process around in October. As of the writing of this case report, we still do not know if it will be reviewed.

On August 17 when Jarvis met with Goodman, Graber, and Davis (Jarvis did not invite Moore), it was decided that the National Research Council (the public policy arm of the National Academy of Sciences) would conduct the outside review. After the August 17 meeting, Graber sent a draft proposal for the NRC with a central question and 7 supporting questions. None of these questions was relevant to the Olema agreement; none of these questions asked the panel to review the Drakes Estero Report. Rather, the proposed questions from Graber and Jarvis asked the panel to review research from other locations and hypothetical considerations of future impacts.

On September 4, I wrote back to Jarvis and Graber, said that their questions were not relevant to the Drakes Estero Report and the Olema agreement, and proposed 4 questions that were as best as I could reconstruct what was agreed upon at the July 21 Olema meeting, focused on the science on the impact of the oyster farm on Drakes Estero, and whether the NPS had properly represented these studies and based policy decisions on them. On September 20, Graber wrote back to me about discussions with Jarvis and said that they were going to go with their questions, were disregarding the Olema questions as I had presented them, were sending their questions to the NRC, and would keep me informed. In other words, the outside panel would not review the Drakes Estero Report, even though the NPS web site said that it was under review.

I protested this manipulation of the outside panel to both Feinstein's office and the DOI Inspector General's (IG's) office. On September 25, Jarvis wrote to me, saying that the NPS had now decided to pose both sets of questions to the NRC. He said that the IG would like to be present at the meeting with the NRC to decide upon the questions, and that I would be invited as well. I subsequently learned from Feinstein's office and the IG's office that this new plan was proposed by Jarvis and Graber after complaints from both offices and a discussion between Jarvis, Graber, the IG's office, and Feinstein's office.

I wrote to Jarvis on September 30, asking him why the Feinstein-Bomar Olema agreement was being ignored, and why he was leaving it up to the NRC to decide if anyone would ever review the Drakes Estero Report. I protested Jarvis' decision to Feinstein's office and the IG's office. As of Tuesday October 16, Feinstein had written a letter to Bomar rejecting this plan, Feinstein's office and Jarvis had spoken, and there now appeared to be a new agreement with a more appropriate central question and set of questions being posed to the NRC. There were 7 proposed questions, 3 of which were germane to the issue of misconduct. The NPS wants to have the review focus on the oyster farm as a smoke screen to keep the NRC from investigating the claim of scientific misconduct.

The bottom line is that without Feinstein and the IG, Jarvis and Graber would have made sure that the outside panel never reviewed the NPS Drakes Estero Report, and would have never reviewed whether Neubacher and Allen had engaged in intentional scientific misconduct in their misrepresentations of their own NPS data.

Here are the questions proposed by Graber and Jarvis on August 20, and which they announced they were taking to the NRC on September 20:

Central question: What are the ecological effects on Drake's Estero, Pt. Reyes National Seashore, of the operations of the Drake's Bay Oyster Company?

Supporting and enlarging questions:

- 1. What effects can be directly demonstrated by research conducted in Drake's Estero itself?*
- 2. What effects can reasonably be inferred by research conducted in analogous ecosystems elsewhere?*
- 3. What additional effects can reasonably be hypothesized based upon ecological theory?*
- 4. How do these ecological effects vary in magnitude with the scale of the mariculture operation? With its duration?*
- 5. What are the uncertainties surrounding these ecological effects?*
- 6. Were the mariculture operation to cease, how would the estero ecosystem likely respond over time?*
- 7. What are the most important subjects for future research to better understand the ecological consequences of the mariculture operations*

Here are the questions proposed by Goodman on September 4 based on the decision at the July 21 Olema meeting to get the Drakes Estero Report reviewed, and the subsequent statement by NPS on July 23 that the report is under scientific review:

1. *What is the body of scientific studies on the impact of the oyster farm and surrounding ranches on Drakes Estero, and what have they shown?*
2. *Did the NPS draw the correct conclusions from these scientific studies, and did they present them correctly to the public?*
3. *Have these conclusions about the science impacted NPS decision-making?*
4. *Do any further scientific studies need to be done to better inform decision-making?*

Appendix 5. Dr. Corey S. Goodman's Background, Scientific Expertise, and Public Policy Experience

I have spent my entire life as a biologist. I was a Searle Scholar and received my B.S. degree with distinction and honors from Stanford University, and was an NSF Fellow and received my Ph.D. degree from U.C. Berkeley. I spent two summers studying marine biology at Stanford's Hopkins Marine Biology Station and U. of Washington's Friday Harbor Laboratory. I was a Helen Hay Whitney postdoctoral fellow at U.C.S.D. I spent 28 years as a Professor, first on the faculty of Stanford University in the Department of Biological Sciences, and then at U.C. Berkeley in the Department of Molecular and Cell Biology. I was tenured at Stanford during my 3rd year. While at U.C. Berkeley, I was an Investigator with the Howard Hughes Medical Institute, a co-founder of the Helen Wills Neuroscience Institute, and Head of the Division of Neurobiology. I am now an Adjunct Professor in the Departments of Anatomy and Biochemistry at U.C.S.F.

I published over 200 peer-reviewed papers in major scientific journals. I was elected a member of the National Academy of Sciences (1995), a member of the American Philosophical Society (1999), and a Fellow of the American Academy of Arts and Sciences (1993). Amongst my many scientific honors are the Alan T. Waterman Award from the National Science Board, the Gairdner Foundation International Award for Achievement in Medical Sciences (1997), and the March-of-Dimes Prize in Developmental Biology (2001), and the Reeve-Irvine Medal (2006).

I started two biotech companies - Exelixis and Renovis - and was the CEO of Renovis from 2001 until September 2007 when we announced the merger of Renovis with Evotec. In October 2007, I joined Pfizer as President of their new Biotherapeutics and Bioinnovation Center and a member of Pfizer's Executive Leadership Team.

My wife and I have lived in West Marin since 1993. We purchased a local ranch in 2001, and are becoming active members of the natural food community of West Marin, with my wife planning for the production of farmstead sheep cheese. We have strong credentials as environmentalists in what we do locally, and what we support globally.

Over the past several decades, I have spent considerable time in public service at the interface of science and public policy. I spent over a decade serving on the Board of Life Sciences (BLS) of the National Research Council (NRC), the committee that sponsors many environmental studies for the federal government including the EPA. I chaired the BLS for 6 years until my term ended in the summer of 2006. I presently serve on the California Council of Science and Technology, which advises our state government about science issues important to public policy concerning our environment, education, health, and economy. My approach to public policy is simple - I am data driven. Public policy decisions can and should be informed by quality science. But this must be science conducted rigorously, without agendas or conflicts-of-interest. The political process can be dangerously misled by bad or misused science.

The NPS likes to say that I am a molecular biologist and not a marine ecologist, as if that somehow makes my allegations of scientific misconduct less serious. Since the NPS can't blunt my criticisms of their claims vs. their data, or my credentials, they try to discredit me by saying that I don't know what I am talking about. Just as their scientific claims are false, so too is their assertion that I am not qualified to compare NPS claims to NPS data. As a biologist, member of the NAS, and former Chair of the BLS, I have a broad perspective and have reviewed topics ranging from stem cells to waterborne pathogens. The problem with the NPS argument is that they have misrepresented facts. When comparing NPS claims vs. NPS data, there is nothing subtle, and it is not difficult to distinguish fact from fiction.

Appendix 6. Emails between Corey Goodman, David Graber, and Jon Jarvis on August 18th and 20th Concerning the Harbor Seal Data

-----Original Message-----

From: Corey S. Goodman

Sent: Sat 8/18/2007 1:50 PM

To: david_graber@nps.gov; Jon_Jarvis@nps.gov

Subject:

Dear Jon and Dave,

Dave -- It was good meeting you and Gary yesterday in Jon's conference room. I look forward to working with you on the review panel.

Jon recommended that I write to Dave, and cc Jon, to help me get access to the harbor seal data that I requested on May 12 and 13 via two FOIA requests to Don Neubacher. Jon has been led to believe recently by the PRNS that I have now received the requested data, but as I told Jon yesterday, and as I will explain below, I have received very little that is useful, nothing that can be analyzed, and few of my specific data requests have been honored.

This is frustrating because I made a number of very straight forward requests for data, and I still have not received any of the data I requested in a form that I can analyze. I hope we can resolve this very soon, because it has now been over 3 months since I asked for the data, and over one month since the Feinstein lunch in which it was promised. I remain puzzled because I was under the impression that this is all publicly available to interested scientists. Dave -- am I not correct that section 10.4 (data availability) of your Data Management Plan for the Inventory and Monitoring Program makes it clear that I should be given access to all of these databases? Why is the PRNS making it so difficult to get access to numbers that should be publicly available according to your management policies, that have been publicly referenced and written about, and that members of the Sierra Club have had access to and have written about? The excuse given last week is that I can not have access because you need to keep the names of the volunteers confidential, but this is not stated in the management policies for access to the database, and moreover, their names are published every year in the annual report.

Jon sent me a reply to my FOIA requests about a week or so ago, and just a few days ago, I received three CDs from Don Neubacher. However, those CDs are incomplete and I still can not analyze the data. I hope you both share my frustration at still not having anything useful, given that this issue was raised at the Feinstein lunch, and Feinstein and Bomar agreed, as did Jon, that I should get the requested data within 2 weeks (that was one month ago).

Here is what I hope you can provide:

First, I was not supplied with a key to the numbers and abbreviations, and thus the CDs I was sent are not useful to me. Could you please get me a key to the various harbor seal files I was sent ASAP.

Second, the PRNS gave Jon incorrect information in claiming that there is no data prior to 1997. Sarah Allen has claimed over 30 years of harbor seal data, and has published (e.g., Sydeman and Allen, 1999) data going back to 1973. Moreover, in the inventory and monitoring program

documents (e.g., Hester et al.), it states that the "legacy databases" (i.e., those prior to establishing the new system in 1997) are available, and were transferred to Excel and then MS Access. I believe that the two relevant databases (please correct me if I am wrong) are pinhead.dbf (1974-2003 harbor seal data) and Phocafacts(year).xls (annual summary data 1993-present).

Third, amongst a number of very clear requests on May 12 and May 13, I asked for the maximum number breed, pups, and molts for each year from 1973 to 2006 for the overall region (PORE) and for the individual sites (Drakes Estero, Double Point, Tomales Bay) within PORE. Those numbers still have not been provided to me. They exist in the annual summary information on the database. [Dave -- in computing the annual maximum numbers, do you use the recorded maximum number on its own or do you multiply by 1.3 as SOP9 suggests?]

Fourth, Sarah Allen testified to the Marin County Board of Supervisors, and the May 11 version of the PRNS report on Drakes Estero states, that the PRNS has observed an 80% reduction in harbor seals in Drakes Estero at some unspecified subsite this year, and they have suggested that this is due to the oyster farm. I have asked where that statement comes from in terms of: what site?, what date or dates? compared to what previous data? Finally, what is her evidence that this reduction has been caused by the oyster farm? She claimed this is of national significance. I have asked to see the data. Her exact words at the hearing were:

"The harm is resulting in abandonment of one area where more than 250 seals, including 100 pups 2 years ago occurred in that spot, this year chronic disturbance and placement of bags on the nursery area has caused an 80% reduction in the seals dropping to around 35 this last Saturday. I was out there on Saturday. This issue has been raised, has been received and recognized by the Marine Mammal Commission and we've received a fax today from the executive director of the Marine Mammal Commission because they've just heard about this which I will provide to you. And they're going to bring it up in their next commission meeting because it has national significance."

In the May 11 version of the PRNS report, PRNS staff wrote: "One area where 250 seals nurse more than 100 pups two years ago, have around 50 total seals including around 25 pups in 2007, an 80% decline."

Gordon Bennett from the Sierra Club wrote in the July issue of the Sierra Club Yodeler: "As many as 300-500 seal pups used to be born annually in the Estero, 100-200 using the middle sandbars. Expanded oyster operations and oyster bags placed in seal nursery areas have reduced baby seals on the middle sandbars to about 50 in 2006 and less than 10 so far in 2007."

Please help me get the data from which these claims are based, including the site, date or dates, and comparison to what date or dates.

Fifth, as the quotes in item #4 above make clear, the PRNS has been keeping data on subsites within Drakes Estero, and has made public references to such data. In fact, at least 6 subsites for Drakes Estero are specified in the data management plan, and the harbor seal data form asks the observer to note the data for each subsite. Thus I am puzzled about the answer in Jon's letter to me (no doubt written by others with information supplied by the PRNS) that prior to my FOIA

requests, the databases did not contain subsite information for Drakes Estero. Dave -- that is certainly an incorrect statement. Would you please clarify, and make sure I have been sent the requested subsite data.

Let me know if you have any questions or if you would like to discuss any of this.
Thanks very much.

Best wishes,
Corey

-----Original Message-----

From: David_Graber@nps.gov [mailto:David_Graber@nps.gov]

Sent: Monday, August 20, 2007 11:18 AM

To: Corey S. Goodman

Cc: Jon_Jarvis@nps.gov; Holly_Bundock@nps.gov

Subject: Re: Drake's Estero data

Dear Dr. Goodman –

Expect my first draft of the proposed NRC Drake's Estero review by tomorrow at the latest.

Regarding your requests below: I am not familiar with the data you describe, and have only a passing familiarity with the negotiations between you and NPS regarding these data and other matters. What I can offer, with your patience, is to obtain a copy of the data you were provided and to take a good look at it so we're on the same page. As I'm booked solid for the next two weeks, the earliest I will be able to respond will be the first week in September. Please understand that any FOIA issues, per se, are handled by Holly Bundock.

Regards,
Dave Graber

N.B. Please include a subject line in any future emails. As I receive about 80/day, I must read selectively and habitually ignore those with a blank subject line.

David M. Graber, Ph.D.

Chief Scientist, Pacific West Region, National Park Service Sequoia & Kings

Canyon National Parks 47050 Generals Highway Three Rivers, CA 93271-9651

559.565.3173 voice 559.679.5999 cell 559.565.4283 fax david_graber@nps.gov

Appendix 7. The White House Office of Science and Technology Policy: Federal Policy on Research Misconduct

I. Research^{1[2]} Misconduct Defined

Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

1. *Fabrication* is making up data or results and recording or reporting them.
2. *Falsification* is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.³
3. *Plagiarism* is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
4. Research misconduct does not include honest error or differences of opinion.

II. Findings of Research Misconduct

A finding of research misconduct requires that:

1. There be a significant departure from accepted practices of the relevant research community; and
2. The misconduct be committed intentionally, or knowingly, or recklessly; and
3. The allegation be proven by a preponderance of evidence.

III. Responsibilities of Federal Agencies and Research Institutions⁴

Agencies and research institutions are partners who share responsibility for the research process. Federal agencies have ultimate oversight authority for Federally funded research, but research institutions bear primary responsibility for prevention and detection of research misconduct and for the inquiry, investigation, and adjudication of research misconduct alleged to have occurred in association with their own institution.

1. Agency Policies and Procedures. Agency policies and procedures with regard to intramural as well as extramural programs must conform to the policy described in this document.

^{1[2]}*Research, as used herein, includes all basic, applied, and demonstration research in all fields of science, engineering, and mathematics. This includes, but is not limited to, research in economics, education, linguistics, medicine, psychology, social sciences, statistics, and research involving human subjects or animals.*

³The research record is the record of data or results that embody the facts resulting from scientific inquiry, and includes, but is not limited to, research proposals, laboratory records, both physical and electronic, progress reports, abstracts, theses, oral presentations, internal reports, and journal articles.

⁴The term "research institutions" is defined to include all organizations using Federal funds for research, including, for example, colleges and universities, intramural Federal research laboratories, Federally funded research and development centers, national user facilities, industrial laboratories, or other research institutes. Independent researchers and small research institutions are covered by this policy.

2. Agency Referral to Research Institution. In most cases, agencies will rely on the researcher's home institution to make the initial response to allegations of research misconduct. Agencies will usually refer allegations of research misconduct made directly to them to the appropriate research institution. However, at any time, the Federal agency may proceed with its own inquiry or investigation. Circumstances in which agencies may elect not to defer to the research institution include, but are not limited to, the following: the agency determines the institution is not prepared to handle the allegation in a manner consistent with this policy; agency involvement is needed to protect the public interest, including public health and safety; the allegation involves an entity of sufficiently small size (or an individual) that it cannot reasonably conduct the investigation itself.
3. Multiple Phases of the Response to an Allegation of Research Misconduct. A response to an allegation of research misconduct will usually consist of several phases, including: (1) an inquiry - the assessment of whether the allegation has substance and if an investigation is warranted; (2) an investigation - the formal development of a factual record, and the examination of that record leading to dismissal of the case or to a recommendation for a finding of research misconduct or other appropriate remedies; (3) adjudication - during which recommendations are reviewed and appropriate corrective actions determined.
4. Agency Follow-up to Institutional Action. After reviewing the record of the investigation, the institution's recommendations to the institution's adjudicating official, and any corrective actions taken by the research institution, the agency will take additional oversight or investigative steps if necessary. Upon completion of its review, the agency will take appropriate administrative action in accordance with applicable laws, regulations, or policies. When the agency has made a final determination, it will notify the subject of the allegation of the outcome and inform the institution regarding its disposition of the case. The agency finding of research misconduct and agency administrative actions can be appealed pursuant to the agency's applicable procedures.
5. Separation of Phases. Adjudication is separated organizationally from inquiry and investigation. Likewise, appeals are separated organizationally from inquiry and investigation.
6. Institutional Notification of the Agency. Research institutions will notify the funding agency (or agencies in some cases) of an allegation of research misconduct if (1) the allegation involves Federally funded research (or an application for Federal funding) and meets the Federal definition of research misconduct given above, and (2) if the institution's inquiry into the allegation determines there is sufficient evidence to proceed to an investigation. When an investigation is complete, the research institution will forward to the agency a copy of the evidentiary record, the investigative report, recommendations made to the institution's

- adjudicating official, and the subject's written response to the recommendations (if any). When a research institution completes the adjudication phase, it will forward the adjudicating official's decision and notify the agency of any corrective actions taken or planned.
7. Other Reasons to Notify the Agency. At any time during an inquiry or investigation, the institution will immediately notify the Federal agency if public health or safety is at risk; if agency resources or interests are threatened; if research activities should be suspended; if there is reasonable indication of possible violations of civil or criminal law; if Federal action is required to protect the interests of those involved in the investigation; if the research institution believes the inquiry or investigation may be made public prematurely so that appropriate steps can be taken to safeguard evidence and protect the rights of those involved; or if the research community or public should be informed.
 8. When More Than One Agency is Involved. A lead agency should be designated to coordinate responses to allegations of research misconduct when more than one agency is involved in funding activities relevant to the allegation. Each agency may implement administrative actions in accordance with applicable laws, regulations, policies, or contractual procedures.

IV. Guidelines for Fair and Timely Procedures

The following guidelines are provided to assist agencies and research institutions in developing fair and timely procedures for responding to allegations of research misconduct. They are designed to provide safeguards for subjects of allegations as well as for informants. Fair and timely procedures include the following:

1. Safeguards for Informants. Safeguards for informants give individuals the confidence that they can bring allegations of research misconduct made in good faith to the attention of appropriate authorities or serve as informants to an inquiry or an investigation without suffering retribution. Safeguards include protection against retaliation for informants who make good faith allegations, fair and objective procedures for the examination and resolution of allegations of research misconduct, and diligence in protecting the positions and reputations of those persons who make allegations of research misconduct in good faith.
2. Safeguards for Subjects of Allegations. Safeguards for subjects give individuals the confidence that their rights are protected and that the mere filing of an allegation of research misconduct against them will not bring their research to a halt or be the basis for other disciplinary or adverse action absent other compelling reasons. Other safeguards include timely written notification of subjects regarding substantive allegations made against them; a description of all such allegations; reasonable access to the data and other evidence supporting the allegations; and the opportunity to respond to allegations, the supporting evidence and the proposed findings of research misconduct (if any).

3. Objectivity and Expertise. The selection of individuals to review allegations and conduct investigations who have appropriate expertise and have no unresolved conflicts of interests help to ensure fairness throughout all phases of the process.
4. Timeliness. Reasonable time limits for the conduct of the inquiry, investigation, adjudication, and appeal phases (if any), with allowances for extensions where appropriate, provide confidence that the process will be well managed.
5. Confidentiality During the Inquiry, Investigation, and Decision-Making Processes. To the extent possible consistent with a fair and thorough investigation and as allowed by law, knowledge about the identity of subjects and informants is limited to those who need to know. Records maintained by the agency during the course of responding to an allegation of research misconduct are exempt from disclosure under the Freedom of Information Act to the extent permitted by law and regulation.

V. Agency Administrative Actions

1. Seriousness of the Misconduct. In deciding what administrative actions are appropriate, the agency should consider the seriousness of the misconduct, including, but not limited to, the degree to which the misconduct was knowing, intentional, or reckless; was an isolated event or part of a pattern; or had significant impact on the research record, research subjects, other researchers, institutions, or the public welfare.
2. Possible Administrative Actions. Administrative actions available include, but are not limited to, appropriate steps to correct the research record; letters of reprimand; the imposition of special certification or assurance requirements to ensure compliance with applicable regulations or terms of an award; suspension or termination of an active award; or suspension and debarment in accordance with applicable government-wide rules on suspension and debarment. In the event of suspension or debarment, the information is made publicly available through the List of Parties Excluded from Federal Procurement and Nonprocurement Programs maintained by the U.S. General Services Administration. With respect to administrative actions imposed upon government employees, the agencies must comply with all relevant federal personnel policies and laws.
3. In Case of Criminal or Civil Fraud Violations. If the funding agency believes that criminal or civil fraud violations may have occurred, the agency shall promptly refer the matter to the Department of Justice, the Inspector General for the agency, or other appropriate investigative body.

VI. Roles of Other Organizations

This Federal policy does not limit the authority of research institutions, or other entities, to promulgate additional research misconduct policies or guidelines or more specific ethical guidance.

Appendix 8. Dr. Corey Goodman's Proposed Questions for NRC Study of Scientific Misconduct by the National Park Service

I. Concerning the NPS May 8th public testimony and May 8th and May 11th versions of the NPS Drakes Estero Report (Drakes Estero - A Sheltered Wilderness Estuary):

- 1. What is the body of scientific studies and NPS databases on the impact of the oyster farm on Drakes Estero that preceded the NPS testimony and Drakes Estero Report in May 2007, and what did these studies and databases show?***
- 2. In the NPS testimony and Drakes Estero Report, did they draw the correct conclusions from these scientific studies and databases, and did they present these data and conclusions correctly to the public?***
- 3. If you find that the NPS testimony and Drakes Estero Report did not draw the correct conclusions from these scientific studies and databases, did these misrepresentations rise to the threshold of Section I of the OSTP Federal policy of research misconduct?***

II. Concerning the NPS September 18th "clarification" document:

- 1. Does the NPS "clarification" document represent independent peer-review?***
- 2. Is it an objective outside review of the NPS Drakes Estero Report, and if so, does it represent a correct validation of the NPS Drakes Estero Report?***
- 3. If you find that the NPS "clarification" document is misleading and not an objective peer-review of the NPs Drakes Estero Report, does it rise to the threshold of Sections III, IV, and V of the OSTP Federal policy of research misconduct?***