

Scientific Misconduct by NPS Superintendent Neubacher & Other NPS Officials in Their May 2007 Drakes Estero Report & Public Testimony

Overview of NPS Data vs. NPS Claims: Impact of Drakes Bay Oyster Company on Drakes Estero

by Corey S. Goodman, Ph.D.

September 4, 2008

Corey S. Goodman, Ph.D., is a Marshall (Marin County, CA) resident. He is an elected member of the National Academy of Sciences, the American Academy of Arts & Sciences, and the American Philosophical Society. He is former Chair of the Board on Life Sciences, the NAS committee that does many environmental and biological studies for the federal government. He spent 25 years as a professor at Stanford University and the University of California, Berkeley. He is currently Adjunct Professor at U.C. San Francisco, a member of the California Council on Science & Technology, and President of Pfizer's Biotherapeutics and Bioinnovation Center.

“I believe that 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. One of my greatest concerns when I see science being invoked in public policy debates is to make sure that it is good science and not pseudo-science or -- even worse -- a blatant misuse of science.”

Written testimony from Dr. Corey Goodman on May 8, 2007 to Marin County Supervisors

***“Everyone is entitled to their own opinion,
but not their own facts”***

The late Senator Daniel Patrick Moynihan

“If the Park Service did in fact manipulate data, that is a serious matter, which should result in disciplinary action”

Senator Dianne Feinstein on ABC7 evening news on December 12, 2007

July 21, 2007: Senator Feinstein asked that NPS May 8 testimony & May 11 Drakes Estero Report be reviewed by independent science panel. Feinstein asked 3 questions:

- 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?*

- During July 21 2007 Olema meeting, Senator Feinstein asked that Jon Jarvis, Tom Moore, & Corey Goodman establish independent science review, and three questions be asked (see above).
- When Goodman and Jarvis met on August 17 2007, Jarvis excluded Moore but instead invited two NPS staff. Jarvis ignored Goodman's proposal and submitted questions to NRC that did not ask about accuracy of NPS Report & testimony.
- It was only after further input from Senator Feinstein that, amongst the broader questions you are considering, Feinstein's original questions are now included.

Question #1: “what is the body of scientific studies on the impact of the oyster farm” on Drakes Estero that predate May 2007 NPS Drakes Estero Report and public testimony

1. *Anima, Roberto (1991) Pollution Studies of Drakes Estero, and Abbotts Lagoon. U.S.G.S. report 91-145, supported by PRNS/NPS;*
2. *Wechsler, Jesse (2004) Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, PRNS. 2004 U.C. Davis masters thesis, under guidance of Professor Elliott-Fisk, supported by NPS;*
3. *Elliott-Fisk, Deborah, and Allen, Sarah (co-PI's) and others including masters students Harbin, Wechsler, and Press (2005) Assessment of Oyster Farming in Drakes Estero, Point Reyes National Seashore. Final Completion Report. Completion report for NPS-funded project;*
4. *Manna, J., Roberts, D., Press, D., and Allen, S. (2006) Harbor Seal Monitoring: Annual Report, National Park Service, 2006*
5. *Neubacher, Don (1997-2007) NPS Harbor Seal Database, provided to Dr. Corey Goodman on August 13, 2007 (after QA/QC) (note: a 2nd version of database was provided on January 16, 2008 with new data)*

Dozens of articles were provided by NPS, most from other locations. Of “body of scientific studies” on Estero, NPS did not give NRC the NPS harbor seal database. Why?

YES *Anima, Roberto (1991) Pollution Studies of Drakes Estero, and Abbotts Lagoon. U.S.G.S. report 91-145, supported by PRNS/NPS;*

YES *Wechsler, Jesse (2004) Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, PRNS. 2004 U.C. Davis masters thesis, under guidance of Professor Elliott-Fisk, supported by NPS;*

YES *Elliott-Fisk, Deborah, and Allen, Sarah (co-PI's) and others including masters students Harbin, Wechsler, and Press (2005) Assessment of Oyster Farming in Drakes Estero, Point Reyes National Seashore. Final Completion Report. Completion report for NPS-funded project;*

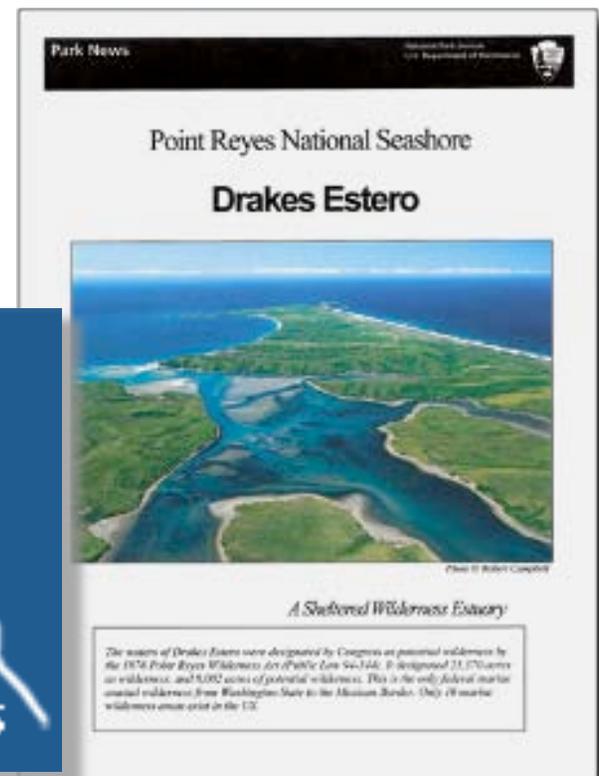
YES *Manna, J., Roberts, D., Press, D., and Allen, S. (2006) Harbor Seal Monitoring: Annual Report, National Park Service, 2006*

NO *Neubacher, Don (1997-2007) NPS Harbor Seal Database, provided to Dr. Corey Goodman on August 13, 2007 (after QA/QC) (note: a 2nd version of database was provided on January 16, 2008 with new data)*

□

Question #2: “... did they present them correctly to the public?”

- PRNS Sarah Allen Apr 27, 2007 article in Pt. Reyes Light
- Superintendent Neubacher and Scientist Allen testimony to Marin County Board of Supervisors on May 8, 2007
- NPS Drakes Estero Report (May 8 & 11 versions)



■

**Apr 26 2007: Goodman's concern about NPS science
began with NPS Scientist Allen's article in Pt. Reyes Light**

ecology

"The natural ecological processes in Drakes Estero have been degraded by oyster operations."

oyster feces

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

eelgrass

"Eelgrass beds ... are especially vulnerable to oyster operations. Oyster racks prevent eelgrass beds from establishing and degrade existing beds by over-shading the substrate, increasing sedimentation ..."

harbor seals

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

May 1 2007: Gordon Bennett (Sierra Club) and others article in Coastal Post with stronger claims against DBOC

**SAVE DRAKES ESTERO in Coastal Post, by
Sierra Club West Marin, EAC, & others**

oyster feces

” 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.”

”DBOC’s oyster structures directly impair eelgrass habitat by reducing the quantity of light necessary of eelgrass growth.”

“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.”



eelgrass

harbor seals

May 8 2007: stronger claims about impact of DBOC on harbor seals escalated in testimony to Marin Supervisors by PRNS Superintendent Neubacher and Scientist Allen

harbor seals



“... the harbor seal pupping area in Drakes Estero is seriously threatened now. ... we have some major problems because you can see from your handout that oyster bags have been recently put in pupping areas, you’ll get statistics, but it’s amazing how many pups we have probably lost this year. We have a serious problem right now.”

“ ... Marine Mammal Commission -- wrote us a letter this morning, they’re going to take it up. This is a national issue.”

Public testimony by Superintendent Don Neubacher to Marin Co. Supervisors on May 8, 2007

“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 ... recognized by the Marine Mammal Commission ... it has national significance.”

Public testimony by PRNS Scientist Sarah Allen to Marin Co. Supervisors on May 8, 2007

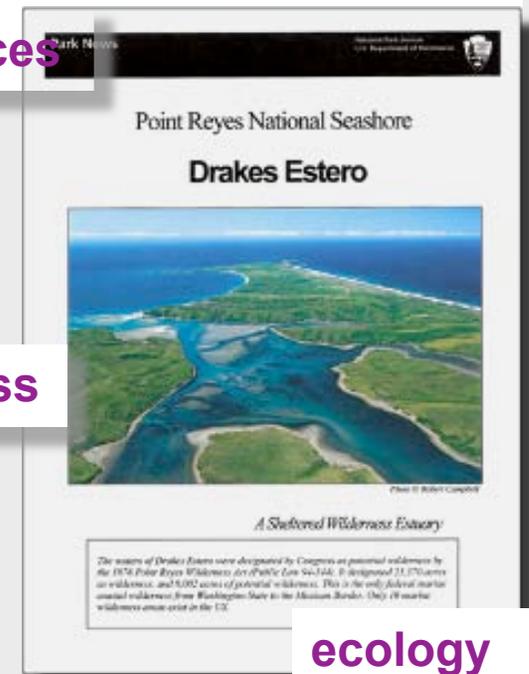
May 8 & May 11 2007: Neubacher featured claims in NPS Drakes Estero Report (*Drakes Estero, A Sheltered Wilderness Estuary*)

"USGS (Anima 1990) collected sediment cores from the estero and identified pseudo feces of oysters as the primary source for sediment fill ... An estimate 0.6 to 1.0 metric tons of fecal matter can be produced per year by a 60 meter square oyster raft." [May 8 and May 11 versions]

"Eelgrass beds are found in all suitable habitats with Drakes Estero, except between active oyster racks, where they do not exist due to shading and possibly other effects. In 2003, with 38 active oyster racks, this amounted to at least 1.5 acres of lost eelgrass cover." [May 8 and May 11 versions]

"Schooner Bay, where there are many oyster racks, supported a different fish community than Estero de Limantour where no mariculture occurs." [May 8 and May 11 versions]

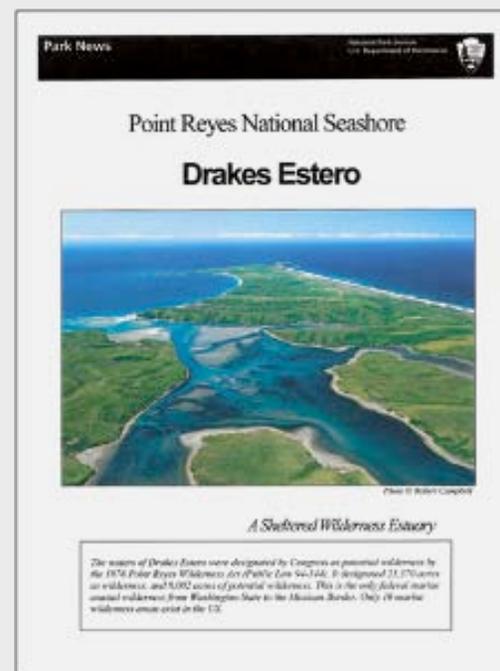
Concerning DBOC & harbor seals: **harbor seals**
"In 2007, oyster bags and disturbance have reduced one sub colony by 80%." [May 11]



"Specifically in Drakes Estero, ecological function has been degraded and altered over the past several decades due to activities associated with oyster farming ..." [May 8 & 11]

Neubacher, Allen, & Bennett claimed that “a USGS researcher stated that a primary source for sediment fill in the estero was from oyster feces”. False: USGS researcher Anima never studied oyster feces

”USGS (Anima 1990) collected sediment cores from the estero and identified pseudo feces of oysters as the primary source for sediment fill ... An estimate 0.6 to 1.0 metric tons of fecal matter can be produced per year by a 60 meter square oyster raft.” [May 8 and May 11 versions]



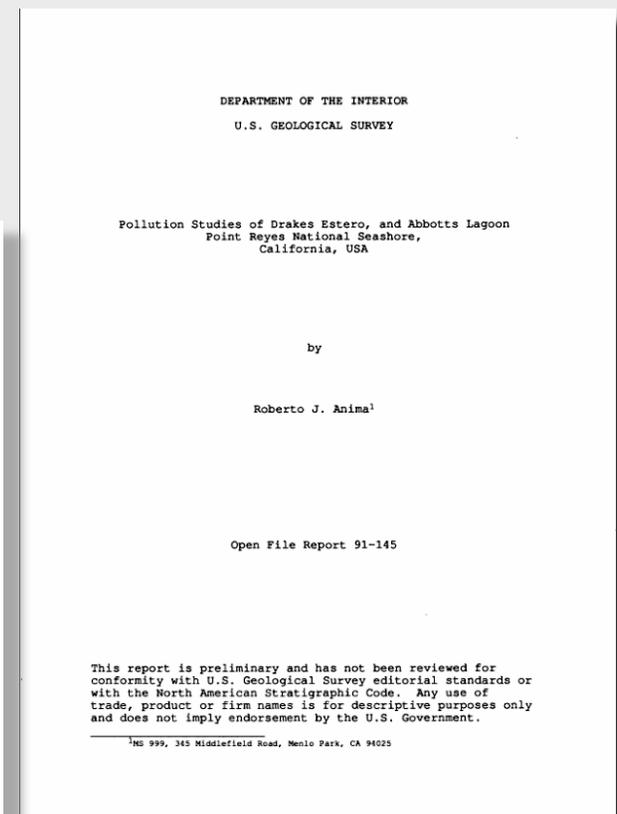
For further analysis, see Goodman’s May 29, 2007 Report to Marin Co Board of Supervisors

Neubacher, Allen, & Bennett claimed that “a USGS researcher stated that a primary source for sediment fill in the estero was from oyster feces”. False: USGS researcher Anima never studied oyster feces

**Dr. Roberto Anima’s 1991 USGS Study
Pollution Studies of Drakes Estero, and Abbotts Lagoon,
PRNS [same as Anima (1990)]**

Results: 55 pages of data make NO mention of oyster feces. The words do not appear in results. Anima did not study oyster feces in Drakes Estero.

Conclusions: “*The increase in sedimentation could be attributed to increased land use as the population of the area increased, i.e., trail and road use, road building, increase in the paved areas that would increase the amount of surface runoff of rain water as opposed to ground absorption.*”



Neubacher, Allen, & Bennett claimed that “a USGS researcher stated that a primary source for sediment fill in the estero was from oyster feces”. False: USGS researcher Anima never studied oyster feces

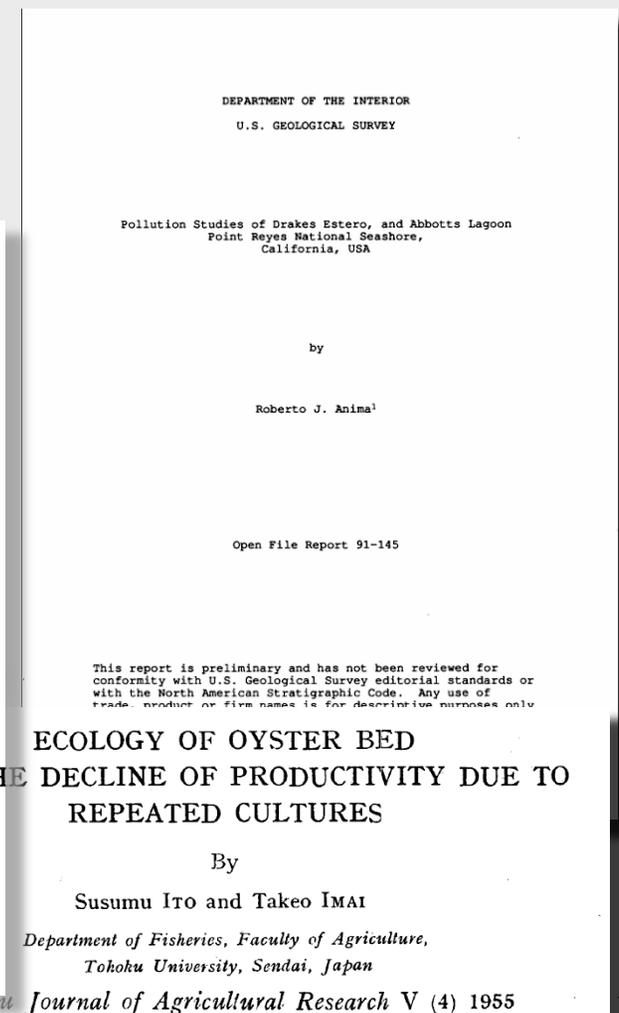
**Dr. Roberto Anima’s 1991 USGS Study
Pollution Studies of Drakes Estero, and Abbotts Lagoon,
PRNS [same as Anima (1990)]**

Do quantitative numbers of 1.0 metric ton per year come from Anima’s study? No

Do quantitative numbers of 1.0 metric ton per year come from Drakes Estero? No

“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 ... of fecal material.”

Numbers from 1955 study in Japan of different oyster with different hydrology. It has nothing to do with Drakes Estero.



Over one decade later Angie Harbin & Deborah Elliott-Fisk were funded by NPS/PRNS to study impact of oysters and were unable to detect oyster feces in sediments in Estero as reported in 2005

Drakes Estero Assessment of Oyster Farming, Final Report 2005

Co-PI Professor Deborah Elliott-Fisk, UC Davis
Co-PI Dr. Sarah Allen, PRNS

“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).”

Point Reyes National Seashore
Drakes Estero Assessment of Oyster Farming Final Completion Report
March 2005
(revised May 2005)

Co-PI Professor Deborah L. Elliott-Fisk, UC Davis
Co-PI Dr. Sarah Allen, Point Reyes National Seashore
Graduate Student Researchers Angie Harbin, Jesse Wechsler, and David Press
GIS Specialist Dave Schirokauer, Point Reyes National Seashore
Marine Ecologist Ben Becker, Point Reyes National Seashore

Project Title: Assessment of Oyster Farming in Drakes Estero, Point Reyes National Seashore
USDI/NPS Cooperative Agreement No. H6530000045
USDI/NPS Task Agreement No. J8530020081
Cooperator: The Regents of the University of California, Davis Campus, One Shields Ave., Davis, CA 95616-9671
Project Period: 10/01-02 – 9/30/04
Parks: Point Reyes National Seashore, California
Funding Source: PRNS, Account Numbers 8538-0301-NWZ at \$25,000 and 2127-0201-NII at \$20,000.
Total Funding Amount FY 2002 and 2003: \$50,000
Contact Information: Professor Deborah L. Elliott-Fisk, Dept. of Wildlife, Fish and Conservation Biology, UC Davis, One Shields Ave., Davis, CA 95616, phone (530)752-8559, fax (530)749-7435, e-mail dlelli@fisk@ucdavis.edu and UC Davis Office of the Vice-Chancellor for Research, Sponsored Programs, Sandra M. Dowdy, Contracts and Grants, phone (530)752-2076; Dr. Sarah Allen, Pt. Reyes National Seashore, e-mail Sarah_Allen@nps.gov; Kristi Swafford, Pt. Reyes National Seashore, Contracting Officer, phone (415)464-5105, e-mail kristi_swafford@nps.gov.

Project Logistics and Summary

Over a four-year period (Fall 2000-Fall 2004), with funding provided for the latter two years of this project by the National Park Service, UC Davis scientists working in cooperation with staff scientists from Pt. Reyes National Seashore conducted a preliminary inventory and assessment of the marine biota in Drakes Estero, a coastal embayment and saline estuary at Pt. Reyes National Seashore. An objective of this assessment was to provide information on impacts of the oyster farm (operated by Johnson's) on the biota and ecological conditions in the estero, as well as provide baseline information on marine organisms that had not been previously inventoried here. In particular, fish and marine benthic and epibenthic invertebrates. This estero has a history of oyster farming since 1934 which occurred prior to the designation of the National Seashore in 1964. Part of the estero (and in particular, the eastern most "arm," Estero de Limantour) is also within a designated Wilderness Area. The research was field based in sampling and as needed the collecting of fish, invertebrates, and sediment and water quality samples for subsequent laboratory analyses. The fieldwork and laboratory work was conducted primarily by UC Davis master's students Angie Harbin

Sept 18 2007: Jarvis & Neubacher issued “clarification” document in which they retracted oyster feces claim

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

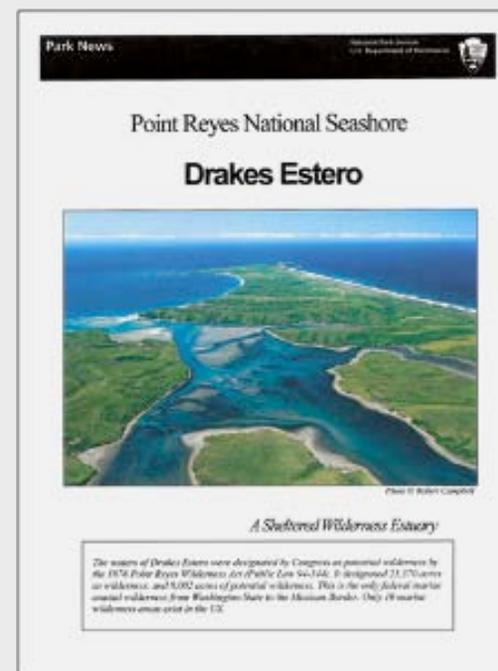
“The NPS incorrectly interpreted the report by Dr. Roberto Anima (1990) that he had detected pseudofeces in sediment core samples, that he estimated the amount of fecal matter produced by oyster rafts, and that he considered oyster farming as the primary source of sedimentation in the estero. NPS acknowledges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

From unsigned “clarification” Sept 18, 2007 18 page document released to public by Jarvis and Neubacher entitled: *NPS Clarification of Law, Policy, and Science on Drakes Estero*

Neubacher & Allen claimed that DBOC negatively impacted the distribution of fish in Drakes Estero. False. Jesse Wechsler's UC Davis masters thesis concluded that there was no significant impact

"Schooner Bay, where there are many oyster racks, supported a different fish community than Estero de Limantour where no mariculture occurs." [May 8 and May 11 versions]



For further analysis, see Goodman's May 29, 2007 Report to Marin Co Board of Supervisors

Neubacher & Allen claimed that DBOC negatively impacted the distribution of fish in Drakes Estero. False. Jesse Wechsler's UC Davis masters thesis concluded that there was no significant impact

Wechsler's 2004 Masters Thesis

Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, PRNS

Jesse Wechsler, comparing Schooner Bay (highest density of oyster racks) to Limantour (no oyster racks), 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.”

“Similar numbers of eelgrass dependent fish were observed at all sites.”

Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, Point Reyes National Seashore



JESSE FREEMAN WECHSLER
B.S. (University of Vermont) 1996

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTERS OF ARTS

in

Geography

in the

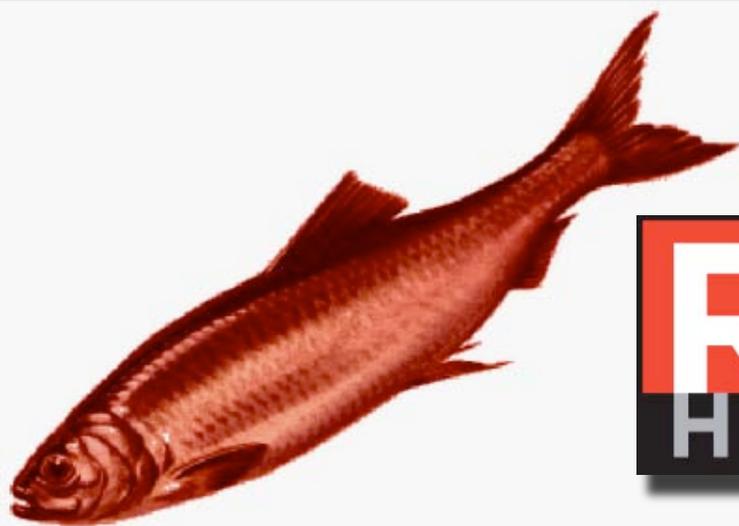
OFFICE OF GRADUATE STUDIES

of the

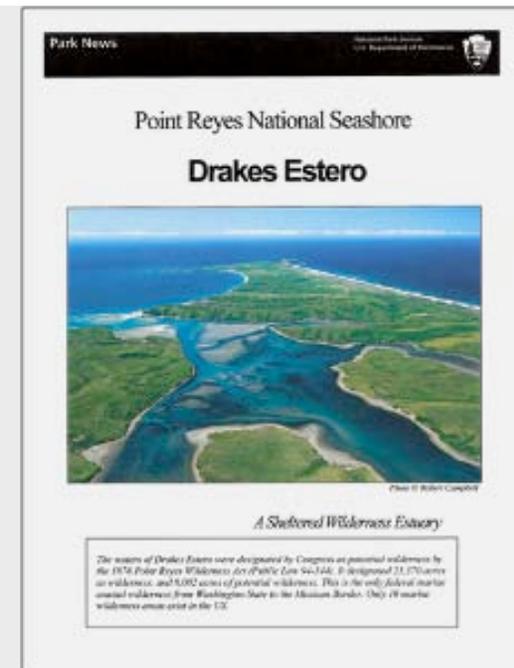
UNIVERSITY OF CALIFORNIA, DAVIS

Neubacher's Drakes Estero Report mentions absence of herring in Schooner Bay as if should have been found, suggesting might indicate trouble with eelgrass beds

"Wechsler (2004) detected few Pacific herring, even though this species was historically found in high numbers and spawns in eelgrass beds (Blunt 1984)." [May 11]



**RED
HERRING**



For further analysis, see Goodman's May 29, 2007 Report to Marin Co Board of Supervisors

Neubacher's Drakes Estero Report mentions absence of herring in Schooner Bay as if should have been found, suggesting might indicate trouble with eelgrass beds

- Wechsler's samples were mostly outside herring season for Estero.
- He trapped only one herring in Limantour (without oyster racks) and none in Schooner Bay. The difference between 1/1242 herring to total fish trapped in Limantour vs. 0/840 in Schooner Bay is of no significant.
- In masters thesis, Wechsler had nothing to say about herring.
- Wechsler found that all regular eelgrass fish he sampled were thriving.
- It was only NPS that grasped this red herring (1 herring in Limantour vs. 0 in Schooner Bay) as if indicated trouble for eelgrass in Drakes Estero.



	Total fish trapped	Herring trapped
Limantour	1242	1
Schooner Bay	840	0

Sept 18 2007: Jarvis & Neubacher issued “clarification” document in which they retracted fish community claim

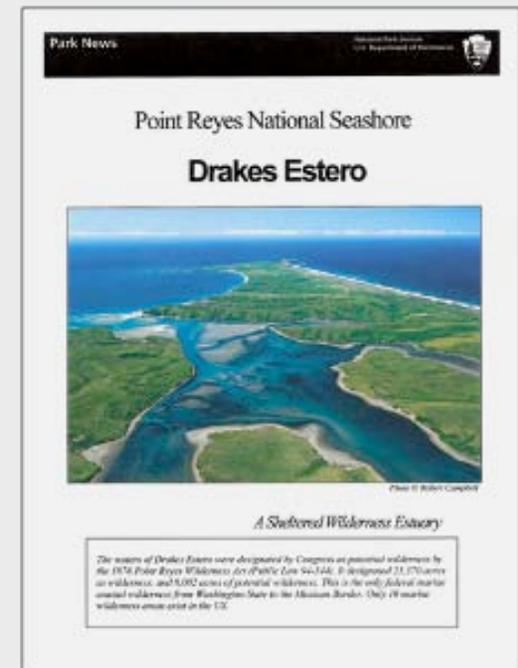
”Dr. Goodman’s review of Wechsler’s thesis does point out several inconsistencies between Wechsler’s results and the PRNS Park News publication, “Drakes Estero – A Sheltered Wilderness Estuary.”

“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.”

From unsigned “clarification” Sept 18, 2007 18 page document released to public by Jarvis and Neubacher entitled: *NPS Clarification of Law, Policy, and Science on Drakes Estero*

Neubacher, Allen, & Bennett claimed that DBOC's oyster racks had a negative impact on the eelgrass in Drakes Estero. Misleading: lost eelgrass is 1.5 acres compared to 368 acres increased eelgrass.

"Eelgrass beds are found in all suitable habitats with Drakes Estero, except between active oyster racks, where they do not exist due to shading and possibly other effects. In 2003, with 38 active oyster racks, this amounted to at least 1.5 acres of lost eelgrass cover." [May 8 and May 11 versions]



For further analysis, see Goodman's May 29, 2007 Report to Marin Co Board of Supervisors

■

NPS-CDFG Aerial Mapping of Eelgrass Coverage in Drakes Estero

Schooner Bay

NPS photos of propeller cuts are in Schooner Bay where no eelgrass existed in 1991

Sept 18 2007: Jarvis & Neubacher issued “clarification” document in which they retracted eelgrass claim

“The current level of impact to eelgrass beds by the oyster operation may or may not be significant to the overall persistence of eelgrass within Drakes Estero.”

“The extent of indirect adverse impacts from boat operations or changes to water quality has not been measured and further research is clearly needed to determine the extent and persistence of these impacts.”

From unsigned “clarification” Sept 18, 2007 18 page document released to public by Jarvis and Neubacher entitled: *NPS Clarification of Law, Policy, and Science on Drakes Estero*

Of all NPS claims against DBOC, the NPS harbor seal claim was the most provocative. In May 2007, NPS claims of harm to harbor seals captured the attention of the public, environmental groups, and elected officials. Were these claims true? Did NPS data support NPS claims?



Analysis shows that Superintendent Don Neubacher, Staff Scientist Sarah Allen, and Gordon Bennett (Sierra Club) misrepresented NPS data in April & May 2007 when they claimed in public articles, testimony, & reports that NPS data showed that DBOC was harming harbor seals in Drakes Estero.

2006 NPS Harbor Seal Annual Report indicated that Drakes Estero had high level of disturbances from kayaks & canoes, predators, birds, hikers & clam diggers; DBOC was not mentioned

Allen's NPS 2006 Harbor Seal Report

Harbor Seal Monitoring, SF Bay Area, Annual Report, NPS 2006

“Drakes Estero had the highest pup and molt numbers, and one of the highest levels of disturbance, 0.97 disturbances per survey (Figure 8). Park regulations allow kayaks and canoes back in Drakes Estero after July 1st. After that date 50% of disturbances were a result of these non-motorboats. Prior to July 1st most disturbances were of unknown cause, 47%. Surveyors documented a bobcat and a coyote disturbing seals on sandbars in Drakes Estero. Other sources included low flying large birds such as turkey vultures, hikers and clam diggers on Limantour and Drakes Beaches, and kayaks after July at the end of the seasonal closure.”

Harbor Seal Monitoring

San Francisco Bay Area

Annual Report
National Park Service
2006



Prepared by:

Jeannine Manna, Dale Roberts, Dave Press, and Sarah Allen

1

In 2005 and 2006, no mention of DBOC disturbing harbor seals

Apr 5 2007: Superintendent Neubacher met with Marin Supervisor Kinsey; Kinsey told Lunny on Apr 11 that Neubacher made ***“strong environmental accusations”*** against DBOC including data of harm to harbor seals; claimed DBOC ***“committed environmental felonies”***

Apr 5 2007: Lunny owned DBOC for 2 1/2 years; NPS harbor seal database recorded over 2000 seal FW's (flushed in water, most serious disturbance) during seal pupping seasons '05 - 4/5/07, but not one was caused by DBOC; as of Apr 5, no support for Neubacher's seal claim

Apr 24 2007: PRNS Scientist Allen emails Joe Cardaro of NOAA, writing in response to his request for data; Allen says that NPS had ***“no direct observations”*** of DBOC causing seal disturbances; she was right -- NPS had no FW's caused by DBOC as of Apr 24 2007

Public claims concerning impact of DBOC on harbor seals escalated in April & May 2007 by Superintendent Neubacher, Allen, and Bennett

Sierra Club Marin Group Gordon Bennett's conclusion concerning impact of DBOC on seals in Drakes Estero:

“Now that ... oyster bags are placed in seal nursery areas, baby seal numbers ... have been reduced to ... less than 10 so far in 2007.”

May 1, 2007 article in Coastal Post entitled “Save Drakes Estero”
Same statement made by Gordon Bennett in July '07 Sierra Club Yodeler

PRNS Staff Scientist Dr. Sarah Allen's conclusion concerning impact of DBOC on seals in Drakes Estero:

“... disturbance and placement of bags on the nursery area has caused an 80% reduction in the seals dropping to around 35 this last Saturday.”

PRNS Superintendent Don Neubacher's conclusion concerning impact of DBOC on seals in Drakes Estero:

“In 2007, oyster bags and disturbance have reduced one sub colony by 80%”

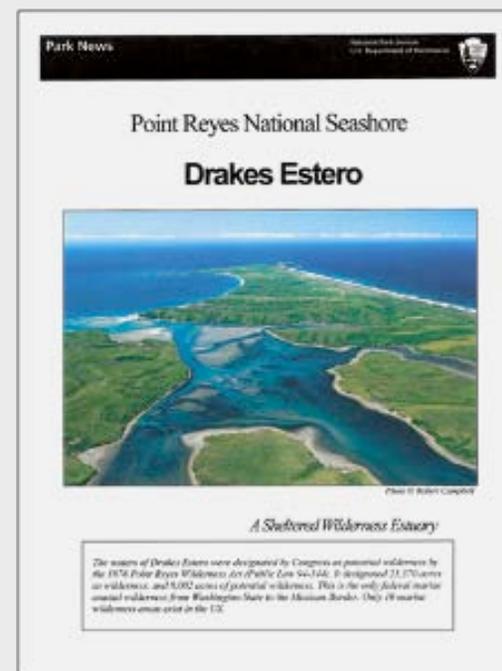
May 11, 2007 version of PRNS Published Report
“Drakes Estero: A Sheltered Wilderness Estuary”



Neubacher, Allen, & Bennett claimed that DBOC caused an 80% reduction of harbor seals at one subsite. False. The NPS harbor seal database does not support this claim. DBOC did not cause decline.

Concerning DBOC and harbor seals:
"In 2007, oyster bags and disturbance have reduced one sub colony by 80%." [May 11 version]

Concerning impact of DBOC on seals:
"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." [May 8 & 11 versions]

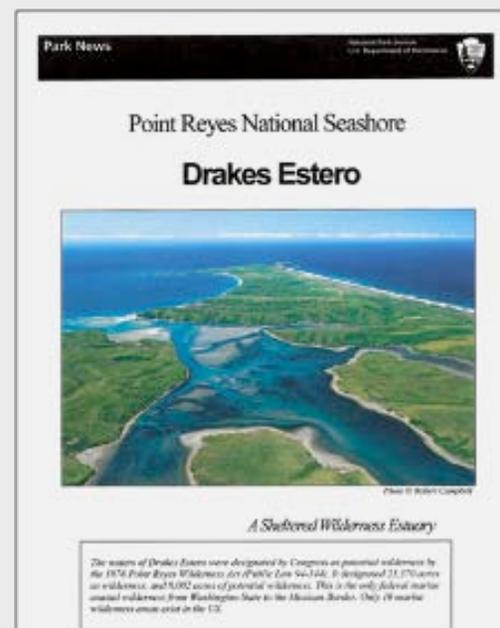


For further analysis, see Goodman's NRC presentation Part 2.

Neubacher, Allen, & Bennett claimed that DBOC caused an 80% reduction of harbor seals at one subsite. False. The NPS harbor seal database does not support this claim. DBOC did not cause decline.

Concerning DBOC and harbor seals:
“In 2007, oyster bags and disturbance have reduced one sub colony by 80%.” [May 11 version]

***Which of 8 subsites?
True or false?***



- NPS most provocative public claim in Apr/May 07 against DBOC was 80% reduction of harbor seals at one subsite due to DBOC
- NRC panel should examine NPS harbor seal database to verify or refute this claim. **See Part 2 for my detailed analysis of NPS database.**
- The subsite is clearly sandbar A -- in wilderness area and outside DBOC lease. Park visitors & predators, not DBOC, caused disturbances.

- May 9 2007: Goodman asked Sarah Allen by email about the harbor seal data she cited at the hearing on May 8th, but she never answered
- May 12 & May 13 2007: Goodman asked Neubacher by FOIA for access to NPS harbor seal data for Drakes Estero from 1973 to 2007
- **June 13 2007: Jarvis denied Goodman's FOIA requests for 2007 seal data citing "deliberative process privilege"**

" We are withholding the draft records pending the final annual report under FOIA exemption 5 (5 USC 552(b)(5)) which is designed to protect those inter-agency and intra-agency memorandums or letters which would not be available by law to a party in litigation with the agency. This exemption includes information that would be protected under the deliberative process privilege. The purpose of this privilege is to encourage open and frank discussions on matters of policy ..., to protect against premature disclosure of proposed policies ..."

From response by Regional Director Jon Jarvis on June 13, 2007 to Dr. Corey Goodman's May 13 FOIA request for complete harbor seal data cited by Dr. Sarah Allen in her testimony

- Goodman never requested opinions that were pre-decisional
- Goodman requested data that is specifically excluded from exemption 5
- Why did Jarvis ignore FOIA by refusing access to NPS harbor seal data?

June 13 2007: Jarvis denied Goodman's FOIA asking which subsite had 80% reduction as claimed in May '07

" (1) ... Would you please clarify her [Sarah Allen's] testimony of what measurement was reduced by 80%?, what site?, compared to what?, and what is the evidence that this reduction is a result of the oyster operation? How does Dr. Allen calculate an 80% reduction?"

From FOIA request #2 from Dr. Corey Goodman to Superintendent Don Neubacher on May 13, 2007, in reference to Dr. Allen's testimony at May 8, 2007 Marin Supervisors hearing in which she said that oyster operations had caused 80% decline at one subsite

" With respect to your May 13 request item (1), an individual may only obtain access to records written or transcribed to perpetuate knowledge or events. Therefore, the FOIA neither requires an agency to answer questions disguised as a FOIA request nor create documents or opinions in response to any individual's request for information."

Response by Regional Director Jon Jarvis on June 13, 2007 to Dr. Corey Goodman's May 13 FOIA request for identify of which subsite Dr. Allen was citing in her May 8 testimony

From May 2007 until Aug 2008, the NPS has steadfastly refused to identify which subsite (of 8) had the 80% seal reduction they cited as due to DBOC

Questions: May 2007 NPS harbor seal claims vs. NPS data

- Claim #1: 80% decline in seals at one subsite due to DBOC

- Facts:

-

- Conclusion:

- Claim #2: oyster bags moved into pupping areas in 2007

- Facts:

-

- Conclusion:

- Claim #3: DBOC increasingly disturbed seals & pups in 2007

- Facts:

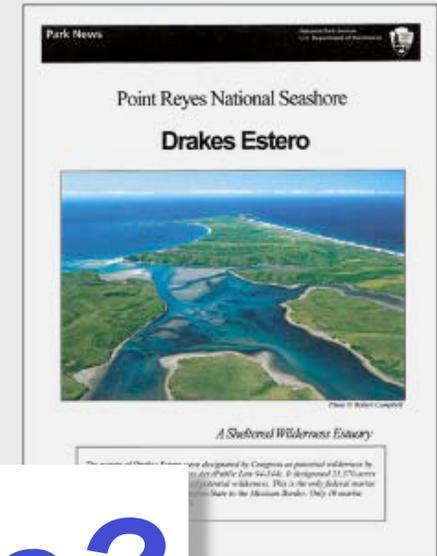
-

- Conclusion:

**Neubacher's PRNS Published Report
Drakes Estero, A Sheltered Wilderness Estuary**
May 11, 2007 version only (not in May 8 version)

Conclusion concerning DBOC and seals:

“In 2007, oyster bags and disturbance have reduced one sub colony by 80%”



Which subsite?

NPS monitors harbor seals at 8 subsites in Drakes Estero

- Neubacher, Allen, & Bennett made repeated public claims of 80% reduction of harbor seals at one subsite due to DBOC in April-May 2007
- As of August 2008, NPS had steadfastly refused to identify which of the 8 subsites in Drakes Estero they were citing. Why? What are they hiding?
- Is this normal NPS procedure for federally-funded research to not clarify data sampling site after making such a provocative public presentation?

Sept 20 2007: After gaining access to NPS data, Goodman's analysis showed that NPS & Bennett had misled public to think that DBOC caused 80% seal decline

“NPS claim ... : the number of harbor seals was down by 80% in 2007 compared to 2005 in Drakes Estero due to the oyster farm ... 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. Bennett's numbers in the Yodeler are quite accurate. ... Bennett and the NPS neglected 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, clammers, kayakers), and also the most disturbances by predators (coyotes). There are no records of disturbances by the oyster farm at sandbar A because it is far from their leased area and far from their oyster bags and boats. ... 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.”

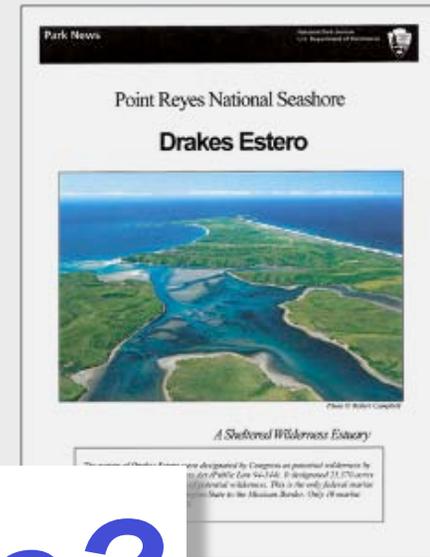
Dr. Corey Goodman article in Pt. Reyes Light, September 20, 2007



**Neubacher's PRNS Published Report
Drakes Estero, A Sheltered Wilderness Estuary**
May 11, 2007 version only (not in May 8 version)

Conclusion concerning DBOC and seals:

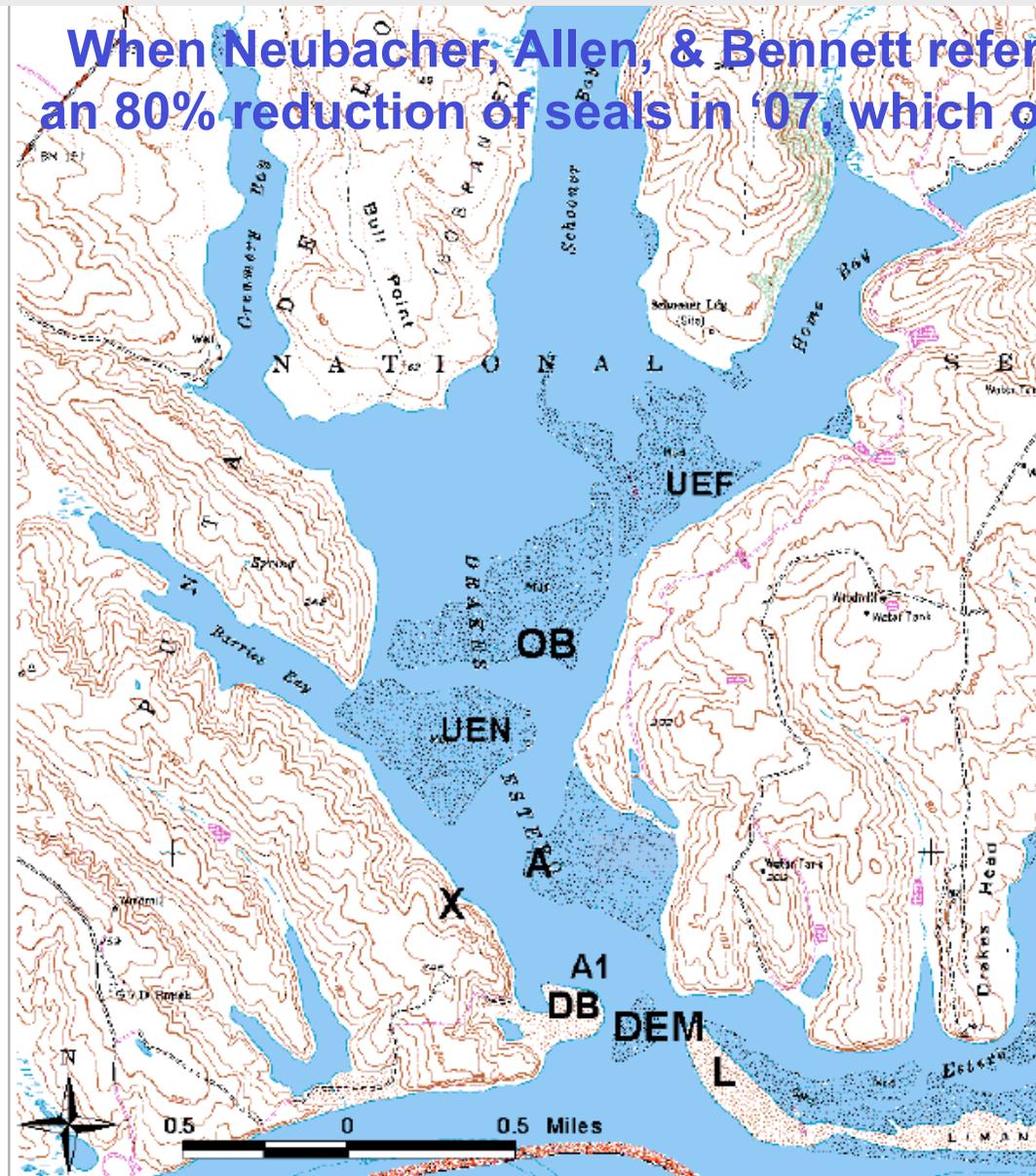
“In 2007, oyster bags and disturbance have reduced one sub colony by 80%”



Which subsite?

- NPS monitors seals at 8 subsites in Drakes Estero
- NPS 2007 harbor seal data are unambiguous - 80% decline in 2007 occurred at one and only one site: sandbar A
- Sandbar A is outside DBOC lease; DBOC does not go near it
- Sandbar A is inside wilderness area; access to Park visitors
- NPS 2007 database shows primary source of disturbances at Sandbar A are from Park visitors, none are from DBOC

When Neubacher, Allen, & Bennett referenced a subcolony showing an 80% reduction of seals in '07, which of 8 subsites were they citing?



Map of Drake's Estero haul out sites. Sub-sites include: L = Limantour Spit, DEM = Drake's mouth sandbars, DB = Drake's Beach, sandbars attached to land. A1 = sandbar next to main haul out, A = sandbar main haul out, AB = back of A sandbar, UEM = Upper Estero Middle, OB = Oyster Bar, UEF = Upper Estero Far. X = Observation Point.

- NPS monitors harbor seals at 8 subsites in Drake's Estero
- 4 sites at mouth (DB, A1, DEM, L),
- 1 site (A) across from "X", and
- 3 sites at inner islands (UEN, OB, UEF)
- Observations of harbor seals made from observation point (X) across from sandbar A; from point X, inner islands are to left, sites at the mouth are to right, and sandbar A is right across channel
- Sandbar site A is connected to mainland via AB whereas inner islands (UEN, OB, UEF) are isolated
- Oyster bags are predominantly on the west sides of islands UEN and OB
- Harbor seals haul out on the east sides of islands UEN and OB
- Oyster operations are not at sandbar A

NPS harbor seal data (Aug 13 '07) vs. NPS claims: the site is sandbar A

author	location	2005		2007		2007
		Total seals	Seal pups	Total seals	Seal pups	decline
Bennett, Sierra Club, 5/1/07 Coastal Post	Middle sandbars	100-200		<10		
Sarah Allen, NPS, 5/8/07 BOS public testimony	One area	>250	100	35 (May 5)		80%
Don Neubacher, NPS, 5/11/07 NPS Report	One area, one sub colony	350	>100	50	25	80%

NPS database	location	2005 (max numbers)		2007 (max numbers)		2007 change	
		Total seals	Seal pups	Total seals	Seal pups	Total	pups
From left to right	A	321	104	39	16	-88%	-85%
	A1	180	40	309	86	+72%	+115%
	DBS	57	23	212	48	+272%	+109%
Fits criteria	L	225	51	358	61	+59%	+20%
Does not fit	DEM	431	62	235	69	-45%	+11%
	OB	167	62	157	38	-6%	-39%
	UEF	128	26	62	18	-51%	-31%
	UEN	348	109	282	102	-19%	-6%

□

Number of total seals at island **UEN** in April & May '05 vs. '07

■

Neubacher's claim

2005	2007	2007
Total seals	Total seals	decline
350	50	80%



Number of total seals at island **OB** in April & May '05 vs. '07

Neubacher's claim		
2005	2007	2007
Total seals	Total seals	decline
350	50	80%

- This is NOT the decrease that Neubacher, Allen, & Bennett referenced in May '07
- NPS harbor seal data reveals identity of subsite as sandbar A

NPS harbor seal data (Aug 13 '07) vs. NPS claims: the site is sandbar A

author	location	2005		2007		2007	"one sub colony"
		Total seals	Seal pups	Total seals	Seal pups	decline	
Bennett, Sierra Club, 5/1/07 Coastal Post	Middle sandbars		100-200		<10		<i>middle sandbars</i>
Sarah Allen, NPS, 5/8/07 BOS public testimony	One area	>250	100	35 (May 5)		80%	
Don Neubacher, NPS, 5/11/07 NPS Report	One area, one sub colony	350	>100	50	25	80%	

NPS database	location	2005 (max numbers)		2007 (max numbers)		2007 change	
		Total seals	Seal pups	Total seals	Seal pups	Total	pups
From left to right	A	321	104	39	16	-88%	-85%
	OB	167	62	157	38	-6%	-39%
	UEF	128	26	62	18	-51%	-31%
Fits criteria	UEN	348	109	282	102	-19%	-6%
Does not fit	OB + UEN	416	163	370	117	-11%	-28%
	OB + UEF	204	65	164	38	-20%	-41%
	OB + UEF + UEN	431	174	393	135	-9%	-2%



Number total seals at islands UEN & OB in April & May '05 vs. '07

Neubacher's claim

2005	2007	2007
Total seals	Total seals	decline
350	50	80%

- This is NOT the decrease that Neubacher, Allen, & Bennett referenced in May '07
- NPS harbor seal data reveals identity of subsite as sandbar A



Number of total seals at **sandbar A** in April & May '05 vs. '07

Neubacher's claim

2005	2007	2007
Total seals	Total seals	decline
350	50	80%

- This IS the decrease that Neubacher, Allen, & Bennett referenced in May '07
- NPS harbor seal data reveals identity of subsite as sandbar A



Allen's Seal Claims Are Only Consistent with Sandbar A



Neubacher's Seal Claims Are Only Consistent with Sandbar A



Percent change
In max pups
2005-2007

Neubacher's Seal Claims Are Only Consistent with Sandbar A

NPS harbor seal data: Seals declined 80% at sandbar A in 2007 vs. 2005, but DBOC had nothing to do with it

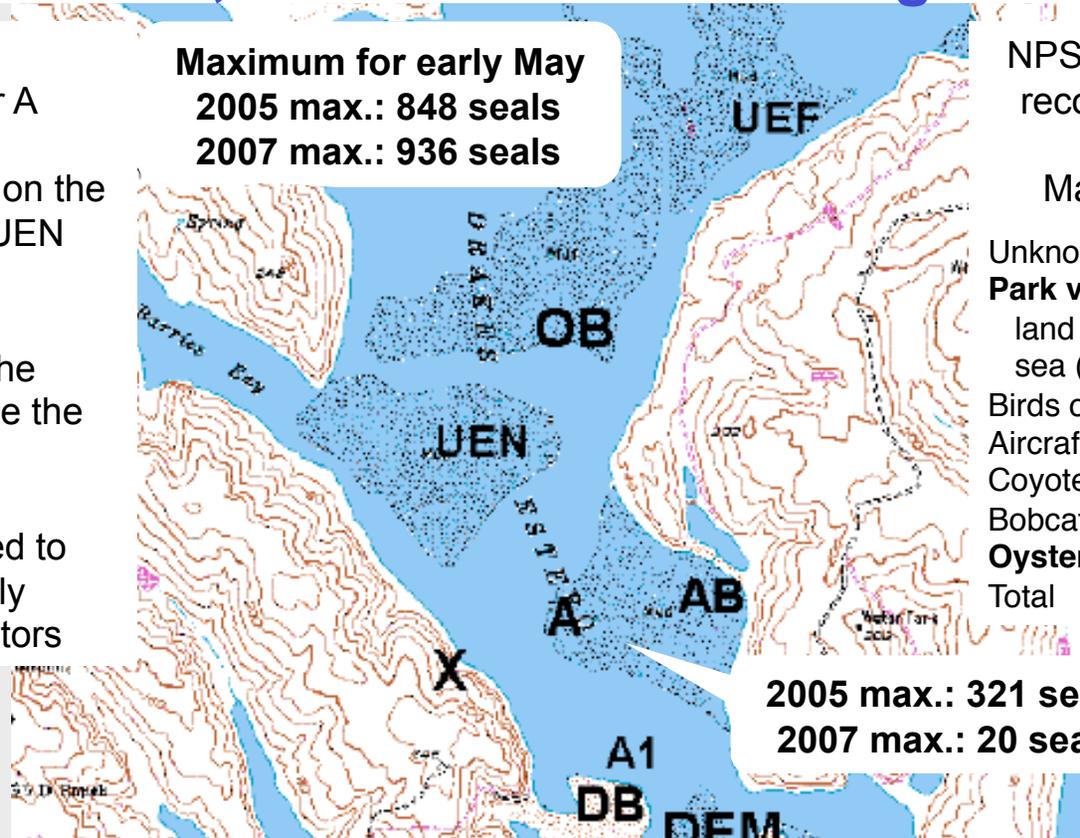
There are no oyster operations on sandbar A

Oyster operations are on the west sides of islands UEN and OB

Sandbar A is outside the DBOC lease and inside the wilderness area

Sandbar A is connected to the mainland and easily accessible to Park visitors

Maximum for early May
2005 max.: 848 seals
2007 max.: 936 seals



NPS harbor seal database record of disturbances at sandbar A:
 Mar-May 2005 to 2007

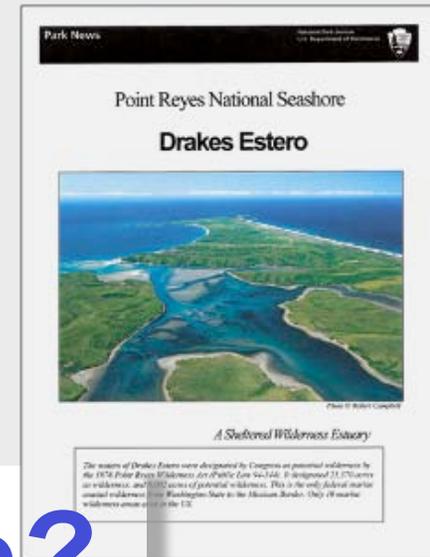
Unknown	7	22%
Park visitors	15	47%
land (hikers)	5	16%
sea (kayaks)	10	31%
Birds of prey	5	16%
Aircraft	3	9%
Coyotes	1	3%
Bobcat	1	3%
Oyster workers	0	0%
Total	32	

- #1: total number seals in Drakes Estero was similar in 2007 vs. 2005
- #2: number seals at one subsite – sandbar A – dramatically declined in '07
- #3: disturbances at sandbar A came from Park visitors and predators
- #4: seals moved away from sandbar A in '07, possibly due to disturbances
- #5: oyster operation had nothing to do with seals abandoning sandbar A

**Neubacher's PRNS Published Report
Drakes Estero, A Sheltered Wilderness Estuary**
May 11, 2007 version only (not in May 8 version)

Conclusion concerning DBOC and seals:

“In 2007, oyster bags and disturbance have reduced one sub colony by 80%”



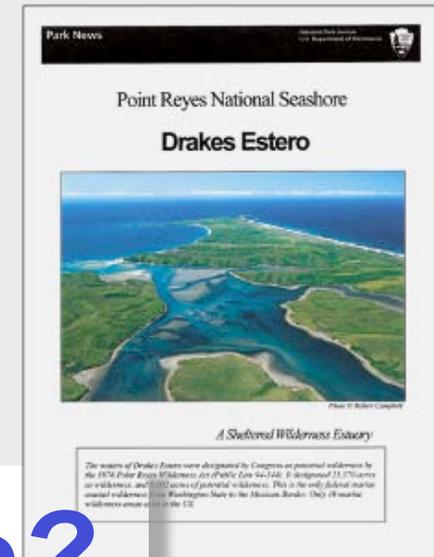
Q. Which subsite?
A. Sandbar A

- NPS monitors seals at 8 subsites in Drakes Estero
- NPS 2007 harbor seal data are unambiguous - 80% decline in 2007 occurred at one and only one site: sandbar A
- Sandbar A is outside DBOC lease; DBOC does not go near it
- Sandbar A is inside wilderness area; access to Park visitors
- NPS 2007 database shows primary source of disturbances at Sandbar A are from Park visitors, none are from DBOC

**Neubacher's PRNS Published Report
Drakes Estero, A Sheltered Wilderness Estuary**
May 11, 2007 version only (not in May 8 version)

Conclusion concerning DBOC and seals:

“In 2007, oyster bags and disturbance have reduced one sub colony by 80%”



Q. Which subsite?
A. Sandbar A

- Neubacher & Allen described the 80% decline at Sandbar A as a *“national issue”* of *“national significance”*
- Why didn't Neubacher protect the natural resource?
- Why did Neubacher falsely blame this 80% decline on DBOC?
- Why didn't Neubacher change policy and keep Park visitors away?
- Why didn't Neubacher properly inform the public and elected officials?
- Why didn't Neubacher properly inform local environmental groups?

FALSE

FALSE

FALSE

FALSE

■

Neubacher, Allen, & Bennett claimed that DBOC caused an 80% reduction of harbor seals at one subsite. False. The NPS harbor seal database does not support this claim. DBOC did not cause decline.

FALSE

FALSE

Sept 18 2007: Jarvis & Neubacher issued “*clarification*” document in which they retracted harbor seal claims

”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.”

From unsigned “clarification” Sept 18, 2007 18 page document released to public by Jarvis and Neubacher entitled: *NPS Clarification of Law, Policy, and Science on Drakes Estero*

- Nowhere in “*clarification*” document does NPS claim 80% decline in seals due to DBOC which was conclusion in May 8 testimony & May 11 NPS Drakes Estero Report
- Nowhere do they claim loss of seal pups due to DBOC
- Nowhere do they claim cause and effect
- This is retraction of NPS May 2007 harbor seal claims

Claim #2: *“...oyster bags have been recently put in pupping areas”*

“We didn’t know there were that many bags in the pupping area.”

Lunny Did Not Move the Oyster Bags in 2007, But Rather Neubacher Moved the Boundary on the Map in Apr 2007

“... 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 oyster bags have been recently put in pupping areas, you’ll get statistics, but it’s amazing how many pups we have probably lost this year. We have a serious problem right now.”

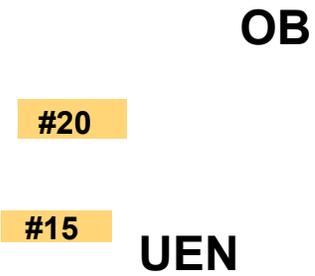
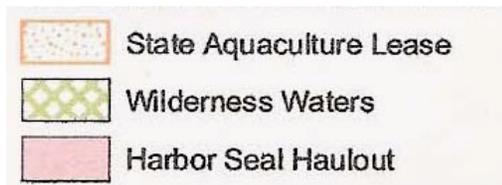
“ All those maps are basically developed for the environmental analysis. We didn’t know there were that many bags in the pupping area. ...So there are some serious issues related to this and what we’re going to do now based on the level of deeper review that we’re doing, we have to decide whether there’s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

From public testimony by Superintendent Don Neubacher to Marin County Board of Supervisors at hearing on May 8, 2007

□

Map given to Kevin Lunny by Sarah Allen on **May 17, 2005**

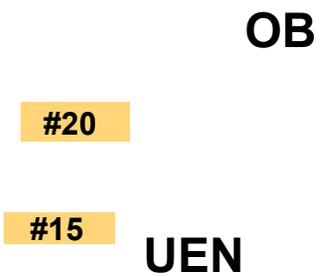
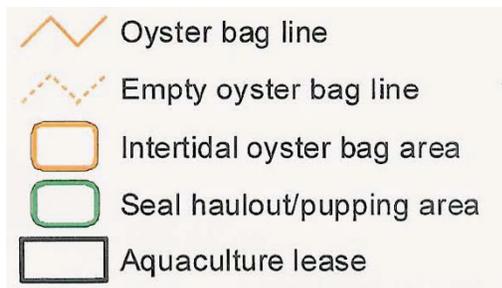
The Oyster Bags Didn't Move; Rather Neubacher Moved the Boundary



Most of the oyster bags in oyster beds #15 & #20 are NOT in the harbor seal haul out area

A

Map included with Allen's Apr 13 and Apr 26, 2007 Trip Reports, and given to Marin Supervisors by Don Neubacher on **May 8, 2007**



Most of the oyster bags in oyster beds #15 & #20 are now IN the new harbor seal haul out area

A

NPS map with altered boundary not given to DBOC or CDFG in Apr/May 2007 55

Claim #3 disturbances: Sept 11 2007: John Dixon of Calif. Coastal Commission issued report on impact of mariculture on Estero; made no mention of 80% seal decline; instead only cited Allen's Apr 26 2007 Trip Report

"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)"

Allen 2007 = Sarah Allen's Apr 26, 2007 Trip Report

From Dr. John Dixon's report to the California Coastal Commission on September 11, 2007 entitled: *Effects of Oyster Mariculture on the Natural Resources in Drake's Estero*

- Dixon collected no harbor seal data of his own. In contrast to statements by California Coastal Commission, Dr. Dixon has no independent harbor seal data.
- He visited the Estero only once on July 17 '07.
- He never examined the NPS harbor seal database. He did not know it existed.
- His only data for DBOC disturbing harbor seals was Allen's Apr 26 Trip Report.
- Dixon nevertheless made conclusions and policy recommendations based on Allen's Apr 26 Trip Report -- one day's worth on anecdotal data at best.

**July 23 2008: DOI Inspector General report entitled
“Investigative Report of Point Reyes National Seashore”
quotes NPS Scientist about Apr 26 2007 Trip Report**

“The Scientist, NPS Pacific West Region, explained that it was “absolutely pointless” for a scientist to fabricate one day’s worth of data to reach a certain conclusion because it would not be considered anything more than an “anecdote” which “isn’t worth anything.” [page 27]

From Department of Interior Inspector General report entitled “Investigative Report of Point Reyes National Seashore” released July 23, 2008

I agree with NPS Scientist that one day’s worth of data is an “*anecdote*” which “*isn’t worth anything*”. But this “*anecdote*” has become a powerful document upon which NPS and California Coastal Commission have drawn conclusions and set policy. This one day’s worth of data has been used to draw conclusions in “*clarification*” document. Thus, this “*anecdote*” has become key NPS data.

Apr 26 '07 Trip Report is key data of harm to harbor seals

Trip Report
Drakes Estero
4/26/07
3:45-5:00 PM

Sarah Allen, Science Advisor

I conducted a field survey of Drakes Estero on Thursday during the afternoon low tide to count harbor seals for the peak pupping season count.

I arrived at 3:45 PM and began counting the seals at A and A1 sandbars. At 3:50 PM I noted a white boat (@20 ft long) with outboard motor and two people aboard in the east end of the OB seal haul out site. The boat was fowled in eelgrass and the operators were poling through the eelgrass bed. Once half way along the channel going west, they used the engine again. I did not see the number of seals present before the boat was there; however there were only 5 (2 pups) when I began surveying and I saw seal heads in the water. There were seal drag marks on the sand bar indicating other seals may have been present and several fresh wet seals were hauling out on UEN, an adjacent sand bar. Also on previous day 4/25, a volunteer counted 21 (8 pups) on the OB haul out. When the boat went by the seals at 3:55 PM, all flushed into the water except one lone seal. Seals on UEN raised their heads but I did not see any enter the water. The boat continued west along the channel and flushed around 120 Black Brant that were in the eelgrass beds in the channel.

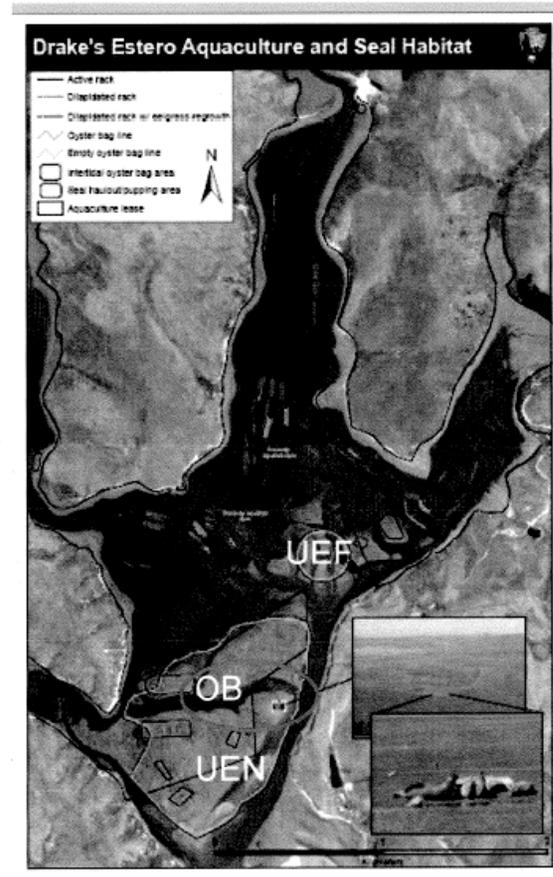
The boat then landed at around 4:10 PM about 2/3 of the way along the channel going west on the OB channel on the north west side where many oyster bags are located. Two men got off the boat, one taller in a green slicker and another in yellow slicker pants. They remained on the site until around 4:38 PM. During this time, they checked bags and added around 30 more bags onto the sandbar on the north west side of the sand bar and closer to the seals. During the interim time, 6 (2) seals hauled out at OB. When the boat proceeded back down the channel going east towards the seals at 4:55 PM, 5 seals flushed into the water included 2 mother-pup pairs at OB, another 3 mother pup pairs flushed at UEN sand bar, and around 75 seals alerted at UEN but did not enter the water. Additionally, around 200 black brant were flushed that were in the eelgrass beds in the channel after previously being flushed by the boat. At 4:58 PM, the boat then proceeded up into Home Bay. I terminated the survey at 5:00 PM.

A total of around 90 seals including around 50 pups were disturbed by the boat, and of these, I observed 14 seals including 7 pups directly flushed into the water. From previous research, we know that females with pups are more disturbed than adult males or immature seals. Additionally, around 320 black brant were flushed while in eelgrass beds.

During surveys of the estero, I again observed several rows of bags on both the OB and UEN sandbars where the seals haul out. Because this is the peak pupping season, mothers with pups are hauling out all over UEN, including near where the oyster bags are

located. There also appeared to be more bags on UEN, in addition to the bags added to OB today. Again, the bags were adjacent to and directly on the haul out sites where the seals historically hauled out in the past three decades of surveys that I have conducted.

Map of Drakes Estero – red circle indicates where seals and Black Brant were disturbed.



New map with altered haul out boundaries;
See Goodman pt 3 report on altered maps

Allen's Apr 26 '07 Trip Report not in Aug 13 NPS database

Date	Location	Time	Disturbance	Source	Source Count	Response	Count	Count
2007-Mar-23 09:30:00_DE	PORE_H_Seal_DE_AI	10:45 L	unknown			FW	22	0
2007-Mar-24 08:30:00_DE	PORE_H_Seal_DE_AI	10:45 DE_ALL	aircraft			None		
2007-Mar-25 10:00:00_DE	PORE_H_Seal_DE_AI	12:40 DBS	fisherman	1		FW	2	0
2007-Mar-25 10:00:00_DE	PORE_H_Seal_DE_AI	10:00 DE_ALL	other		oyster bags			
2007-Mar-26 11:15:00_DE	PORE_H_Seal_DE_AI	12:30 UEN	aircraft		hangglider	FW	17	13
2007-Mar-28 11:30:00_DE	PORE_H_Seal_DE_AI	12:15 DE_ALL	bird		1 gull	HA		
2007-Mar-28 11:30:00_DE	PORE_H_Seal_DE_AI	12:45 L	human	2		FW	5	0
2007-Mar-30 13:15:00_DE	PORE_H_Seal_DE_AI	13:20 L	other		5 horse riders	FW	142	27
2007-Mar-30 13:15:00_DE	PORE_H_Seal_DE_AI	15:00 L	human	3		FW	95	0
2007-Mar-30 13:15:00_DE	PORE_H_Seal_DE_AI	13:15 DE_ALL	human	8		None		
2006-May-27 07:45:00_DE	PORE_H_Seal_DE_AI	9:40 A1	unknown			HA	63	41
2006-Nov-04 13:50:00_DE	PORE_H_Seal_DE_AI	14:25 DE_ALL	unknown			FW	133	92
2007-Apr-01 12:30:00_DE	PORE_H_Seal_DE_AI	16:55 DE_ALL	human	3		F	232	231
2007-Apr-06 09:00:00_DE	PORE_H_Seal_DE_AI	11:15 L	human	3			43	
2007-Apr-06 09:00:00_DE	PORE_H_Seal_DE_AI	11:25 DBS	human	3			42	
2007-Apr-09 08:30:00_DE	PORE_H_Seal_DE_AI	11:30 A1	other		seal	HA		
2007-Apr-11 11:45:00 AM_DE	PORE_H_Seal_DE_AI	12:30 DEM	human	2	hikers	FW	31	6
2007-Apr-11 11:45:00 AM_DE	PORE_H_Seal_DE_AI	14:50 DEM	human		hikers	FW	29	16
2007-Apr-13 1:00:00 PM_DE	PORE_H_Seal_DE_AI	14:30 OB	human		oyster boat	None	525	479
2007-Apr-18 8:50:00 AM_DE	PORE_H_Seal_DE_AI	9:50 L	fisherman	2		FW		
2007-Apr-18 8:50:00 AM_DE	PORE_H_Seal_DE_AI	10:25 A1	clammer	2		HA	145	136
2007-Apr-18 8:50:00 AM_DE	PORE_H_Seal_DE_AI	9:50 DE_ALL	human		oyster bags	None		
2007-Apr-20 08:55:00_DE	PORE_H_Seal_DE_AI	9:10 A1	clammer	3		FW	166	128
2007-Apr-21 10:15:00_DE	PORE_H_Seal_DE_AI	10:00 L	human	5		FW	16	12
2007-Apr-21 10:15:00_DE	PORE_H_Seal_DE_AI	10:00 A1	clammer	10		None		
2007-Apr-21 10:15:00_DE	PORE_H_Seal_DE_AI	10:15 A1	bird		Turkey Vultures (1)	F	237	191
2007-Apr-21 10:15:00_DE	PORE_H_Seal_DE_AI	11:17 A1	bird		turkey vultures (4)	FW	192	190
2007-Apr-22 09:15:00_DE	PORE_H_Seal_DE_AI	10:15 DBS	clammer	11		None	190	190
2007-Apr-23 09:30:00_DE	PORE_H_Seal_DE_AI	10:30 L	human	2		FW	101	50
2007-Apr-25 13:40:00_DE	PORE_H_Seal_DE_AI	13:55 UEN	human		2 oyster workers	None	0	0
2007-Apr-25 13:40:00_DE	PORE_H_Seal_DE_AI	13:55 OB	other		boat on sandbar	None	0	0
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	12:50 UEN	motor boat	1		F	6	5
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	13:00 L	human	11		None	104	64
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	13:00 L	non-motor bc		kayak (4)	None	104	64
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	13:40 UEN	motor boat		oyster boat	FW	9	4
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	14:15 L	human	2		FW	100	45
2007-Apr-29 09:30:00_DE	PORE_H_Seal_DE_AI	15:04 DE_ALL	aircraft	1		HA		
2007-Apr-30 14:30:00_DE	PORE_H_Seal_DE_AI	15:35 L	human		2 hikers	None	270	230
2007-May-12 12:45:00_DE	PORE_H_Seal_DE_AI	14:10 L	human		hikers on path	FW	70	0

April 2007 dates in the NPS Aug 13 2007 QA/QC'd database include Apr 1, 6, 9, 11, 13, 18, 20, 21, 22, 23, 25, 29, and 30, but NOT April 26.

Apr 26 Trip Report controversial, anecdotal, not in database

- Allen's April 26 Trip Report is Dr. Dixon's exclusive citation of harbor seal data from Drakes Estero in his Sept 11 2007 California Coastal Commission report supporting claim that oyster farm is having negative impact on harbor seals. Dixon was not given access to NPS harbor seal database for disturbance records; he didn't even know it existed.
- When Goodman requested NPS harbor seal database by FOIA in May 2007, Jarvis denied his request in June, but sent him this Trip Report (and one other).
- 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."* Most FW's observed at 4:55 pm. This represents first observation of seals getting flushed into water by DBOC from '05-'07. If authentic, why wasn't this data entered into NPS database?
- Neither DBOC nor CA Dept. Fish & Game were notified. Why not? Pupping season was not yet over. Procedures could have been changed.
- DBOC records show that the white boat cited in the Trip Report was not operational on April 26th due to engine problems.
- DBOC payroll records show the oyster workers clocked out on shore by 4:37 pm (20+ min from UEN/OB) when Allen claims to have observed them in Estero.

Apr 26 Trip Report controversial, anecdotal, not in database

- Apr 26 Trip Report data was not on proper forms and not entered into NPS harbor seal database (Aug 13 '07 version) in violation of NPS management plan protocols. Why had Allen entered data from previous dates into database, but not from Apr 26 observations?
- Apr 26 Trip Report was not listed in Kristen Truchinski's seal report email update to Don Neubacher on May 1 for the week including Apr 26. All data from that week was listed in her email except the most important: the Apr 26 Trip Report.
- Apr 26 Trip Report was not mentioned by Allen at May 8 hearing or by Neubacher in May 11 Drakes Estero Report.
- Nevertheless, 9 months after the date of observation, and after written complaint from Lunny about authenticity of these data, the NPS entered the Apr 26 2007 Trip Report "data" into their NPS database and gave it to Goodman on Jan 16 2008. What is the integrity of database? Why did they enter controversial data?
- The April 26 Trip Report is controversial and anecdotal at best. According to NPS scientist, one day's worth of data is "*anecdotal*" and "*isn't worth anything.*" Why does this Trip Report become so important and lead to conclusions and policy?
- The oyster farm is certainly not a serious source of harbor seal flushings.

July 23 2008: DOI Inspector General report “*Investigative Report of Point Reyes National Seashore*” quotes PRNS Ecologist about why Apr 26 Trip Report added to database

“The PRNS Ecologist said he was responsible for managing harbor seal data that was collected pertaining to Drakes Estero. According to him, NPS did not initially include the information Allen obtained on April 26 in that database because her observations as a park scientist were not part of the volunteers’ monitoring program, but when the complainants questioned why that report was not part of the database, they decided to incorporate it.” [pg 26]

From Department of Interior Inspector General report entitled “*Investigative Report of Point Reyes National Seashore*” released July 23, 2008

As described on next page, this explanation by PRNS Ecologist makes no sense. He violated NPS protocol for database that he is responsible for managing. Is this good science? Does this maintain integrity of database?

July 23 2008: DOI Inspector General report “*Investigative Report of Point Reyes National Seashore*” quotes PRNS Ecologist about why Apr 26 Trip Report added to database

The explanation by the PRNS Ecologist does not make sense.

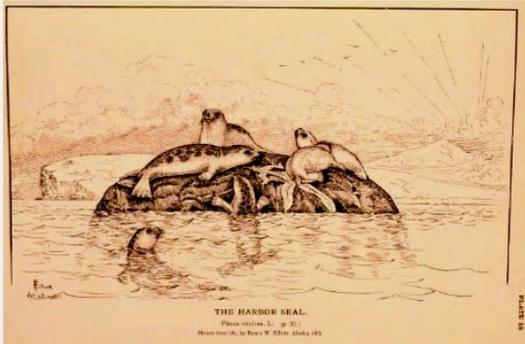
- Database not just for “volunteers”. Protocol for collecting and entering data (Hester, Allen, et al., 2004, *Pinniped Long-term Monitoring Program*) states that all data gets entered into database, including science advisor (Sarah Allen), I&M Coordinator, & volunteers.
- Allen apparently entered data in database on 8 prior occasions since 2000, including twice before in Apr 2007. Observer #37 responsible for Apr 26 Trip Report & 8 other data entries.
- Neubacher wanted to know all harbor seal data, not just volunteer data. Truchinski’s email on May 1 ‘07 included all data in database for week of Apr 26, but not Allen’s Apr 26 data.
- The Apr 26 data, if authentic, would be first observation of seals getting flushed into water (FW) in three years that Lunny owned DBOC. If true, shouldn’t this have been entered in database in timely fashion?
- Lunny filed a complaint with CCC (& copied NPS) on Sept 27 ‘07 concerning authenticity of Apr 26 Trip Report. NPS never responded. On what basis were controversial data entered into NPS database some 8 months or so later?
- Protocol says to “*only make changes that improve or update the data while maintaining data integrity*”. Did entering data many months later for which a formal complaint had been filed and not answered improve data integrity?
- Did the Data Manager enter the data based on Harbor Seal Survey & Harbor Seal Disturbance Survey forms? Did he follow QA/QC protocols?

Protocols for collecting data, QA/QC, & entering in database are defined in 2004 protocol; were protocols followed for Apr 26 2007 Trip Report?

DRAFT

PINNIPED LONG-TERM MONITORING PROGRAM

San Francisco Area Network of Parks



Henry W. Elliott 1872

Michelle Hester¹, Sarah Allen², Dawn Adams², Hannah Nevins¹,

¹Oikonos, P.O. Box 979, Bolinas, CA 94924

²National Park Service, Point Reyes National Seashore, Point Reyes, CA 94956

Version 1: July 30, 2004

Harbor Seals

Data Handling

- Data collected in the field are first recorded on the following paper forms:
Harbor Seal Survey (Phoca forms.doc)
Harbor Seal Disturbance Survey (Phoca forms.doc)
- Data are then proofed by two people and entered into the following database (Access compatible): phocabase.mdb
- Annually, the data are checked for errors and consistency.
- Data are currently stored in the Park network at
U:\natural_databases\Phoca\phocabase.mdb
- Database Documentation (metadata)

Data QA/QC

- Intensive and extensive training of volunteers (high retention rate of trained volunteers)
- Repeated counts during each survey
- Several surveys per week during breeding seasons
- Data forms are consistent over years
- Data entry completed by one primary person
- Any editing of archived data is accomplished jointly by the Project Manager and Data Manager

- Only make changes that improve or update the data while maintaining data integrity.
- Once archived, document any changes made to the data set.
- Be prepared to recover from mistakes made during editing.

Any editing of archived data is accomplished jointly by the Project Manager and Data Manager. Every change must be documented in the edit log and accompanied by an explanation that includes pre- and post-edit data descriptions. The reader is referred to Tessler & Gregson (1997) for a complete description of prescribed data editing procedures and an example edit log.

July 31, 2008: Concerning QA/QC of Apr 26 2007 Trip Report entry into database in Jan 2008, Goodman asked Jarvis by FOIA ***“did NPS follow the protocols in the Pinniped Long-Term Monitoring Program” of 2004?***

- Aug 25, 2008: NPS West Region FOIA Officer Bundock denied access to pinniped protocol under exemption 5 because it *“... is a draft and undergoing a peer review”*
- She wrote *“... the edit log is enclosed”* but log did not include 4/26/07 and *“explanation for the changes, the date of the changes ...”* was not provided
- She included 5/2/08 David Press note entitled *“Notable differences between harbor seal databases sent to ... Goodman in August 2007 and January 2008.”* with entry *“I entered Sarah Allen’s 4/26/07 survey with 6 associated disturbances.”*
- Harbor seal survey form provided for 4/26/07, but no harbor seal disturbance form.
- Declined to answer questions that were sent by Goodman to Jarvis on 7/31/08 concerning the integrity and explanation of changes to harbor seal database.

Data Management Plan
Version 2.00
San Francisco Bay Area Network

**Inventory and Monitoring
Program**

Inventory and Monitoring Program
National Park Service
September 2005

**Inventory and Monitoring
Program**

National Park Service
U.S. Department of the Interior



Director’s Order #11B states that all information (e.g., brochures, research and statistical reports, policy and regulatory information, and general reference information) distributed by the NPS (including information obtained from sources outside of the NPS) must be accurate, reliable and timely in nature. Therefore, the SFAN must evaluate and identify the types of information it will

Enter or download data in a timely manner. All data should be entered or downloaded into the project database as soon as possible, preferably no less than once a week. Do not delay data entry until all the project data have been collected if at all possible.

San Francisco Bay Area Network
Inventory and Monitoring Program

Data Management Plan
Version 2.00

Prepared by:

David Press
Golden Gate National Recreation Area

Eight questions to ask Jon Jarvis and NPS about the integrity of NPS harbor seal database

1. Jarvis sent Goodman the NPS harbor seal database on Aug 13 '07 and said it had been QA/QC'ed. Why did Jarvis send Goodman a new version of the database on Jan 16 2008?
2. Why didn't Jarvis inform Goodman that the new version contained one key change: the addition of Apr 26 Trip Report?
3. Were the NPS data management protocols followed for the collection and entry of data from the Apr 26 Trip Report?
4. Were proper survey forms filled out during field observations on Apr 26 2007?
5. Lunny filed a complaint with CCC (& copied NPS) on Sept 27 '07 concerning authenticity of the Apr 26 Trip Report. NPS never responded. On what basis were controversial data entered into NPS database some 8 months or so later?
6. Is altering a government database and violating management protocols acceptable conduct for federally-funded research? Is this good science?
7. When Jarvis denied Goodman's FOIA request for harbor seal data on June 13 '07, he wrote that the data would be prepared "*as a final annual report by December 2007.*" This has been the PRNS custom. Thus why was the database changed after the final annual report was due in December 2007?
8. Why as of Aug 2008 hasn't NPS issued their 2007 annual harbor seal report?

Summary: May 2007 NPS harbor seal claims vs. NPS data

- Claim #1: 80% decline in seals at one subsite due to DBOC
 - Facts: 80% decline was at sandbar A outside of oyster farm lease; disturbances by Park visitors & predators, not DBOC
 - **Conclusion: NPS misrepresented their own NPS data**
-
- Claim #2: oyster bags moved into pupping areas in 2007
 - Facts: oyster bags were not moved by DBOC in 2007; rather, NPS moved harbor seal haul out boundary on map
 - **Conclusion: NPS misrepresented data using altered map**
-
- Claim #3: DBOC increasingly disturbed seals & pups in 2007
 - Facts: based only on Apr 26 Trip Report; one day's worth of data is "*anecdotal*"; Apr 26 Trip Report is controversial
 - **Conclusion: Allen wrote on Apr 24: NPS has "*no direct observations*"; DBOC not major source of disturbances**

■

**Apr 26 2007: Goodman's concern about NPS science
began with NPS Scientist Allen's article in Pt. Reyes Light**

FALSE

■

**May 1 2007: Gordon Bennett (Sierra Club) and others
article in Coastal Post with stronger claims against DBOC**

FALSE

FALSE

■
**May 8 & May 11 2007: Neubacher featured claims in NPS
Drakes Estero Report (*Drakes Estero, A Sheltered Wilderness Estuary*)**

oyster feces

FALSE

oyster feces

[new non-public draft version]

beneath

eelgrass

In 2007, with 63 active oyster racks, this amounted to at least 8 acres of lost eelgrass cover [new non-public draft version]

ecology

fish

[new non-public draft version]

harbor seals

[new version]

the ecology has been altered over the past several decades due to activities associated with human activities including ranching and oyster farming.” [new non-public draft version]

May 11 2007 Conclusions

Oyster farming impacts on the ecological communities of Drakes Estero

- A USGS researcher stated that a source for sediment fill in the estero was from oyster feces and from structures trapping sediment.
- Eelgrass beds are found in all suitable habitats within Drakes Estero, except between active oyster racks, where they do not exist due to shading and possibly other effects. In 2003, 38 active oyster racks, this amounted to at least 1.5 acres of lost eelgrass cover
- Oyster racks and bags provide structural habitat that does not naturally occur in the estero except in limited areas. The equipment and structures change the community composition and provide habitat for invasive, non-native species.
 - Invasive organisms were found on the hard substrates provided by the oyster racks in Schooner Bay. These organisms were limited in Estero de Limantour where no oyster facilities exist.
 - The invasive non-native species, *Didemnum spp.*, is commonly present on oyster racks and is a highly aggressive, invasive species that could alter Drakes Estero ecology.
 - Schooner Bay, where there are many oyster racks, supported a different fish community than Estero de Limantour where no mariculture occurs.
- Clam abundance is reduced under oyster racks, possibly due to changes in bottom sediment composition or increased predation by fish and decapod crustaceans attracted to the oyster racks. In parts of Drakes Estero, clams are found in extremely high densities away from racks - up to 250 per meter squared.
- The oyster operation is a potential source for many invasive species because non-native species hitchhike on oysters and equipment that are brought to the estero.
- Placement of oyster bags and racks in intertidal mudflats and sand bars displace wildlife such as shorebirds and harbor seals because of spatial coverage of racks and disturbance by oyster operations. In 2007, oyster bags and disturbance have reduced one sub colony by 80%

Non-Public Draft Conclusions

Oyster farming impacts on the ecological communities

- Eelgrass beds are found in all suitable habitats within Drakes Estero, except beneath active oyster racks, where they do not exist due to shading and possibly other effects. In 2007, with 63 active oyster racks, this amounted to at least 8 acres of lost eelgrass cover. Approximately 50 additional acres were also affected, likely from boat propeller damage.
- Oysters that are grown in Drakes Estero likely play an important role in the deposition of fine-grained sediment, and in the trapping of sediment.
- Oyster racks and bags provide structural habitat that does not naturally occur in the estero except in limited areas. The equipment and structures may change the community composition and abundance of species and provide habitat for invasive, non-native species.
 - Invasive organisms were found on the hard substrates provided by the oysters and oyster racks in Schooner Bay.
 - The invasive non-native species, *Didemnum sp. A*, is commonly present on oyster racks and was discovered on natural habitat within the estero. Oyster processing methods have the potential to spread *Didemnum* by creating large numbers of fragments that can colonize new areas.
- The oyster operation is a potential source for invasive species because non-native species may hitchhike on oysters and equipment that are brought to the estero.
- Placement of oyster bags and racks in intertidal mudflats and sand bars displace wildlife such as shorebirds, black brant and harbor seals because of spatial coverage of racks and bags, and disturbance by oyster operations.

July 27, 2007; Version 3

DRAFT – NOT FOR DISTRIBUTION OR PUBLIC REVIEW



Point Reyes National Seashore
Drakes Estero



Photo © Robert Campbell

Conclusions deleted in new draft non-public version

- A USGS researcher stated that a source for sediment fill in the estero was from oyster feces and from structures trapping sediment.
 - Schooner Bay, where there are many oyster racks, supported a different fish community than Estero de Limantour where no mariculture occurs.

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

[new non-public draft version]

[new non-public draft version]

DRAFT – NOT FOR DISTRIBUTION OR PUBLIC REVIEW

National Park Service
U.S. Department of the Interior



FALSE

Sept 18 2007: Jarvis & Neubacher issued “clarification” document, retracted all major NPS claims from May 2007

- *”Dr. Goodman correctly points out errors or oversights by NPS ...”*
- *”The NPS incorrectly interpreted the report by Dr. Roberto Anima ...”*
- *”The Elliott-Fisk et al. (2005) report notes oyster feces are not a problem...”*
- *”Dr. Goodman’s review of Wechsler’s thesis does point out several inconsistencies between Wechsler’s results and...”* the Drakes Estero Report
- *”The current level of impact to eelgrass beds by the oyster operation may or may not be significant to the overall persistence of eelgrass within Drakes Estero.”*
- *”More focused analyses are required to determine if oyster operations are affecting seal distribution and productivity within Drakes Estero.”*
- *”Scientific studies to date are inconclusive as to the extent to which oyster farming is altering natural resources within the Estero...”*

□

FALSE

Oct 30 2007: Dr. Peter Gleick (member NAS, President, Pacific Institute) letter to Peter Douglas (Exec. Director, California Coastal Commission) said NPS “clarification” document was retraction

“As you know, the Pacific Institute signed on as a party to a Data Quality Act complaint to the National Park Service.”

“... consider the proper use of science to be a key component to any policy discussion.”

“... the memo of September 18 by the National Park Service ... essentially acknowledges the many errors and misrepresentations of the NPS ...”

Nov 20 2007: Dr. Peter Gleick letter to Gordon Bennett (Sierra Club Marin Group) said NPS “clarification” document was retraction

“... it should be an embarrassment to the Park Service. It is a remarkable piece of misleading fluffery ... the Park Service effectively acknowledges over and over that they were wrong and Goodman was right.”

“Goodman never claimed benefits; he challenged the NPS’s inaccurate and unsupported claims of harm!”

Nov 20 2007: Dr. Gleick (member NAS, President, Pacific Institute) email to Bennett (Sierra Club Marin Group) said NPS “clarification” document was retraction; NPS errors were “major and misleading”

“... this NPS “rebuttal” ... acknowledges very clearly that the NPS was wrong and Goodman was right, over and over and over again, but couched in language that pretends the opposite.”

“The Park's science is not supported by these independent scientists, who over and over again agree with Goodman, point out that there is insufficient evidence of harm ...”

“ The NPS errors were NOT minor, but major and misleading, and now, given the responses, pretty obviously intentional. Nor were they corrected when pointed out ...”

“ But the evidence so far doesn't show significant harm.”

“I cannot speak to Goodman's biases. But his criticisms have been made in the best scientific tradition of analysis, ... by saying this isn't his area of expertise -- that is irrelevant to the strength of his argument: either he is right or wrong ...”

retraction of retractions

effects.” *“Our research would indicate there are some negative*

FALSE

The park service said harbor seals declined from 250 to 50 in the area Lunny recently developed.

Park service officials deny any misrepresentations

NPS “clarification” document

FALSE



??????

FALSE

Answers to Feinstein's three questions concerning NPS May 11 Drakes Estero Report & NPS May 8 testimony

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?

The body of scientific studies on Drakes Estero includes 4 papers and the NPS harbor seal database. They show no evidence for major harm to Drakes Estero by DBOC. As Dr. Peter Gleick wrote: *"... the evidence so far doesn't show significant harm."*

2. Did the NPS draw the correct conclusions from these scientific studies, and did they present them correctly to the public?

No, the NPS presented false scientific claims to the public, and showed a pattern of intentional misrepresentation of the science. As Dr. Peter Gleick wrote: *"The NPS errors were NOT minor, but major and misleading, and now, given the responses, pretty obviously intentional. Nor were they corrected when pointed out ..."*

3. Have these conclusions about the science impacted NPS decision-making?

Yes, the false scientific claims by NPS have had a negative influence on policy by NPS and California Coastal Commission. As NPS Superintendent Don Neubacher testified: *"Now here's another reason why the permit is not available at this time."*

Brief history of scientific misconduct: role of NAS

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine



Committee on Science Engineering and Public Policy

POLICY AND GLOBAL AFFAIRS

1992: National Academy of Sciences (NAS) proposed a standardized definition in 1992. National Research Council (NAS) Committee on Science, Engineering, and Public Policy commissioned Panel on Scientific Responsibility in 1989, which released its report in 1992 entitled “Responsible Science: Ensuring the Integrity of the Research Process”. 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.

Brief history of scientific misconduct: OSTP



Office of Science & Technology Policy
Executive Office of the President

**Dec 6, 2000: White House Office of Science & Technology Policy
“Federal policy on research misconduct” entered Federal Register**

“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.*
- *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.”*

“Agencies will have one year to implement this policy”

