

Environmental Action Committee of West Marin

~ Protecting West Marin Since 1971 ~

March 27, 2012

The Honorable Ken Salazar
Secretary, U.S. Interior Department
1849 C Street, N.W. Washington, D.C. 20240

Re: Concerns Regarding Scientific Advice Received From Dr. Corey Goodman

Dear Secretary Salazar:

As you are aware, Dr. Corey Goodman, a neurobiologist, has actively pursued claims of scientific misconduct against the National Park Service (NPS) and its employees in an attempt to advocate on behalf of Drakes Bay Oyster Company (DBOC). DBOC operates in Drakes Estero, a congressionally designated wilderness area within Point Reyes National Seashore. Together with Dr. Goodman, DBOC is aggressively seeking an extension of its permit to engage in commercial oyster operations in the Estero, despite long-standing law and policy that requires operations to cease in November 2012.

A unique characteristic of Dr. Goodman's lobbying has been his claim that he presents an independent critique and analysis of NPS science, but as we have outlined below, this claim is belied by his advocacy positions and the factual record.

Dr. Goodman's analyses have been circulated broadly, and appear to have influenced the opinions of Senator Feinstein and others in Congress, such as Senator Inhofe, Senator Vitter, and Rep. Issa. Yet, as documented in several government reviews, Dr. Goodman's analyses often do not reflect the best available science or the weight of expert opinion, and have been found to be without merit. We are concerned that policymakers may rely on Dr. Goodman's rejected conclusions, and therefore write to highlight some of the specific problems with his published attacks on the NPS and its scientists.

As shown below, Dr. Goodman:

- Used fundamentally flawed statistical analyses in an attempt to undermine research by NPS scientists that has been published in a respected, peer-reviewed scientific journal and confirmed by the U.S. Marine Mammal Commission;
- Cherry-picked data in an apparent effort to misinform and mislead the public and elected officials regarding the environmental impacts from DBOC's operations;
- Continues to deny the potential for significant adverse ecological risks to Drakes Estero from DBOC's operations despite evidence that contradicts his claims, and expert opinion that clearly acknowledges those risks;
- Attempted to undermine the credibility of scientists he disagreed with rather than debate the merits of data that contradicted his views and failed to retract his demonstrably false accusations; and
- Is an advocate for the DBOC and an anti-wilderness policy, contrary to his claim to provide an independent opinion.

The Department of Interior Solicitor's March 22, 2011 report (the "Frost Report") noted that Dr. Goodman's analyses represented a disturbing pattern, in that he "*immediately attached labels of 'false' and 'misrepresentation' and 'misleading' to every scientific assertion with which [he] disagreed...*"¹

As one example, the Frost Report notes with regard to Dr. Goodman's May 8, 2007 testimony to the Marin County Board of Supervisors, that Dr. Goodman "*reviewed the [NPS] data, unilaterally concluded that the provided information did not support comments made by NPS employees...rejected the possibility of honest but different scientific opinions, and immediately accused [the NPS employees] of scientific misconduct in the form of false or fabricated claims.*"²

With the passage of time, the National Academy of Sciences, the Marine Mammal Commission, and the California Coastal Commission have all had an opportunity to review various claims asserted by Dr. Goodman. Each of these bodies has found Dr. Goodman's analyses to be unpersuasive. Lacking support in the scientific community, Dr. Goodman's writings are used by DBOC and others as part of their political campaign, particularly in the U.S. Congress.

It is our hope that Dr. Goodman's continued campaign of accusations does not distract you from the important legal and policy questions, and the best available science bearing on those questions, at issue in your decision about the Estero's wilderness designation.

Dr. Goodman Used Faulty Statistical Analyses To Attack NPS Park Science

Dr. Goodman's Claim:

A published and peer-reviewed NPS study of harbor seals in Drakes Bay engaged in an incorrect statistical analysis of data.

Why Dr. Goodman's Claim Should Not Be Credited:

The Marine Mammal Commission and an expert statistician found that Dr. Goodman's statistical analysis was fundamentally flawed.

On August 29, 2011, Dr. Goodman presented a purportedly independent statistical analysis³ of data that had been included in NPS scientists' peer-reviewed study⁴ of harbor seals and disturbances. The Marine Mammal Commission squarely rejected Dr. Goodman's analysis:

*"[T]he dependent and independent variables [Dr. Goodman] used in numerous models, including his top models, have a built-in dependency—that is, the dependent variable also occurs as part of one of the explanatory variables. This means the regression results are artificially linked and inflated, and much more likely to appear significant using superficial statistical tests that do not account for this built-in dependency."*⁵

Instead of responding to the serious flaw in the statistical models he was using in an attempt to discredit the findings of NPS scientists, Dr. Goodman responded to the Marine Mammal Commission's criticism by suggesting that the Commission had misunderstood his first analysis,

¹ 3/22/11 Frost Report, at page 15.

² 3/22/11 Frost Report, at page 8.

³ 8/29/11 corr. from Dr. Goodman to MMC: "Analysis of Becker 2011."

⁴ Becker, B. H., Press, D. T. and Allen, S. G. (2011), Evidence for long-term spatial displacement of breeding and pupping harbour seals by shellfish aquaculture over three decades. *Aquatic Conserv: Mar. Freshw. Ecosyst.*, 21: 247–260. doi: 10.1002/aqc.1181.

⁵ 11/21/11 MMC Report, at page 51.

and then submitted an additional analysis.⁶ However, as an expert statistician wrote to the Marine Mammal Commission, Dr. Goodman's second analysis suffered from the same underlying and fundamental flaw as his initial analysis.⁷

In contrast to Dr. Goodman's purported statistical analyses, the NPS analysis of harbor seal disturbances has been peer-reviewed, published in the respected journal *Aquatic Conservation*, and has been upheld by the Marine Mammal Commission.⁸ The Commission found that NPS used the best available scientific information and had a sufficient basis from which to conclude that "from time to time, mariculture activities in the estuary do disturb harbor seals" and that there is a statistically significant correlation between increased mariculture activity and decreased seal use of the estuary.ⁱ

Dr. Goodman "Cherry-Picked" Data In An Apparent Effort To Misinform and Mislead the Public, including Senator Feinstein

Dr. Goodman's Claims:

- NPS Maps Are Wrong: Seals and Oyster Operations Do Not Overlap;
- DBOC Does Not Violate Harbor Seal Protection Regulations;
- NPS "Cherry-Picked" Harbor Seal Data That Should be Omitted from Analyses.

Why Dr. Goodman's Claims Should Not be Credited:

Dr. Goodman Omits or Seeks to Exclude Evidence that Contradicts His Arguments, as Found By the Marine Mammal Commission and the California Coastal Commission.

Dr. Goodman has repeatedly cherry-picked data⁹ in making public presentations in support of his attacks on the NPS and its scientists.

In his August 29, 2011 letter to the Marine Mammal Commission, Dr. Goodman accused NPS scientists of using a map that was "inaccurate and misleading" because there was "no record" of seals and oyster beds overlapping at the west end of the Estero's lateral channel.¹⁰ To support his claim, Dr. Goodman chose a California Department of Fish and Game (CDFG) map that was available on the Marine Mammal Commission's website. This CDFG map provided generalized harbor seal haul-out locations, but no specific count or location data. Dr. Goodman misleadingly referred to the CDFG map as the "Harbor seal haul-out areas map used by Tom Moore (CDFG) on May 20, 1991."¹¹ However, Dr. Goodman chose not to select the other CDFG map on the website, which showed the specific counts and locations of harbor seals based on Moore's actual May 20 survey results. This map that Dr. Goodman chose to ignore squarely contradicted his erroneous assertion that there was no record of seals overlapping areas with oyster bags in the west end of the lateral channel.

⁶ 1/13/12 corr. from Dr. Goodman to MMC, "Proposed Agenda for Meeting": "*The MMC rejected the Goodman and Lewis models, claiming they were difficult to evaluate.*"

⁷ 2/13/12 corr. from Dr. Dominique Richard to MMC: "Rejection of Dr. Goodman's models."

⁸ 11/21/11 MMC Report, at pages 55-56.

⁹ *Ibid.*, at page 49: "'Cherry-picking' refers to the selective treatment of specific data, usually because of the influence of individual data points on the outcome of a particular analysis."

¹⁰ 8/29/11 corr. from Dr. Goodman to MMC: "Analysis of Becker 2011," at page 16: "*Becker's Figure 1 gave false impression that oyster bags are within seal haul-outs – map is inaccurate and misleading.*"

¹¹ *Ibid.*, at page 19.

As the Marine Mammal Commission stated, it was “difficult to determine” seal locations from the map Dr. Goodman used because no specific seal count or location data existed on that map, whereas the map Dr. Goodman failed to use was “notable” for its accuracy.^{12,ii}

As a second example of Dr. Goodman’s cherry-picking, DBOC’s Permit from the NPS establishes a harbor seal protection area known as the “Lateral Channel” and closes this channel to motorboats during the harbor seal breeding season March 1-June 30.¹³ In a recent March 1, 2012 Op-ed article,¹⁴ Dr. Goodman chose to rely on a misleading aerial photograph to claim that DBOC motorboats do not violate this seal protection area, even though a second aerial photograph contradicted his claim. Dr. Goodman had earlier used both of these aerial photographs in his August 29, 2011 letter to the Marine Mammal Commission in an effort to criticize the NPS.¹⁵

The photograph Dr. Goodman selected for use in his Op-Ed did not show the full Lateral Channel (a fact he did not disclose to the public). He nevertheless used the photograph to misleadingly assert that the position of the DBOC boat in the photograph was at the end of the lateral channel and positioned as allowed by DBOC’s permit. Had Dr. Goodman used the other photograph from his August 29th letter, which shows the full Lateral Channel and thus allows the viewer to see the boat’s position deep within that off-limits channel during the seasonal closure, his argument in defense of DBOC would have collapsed.

At the time Dr. Goodman wrote his Op-ed, he knew that the California Coastal Commission, citing the photograph he chose not to publish, had found evidence that DBOC had violated the seal protection area. Several months earlier, the Commission’s staff had reviewed the photograph showing the full Lateral Channel: *“It has been brought to our attention that there have been DBOC boats in the Lateral Channel during this restricted period. A photograph of Drakes Estero recently displayed by Corey Goodman, dated April, 26, 2011, ... demonstrates the presence of a motorized vessel apparently in support of aquaculture activities within the Lateral Channel of Drakes Estero.”*¹⁶

Dr. Goodman’s selective use of maps and photographs does not represent any genuine scientific disagreement. Instead, Dr. Goodman presented and relied on incomplete and misleading information to make arguments in support of DBOC.

Dr. Goodman’s cherry-picking has not been limited to selection of seal maps and photographic evidence. He has attacked NPS’s use of data regarding harbor seals and disturbances.¹⁷ Initially, he argued that NPS’s analyses could not be credited because NPS needed to locate and incorporate data from the 1970’s and 1980’s.^{18, iii} When NPS did just that,^{19, iv} and the additional data served to reinforce the NPS conclusions with which Dr. Goodman disagreed, Dr. Goodman then reversed course and asked the Marine Mammal Commission to exclude from the scientific

¹² 11/21/11 MMC Report, at page 44.

¹³ DBOC NPS Special Use Permit, Exhibit C.

¹⁴ C. Goodman, West Marin Citizen, 3/1/12 Guest Column, “A picture is worth a thousand words.”

¹⁵ 8/29/11 corr. from Dr. Goodman to MMC: “Analysis of Becker 2011,” at Part 2 page 12 (partial view of channel) & page 33 (full view of channel).

¹⁶ 9/29/11 corr. from California Coastal Commission to Drakes Bay Oyster Company.

¹⁷ 8/29/11 corr. from Dr. Goodman to MMC: “Analysis of Becker 2011.”

¹⁸ <http://mmc.gov/drakes_estero/pdfs/ltr_becke_mms_92208.pdf>.

¹⁹ 11/21/11 MMC Report, at page 49.

analysis some of the very same data he had previously insisted should be included, specifically data from 1982 and 1983, as well as other data from 2003 and 2004.²⁰

However, the Commission responded (emphasis ours): “*Selective treatment can involve the addition or removal of data if the reason for either course is simply to influence the outcome of an analysis. Any data point used in an analysis should be determined in advance based on its inherent properties rather than its potential influence.*”²¹ Dr. Goodman’s *ex post facto* request to eliminate selected data was an apparent attempt to influence the statistically significant correlation between increased oyster harvests and decreased harbor seal counts established in the peer-reviewed NPS study.

Thus, the Marine Mammal Commission rejected Dr. Goodman’s request: “*The Commission does not agree that data from 1982 and 1983 necessarily should be excluded... [and] the Commission believes [it] is more appropriate...to retain [2003 and 2004]....*”²² Unfortunately, despite the Marine Mammal Commission’s conclusion that Dr. Goodman’s selective treatment of data would be inappropriate scientific analysis,²³ that analysis apparently persuaded Senator Feinstein and others to place a rider on the Commission’s annual funding bill urging the Commission to consider adopting Dr. Goodman’s flawed approach.²⁴

Dr. Goodman Continues to Deny Potential Ecological Risks to Drakes Estero Despite His Claims Having Been Proven Wrong

Dr. Goodman’s Claim:

NPS exaggerated the risk posed by an invasive species, *Didemnum vexillum*, because that species cannot grow on eelgrass or Estero rocks.

Why Dr. Goodman’s Claim Should Not Be Credited:

Studies by scientific experts, photographs, and the National Academy of Sciences report conclude that *Didemnum* presents a potential ecological risk to the Estero.

In 2007, Dr. Goodman accused NPS of overstating the potential risk to Drakes Estero, and particularly its eelgrass, from the invasive tunicate *Didemnum*.^{25, v} In support of his position, Dr. Goodman quoted Mary Carmen, a leading tunicate researcher at the Woods Hole Oceanographic Institute, as telling him that *Didemnum* “*has ... never been found on eelgrass.*” However, within months of the conversation, Carmen recorded the presence of *Didemnum* on eelgrass, a finding she later published in a peer-reviewed scientific journal.²⁶

Dr. Goodman also claimed that “[*Didemnum*] is found nowhere other than Lunny’s oyster racks, it cannot and has not spread to other substrate in the estero, and thus it is only Lunny’s problem and not ours.” Yet, as the Department of Interior’s Inspector General’s July 23, 2008 report notes “[on] May 11, 2007... NPS added a photograph demonstrating that...the tunicate was also attached to hard

²⁰ Ibid., at page 50.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ <http://thomas.loc.gov/cgi-bin/cpquery/?dbname=cp112&sid=cp1128emTZ&refer=&r_n=s078.112&item=&&sel=TOC_361405&>.

²⁵ 5/8/07 corr. from Dr. Goodman to Marin County Bd. of Supervisors; 8/23/07 Data Quality Complaint filed by DBOC against NPS.

²⁶ “First occurrence of the invasive tunicate *Didemnum vexillum* in eelgrass habitat,” *Aquatic Invasions* (2010) Volume 5, Issue 1: 23-29.

substrate in the Bull Point area of Drakes Estero.”²⁷ These undisputed findings that *Didemnum* – contrary to Dr. Goodman’s assertions – can grow on eelgrass and has grown on Estero rocks are thus no longer a matter of legitimate scientific dispute, and yet Dr. Goodman has not amended or corrected his comments.

Additionally, the 2009 report by the National Academy of Sciences contradicts Dr. Goodman’s claim that there is no risk associated with the spread of *Didemnum*: “*Further understanding of how to control abundances and reduce the risk of spread of the invasive Didemnum... is urgently needed.... For Drakes Estero, methods need to be developed for how to dispose of Didemnum after scraping it off racks and oyster shells to prevent it from spreading by fragmentation. The current practice of disposing of scraped off fragments into the estero increases the risk of spread, perhaps even to eelgrass given recent reports of the colonization of eelgrass blades...*”²⁸

Despite the experts’ recognition of the risks posed by *Didemnum* and the undisputed findings of *Didemnum* on eelgrass and on Estero rocks, Dr. Goodman’s accusations that NPS misrepresented threats posed by *Didemnum* to Drakes Estero continue to be presented on the web.²⁹

Dr. Goodman Attempted To Destroy the Credibility Of Scientists He Disagreed With Rather Than Debate The Merits of Data That Contradicted His Views and Failed to Retract His Demonstrably False Accusations

Dr. Goodman’s Claims:

- NPS Presented False Science to the National Academy of Science’s National Research Council Panel;
- NPS Never Requested Oyster Harvesting Data from DBOC;
- NPS Scientist Dr. Sarah Allen Claimed that DBOC Expanded Operations at Sandbar A.

Why Dr. Goodman’s Claims Should Not Be Credited:

- Peer-Reviewed NPS Scientific Studies and Expert Scientific Opinion Directly Contradicts Goodman’s Unsupported Claims;
- Email Records of NPS Demonstrate that NPS Requested the Data in Question;
- Recorded Testimony of Dr. Allen Shows That Dr. Goodman’s Statements are Incorrect.

On January 18, 2009, Dr. Goodman wrote to the National Academy of Science and accused NPS of presenting “false science” to the Academy’s National Research Council (NRC).³⁰ Specifically, Dr. Goodman claimed that NPS data showing that harbor seal disturbances were observed at particular times could not be true because his own “experimental analysis” of tides in the Estero revealed that the sandbars were submerged at the times in question: “*NPS officials and scientists provided your NRC panel with harbor seals data and analyses that are false and misleading. There is little ambiguity – your NRC panel was repeatedly presented with false science. Tide charts and direct experimental analysis of tides similar to those in Drakes Estero on April 29, 2007 reveal that the sandbars in question were under water when seals were supposedly observed getting flushed off them...swimming harbor seals cannot be flushed off a sandbar that is under water.*”³¹

²⁷ 7/23/08 Dept. of Interior Inspector General report, at page 21.

²⁸ Shellfish Mariculture in Drakes Estero, National Academy 2009, available at <<http://www.nap.edu/catalog/12667.html>>, at page 84.

²⁹ <<http://www.alsamarin.org/pdfs/CSG%20report1%20070508.pdf>>.

³⁰ <http://mmc.gov/drakes_estero/pdfs/ltr_goodman_nrc_01809.pdf>.

³¹ <http://mmc.gov/drakes_estero/pdfs/ltr_goodman_nrc_01809.pdf>.

NPS responded to Dr. Goodman's criticisms on May 1, 2009. NPS noted that Dr. Goodman's experiment did not accurately reflect conditions on the date in question, in part because there are more seals and pups present in April than in January, the time of Dr. Goodman's referenced experiment. Further: "*Dr. Goodman (pages 7-12) assumes that seals do not use the site when sandbars are submerged. ...[T]here is no supporting evidence for these allegations. ...[S]eals (especially mothers with pups) regularly hover over and rest on sandbars in Drakes Estero before they are exposed by falling tides, and this is a common behavior of harbor seals elsewhere. NPS has time stamped images of seals on the sandbars at similar falling tides during the 2008 breeding season in Drakes Estero.*"³²

The National Academy Report included a photo of seals resting on a submerged sandbar.³³ Yet Dr. Goodman has failed to respond to the NPS's direct critique or the Academy's implied critique of the "experiment," which he relied on in accusing NPS of misconduct. Because he has yet to retract this mistaken analysis, Dr. Goodman's erroneous prior statements continue to be relied upon, and individual NPS scientists and volunteers continue to be wrongly accused of falsifying observations of disturbances. Even if there remains any legitimate scientific disagreement regarding the 2007 disturbance event, Dr. Goodman has chosen to attack individual scientists and park volunteers and call into question their professional integrity instead of engaging in a civil debate regarding the scientific merits of the NPS analysis.

The Interior Department's Frost Report exposed Dr. Goodman's attempt to discredit the NPS data: "*[Dr. Goodman] submitted arguments in an effort to destroy the credibility of all 2007 disturbance data, and to flat line that year's data, which would negate any statistical correlation between or among an increase on mariculture activities, evidence of pinniped harassment, and the displacement of marine mammals in upper Drakes Estero.*"³⁴

In a second example, on August 29, 2011, Dr. Goodman wrote to the Marine Mammal Commission and accused NPS of never asking for additional data that might be useful for its analysis of oyster operations.³⁵ However, the Marine Mammal Commission's report concluded that there was no basis for this accusation, and included in the exhibits to the report three e-mail messages showing that NPS scientist Dr. Ben Becker did indeed request the additional data from DBOC.^{36,vi} We are not aware of any steps taken by Dr. Goodman to withdraw or correct what has been shown to be a patently false claim.

In a third example, in an April 2007 Point Reyes Light "Opinion" article, Dr. Goodman claimed that NPS scientist Dr. Sarah Allen "*repeated ... false science when she testified [at a Marin County Board of Supervisors meeting] that disturbances by DBOC had caused an 80% reduction in the seals and pups at sandbar A....*" However, Dr. Allen's testimony was video-recorded and reveals that Dr. Goodman's claim was wrong.

Dr. Allen stated: "*Over the past few weeks we have documented oyster operations disturbing mothers with pups and oyster bags left on sandbars where the seals would normally give birth and nurse their pups.*"³⁷ Dr. Allen made no reference to sandbar "A."³⁸ Nor would it have made

³² <http://mmc.gov/drakes_estero/pdfs/ltr_nps_goodman_50109.pdf>.

³³ Shellfish Mariculture in Drakes Estero, National Academy 2009, available at <<http://www.nap.edu/catalog/12667.html>>, at page 47.

³⁴ 3/22/11 Frost Report, at page 16.

³⁵ 8/29/11 corr. from Dr. Goodman to MMC: "Analysis of Becker 2011," at part 2, page 5.

³⁶ 11/21/11 MMC Report, at page 3.

³⁷ <http://marin.granicus.com/MediaPlayer.php?view_id=16&clip_id=2173>.

³⁸ Ibid.

any sense for Dr. Allen to refer to that sandbar, as it is located at the southern end of the Estero, far from the oyster operations. Dr. Goodman was publicly asked to retract his accusations regarding Dr. Allen, in light of the undisputable evidence that Dr. Allen did not say what he said she did.³⁹ Yet Dr. Goodman refused to retract his statements.

This is not the behavior one should expect from a member of the National Academy of Sciences.

Dr. Goodman Misleads Public, Congress By Presenting Himself as an Independent Scientist With No Policy or Advocacy Position.

Dr. Goodman's Claim:

He Is an Independent Scientist, Not Interested in the Drakes Estero Land-use Policy and Is Not an Advocate For the Continuation of DBOC Operations.

Why Dr. Goodman's Claim Should Not Be Credited:

His Own Public Testimony and Advocacy Letter Confirm His Role as an Advocate For Aquaculture Industry Expansion In a Designated Wilderness Area.

Dr. Goodman claims that he is only interested in the science, not the policy issue: “*Regardless of whether you think that the Estero should be wilderness or there should be an oyster farm there—that’s not my concern.*”⁴⁰ Rather, he claims, his only concern is NPS’s use of science.⁴¹ Yet, Dr. Goodman himself is hardly neutral and is a vociferous advocate on behalf of DBOC. He is on record as lobbying for the continuation of oyster operations, which would require overturning long-standing law and policy.⁴²

Moreover, Dr. Goodman’s writings demonstrate his attempts to introduce scientific uncertainties into what should be a clear policy issue. As the Frost Report notes, Dr. Goodman’s efforts “*seemingly redirected the analysis relevant to Agency evaluation of terminating/extending DBOC mariculture operations to one based primarily on science, not policy or property or law.*”⁴³

In his May 8, 2007 letter to the Marin County Supervisors, Dr. Goodman argued: “[T]he Wilderness Act of 1964 considers the minimal size of a wilderness to be 5000 acres. The Estero is 2270 acres. Since 1964, biologists have become more sophisticated about what is needed to be a sustainable ecosystem, and have learned that to be a true wilderness often requires many tens of thousands of acres for sustainable reproduction of the largest predators... Unless the PRNS plans to turn the entire Park and its surrounding environment including Inverness into ‘wilderness’ it is hard to see how this concept applies to the Estero.”⁴⁴ Yet Dr. Goodman’s letter fails to point out that Drakes Estero is a contiguous part of the 33,373 acres of congressionally authorized wilderness, which represents more than 51% of the acreage in Point Reyes National Seashore.⁴⁵

Furthermore, Dr. Goodman’s letter is clear evidence that he is actively opposing the protection of

³⁹ <http://www.savedrakesbay.org/uploads/Sierra_Club_DBOC_threatens_Harbor_Seals.pdf>.

⁴⁰ Oystergate video, available at <<http://www.youtube.com/watch?v=GUIQTFGM3nk>>, at 3:01.

⁴¹ Ibid.; 5/8/07 corr. from Dr. Goodman to Marin County Bd. of Supervisors: “*Good science is independent and unbiased.*”

⁴² 11/18/09 corr. from Dr. Goodman to Marin County Planning Commission: “*We request that you...support the protection of...mariculture operations...in the national park.*”

⁴³ 3/22/11 Frost Report, at page 8.

⁴⁴ 5/8/07 corr. from Dr. Goodman to Marin County Bd. of Supervisors.

⁴⁵ <<http://www.nps.gov/pore/parkmgmt/statistics.htm>>.

congressionally authorized wilderness. But Congress has already recognized the value in protecting wilderness, and that is not a question that should be opened to dispute by Dr. Goodman's purportedly independent scientific analyses and experiments: *"In order to assure that an increasing population... and growing mechanization, does not occupy and modify all areas...leaving no lands designated for preservation and protection in their natural condition it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."*⁴⁶

Summary

The Frost Report noted that these aforementioned and other similar claims by Dr. Goodman *"fueled verbal and written assaults on NPS officials and scientists, whom [Dr. Goodman] has repeatedly accused of misrepresentation and scientific misconduct."*⁴⁷ The national policy in favor of wilderness must guide the decisions regarding Drakes Estero and Dr. Goodman's attempts to belittle and undermine that policy should not be credited.

Thank you for your consideration of our concerns. We would welcome the opportunity to discuss this matter further with you.

Respectfully yours,



Amy Trainer, Executive Director
Environmental Action Committee of West Marin

cc: Dr. Ralph Morganweck, Scientific Integrity Advisor, DOI
Dr. Gary Machlis, Science Advisor to NPS
Honorable Dianne Feinstein, U.S. Senator for California
Honorable Barbara Boxer, U.S. Senator for California
Honorable Lynn Woolsey, U.S. Congresswoman for California's 6th District
Dr. Ralph J. Cicerone, President of the National Academy of Sciences and Chair of the National Research Council
Dr. Susan Hackwood, Executive Director, California Council on Science and Technology

⁴⁶ Public Law 88-577 (16 U.S. C. sections 1131-1136), 88th Cong., Second Sess., Sept. 3, 1964, Sec. 2(a), Wilderness System Established, Stmt. of Policy.

⁴⁷ 3/22/11 Frost Report, at page 5.

Endnotes

ⁱ November 22, 2011 Marine Mammal Commission Report: Mariculture and Harbor Seals in Drakes Estero, California, at pages 55-56: *“To the Commission’s knowledge, it has reviewed and used the best available scientific information regarding human impacts on harbor seals in the estuary. That does not mean that the data are fully adequate—both the Park Service and the Drakes Bay Oyster Company are aware of data gaps and uncertainties that confound both the study and management of the estuary. Unfortunately such problems are common in most, if not all, U.S. coastal waters. In such cases, analysts must use the best available data and managers must incorporate the uncertainties into their decision-making processes. In the Commission’s view, the information examined during the course of this review is sufficient to conclude that, from time to time, mariculture activities in the estuary do disturb harbor seals. The Commission also believes that the data provide reasonable evidence of a correlation between mariculture activity and seal haulout use, but that evidence is not sufficient to conclude causation. The term “evidence” has added to the controversy surrounding this issue. The Commission does not believe that the Service used this term in the title of the Becker et al. (2011) paper to mean “proof” of displacement, but rather to mean “information that supports the hypothesis of displacement.” Such use would be entirely consistent with scientific custom. For example, the term “weight of evidence” is often used to mean consideration of the relative strengths of information supporting opposing hypotheses.”*

ⁱⁱ *Ibid.*, at page 44: *“Those maps are not entirely consistent and, with one notable exception, it is difficult to determine their accuracy. The exception is a map showing markings made by Mr. Tom Moore (California Department of Fish and Game, retired) on May 20, 1991, to document his observations in the estuary (Figure 19). Specifically, Mr. Moore drew a circle on his map near bed #17 (Figure 19a) and recorded —1330 25. Because the map was used to record seal counts and included similar notations at other haulout sites, it is reasonable to interpret that note as indicating 25 seals counted at 1330. Mr. Moore’s notes (Figure 19b) include the words: —1100 — ~ 1 2 doz mammals off point by [oyster bed] #17. Presumably this statement meant about 12 or a dozen seals, or it might have meant 1 to 2 dozen seals. In addition, in his notes, he wrote—#20 – good growth stake area – not a major haul-out, which suggests that seals hauled out around bed #20 at least periodically.”*

ⁱⁱⁱ 9/8/08 corr. from Dr. Goodman to Boness, Editor, Marine Mammal Science: *“The NPS has, or has access to via Dr. Sarah Allen and her former employer (the Point Reyes Bird Observatory), the complete Drakes Estero harbor seal data from the 1970’s to the present....Instead of comparing three recent years...(and thus deriving misleading conclusions), why not compare seals to oysters over a 30-30 year period and determine if there is any relationship?”*

^{iv} 11/22/11 MMC Report, at page 49: *“Becker et al. (2011) included the 1982 and 1983 data in response to criticisms that the time period analyzed in Becker et al. (2009) was too short. In response to that criticism, the analysts incorporated data from outside the Service’s database—that is, from records collected for the Point Reyes Bird Observatory. They added data not just from 1982 and 1983, but also from 1986, 1987, 1989, 1991, 1992, and 1993.”*

^v Dr. Goodman’s May 9, 2007 letter also formed the basis of an August 23, 2007 Data Quality Complaint filed by DBOC against NPS, which repeated Dr. Goodman’s assertions that NPS had falsely identified risks posed to eelgrass by *didemnum* and further asserted (emphasis ours) that *“the NPS Report fail[s] to acknowledge...the benign presence of *Didemnum* in Drakes Estero.”*

^{vi} 11/22/11 MMC Report, at page 50: *“Finally, after its June 2010 meeting the Commission urged Park Service staff to meet with Drakes Bay Oyster Company to develop a better method for characterizing mariculture effort. Critics of the Park Service have accused its staff of failing to ask for the data pertaining to harvest amounts. However, this statement appears to be an incomplete description of communications between Park Service staff and Drakes Bay Oyster Company. By both telephone and email (Appendix J) Park Service staff did attempt, unsuccessfully, to set up a meeting to discuss mariculture effort as well as seek comments on Becker et al. (2010)—an earlier draft of Becker et al. (2011).”*