

July 3, 2012

From: Dr. Corey S. Goodman

To: NRC panel reviewing NPS DEIS for DBOC and ATKINS peer review

Re: NPS misrepresented and concealed acoustic data and deceived the peer reviewers of the NPS DEIS on DBOC

Dear NRC Review Panel,

The data and analysis presented here (see enclosed summary and parts 1-6) is limited to the soundscape analysis in the DEIS – arguably among the most important, if not the most important, data in the entire document. The soundscape data and calculations shown in Tables 3-3, 4-2, 4-3, and 4-4 are some of the few tables of data in the entire DEIS, and thus it is conspicuous that these data did not come from Drakes Bay Oyster Company (DBOC) or Drakes Estero, but rather were imported inappropriately from other reports. The data in the DEIS were misrepresented, and the real data concealed.

The analysis of soundscape data presented here indicates that the NPS DEIS:

- (1) Failed to follow NPS Management Policies 2006 and Director's Order #47.
- (2) Made false representations of key acoustic data in Chapter 3 of the DEIS.
- (3) Made false representations of key acoustic data in Chapter 4 of the DEIS.
- (4) Concealed key acoustic data in Chapters 3 and 4 that contradicted DEIS.
- (5) Drove incorrect findings of major impacts in Chapter 2 of the DEIS.
- (6) Knowingly deceived the peer-reviewers of the DEIS.

Each misrepresentation of data in the DEIS supports the notion that the DEIS has a bias by writers intent on finding major impacts of environmental harm by DBOC.

Data and metrics were distorted, invented, falsely represented, overestimated, underestimated, and exaggerated, and the real data concealed – all with the result of showing that DBOC boats and equipment could be heard for miles, when they could not. Distances for sound to dissipate were exaggerated by two orders of magnitude.

It is difficult to examine this record of misrepresentations and suppression of data without coming to the conclusion that these actions were knowingly undertaken. The peer-reviewers were knowingly deceived into believing that there was a major environmental impact as defined by NEPA, when there was not.

Time permitting, additional documents will be submitted in the coming days that address scientific data (or lack thereof) presented in other sections of the DEIS, including the harbor seal, eelgrass, and endangered species sections.

NPS policy, as quoted multiple times in the DEIS, provided specific guidance on how the soundscape analysis leading up to and included in the DEIS was to be conducted, including Director's Order #47 and NPS Management Policies 2006 (see part 1).

For example, the DEIS stated:

*“This Director’s Order [#47] also directs park managers to measure acoustic conditions, differentiate existing or proposed human-made sounds that are consistent with park purposes, set acoustic goals based on the sounds deemed consistent with the park purpose, and determine which noise sources are impacting the parks (NPS 2000).”*

NPS Director’s Order #47 directed park managers to:

*“(1) measure baseline acoustic conditions, (2) determine which existing or proposed human-made sounds are consistent with park purposes, (3) set acoustic management goals and objectives based on those purposes, and (4) determine which noise sources are impacting the park and need to be addressed by management.”*

*“It is these [human-made] sounds and sound levels that need to be measured and evaluated in park planning processes to determine whether they are consistent with or destructive to soundscape management objectives.”*

In disregard of those NPS requirements:

- NPS did not measure DBOC human-made sounds.
- NPS made no consistency determinations.
- NPS established no sound management goals.
- NPS did not prepare a sound management plan.

If NPS prepared plans, established goals, collected data, or made determinations, then they were withheld from the Johnsons (who owned the oyster farm until EOY 2004), the Lunnys (2005-2012), the public, and elected officials. To my knowledge, sound impacts of DBOC boats and equipment were never mentioned previously, and thus were never cited previously in the many review and reports on DBOC and Drakes Estero, including the NPS Drakes Estero Report (2006-2007), the National Academy of Sciences Report (May 2009), the Department of the Interior Frost Report (March 2011), and the Marine Mammal Commission Report (November 2011).

The soundscape analysis – and resulting major environmental impact of noise – was mentioned for the first time in this NPS DEIS in 2011. Why was soundscape elevated out of nowhere to be one of the two major impacts? Why was this issue raised in the EIS without having been raised with DBOC at any time during their seven-year ownership?

NPS manipulated the soundscape data in the DEIS in four different ways, each biased to show a “major” environmental impact where none existed (parts 2-4).

- NPS imported 16-year old data from the New Jersey State Police, 3,000 miles away, and included them in the DEIS as if they came from Drakes Estero (part 2).
- NPS did the same with data from the Federal Highway Administration (part 2).
- Data were included in the DEIS as if they represented the major findings of a report from another agency (the VOLPE 2011 report) when they did not (part 3).
- Data were concealed – data that contradicted conclusions of the DEIS – when

data from VOLPE microphone PORE 004 should have been disclosed (part 4).

For example, based upon the false numbers for both DBOC noise generators and ambient noise levels used in Chapters 3 and 4 of the DEIS, the DEIS claimed that the DBOC oyster tumbler (with a one-quarter horsepower, 12-volt electric motor) generates 79 decibels of noise at 50 feet, and can be heard for 2.4 miles (12,450 feet).

The ENVIRON report, based on actual measurements of the DBOC oyster tumbler (50 decibels) and the correct ambient noise measurements from the VOLPE report, showed that the oyster tumbler can be heard for only 140 feet, a difference of over two orders of magnitude (> 100X) compared to 2.4 miles.

The ENVIRON measurements can be easily verified. The sound measurements are straightforward to make, leading to the question of why NPS did not make direct measurements of DBOC boats and equipment. This question has not been answered.

Instead, without explanation or disclosure, NPS used the NOISE UNLIMITED 1995 numbers from fast, loud boats along the New Jersey shore, and the Federal Highway Administration Construction User's Guide 2006 report of loud highway construction equipment. It is clear that the DBOC oyster boats are not nearly as loud as what NPS used to misrepresent them, and equally clear that as one walks away from the oyster tumbler that it can only be heard for 100-200 feet, not 2.4 miles. How did NPS get it so wrong?

These were not simple mistakes. Examine pages 350-351 on the assessment of the soundscape impact in the DEIS. These pages explain how the DEIS incorrectly concluded that soundscape represented a major impact. Quite separate from Table 3-3 in Chapter 3, the writers of the DEIS once again misled the reader to believe that the NOISE UNLIMITED 1995 report represented the two DBOC oyster boats. The numbers on the DBOC boat operations ("*up to eight hours per day*") are also exaggerations taken out of context.

The ambient noise as measured by the VOLPE report is represented on page 350 as the  $L_{50}$  of 34 dBA (although not reporting the  $L_{eq}$  of 41 dBA). But this bears no relationship to the unprecedented metric ("*lowest daily ambient level*" of 24 dBA), not found in the VOLPE report (or anywhere on the internet), that appears in Tables 4-2, 4-3, and 4-4 of the same chapter, and that drove the exaggerated distances required for sound to dissipate. These were not simple accidents. This deception was intentional. The misrepresentations allowed NPS to conclude a major impact, where none existed.

These are just a few examples of what is found throughout the soundscape sections of the NPS DEIS. The numbers are exaggerated, with the levels for the noise generators much too loud (based upon jet skis or other loud, noisy boats, and construction equipment numbers), and the ambient noise level ("*lowest daily ambient level*") too low, and the resulting distances over which the sound dissipates orders of magnitude too far. These exaggerated numbers allowed the DEIS to claim that DBOC noise generators have a major impact on both wildlife and humans, when in fact they do not.

One of the major purposes of this DEIS report was to evaluate potential environmental impacts of various alternative actions. The DEIS identified fourteen areas of potential impact, and found two with "major" impact, seven with moderate impact, four with minor impact, and one with beneficial impact.

The misrepresentations of noise data in Chapters 3 and 4 of the DEIS were responsible for one of the two findings of “major” impact (soundscape), contributed significantly to the other finding of “major” impact (wilderness), and contributed to several findings of moderate impact (birds, harbor seals, visitor experience) in the DEIS in Chapter 2. Without these false data, the only two “major” impacts disappear or change considerably and the DEIS becomes a different document – one lacking any “major” impacts (part 5).

How did NPS conclude a “major” impact for soundscape? Consider the definitions on page 351:

- Minor:** *Human-caused noise would be at a level that causes vocal communication to be difficult between people separated by more than 32 feet, and the natural soundscape is interfered with less than 5 percent of the time.*
- Moderate:** *Human-caused noise would be at a level that causes vocal communication to be difficult between people separated by 32 to 16 feet, and the natural soundscape is interfered with 5 to 10 percent of the time.*
- Major:** *Human-caused noise would be at a level that causes vocal communication to be difficult between people separated by less than 16 feet, and the natural soundscape is interfered with more than 10 percent of the time.*

The DEIS concluded that DBOC-caused noise led to a major impact, but that was based on the false representations of data and false calculations. The real numbers (as measured by ENVIRON, and as calculated by me based upon the VOLPE microphone PORE 004 data – see part 4) suggest at most a minor impact, and possibly none at all.

The NAS mistakenly agreed not to examine “wilderness” because it was (evidently) not based upon science. That was incorrect. The “major” impact on wilderness is driven by four factors, all based upon false numbers, including both misrepresentations of boat trips and misrepresentations (and concealment) of soundscape data. You should examine the so-called “major” impact on wilderness. It is driven by soundscape data.

This NPS DEIS included misrepresentations of data, and concealed data that should have been disclosed. This NPS DEIS was written in a deceptive fashion (e.g., Tables 3-3, 4-2, 4-3, 4-4, and sections of the text that cite these Tables). NPS managers were required by NPS rules (Director’s Order #47 and Management Policies 2006) to develop a soundscape management plan and to directly monitor soundscape data, including human-generated noise (part 1). It is clear from the DEIS that NPS did not do so. The DEIS quoted the NPS Management Policies 2006 and Director’s Order #47 in multiple sections, but NPS did not follow those policy directives in the soundscape sections.

The peer reviewers were deceived. The ATKINS peer-reviewer, Dr. Christopher Clark, an expert in bio-acoustics from Cornell, admitted to me that he was “*deceived.*”

For example, believing that the noise data in the DEIS were actual measurements of DBOC boats and equipment, Dr. Clark wrote, as part of the original ATKINS peer review:

*“Overall, I found that the Soundscape section provided **compelling** support for its conclusion ...”*

*“The data and synthesis presented in both sections support the conclusion*

*that noise producing DBOC activities not only impact human experiences in the Drakes Estero but also have the potential to **negatively effect wildlife** in the Point Reyes National Seashore.”*

*“I conclude that there is **ample acoustic scientific evidence** by which the DEIS can determine that DBOC noise-generating activities have negative impacts on both the human visitor experience and the seashore’s wildlife.”*

*“The scientific evidence presented leads me to conclude that this DEIS is **robust**, and that its recommendation for Alternative A is substantial and justifiable.” [emphasis added]*

Dr. Clark wrote that the soundscape data were “*one of the document’s core issues*” and believed that his comments on the “*Soundscape section readily apply to this Wilderness section.*” I agree. This is why the NAS should not have agreed to not review the wilderness section – it is based in part upon the soundscape data.

These were the only two sections of the DEIS that led in Chapter 2 to a finding of “major” environmental impact. Dr. Clark described the data he reviewed in Chapter 3 as follows:

*“Provides some sound level data for Drakes Estero using standard techniques and metrics. Two sets of data are presented. Data (considered “best available and reasonable measurement”) were collected in 2009 (Volpe 2011) from a site two miles from the onshore DBOC operations. They use A-weighted L<sub>50</sub> values, in dBA units, as the acoustic metric. As stated in the report: “These measured levels included noise from DBOC operations and other human activities, and they included natural sound energy from portions of the audio spectrum well above the noise energy generated by DBOC.” Table 3-3 shows noise level values within close proximity to specific DBOC noise sources. According to this table these data were collected by Noise Unlimited, Inc. (1995) and represent two types of relatively small motorboat engines (20 horse power [HP] and 40 HP), a diesel forklift, pneumatic drills and an oyster tumbler. Noise level values in dBA are given relative to 50 feet from each of these sources. The document concludes that these measures are reasonable representations of the existing acoustic environment by which to make comparisons.”*

- Dr. Clark believed the measurements in Table 3-3 provided “*sound level data for Drakes Estero*” from “*specific DBOC noise sources*” when Table 3-3 had not.
- Dr. Clark believed that the NOISE UNLIMITED 1995 report had measured DBOC motorboat engines as well as DBOC pneumatic drills and oyster tumbler when NOISE UNLIMITED had not.
- Dr. Clark believed the DEIS used the VOLPE 2011 report “*A-weighted L<sub>50</sub> values*” as a measure of ambient noise, when Tables 4-2 to 4-4 had not.
- Dr. Clark believed the NPS DEIS used “*best available science*” when it did not.

Dr. Clark was deceived.

The ATKINS peer review summarized Dr. Clark’s findings:

*“Clark found the conclusions presented in the DEIS to be reasonable and*

*supported by available data and scientific concepts.”*

Dr. Clark believed that the NPS data in the DEIS came from DBOC boats and equipment at Drakes Estero. He told me via phone on March 21, 2012 that he “*assumed*” the data were from “*field measurements at Drakes Estero.*” After learning the true source of the data, and the real sound measurements of DBOC equipment made by ENVIRON, Dr. Clark changed his view. He told me: “*I was led to believe these tables were from field activities of DBOC.*” He told me that he was “*deceived.*”

In the ATKINS review, Dr. Clark wrote that DBOC noise generators “... *have the potential to negatively effect wildlife ...*” After seeing the real data, Dr. Clark changed his conclusion and wrote to me on March 21, 2012 that he does:

*“... not believe that these activities have a biologically significant impact on wildlife ...”*

Dr. Morgenweck, the Department of the Interior Scientific Integrity Officer, was involved in commissioning the ATKINS peer-review of the DEIS “*in recognition of high interest in the science.*” Dr. Morgenweck then released the ATKINS peer-review of the DEIS, publicly praising it for accomplishing “*exactly what we were seeking ...*”

Dr. Clark admitted that he was deceived. The ATKINS team, to whom Dr. Clark reported, was similarly deceived. NPS knew – or should have known – when they received the ATKINS report, that it was not (and could not) be accurate, because they certainly knew that the soundscape data were not from DBOC or Drakes Estero. Having received a knowingly flawed report, DOI and NPS elected to be silent, and to publish a report that knowingly contained a compromised analysis.

We now know that the ATKINS report was tainted by the NPS decision to include false representations of data in the DEIS.

The peer-reviewer of the soundscape analysis, Dr. Christopher Clark, was, by his own words, “*deceived.*” Upon seeing the origin of the data he reviewed (e.g., NOISE UNLIMITED 1995), and the real data collected at Drakes Estero by ENVIRON, Dr. Clark changed his major conclusion in an email he sent to me on March 21, 2012 (see June 25, 2012 letters part 1 and 2 to Dr. Morgenweck). His peer review was corrupted by false and deceptive representations of soundscape data.

On April 19, Dr. Morgenweck asked Dr. Clark to re-review the soundscape section of the DEIS, but he only asked about Table 3-3 (and not Tables 4-2, 4-3, 4-4, or the many other soundscape sections), he did not provide much of the key data and documents, and he only asked three questions that were incomplete at best. Dr. Clark accepted the ENVIRON data, dismissed the NPS data in Table 3-3, but nevertheless concluded that his opinion remained unchanged. That was a remarkable conclusion that defied the science (the data changed by over two orders of magnitude, but Dr. Clark’s opinion did not) and defied NEPA requirements for strict definitions of impacts supported by data.

I ask you to carefully read my two-part critique of the ATKINS re-review of the soundscape sections of the DEIS (contained in my two June 25, 2012 letters to Dr. Morgenweck, enclosed here) to gain a better perspective of Dr. Clark’s analysis and conclusions. Dr. Clark’s re-review was incomplete and superficial. Even for his re-review, he was not given most of the primary sources of the data cited in or concealed from the DEIS that he has been asked to review. DOI, by the limited nature of the

questions, restricted and limited Dr. Clark's re-review.

On June 25, I submitted to Dr. Morgenweck a list of additional data and documents, and a set of 35 questions, for Dr. Clark for his re-review. Those questions are enclosed here in the first of my two June 25, 2012 letters. On July 2, Dr. Morgenweck responded:

*"The contract with Atkins to provide a peer review of the Drakes Bay DEIS has been completed and is now expired. Atkins provided the Department with a peer review and answers to several questions that I had of the acoustics reviewer. Both are posted on the web. The material provided by Atkins will be considered by NPS as they move forward to completion of the Final EIS. You have filed allegations of scientific misconduct with the OIG and they are currently looking into those allegations. As a result, the scientific integrity officers are standing down on the Pt. Reyes issues unless the OIG asks for scientific integrity officer assistance. The National Academy review, in my opinion, is an issue between the NPS and the Academy with the Academy fully capable of conducting the review as they see fit. I think it is inappropriate for Dr. Machlis and myself to have sidebar conversations with you regarding the Atkins review. You obviously think there are issues regarding the peer review that need to be "cleared up" before the NAS review. Again, I think NAS is very capable of determining whether they agree or not."*

Thus, the Department of the Interior elected not to provide the additional data and documents to Dr. Clark, and further elected not to ask the enclosed 35 questions of him as part of his re-review. As it stands, an incomplete and superficial re-review now supplements the original corrupted peer-review of deceptive data, and both together were forwarded, according to Dr. Morgenweck, to NPS for the completion of the Final EIS. Surely this neither meets the NAS standards, nor the OMB federal standards, of scientific peer review.

These actions dismissed numerous requirements in the DOI Scientific Integrity Policy. In regard to my criticism that the re-review is incomplete and superficial, Dr. Morgenweck wrote: "... I think NAS is very capable of determining whether they agree or not." That is true, but only if NAS is aware of these issues, and is provided access to all related data, analysis, and documents. DOI and NPS are controlling – and it appears – restricting – the NAS agenda through their written agreement – and it is therefore incumbent on those of you on the NAS panel to make sure that you have a full and complete record when you examine the NPS DEIS, peer review, and related data, analysis, and documents.

The integrity of the DEIS peer review process is in your hands. At present, the preliminary list of soundscape data you are considering is no different from what Dr. Clark was given for his re-review. Dr. Clark considered the NPS data underlying Table 3-3, but not Tables 4-2, 4-3, and 4-4, the inappropriate ambient noise metric in those tables, and misrepresentation of the VOLPE 2011 report, and the exaggerated calculations of distance for sound to dissipate.

Just as with Dr. Clark's re-review, so too by your preliminary list, it does not appear that the panel is currently planning to review the VOLPE 2011 report, the audio data from the VOLPE (FAA) microphone PORE 004, the combination of those audio recordings with the NPS time- and date-stamped photographs and the DBOC GPS data from the oyster boats, and my detailed analysis of those data.

Since Interior's Scientific Integrity Officer refused to ask these questions of ATKINS and Dr. Clark, I ask you to answer these 35 questions as part of your review of the ATKINS peer review of the NPS DEIS. They are focused on the NPS data and Dr. Clark's scientific conclusions. It is requested that the NRC panel carefully read and evaluate my two June 25, 2012 letters to Dr. Morgenweck.

If the scientific analysis presented here is correct, then these were not "*minor*" mistakes, as some have said publicly. Rather, misrepresented noise measurements drove or helped drive the only two "*major*" impacts in the DEIS (soundscape and wilderness) and several of the moderate impacts (e.g., harbor seals). These were central data to findings of major impacts presented in this document. Without them, the DEIS would be a different document. The mistakes were significant, are found throughout Chapters 2, 3, and 4, and represent a bias of the authors.

As Dr. Morgenweck wrote, this DEIS has garnered a "*high interest in the science.*" That is all the more reason why these false representations of data, and concealment of data, cannot stand. There are clear NPS policies on how soundscape data should be collected in Management Policies 2006 and Director's Order #47. The soundscape scientists at Fort Collins follow these policies – they do good work. Other NPS EIS reports, including recent EIS reports for Yosemite and GGNRA, followed those policies. What is special about the NPS DEIS for Drakes Estero is that it did not. Data were misrepresented and concealed.

This DEIS is like no other NPS has recently produced in terms of misrepresentations and concealment of soundscape data, exaggeration of calculations, and invention of new metrics never before seen in an NPS EIS, all with the result of showing that DBOC boats and equipment can be heard for miles, when in reality they can not.

Why have I spent so much time and effort analyzing the NPS data? On April 5, 2007, then NPS PRNS Superintendent Don Neubacher met with Marin County Supervisor Steve Kinsey. Kinsey reported that Neubacher made "*strong environmental accusations*" against DBOC including overwhelming data of harm to harbor seals, and claimed DBOC "*committed environmental felonies.*"

We now know that former Superintendent Neubacher had no such data – there were no DBOC disturbances of harbor seals in the NPS database prior to April 5, 2007. It is now known that Neubacher's staff contacted NOAA on April 24, 2007 and reported to the federal agency with primary responsibility for implementing the Marine Mammal Protection Act that NPS had no record of harbor seal disturbances.

On April 28, 2007, Supervisor Kinsey, seeking to validate and understand the NPS claims of environmental harm, contacted me based upon my scientific credentials. He knew me at the time as an elected member of the National Academy of Sciences, tenured biology professor at U.C. Berkeley, and someone who had historically gotten involved in science-based public policy issues.

For example, I chaired the National Academy of Sciences' Board on Life Sciences from 2001 to 2006, and was involved previously, as Kinsey was aware, in science-based issues influencing public policy in Marin County. I certainly was not "*pro oyster farm*" since in one previous case in which science collided with policy I had publicly disagreed with a Tomales Bay oyster company (and several years later, both State officials and an oyster company owner agreed I had been correct).

Supervisor Kinsey, who questioned the veracity of the NPS scientific claims, asked me to review the NPS claims and NPS-sponsored scientific studies, and to testify at the Marin County hearing on May 8, 2007 as an independent scientist as to whether the NPS data supported the NPS claims.

When I testified at that May 8, 2007 Marin County hearing, I had not met Kevin Lunny, owner of DBOC. I came to the hearing at the invitation of Supervisor Kinsey, and I testified on behalf of truth and scientific integrity. Today those principles continue to guide my involvement just as they did on May 8, 2007.

At that hearing, I testified that NPS officials and scientists misrepresented their own data. My analysis showed that NPS data did not support NPS claims. I testified:

*“... 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.”*

I continue to advise Supervisor Kinsey and others today as I have over the intervening six years but I do not work for nor am I affiliated with Marin County government. Similarly, I provide advice to other agencies and elected officials, and was invited to present a keynote talk on this topic on October 16, 2010 to the California Council on Science and Technology (of which I am an appointed member), all as a world-renowned and independent scientist.

The analysis I presented on May 8, 2007 to the Marin County Supervisors was validated two years later on May 5, 2009 when the National Academy of Sciences concluded:

*“The National Park Service report “Drakes Estero: A Sheltered Wilderness Estuary” in some instances selectively presented, overinterpreted, or misrepresented the available scientific information on DBOC operations by exaggerating the negative and overlooking potentially beneficial effects.”*

The NAS found NPS misrepresented NPS data in every category of environmental harm including harbor seals. NAS concluded:

*“... there is a lack of strong scientific evidence that shellfish farming has major adverse ecological effects on Drakes Estero”*

Two years later, and at considerable taxpayer expense, the NAS arrived at essentially the same conclusions as I had on May 8, 2007.

As an elected member of the NAS, I listened the morning of April 27, 2009, as President Obama spoke to my fellow NAS members at our annual meeting. It was a historic speech – the first President to address the NAS since President John Kennedy. President Obama sent a powerful message that morning about the integrity of science.

The President said:

*“And we have watched as scientific integrity has been undermined and scientific research politicized in an effort to advance predetermined ideological agendas.”*

*“... we are restoring science to its rightful place.”*

*“I want to be sure that facts are driving scientific decisions – and not the other way around.”*

Policy, the President told us, would be driven by good science, not false science being driven by predetermined agendas. The country’s top scientists gave him a standing ovation. I was moved by Obama’s words that day – as I am today. I continue to speak out on behalf of scientific integrity. I continue to be motivated by the principles articulated by the President.

The analysis of scientific data presented here (see summary and parts 1-6) leads to the realization that the problem with this NPS DEIS is systemic. False representations were made in Chapters 3 and 4. Data were concealed that should have been disclosed in Chapters 3 and 4. The false representations and concealment led to incorrect findings of major environmental impact in Chapter 2. The peer reviewers were deceived.

I pledge my complete cooperation with your panel’s review. Please don’t hesitate to ask me for clarifications of any of the material here, or for any data supporting this analysis.

On June 27, 2012, I wrote to Dr. Warren Muir, Executive Director, Division on Earth and Life Studies, National Research Council, indicated that the list of data you plan to review is incomplete (i.e., NPS 2011 DEIS, ATKINS 2012 peer review, ENVIRON 2011 report, and MMC 2011 report), and asked for a major time slot to present additional soundscape data and my detailed analysis. I have included a list of relevant data sources in the appendix here.

I once again request the opportunity to present this scientific analysis to your panel on July 10 in a major time slot. A few minutes without slides will be of little value in helping you understand my analysis. It requires a full airing.

Best wishes,

A handwritten signature in black ink, appearing to read "Corey Goodman", written in a cursive style.

Corey S. Goodman, Ph.D.  
corey.goodman@me.com  
415 663-9495; mobile 650 922-1431  
PO Box 803, Marshall, CA 94940

Enclosures:

**APPENDIX: LIST OF RELEVANT DATA AND DOCUMENTS CRUCIAL TO ANALYSIS**

**DR. GOODMAN'S ANALYSIS OF NPS DEIS SOUNDSCAPE SECTIONS THAT ARE CRUCIAL FOR NRC REVIEW OF NPS DEIS AND ATKINS PEER REVIEW**

- 1) NPS DEIS soundscape.CSG analysis.exec summary.pdf by Dr. Corey S. Goodman, 07/02/12
- 2) NPS DEIS soundscape.CSG analysis.part 1.pdf by Dr. Corey S. Goodman, 07/02/12
- 3) NPS DEIS soundscape.CSG analysis.part 2.pdf by Dr. Corey S. Goodman, 07/02/12
- 4) NPS DEIS soundscape.CSG analysis.part 3.pdf by Dr. Corey S. Goodman, 07/02/12
- 5) NPS DEIS soundscape.CSG analysis.part 4.pdf by Dr. Corey S. Goodman, 07/02/12
- 6) NPS DEIS soundscape.CSG analysis.part 5.pdf by Dr. Corey S. Goodman, 07/02/12
- 7) NPS DEIS soundscape.CSG analysis.part 6.pdf by Dr. Corey S. Goodman, 07/02/12
- 8) Dr. Goodman letters (part 1 and 2) to Dr. Morgenweck giving reasons why Dr. Clark's re-review was incomplete and superficial, and requesting further re-review and posing 35 questions to be asked of Dr. Clark June 25, 2012

**KEY REPORTS AND LETTERS THAT ARE CRUCIAL FOR NRC REVIEW**

- 9) NOISE UNLIMITED 1995 report for New Jersey State Police November 1995
- 10) FHWA (Federal Highway Administration) Construction User's Guide 2006 report  
January 2006
- 11) VOLPE 2011 report  
March 2011

**APPENDIX: Data and documents used in my analysis of the soundscape sections of the NPS DEIS, ATKINS peer review, and ATKINS re-review of soundscape data – all of these data and documents are relevant for the NRC review of the NPS DEIS and ATKINS peer review and re-review**

- (1) NOISE UNLIMITED 1995 report for New Jersey State Police November 1995
- (2) FHWA (Federal Highway Administration) Construction User's Guide 2006 report  
January 2006
- (3) Acoustic recordings, measurements, photographs, and logs from FAA microphone  
PORE 004 generated for VOLPE 2011 report  
July-August, 2009  
Jan-Feb 2010
- (4) NPS time and date-stamped photographs of DBOC oyster boats from NPS secret  
cameras; photos overlapping with microphone PORE 004  
July-August 2009
- (5) DBOC GPS data (time, location, speed) from oyster boats overlapping with data  
from FAA microphone PORE 004  
Jan-Feb 2010
- (6) VOLPE 2011 report  
March 2011
- (7) NPS DEIS on Drakes Estero, public version  
September 2011
- (8) ENVIRON 2011 report (prepared at request of DBOC)  
December 2011
- (9) ATKINS 2012 peer-review report  
March 19, 2012
- (10) Dr. Clark's comments and emails to Dr. Goodman  
March 21, 2012
- (11) FAA and NPS acoustic data (originating with FAA microphone PORE 004)  
provided to Dr. Goodman by Dr. Kurt Fristrup and Damon Joyce, NPS  
soundscape scientists at Fort Collins.  
April 11-12, 2012
- (12) Dr. Morgenweck letter to ATKINS requesting re-review  
April 19, 2012
- (13) Dr. St. Claire letter from ATKINS and Dr. Clark re-review,  
released to public in mid June  
May 7, 2012
- (14) Further FAA and NPS acoustic data (from microphone PORE 004) including  
acoustic recordings, photographs, and logs supplied by NPS in response to FOIA  
June 20, 2012
- (15) Dr. Goodman letters (part 1 and 2) to Dr. Morgenweck giving reasons why Dr.  
Clark's re-review was incomplete and superficial, and requesting further re-review  
and posing 35 questions to be asked of Dr. Clark  
June 25, 2012
- (16) NPS DEIS soundscape.CSG analysis.exec summary.pdf by Corey Goodman,  
07/02/12
- (17) NPS DEIS soundscape.CSG analysis.part 1.pdf by Corey Goodman, 07/02/12
- (18) NPS DEIS soundscape.CSG analysis.part 2.pdf by Corey Goodman, 07/02/12
- (19) NPS DEIS soundscape.CSG analysis.part 3.pdf by Corey Goodman, 07/02/12
- (20) NPS DEIS soundscape.CSG analysis.part 4.pdf by Corey Goodman, 07/02/12
- (21) NPS DEIS soundscape.CSG analysis.part 5.pdf by Corey Goodman, 07/02/12
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