



August 7, 2012

VIA E-MAIL AND FEDERAL EXPRESS

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Attn: Correspondence Control Unit (CCU)  
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RE: COMPLAINT ABOUT INFORMATION QUALITY

Dear Ms. Lowery:

Kevin and Nancy Lunny (“the Lunnys”) and Dr. Corey Goodman (“Dr. Goodman”) respectfully submit this joint Complaint About Information Quality (Complaint) requesting expedited correction of information disseminated by the National Park Service (NPS) in the following publications: *National Park Service, Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit* (Sept. 2011) (hereinafter “DEIS”)<sup>1</sup> and *Atkins North America, Final Report on Peer Review of the Science Used in the National Park Service’s Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit* (Mar. 2012) (hereinafter “Atkins Peer Review Report”).<sup>2</sup>

The information NPS has publicly disseminated via the DEIS and Atkins Peer Review Report is subject to the requirements of the Data Quality Act (DQA), 44 U.S.C. § 3516 Note, which prescribes standards for the dissemination of information by federal agencies; the Office of Management and Budget (OMB) Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies (hereinafter “OMB Guidelines”); Department of Interior (DOI) Information Quality Guidelines Pursuant to

<sup>1</sup> Available at <http://parkplanning.nps.gov/document.cfm?parkID=333&projectID=33043&documentID=43390>.

<sup>2</sup> Atkins Project No. 10002598 (Mar. 2012), available at <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=284844>.

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Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (hereinafter “DOI Guidelines”); Director’s Order #11B: Ensuring Quality of Information Disseminated by the National Park Service (hereinafter “Director’s Order #11B”); and other applicable statutes, regulations, Executive Orders, manuals, orders, policy statements, instructions, directives, and guidelines establishing binding information-quality standards.

Information disseminated by NPS in the DEIS and Atkins Peer Review Report fails to conform to minimum information-quality standards established by the OMB Guidelines, DOI Guidelines, and Director’s Order #11B. This inaccurate, nontransparent, and deliberately misleading information is reasonably likely to cause severe harm to the Lunnys—who may be forced to close their family business, Drakes Bay Oyster Company (hereinafter “DBOC”)—and Dr. Goodman, who is a user of the information provided in these publications and adversely affected by the scientifically invalid data and methods used therein.<sup>3</sup>

After substantial inaccuracies were identified in the DEIS and Atkins Peer Review Report and the National Academy of Sciences (NAS) (of which Dr. Goodman is an elected member) initiated a review of the DEIS, the Lunnys and Dr. Goodman retained Cause of Action for the purposes of drafting and submitting this Complaint.<sup>4</sup> Cause of Action is a nonprofit, non-partisan organization that uses public advocacy and legal reform strategies to ensure greater transparency in government and protect taxpayer interests and economic freedom and provides its services on a pro bono basis. Expedited correction of the manifold errors in the DEIS and Atkins Peer Review Report is especially important given the limited term of the permit that allows operation of DBOC, which provides livelihoods for not just the Lunnys but their employees.

Pursuant to Director’s Order #11B, which establishes NPS-specific information-quality standards, the DEIS and Atkins Peer Review Report must be withdrawn from the public domain and timely corrected as described below. Specifically, corrections must be included in the Final Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit (hereinafter “Final EIS”) and the Atkins Peer Review Report must be withdrawn, corrected, and reissued.

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<sup>3</sup> This is not the first time that NPS has published scientifically flawed information regarding DBOC’s alleged impact on the environment under circumstances suggesting a lack of scientific objectivity. See DOI OFFICE OF INSPECTOR GENERAL, REPORT OF INVESTIGATION—POINT REYES NATIONAL SEASHORE, Case No. OI-CA-07-0297-1, at 2 (July 21, 2008) (concluding that NPS employees “misrepresented research” in initial versions of a 2007 report regarding DBOC’s oyster farm) (Exhibit 1). Even other federal agencies, such as the National Marine Fisheries Service (NMFS), have “recommend[ed] that NPS [revise the DEIS to] ... [p]rovide a more balanced consideration of ... the positive impacts of shellfish aquaculture [i.e., DBOC’s oyster farm] on habitat and water quality....” Letter from Rodney R. McInnis, Regional Administrator, National Marine Fisheries Service, to Cicely Muldoon, Superintendent, Point Reyes National Seashore, p. 2 (Nov. 17, 2011) (Exhibit 2).

<sup>4</sup> As explained in greater detail below, because NPS took great pains to conceal the inaccuracies and deliberate misrepresentations in the DEIS, Dr. Goodman did not discover the extent to which the conclusions in the DEIS were supported by false and deliberately misleading information until well after the initial public comment period had closed. (The DEIS was made publicly available on September 21, 2011; the public comment period closed on December 9, 2011.)

## Table of Contents

1. Individuals Submitting this Complaint About Information Quality.....	1
2. Background.....	1
3. Summary of Complaint.....	2
3.1 DBOC Does Not Cause A “Major Impact” to Soundscape.....	2
3.2 DBOC Does Not Cause a “Major Impact” to Wilderness.....	4
3.3 DBOC Does Not Cause An “Adverse Impact” to Harbor Seals, Birds and Bird Habitat, or Visitor Experience and Recreation.....	5
4. Authority for Complaint Submittal.....	5
4.1 The Lunnys and Dr. Goodman are Affected Persons Entitled to Petition NPS for Correction of Information Contained in the DEIS and Atkins Peer Review Report...	5
4.2 The DEIS and Atkins Peer Review Report are Subject to Information-Quality Standards Mandated by the Data Quality Act, OMB and DOI Guidelines, and Director’s Order #11B.....	8
4.3 The DEIS and Atkins Peer Review Report Disseminate “Influential Scientific Information” and are Therefore Subject to Heightened Information-Quality Standards.....	9
5. Because this Complaint Concerns Analysis Conducted Under the National Environmental Policy Act (NEPA), A Response to this Complaint Must be Included in the Final EIS.....	10
6. The DEIS and Atkins Peer Review Report Must Be Accurate and Timely; Objective; Highly Transparent About Data, Sources, and Methods; Reproducible; Based on Reliable Data and Sound and Accepted Practices For Data Collection and Analysis; and Use the Best Available Science.....	12
7. Description of Inaccurate, False, or Deliberately Misleading “Information” Disseminated in the DEIS and Atkins Peer Review Report that Fails to Comply With Applicable Information-Quality Standards and Must Be Immediately Corrected.....	14
7.1 Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit (Sept. 2011).....	14
7.1.1 DEIS References to Alternative A Using “Expected Future Conditions” as a Baseline for Assessing Environmental Impact.....	14

7.1.1.1	Environmental-Impact Analysis in the DEIS that Uses “Expected Future Conditions” as the Baseline, Instead of Current Conditions, is Not Based on the Best Available Science and Sound and Objective Scientific Practices.....	14
7.1.2	Table 3-3. Noise Generators at DBOC.....	15
7.1.2.1	Using Data from 1995 Noise Unlimited Study and 2006 FWHA Study to “Represent” Sound Generated by DBOC Equipment and Boats Violated Information-Quality Standards for Accuracy.....	18
7.1.2.2	Because the 1995 Noise Unlimited and 2006 Federal Highway Administration Studies Were Not the Most Current Information Available and Were Untimely, Stale, and Dated, Use of Those Studies Violated NPS’s Information-Quality Guidelines.....	21
7.1.2.3	Data in Table 3-3 was Not Transparent About Sources and Methods Used, in Violation of Applicable Information-Quality Standards.....	22
7.1.2.4	Data in Table 3-3 is Not Reproducible.....	24
7.1.2.5	Table 3-3 was Not Based on the Best Available Science and Data Using the Best Available Methods.....	24
7.1.3	Claims Regarding Frequency and Duration of DBOC Boat Trips.....	25
7.1.3.1	Claims Exaggerating the Frequency and Duration of DBOC Boat Trips are Demonstrably False and Not Based on the Most Current Information Available.....	25
7.1.3.2	Ignoring Detailed GPS Data Reflecting Frequency and Duration of DBOC Boat Trips is Not a Sound and Accepted Scientific Practice.....	26
7.1.4	Measurements of Ambient Sound Level.....	26
7.1.4.1	This Claim is Demonstrably False and Thus Not Accurate as Required by Part III.B of Director’s Order #IIB.....	27
7.1.4.2	The DEIS’s Conclusory Dismissal of Highly Probative Soundscape Data is Not Based on the Best Available Science and Data Using the Best Available Method and Omits Critical Data from the DEIS.....	28

7.1.5	Claims Regarding Measurements of Ambient Sound Level Using Nonstandard, Unprecedented Metrics in Tables 4-2, 4-3, and 4-4 and accompanying text. pp. 354-58 Claim that the Volpe Report Found that the “Median Ambient Sound Level from the Lowest Daily Ambient Level Measured” for Drakes Estero is 24 dBA is Not Accurate, as Required by Part III.B of Director’s Order #11B.....	29
7.1.5.1	Claim that the Volpe Report Found that the “Median Ambient Sound Level from the Lowest Daily Ambient Level Measured” for Drakes Estero is 24 dBA is Not Accurate, as Required by Part III.B of Director’s Order #11B.....	29
7.1.5.2	Citing the Volpe Report for Sound Measurements Not Found in that Report and Claiming that the Volpe Report Used a Metric that It Had Not In Fact Used Is Not An Accepted Scientific Practice and Does Not Use Best Available Science and Methods.....	31
7.1.5.3	Citing the Volpe Report for Sound Measurements and Analysis Not Found in that Report and Claiming that the Volpe Report Used a Metric Not Used in that Report is Not Transparent.....	32
7.1.6	Claims Regarding Sound-Dissipation Distances for Noise Allegedly Generated by DBOC Boats and Equipment in Tables 4-2, 4-3, and 4-4 and accompanying text.....	32
7.1.6.1	Because the Sound-Dissipation Distances in Tables 4-2, 4-3, and 4-4 and Statements Concerning those Distances were Generated Using Artificially Low Ambient Sound Level Data Without Scientific Basis and Substantially Exaggerated, Demonstrably False “Representative” Sound Levels for DBOC Oyster Skiffs and Equipment, Those Sound-Dissipation Distances Do Not Meet Minimum Information-Quality Standards for Accuracy.....	34
7.1.6.2	Sound-Dissipation Data in Tables 4-2, 4-3, and 4-4 and Statements About that Data in Chapter 4 are Not Transparent, in Violation of Applicable Information-Quality Standards.....	36
7.1.6.3	Sound-Dissipation Data in Chapter 4 of the DEIS is Not Reproducible.....	36
7.1.6.4	Sound-Dissipation Data in Chapter 4 of the DEIS is Not Based on the Best Available Science and Data Using the Best Available Methods.....	36
7.1.7	Claim that Granting DBOC a 10-Year SUP Will Cause “Long-Term Major Adverse Impacts on Wilderness.”.....	36

7.1.7.1	These Statements are Not Based on Sound and Objective Scientific Practices and the Best Available Science.....	38
7.1.7.2	These Statements are Not Accurate.....	39
7.1.8	Claim that DBOC Boats and Equipment Cause “Major Adverse Impact on Soundscapes” in Chapter 4 and Related Claims in Chapter 2 and Table 2-6....	40
7.1.8.1	These Statements Do Not Meet Applicable Information-Quality Standards Related to Accuracy.....	40
7.1.9	Claim that Over 280,000-Plus Photographs of Drakes Estero Taken By Covertly-Installed NPS Cameras Over A Three-Year Period Are Not Probative Evidence of DBOC’s Impact on Harbor Seals and Other Wildlife in Drakes Estero.....	42
7.1.9.1	This Statement Does Not Meet Applicable Information-Quality Standards Related to Accuracy and Objectivity.....	42
7.1.10	Claims that Granting DBOC a 10-Year SUP Will Cause “Long-Term Moderate Adverse Impacts” on Harbor Seals, Birds and Bird Habitat, and Visitor Experience.....	44
7.1.10.1	Because DEIS’s Claims Regarding DBOC’s Alleged Impact on Wildlife and Visitor Experience Are Based on Subjective, Standardless “Intensity Definitions,” Those Claims Are Not Based on the Best Available Science and Sound, Objective, and Accepted Scientific Practices.....	45
7.2	Atkins North America, Final Report on Peer Review of the Science Used in the National Park Service’s Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit.....	47
7.2.1	These Statements Does Not Meet Applicable Information-Quality Standards Related to Accuracy.....	49
7.2.2	These Statements are Not Based on the Best Available Science and Scholarly Analysis and Sound and Objective Scientific Analysis.....	52
7.2.3	These Statements Do Not Meet Applicable Information-Quality Standards for Objectivity.....	52
8.	<b>Additional Specific Recommendations for Corrective Action.....</b>	<b>53</b>
	<b>Addendum I: Exhibit List.....</b>	<b>55</b>
	<b>Addendum II: Summary Table of Errors and Required Corrections.....</b>	<b>57</b>

## 1. Individuals Submitting this Complaint About Information Quality

This Complaint is submitted on behalf of the following individuals:

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All communications regarding this Complaint should be directed to the Lunnys' and Dr. Goodman's attorney in this matter, Amber D. Abbasi, Chief Counsel for Regulatory Affairs, Cause of Action, 2100 M Street, N.W., Suite 170-247, Washington, D.C. 20037, Phone: (202) 507.5880, Fax: (202) 507.5881, E-mail: amber.abbasi@causeofaction.org.

## 2. Background

DBOC, a family-owned, environmentally conscious, sustainable oyster farm, is located in Drakes Estero, California, which is part of the Point Reyes National Sea Shore. The Lunnys, who own DBOC, hold a Reservation of Use and Occupancy (RUO) and renewable Special Use Permit (SUP) that allow them to farm oysters in the Point Reyes National Sea Shore.<sup>5</sup> DBOC's RUO and SUP will expire on November 30, 2012.<sup>6</sup> However, DBOC will be able to continue operating if the Secretary of the Interior, Ken Salazar, grants the Lunnys an additional 10-year SUP.<sup>7</sup> The publications that are the subject of this Complaint, the DEIS and Atkins Peer Review Report, were produced for the specific purpose of enabling the Secretary to make an informed, reasoned decision on whether to grant the Lunnys and DBOC another 10-year SUP.<sup>8</sup>

The DEIS outlines four "alternatives." Under "Alternative A," the Lunnys will not be issued a 10-year SUP and will be forced to close DBOC and remove its buildings and structures in late 2012.<sup>9</sup> The DEIS concludes that Alternative A is the "environmentally preferred alternative" based upon the agency's claims that continued DBOC operations will have long-term "major" and "moderate" adverse impacts on the environment in Drakes Estero. These claims are derived from the data, factual assertions, and analysis at issue in this Complaint, which NPS has used to

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<sup>5</sup> See NATIONAL PARK SERVICE, DRAFT ENVIRONMENTAL IMPACT STATEMENT: DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT, Appx. A-2-A-3 (Sept. 2011), *available at* <http://parkplanning.nps.gov/document.cfm?parkID=333&projectID=33043&documentID=43390> (last visited August 1, 2012) [hereinafter DEIS]. NPS granted DBOC a SUP in April 2008; DBOC purchased the RUO in 2005. See *id.*

<sup>6</sup> See *id.* at iii.

<sup>7</sup> See Department of Interior, Environment, and Related Agencies Appropriations Act of 2010, Pub. L. No. III-88, § 124 (2010).

<sup>8</sup> See DEIS, *supra* note 5, at iii ("The purpose of this document is to use the NEPA process to engage the public and evaluate the effects of issuing a SUP . . . [to DBOC]. The results of the NEPA process [i.e., the Final EIS] will be used to inform the decision of whether a new SUP should be issued to DBOC for a period of 10 years.")

<sup>9</sup> See *id.* at 120.

support the *only* findings of “major” adverse impacts allegedly caused by DBOC *and* three findings of “moderate” adverse impacts in the DEIS.<sup>10</sup>

### 3. Summary of Complaint

To comply with applicable minimum information-quality standards, all scientific information that NPS disseminates in publications such as the DEIS and Atkins Peer Review Report must be, among other things, accurate and timely; based on the best available science and supporting studies and the most current information available; highly transparent; supported by reliable data, including on-site data when required by law; consistent with sound and accepted scientific practices and policies; evidence-based; reproducible by qualified third parties; and objective and unbiased in terms of both presentation and substance.<sup>11</sup>

NPS can only claim that Alternative A is the “environmentally preferred alternative” because it flagrantly and repeatedly failed to comply with these minimum information-quality standards. Conclusions in the DEIS that DBOC causes “major” long-term adverse impacts on Drakes Estero’s “soundscape” and “wilderness” are based on inaccurate, nontransparent, false, and misleading data and analysis that violates NPS’s information-quality guidelines, as are claims that DBOC causes “moderate” long-term adverse impacts on Drakes Estero’s “harbor seals,” “birds and bird habitat,” and “visitor and recreation experience.”<sup>12</sup> If the DEIS is corrected to meet basic minimum information-quality standards, it becomes clear that DBOC’s operations do not have long-term adverse impacts on Drakes Estero’s environment.

#### 3.1. DBOC Does Not Cause A “Major Impact” to Soundscape.

The conclusion that DBOC causes “major” adverse impacts on “soundscape” is supported solely by inaccurate soundscape data and analysis that does not meet minimum information-quality standards. The DEIS’s conclusion that DBOC has a long-term “major” adverse impact on Drake’s Estero’s “soundscape” was generated using data and analysis that substantially exaggerated the amount of noise generated by DBOC’s oyster boats and equipment; materially understated the ambient, or natural, sound level for Drakes Estero; and dramatically overstated the distance at which noise from DBOC’s boats and equipment could be detected.

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<sup>10</sup> See *infra* Section 7.1.

<sup>11</sup> See Director’s Order #11B; DOI Guidelines; 40 C.F.R. pt. 1502 (prescribing requirements for environmental impact statements); U.S. Dep’t of Interior, Departmental Manual, 305 DM 3 (January 2011) (effective date: January 28, 2011) [hereinafter DOI Departmental Manual]; National Park Service, Director’s Order #12: Conservation Planning and Environmental Impact Analysis, and Decision-Making (2001); National Park Service, DO-12 Handbook, *available at* <http://www.nps.gov/policy/DOrders/RM12.pdf> (last visited July 16, 2012) [hereinafter DO-12 Handbook]; National Park Service, Director’s Order #47: Soundscape Preservation and Noise Management (2000) [hereinafter Director’s Order #47]; National Park Service, Management Policies 2006, *available at* <http://www.nps.gov/policy/MP2006.pdf> (last visited August 1, 2012) [hereinafter Management Policies 2006].

<sup>12</sup> These findings are inconsistent with NPS’s 1998 Environmental Assessment (EA) analyzing the environmental impacts of oyster production in Drakes Estero. See NATIONAL PARK SERVICE, ENVIRONMENTAL ASSESSMENT: JOHNSON OYSTER COMPANY, MARIN COUNTY, POINT REYES NATIONAL SEA SHORE (May 1998) [hereinafter EA] (Exhibit 3). The 1998 EA evaluated “Impacts on Noise” and characterized the “noise” from mariculture-related activities in Drakes Estero as “limited.” See *id.* at 12. The EA resulted in a Finding of No Significant Impact (FONSI). See NATIONAL PARK SERVICE, FINDING OF NO SIGNIFICANT IMPACT (FONSI): JOHNSON OYSTER COMPANY REPLACEMENT AND REHABILITATION OF FACILITIES POINT REYES NATIONAL SEASHORE (August 11, 1998) [hereinafter FONSI] (Exhibit 4).



Even though doing so is inexpensive, simple, and can be accomplished in less than a few hours, NPS did not actually take on-site measurements of noise generated by DBOC's equipment, including a 20 horsepower (HP) and a 40 HP oyster boat; a 1/4 HP, 12 volt electric oyster tumbler; two handheld oyster drills; and a small forklift. Instead, the DEIS used data from an obscure study measuring sound generated by loud, fast high-horsepower racing and police patrol boats and 70 HP-plus jet skis operating at full throttle off of the New Jersey coast in 1995<sup>13</sup> as "representative" of noise generated by DBOC's 20 and 40 HP oyster skiffs in 2012. Further, the DEIS inappropriately relies on data from a 2006 study measuring sound generated by heavy highway construction equipment (e.g., jackhammers, concrete mixers, and drill rig trucks)<sup>14</sup> as "representative" of noise generated by DBOC's 1/4 HP, 12 volt oyster tumbler, two handheld drills, and small 60 HP forklift.

The DEIS's Soundscape impact conclusions are demonstrably false for at least two reasons: (1) actual on-site measurements of sound generated by DBOC boats and equipment taken by ENVIRON International, an independent consulting firm, reveal that the DEIS's conclusions concerning the noise caused by DBOC are substantially exaggerated;<sup>15</sup> and (2) 2009 recordings of DBOC's oyster boats captured by a sophisticated government microphone can be matched with GPS data from DBOC's oyster boats and NPS's own photographs of DBOC's oyster boats to independently confirm the accuracy of the ENVIRON data.

Moreover, the peer reviewer responsible for assessing the adequacy of the Soundscape section of the DEIS has accepted the ENVIRON data, stating in a "Re-Review" completed at the behest of a DOI Scientific Integrity Officer that the ENVIRON International data "revise the noise levels" for DBOC boats and equipment "as presented in the DEIS," which were "not representative of actual DBOC noise-generating activities."<sup>16</sup> (Because the version of the DEIS that was publicly released used nontransparent, misleading short form citations to the aforementioned sources of "representative" sound levels, the peer reviewer was under the misimpression that the DEIS used on-site sound level data for DBOC's boats and equipment, rather than data from New Jersey and Massachusetts, when he drafted the Soundscape section of the Atkins Peer Review Report.)

The DEIS also used an inappropriate baseline for the ambient noise in Drakes Estero, thus overstating the relative amount of noise added to the environment by DBOC. The DEIS concludes that the "median ambient sound level from the lowest daily ambient level meas-

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<sup>13</sup> NOISE UNLIMITED, INC., BOAT NOISE TESTS USING STATIC AND FULL-THROTTLE METHODS (1995) [hereinafter NOISE UNLIMITED STUDY] (Exhibit 5). The 1995 Noise Unlimited study was available when the EA and FONSI for Drakes Estero were prepared in 1998.

<sup>14</sup> FEDERAL HIGHWAY ADMINISTRATION, ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE (2006) [hereinafter FHWA STUDY] (Exhibit 6).

<sup>15</sup> See ENVIRON INTERNATIONAL, INC., COMMENTS ON DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT ENVIRONMENTAL IMPACT STATEMENT: POINT REYES NATIONAL SEA SHORE, pt. H, pp. 33-37 (Dec. 9, 2011) [hereinafter ENVIRON REPORT] (Exhibit 7).

<sup>16</sup> Letter from Tom St. Clair to Dr. Ralph Morgenweck, "Response to letter from R. Morgenweck to T. St. Clair dated April 19, 2012," p. 4 (May 7, 2012) (including a "letter of clarification" from Dr. Chris Clark, the peer reviewer of the Soundscape and Wilderness sections of the DEIS, in which he reevaluates statements he made in the Atkins Peer Review Report regarding the adequacy and accuracy of the DEIS in light of new information) [hereinafter Re-Review] (Exhibit 8).

ured”—a nonstandard metric for measuring sound that is not scientifically accepted—for Drakes Estero is 24 dBA and uses this data point to calculate the distance at which noise from DBOC boats and equipment can be detected.<sup>17</sup> The DEIS cites a 2011 report, entitled “Baseline Ambient Sound Levels in Point Reyes National Seashore,”<sup>18</sup> to support this conclusion. However, that report did not measure the ambient sound level using that nonstandard metric and did not conclude that the ambient sound level for Drakes Estero is 24 dBA. The 24 dBA figure appears to be arbitrary and without any valid scientific basis.

The DEIS uses the foregoing inaccurate, misrepresented ambient sound level data and inappropriate and overstated “representative” sound levels for DBOC’s boats and equipment to dramatically overstate the distance at which sound from DBOC’s boats and equipment can be detected. (For example, the DEIS concludes that DBOC’s 1/4 HP, 12 volt oyster tumbler can be heard from 12,672 feet, or 2.4 miles, away, when the ENVIRON measurements on site reveal that it cannot be heard more than about 140 feet away.)<sup>19</sup>

The Final EIS must be corrected to accurately reflect the amount of noise generated by DBOC boats and equipment, the actual ambient sound level for Drakes Estero, and actual distances at which DBOC’s boats and equipment can be heard by visitors and wildlife. The Final EIS should use ENVIRON International’s on-site measurements of sound generated by DBOC boats and equipment and a scientifically accepted ambient sound level measurement for Drakes Estero to calculate the sound-dissipation distances for DBOC’s boats and equipment. The Final EIS should reflect that DBOC boats and equipment make far less noise than stated in the DEIS, the ambient sound level for Drakes Estero is much higher than the DEIS concludes, and noise from DBOC’s boats and equipment can only be heard at distances far shorter than those claimed in the DEIS. The Atkins Peer Review Report’s discussion of the DEIS’s analysis of noise generated by DBOC operations should be permanently withdrawn from the public domain.

### 3.2. DBOC Does Not Cause a “Major Impact” to Wilderness.

The conclusion that DBOC causes “major” adverse impacts on Drakes Estero’s “wilderness” is driven not only by inaccurate soundscape data in the DEIS, but also by on the use of vague, subjective, unbounded “Impact Intensity” definitions—allegedly used to scientifically measure DBOC’s impact on Drakes Estero’s “wilderness”—which are identical to or indistinguishable from those that federal courts have repeatedly rejected on the basis that they are arbitrary and capricious.

All analysis and conclusions in the DEIS regarding DBOC’s alleged impact on Drakes Estero’s “wilderness” that are based on or refer to these unscientific, opinion-based “Impact Intensity” definitions should be deleted from the DEIS. The section of the Atkins Peer Review Report evaluating the adequacy of the DEIS’s “wilderness” analysis should be withdrawn from the public domain.

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<sup>17</sup> See DEIS, *supra* note 5, at 349-64 & Tables 4-2, 4-3, 4-4.

<sup>18</sup> FEDERAL AVIATION ADMINISTRATION (FAA) & JOHN A. VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER (VOLPE CENTER), BASELINE AMBIENT SOUND LEVELS IN POINT REYES NATIONAL SEASHORE (2011) [hereinafter VOLPE REPORT] (Exhibit 9).

<sup>19</sup> See *infra* Section 7.1.6.1.

### 3.3. DBOC Does Not Cause An “Adverse Impact” to Harbor Seals, Birds and Bird Habitat, or Visitor Experience and Recreation.

NPS’s conclusions regarding DBOC’s impact on Drakes Estero’s harbor seals, birds and bird habitat, and visitor experience and recreation suffer from similar information-quality defects. For example, as other government agencies and panel scientists have suggested, NPS does not have sufficient evidence to scientifically evaluate DBOC’s impact on harbor seals and would need to conduct additional studies to make that determination. NPS has not done so. Moreover, NPS has chosen to ignore the relevant harbor seal data it does have, such as more than 281,000 time- and date-stamped photographs taken by NPS’s own high-resolution cameras over a three-year period, none of which indicate that DBOC has an impact on Drakes Estero’s harbor seal colony.<sup>20</sup> Even though NPS has access to and is aware of highly probative, credible data—including on-site sound recordings captured by a sophisticated government microphone; NPS photographs, video recordings, and detailed logs; and GPS data—contradicting factual statements, data, and analysis in the DEIS, NPS does not discuss or meaningfully acknowledge the existence of this data in the DEIS.

The Final EIS should be corrected to comply with NPS’s minimum information-quality standards and accurately reflect DBOC’s de minimis, indeed positive, impact on Drakes Estero’s soundscape, wilderness, harbor seal colony, birds and bird habitat, and visitor and recreation experience. Atkins Peer Review Report should be withdrawn from the public record and should not be relied upon or used in any agency decision-making process.

## 4. Authority for Complaint Submittal

### 4.1 The Lunnys and Dr. Goodman are Affected Persons Entitled to Petition NPS for Correction of Information Contained in the DEIS and Atkins Peer Review Report.

The Lunnys and Dr. Goodman are “affected persons” who are entitled to petition NPS for correction of inaccurate, deliberately misleading, and false information disseminated in the DEIS and Atkins Peer Review Report. Director’s Order #IIB incorporates by reference the OMB

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<sup>20</sup> NPS’s improper treatment of those photographs was the subject of an investigation that resulted in a finding of “administrative misconduct.” See DOI OFFICE OF THE SOLICITOR, PUBLIC REPORT ON ALLEGATIONS OF SCIENTIFIC MISCONDUCT AT POINT REYES NATIONAL SEASHORE, CALIFORNIA (March 22, 2011) [hereinafter FROST REPORT] (Exhibit 10). Most of those photographs have now been made publicly available and can be accessed on NPS’s website, which also contains links to highly detailed logs and video recordings and other relevant harbor-seal related data that NPS excluded from the DEIS. To view NPS’s then-covertly-taken high-resolution photographs of Drakes Estero’s harbor seal colony and DBOC oyster boats, video recordings of Drakes Estero’s harbor seals, and detailed logs documenting DBOC’s interaction with Drakes Estero’s harbor seals, visit National Park Service, Reading Room: Photographs and Videos, at [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_photographs\\_videos.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_photographs_videos.htm) (last visited August 1, 2012) (for links to NPS’s 280,000-plus time- and date-stamped photographs (Exhibit 11); National Park Service, Reading Room: Videos: Drakes Estero Wildlife Monitoring Cameras—2008, at [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_videos\\_wmc\\_de\\_2008.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_videos_wmc_de_2008.htm) (last visited August 1, 2012) (for links to video recordings of Drakes Estero’s harbor seal colony and detailed logs, some of which are referred to as “Oyster Activity Sheets,” that are omitted from the DEIS) (Exhibit 12). To access links to other harbor seal-related data that NPS omitted or did not meaningfully discuss in the DEIS, visit National Park Service, Reading Room: Other Documents of Interest, at [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_other\\_freq\\_req\\_docs.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_other_freq_req_docs.htm) (last visited August 1, 2012) (Exhibit 13).

Guidelines.<sup>21</sup> The preamble to the Final OMB Guidelines makes clear that “affected persons’ are people who may benefit or be harmed by the disseminated information. This includes persons who are seeking to address information about themselves as well as persons who use information.”<sup>22</sup> As explained below, the Lunnys and Dr. Goodman are “affected persons” who are, and will continue to be, harmed by the information disseminated in the DEIS and Atkins Peer Review Report and at issue in this Complaint.

The Lunnys, as owners of DBOC, are “affected persons” in this matter. The DEIS and Atkins Peer Review Report used flawed data and methods to assess the environmental impacts of issuing DBOC a new 10-year SUP allowing them to continue operating their family business. The Lunnys are harmed by “information” at issue in this Complaint because NPS has used it to conclude that the DEIS’s Alternative A is the “environmentally preferred alternative,” which, if adopted, will force DBOC to cease operations by November 30, 2012, when its current SUP and RUO expire.<sup>23</sup> The stated purpose of the DEIS is to provide the Secretary with information upon which to base his decision about whether to grant DBOC a 10-year SUP; indeed, the Final EIS’s *raison d’être* is to enable the Secretary to make a reasoned, informed decision. Unless the false and misleading information disseminated in the DEIS and Atkins Peer Review Report is corrected prior to the release of the Final EIS, the Secretary may erroneously rely on that information to deny the Lunnys a SUP, which would force them to close their oyster farm. The Lunnys are therefore “affected persons” who are entitled to petition NPS for correction of inaccurate, false, and deliberately misleading information in the DEIS and Atkins Peer Review Report.

Likewise, Dr. Goodman is an “affected person” who uses the information in the DEIS and Atkins Peer Review Report.<sup>24</sup> He is an elected member of NAS, which has been charged with evaluating information disseminated in the DEIS and Atkins Peer Review Report and is currently drafting a report assessing the adequacy of those publications.<sup>25</sup> Dr. Goodman has actively

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<sup>21</sup> See Director’s Order #11B, pt. III.C.

<sup>22</sup> Office of Management and Budget, Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, Final Guidelines, With Request for Public Comment, 66 Fed. Reg. 49,718, 49,721 (Sept. 28, 2001).

<sup>23</sup> See DEIS, *supra* note 5, at 5.

<sup>24</sup> Dr. Goodman is a renowned scientist, entrepreneur, educator, CEO, and corporate executive. He is currently Managing Partner and Co-founder of venBio LLC, a biotech venture capital firm. He was formerly President of Pfizer’s Biotherapeutics and Bioinnovation Center, and a member of Pfizer’s Executive Leadership Team. Dr. Goodman was a co-founder of Exelixis, Renovis, Second Genome, and Ossianix, and CEO of Renovis until its acquisition by Evotec. He is a former professor at Stanford University and UC Berkeley, co-founder of Berkeley’s Wills Neuroscience Institute, an Investigator with the Howard Hughes Medical Institute, and currently an Adjunct Professor at UC San Francisco. During his 25-year academic career, he published over 200 scientific papers. Dr. Goodman is an elected member of the U.S. National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. His honors include, amongst others, the Alan T. Waterman Award from the National Science Board, Canada Gairdner Biomedical Award, March-of-Dimes Prize in Developmental Biology, Reeve-Irvine Research Medal, and Trinity College Dublin Dawson Prize in Genetics. He is on the Board of the California Council on Science and Technology, the Pacific Institute, and former chair of the National Academy of Sciences’ Board on Life Sciences. He is an advisor to several university innovation centers and disease foundations. He is Chair of the Board of several companies, including Oligasis, Ossianix, and Second Genome, and a member of the Board of several others, including NeuroTherapeutics and Mirna.

<sup>25</sup> NAS is conducting a limited review of the DEIS due to widespread concern that it is the product of scientific misconduct. See Letter from Dianne Feinstein, U.S. Senator (D-Calif), to Daniel W. Richards, President, California Fish and Game Commission (May 22, 2012), *available at* <http://www.feinstein.senate.gov/public/index.cfm/2012/5/feinstein-letter-to-california-fish-and-game-commission->

participated in that process and has provided data and analysis to fellow NAS members to aid them in their review.<sup>26</sup> Additionally, Dr. Goodman's interest in this matter is not merely a general interest in scientific integrity and furthering NAS's mission of furthering science and technology and their use for the public good.<sup>27</sup> His analysis of the DEIS and Atkins Peer Review Report has also been the subject of substantial public criticism in some quarters, thereby causing substantial harm to his reputation.<sup>28</sup> Correction of the DEIS and Atkins Peer Review Report would remedy this undeserved reputational harm. He has extensively used and analyzed information disseminated in the DEIS and Atkins Peer Review Report<sup>29</sup> and submitted formal scien-

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on-drakes-bay-oyster-company (last visited July 22, 2012) ("Given the repeated allegations of scientific misconduct, Congress included, at my request, report language in its Fiscal Year 2012 appropriations omnibus that directed the National Academy of Sciences to conduct another review of the Park Service's work on the draft EIS [for DBOC] which was released in September 2011.")(Exhibit 14); *see also* Letter from Darrell Issa, Chairman of House Committee on Oversight and Government Reform, to Kenneth L. Salazar, Secretary of the Interior, 3 (Oct. 20, 2011), *available at* [http://www.alsamarin.org/pdfs/Issa%20to%20Salazar.10\\_20\\_11.pdf](http://www.alsamarin.org/pdfs/Issa%20to%20Salazar.10_20_11.pdf) (last visited August 2, 2012) (noting that "the alleged [NPS] misconduct is serious, and it could result in the loss of the Lunny family's business, which employs a number of local residents") (Exhibit 15). The House of Representative's Conference Report on H.R. 2055, Consolidated Appropriations Act, 2012, put it thus: "Because of concerns relating to the validity of the science underlying the DEIS, the conferees direct the National Academy of Sciences to assess the data, analysis, and conclusions in the DEIS in order to ensure there is a solid scientific foundation for the Final Environmental Impact Statement." H.R. 112-118, 157 Cong. Rec. H9593 (Dec. 15, 2011).

<sup>26</sup> *See* Letter from Dr. Corey S. Goodman to National Academy of Science, NRC Panel Reviewing NPS DEIS for DBOC and ATKINS Peer Review (July 3, 2012) (Exhibit 16).

<sup>27</sup> Dr. Goodman's involvement in this matter stems from a request by the President of the Marin County Board of Supervisors, Steve Kinsey. On April 5, 2007, NPS PRNS Superintendent Don Neubacher met with Supervisor Kinsey. Superintendent Neubacher indicated to Mr. Kinsey that he believed that DBOC was harming Drakes Estero's environment and its harbor seal colony. On April 28, 2007, Supervisor Kinsey contacted Dr. Goodman based upon his scientific credentials, as he was aware that Dr. Goodman is an elected member of the National Academy of Sciences, tenured biology professor at U.C. Berkeley, and has historically been involved with science-based public-policy issues. (For example, Dr. Goodman chaired the National Academy of Sciences' Board on Life Sciences from 2001 to 2006.) Supervisor Kinsey, who questioned the veracity of the NPS's scientific claims, asked Dr. Goodman to review the NPS claims and NPS-sponsored scientific studies and to testify at the Marin County hearing regarding DBOC that was held on May 8, 2007—as an independent, neutral scientist—as to whether the NPS data supported the agency's claims. When he testified at the May 8, 2007 Marin County hearing, Dr. Goodman had not met Kevin Lunny, owner of DBOC (in fact, several years prior to that hearing he publicly disagreed with the Tomales Bay Oyster Company concerning a scientific issue). He was later invited by Senator Dianne Feinstein to attend the July 21, 2007 Olema meeting regarding DBOC. He does not have a pecuniary interest in this matter.

<sup>28</sup> *See, e.g.*, Letter from Amy Trainer, Executive Director, Environmental Action Committee of West Marin, to Ken Salazar, Secretary of the Interior, "Re: Concerns Regarding Scientific Advice Received from Dr. Corey Goodman" (March 27, 2012), *available at* [http://www.peer.org/docs/nps/4\\_3\\_12\\_Source\\_Goodman\\_.pdf](http://www.peer.org/docs/nps/4_3_12_Source_Goodman_.pdf) (last visited August 6, 2012); Letter from Dr. Timothy Ragen, Executive Director, Marine Mammal Commission, to Dr. Corey Goodman (undated), *available at* <http://dels.nas.edu/resources/static-assets/osb/miscellaneous/desai.pdf> (last visited August 6, 2012).

<sup>29</sup> *See* Dr. Corey S. Goodman, Power Point Presentation, "NPS Misrepresented and Concealed Acoustic Data and Deceived the Public and Peer Reviewers of the Draft Environmental Impact Statement (DEIS) on DBOC" (July 2, 2012) [hereinafter Goodman Power Point] (Exhibit 17) (Dr. Goodman initially prepared this Power Point on April 24, 2012, and attached it to a letter he sent to DOI's Acting Inspector General); Letter from Dr. Corey S. Goodman to Mary Kendall, Acting Inspector General, Department of the Interior (April 24, 2012) (Exhibit 18); Dr. Corey S. Goodman, "Re: Dr. Chris Clark's re-review of the NPS DEIS: the data completely changed, but his conclusions did not, suggesting this is policy and politics, not science" (June 18, 2012) (Exhibit 19); Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, "Re: Dr. Chris Clark's re-review of the DEIS" (June 25, 2012) (Exhibit 20). Moreover, Dr. Goodman has submitted numerous Freedom of Information Act (FOIA) requests to both NPS and the Marine Mammal Commission (MMC) in connection with his analysis and use of information in the DEIS and Atkins Peer Review Report.

tific misconduct complaints to Secretary of the Interior Ken Salazar and others regarding materially inaccurate information disseminated in the DEIS.<sup>30</sup> Dr. Goodman is thus an affected person who has a right to petition NPS for correction of the DEIS and Atkins Peer Review Report.

#### 4.2 The DEIS and Atkins Peer Review Report are Subject to Information-Quality Standards Mandated by the Data Quality Act, OMB and DOI Guidelines, and Director's Order #IIB.

Because the DEIS and Atkins Peer Review Report constitute “information” that was “disseminated” by NPS, those documents must comply with the information-quality standards established by the DQA, OMB and DOI Guidelines, Director's Order #IIB, and other binding minimum information-quality standards.<sup>31</sup> The DQA and OMB Guidelines published pursuant to the DQA require federal agencies to promulgate guidelines establishing binding minimum information-quality standards for “information” that they make publicly available or use in agency decision-making processes.<sup>32</sup> As required by the DQA and OMB Guidelines, in 2002 NPS published its statutorily required information-quality standards in Director's Order #IIB.<sup>33</sup> Notably, NPS chose to hold itself to particularly high information-quality standards, incorporating by reference not only DOI's robust information-quality standards but all other statutes and regulations establishing information-quality standards and all binding NPS policies and procedures.<sup>34</sup>

The DEIS constitutes “information” because NPS generated it,<sup>35</sup> and it makes factual and data-based assertions in the form of textual, numerical, graphic, and narrative statements that are represented as NPS's views.<sup>36</sup> Because NPS relied on and disseminated the data, factual assertions, conclusions, and other technical and scientific information in the Atkins Peer Review

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<sup>30</sup> See Letter from Dr. Corey S. Goodman to Mary Kendall, Acting Inspector General, Department of Interior, 1 (April 24, 2012).

<sup>31</sup> See Director's Order #IIB, pt. III. See *infra* Sections 5-6.

<sup>32</sup> The DQA, 44 U.S.C. § 3516 note(a), provides that the Director of the Office of Management and Budget (OMB) shall, “with public and Federal agency involvement,” issue guidelines by the end of September 2001 that: provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information).” The DQA obligates federal agencies to promulgate “guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency” and further requires those agencies to “establish administrative mechanisms allowing affected persons to seek and obtain correction of information maintained and disseminated by the agency that does not comply with” the agency's information-quality standards. 44 U.S.C. § 3516 note(a). OMB has issued guidelines implementing the DQA. The OMB Guidelines obligate federal agencies to not only establish “a basic standard of quality (including objectivity, utility, and integrity)” but also adopt “specific standards of [information] quality that are appropriate for the” types of information those agencies disseminate.” OMB Guidelines, pt. III.1.

<sup>33</sup> See Director's Order #IIB.

<sup>34</sup> See *id.*, pt. III.C (“All information will comply with current NPS and Departmental policies and guidelines... The information will also comply with the requirements of applicable public laws ... and implementing rules, regulations, directives and instructions issued under the authority of such laws... In addition to these standards, the information quality standards as described by OMB's final guidelines and the Department of the Interior's guidelines are incorporated by reference as NPS policy and standards.”).

<sup>35</sup> An NPS contractor, Vanasse Hangen Brustlin, Inc. (VHB), assisted NPS with production of the DEIS. This does not alter the analysis. See *id.*, pt. IV.E-F.

<sup>36</sup> See *id.*, pt. IV.E.

Report, it also constitutes “information,”<sup>37</sup> which is subject to the same information-quality standards as the DEIS.<sup>38</sup>

The information in both publications has been “disseminated” by NPS.<sup>39</sup> NPS initiated or sponsored distribution of the DEIS and Atkins Peer Review Report to the public, making both documents publicly available on official government websites.<sup>40</sup> During the comment period on the DEIS, NPS received scores of public comments on that document.<sup>41</sup> And NPS and DOI have publicly endorsed information in the Atkins Peer Review Report on an official government website.<sup>42</sup>

#### 4.3 The DEIS and Atkins Peer Review Report Disseminate “Influential Scientific Information” and are Therefore Subject to Heightened Information-Quality Standards.

In addition to complying with NPS’s base information-quality standards, publications that disseminate “influential scientific information”<sup>43</sup> must also comply with heightened, more rigorous information-quality standards, including those set forth in Part II.4 of DOI Guidelines, and must be “highly transparent”<sup>44</sup> and based on the “best available” science, technical data, methods, and supporting studies.<sup>45</sup>

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<sup>37</sup> See *id.*

<sup>38</sup> See *id.*, pts. III.D, IV.E. Pursuant to Part III.D of Director’s Order #11B, because NPS relied upon technical and scientific information in and disseminated the Atkins Peer Review Report, it is subject to “appropriate standards of objectivity and utility” and must comply with NPS, DOI, OMB and other applicable information-quality standards to the same extent as the DEIS.

<sup>39</sup> *Id.*, pt. VI.F.

<sup>40</sup> See *supra* notes 1-2.

<sup>41</sup> In fact, NPS received 52,473 public comments on the DEIS. See National Park Service, “More than 52,000 comment letters on the future of Drakes Estero posted to Point Reyes National Seashore website,” March 1, 2012, at [http://www.nps.gov/pore/parknews/newsreleases\\_20120301\\_dboc\\_sup\\_deis\\_comments\\_posted.htm](http://www.nps.gov/pore/parknews/newsreleases_20120301_dboc_sup_deis_comments_posted.htm) (last visited July 31, 2012). According to NPS, “[l]etters were submitted from every state, all of the United States commonwealths and territories, as well as 40 countries. Thirty-seven percent of the correspondence came from California.” *Id.*

<sup>42</sup> See ATKINS NORTH AMERICA, FINAL REPORT ON PEER REVIEW OF THE SCIENCE USED IN THE NATIONAL PARK SERVICE’S DRAFT ENVIRONMENTAL IMPACT STATEMENT: DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT, Atkins Project No. 10002598 (Mar. 2012), available at <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=284844> (last visited June 5, 2012) [hereinafter ATKINS PEER REVIEW REPORT]; see also U.S. Dep’t. of Interior, Press Release, “Peer Review of Scientific Findings in Draft EIS on Drakes Bay Oyster Company Now Available” (March 19, 2012), at <http://www.doi.gov/news/pressreleases/Peer-Review-of-Scientific-Findings-in-Draft-EIS-on-Drakes-Bay-Oyster-Company-Now-Available.cfm> (last visited July 16, 2012) (“The peer-review accomplished exactly what we were seeking—that is, specific recommendations on how to improve the final environmental impact statement to make it a better science product,” stated Dr. Ralph Morgenweck, Interior’s Scientific Integrity Officer.”). For the DEIS’s url, see *supra* note 1.

<sup>43</sup> See DOI Guidelines, pt. VII.9.

<sup>44</sup> See Director’s Order #11B, pt. III.A (“Influential information will be produced with a high degree of transparency about data and methods.”).

<sup>45</sup> See DOI Guidelines, pt. II.4(a)-(b) (“Influential scientific information” must, *inter alia*, “[u]se the best available science and supporting studies conducted in accordance with sound and objective scientific practices” and “[u]se data collected by standard and accepted methods or best available methods”).

The DEIS and Atkins Peer Review constitute “influential scientific information,” as defined by DOI Guidelines, because they disseminate data and analysis concerning alleged risks to the environment that will have a “clear and substantial impact” on both public policy and important private-sector decisions.<sup>46</sup> Those publications will have a substantial, if not dispositive, impact on the Secretary’s decision whether to issue a new SUP to DBOC. Accordingly, inaccurate information in those publications poses an existential threat to DBOC’s—and its employees’<sup>47</sup>—future.

Further, the information at issue in this Complaint will be used to shape important public-policy decisions concerning the future of Drakes Estero and the Point Reyes National Sea Shore, e.g., the extent to which it will be converted into wilderness. Therefore, information in those publications must comply with particularly stringent information-quality standards that apply to “influential scientific information.”

#### **5. Because this Complaint Concerns Analysis Conducted Under the National Environmental Policy Act (NEPA), A Response to this Complaint Must be Included in the Final EIS.**

The merits of this Complaint must be considered and responded to in the Final EIS because the Lunnys will likely suffer severe, irreparable actual harm if a response to this Complaint is not included in the Final EIS, and an expedited response will not unduly delay issuance of the Final EIS.

Director’s Order #11B makes clear that where, as here, NPS has disseminated information “prior to the final agency action or information product,” information-quality complaints regarding that information should be given expedited consideration if “the complainant has shown a reasonable likelihood of suffering actual harm from the agency’s dissemination if the agency does not resolve the complain[t] prior to the final agency action or information product” and early consideration will not “unduly delay issuance of the agency action or information...”<sup>48</sup>

NPS disseminated the DEIS in September 2011 and the Atkins Peer Review Report in March 2012, months before the anticipated release of the relevant final information product, i.e., the Final EIS, and more months before the final agency action, i.e., the Secretary’s decision whether to issue DBOC a 10-year SUP on or before November 30, 2012.

If this Complaint is not considered before the Final EIS is made publicly available, the Lunnys will, in all likelihood, be forced to close their family business and their employees will

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<sup>46</sup> See *id.*, pt. VII.9; National Park Service, Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines, pt. VIII (January 31, 2008) (defining “influential scientific information” as information that is *either* “influential in determining important policies or decisions if the same decision would be difficult to reach in the absence of the information” or “serves as the principal basis for a decision that affects significant numbers of private sector entities outside parks or not associated with NPS assistance activities”); see also Director’s Order #11B, pt. III.C (incorporating by reference DOI Guidelines as additional information-quality standards that NPS must adhere to).

<sup>47</sup> DBOC jobs directly support about thirty local families, not to mention the ancillary economic benefits derived by Marin County businesses from the many thousands of annual visitors to DBOC.

<sup>48</sup> Director’s Order #11B, pt. IV.E.



lose their jobs. This makes the Lunnys reasonably likely to suffer actual harm if the information at issue in this Complaint is not timely corrected in the Final EIS.

Expedited consideration of this Complaint will neither delay release of the Final EIS nor delay the Secretary's decision whether to issue DBOC a 10-year SUP. The Final EIS will not be released until NAS completes its review of the DEIS and Atkins Peer Review Report (currently anticipated in early September), and the NPS considers and incorporates any recommendations and conclusions made in the NAS review. As a result, NPS will already be engaged in revising the Final EIS. Moreover, this Complaint was submitted on August 7, 2012, over three months before expiration of DBOC's SUP and RUO on November 30, 2012—more than ample time to integrate necessary corrections into the Final EIS and withdraw and reissue the Atkins Peer Review Report. Therefore, this Complaint should be given expedited consideration.

NPS should also evaluate the merits of this Complaint before the Final EIS is publicly released for a second reason.<sup>49</sup> Under NPS's information-quality guidelines, information-quality complaints concerning data and analysis in draft documents prepared in connection with structured reviews “involv[ing] a[n] ... opportunity for review and [public] comment” should be “treated as a comment on the draft document and the response ... [must] be included in the final document.”<sup>50</sup> Such structured reviews include “analyses conducted under the National Environmental Policy Act (NEPA),”<sup>51</sup> which prescribes detailed procedural requirements for environmental-impact analysis and requires that NEPA documents, such as the DEIS, must be subject to public comments.<sup>52</sup> The DEIS and Atkins Peer Review Report were prepared in the course of a structured review process analyzing DBOC's interaction with and impact on Drakes Estero's environment that was conducted pursuant to NEPA, and the DEIS was the subject of numerous public comments.<sup>53</sup> In accordance with Director's Order #IIB, NPS must treat this Complaint as a comment on the DEIS and respond to it in the Final EIS.

Further, until this matter is resolved, the information that is the subject of this Complaint should be withdrawn, to the extent practicable, from the public domain. The DEIS and Atkins Peer Review Report should not be used in any agency decision-making process until those publications are corrected to comply with applicable information-quality standards.

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<sup>49</sup> *See id.* (With respect to “analyses conducted under the National Environmental Policy Act (NEPA),” complaints about information quality should “be treated as a comment on the draft document and the response will be included in the final document.”).

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> NEPA, codified at 42 U.S.C. § 4331 *et seq.*, prescribes detailed procedural requirements that apply to all aspects of the NEPA process and establishes information quality-based standards that apply to publications such as the DEIS.

<sup>53</sup> NPS received 52,473 public comments on the DEIS. *See supra* note 41.

6. The DEIS and Atkins Peer Review Report Must Be Accurate and Timely; Objective; Highly Transparent About Data, Sources, and Methods; Reproducible; Based on Reliable Data and Sound and Accepted Practices For Data Collection and Analysis; and Use the Best Available Science.

“Information”<sup>54</sup> in the DEIS and Atkins Peer Review Report is subject to basic, common-sense minimum information-quality standards set forth in Director’s Order #11B, which requires that “[a]ll information disseminated by the NPS must ... [be presented to the public in a manner that] maximizes ... objectivity, utility, and integrity”<sup>55</sup> and prescribes specific, judicially manageable standards and criteria for determining compliance. Further, such “information” must also comply with information-quality standards set forth in OMB and DOI Guidelines,<sup>56</sup> all other NPS and DOI policies and guidelines that govern information quality and dissemination of information to the public,<sup>57</sup> and other relevant laws, including but not limited to NEPA.<sup>58</sup>

To comply with minimum information-quality standards, information in the DEIS and Atkins Peer Review Report must be:

- accurate;<sup>59</sup>
- timely and based on the most current information available;<sup>60</sup>
- objective and unbiased in terms of both presentation and substance;<sup>61</sup>

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<sup>54</sup> “Information” is defined as “representation[s] of knowledge such as fact or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms.” Director’s Order #11B, pt. VI.E.

<sup>55</sup> *Id.*, pt. III.

<sup>56</sup> *See id.*, pt. III.C (“In addition to ... [NPS’s information-quality] standards, the information quality standards as described by OMB’s final guidelines and the Department of the Interior’s [information-quality] guidelines are incorporated by reference as NPS policy and standards.”).

<sup>57</sup> *See id.* (“All information will comply with current NPS and Departmental policies and guidelines that govern information dissemination to the public.”). NPS policies are binding on NPS personnel. 43 C.F.R. § 20.502 unequivocally requires NPS personnel “to carry out the announced policies and programs of the Department.” As a result, the DEIS and Atkins Peer Review must comply with information-quality-related standards established by NPS’s 2006 Management Policies, Director’s Order #47, and the DOI Departmental Manual. *See supra* note 34.

<sup>58</sup> *See* Director’s Order #11B, pt. 3.C (“Information” disseminated by NPS must “also comply with the requirements of applicable public laws ... , regulations, directives and instructions issued under the authority of such laws.”). Under 43 C.F.R. § 20.501, NPS personnel have a duty to comply with all “Federal statutes, Executive Orders, Office of Government Ethics and Office of Personnel Management regulations, and Departmental regulations.” As a result, the DEIS and Atkins Peer Review Report must comply with information-quality-related standards established by NEPA, 42 U.S.C. § 4331 *et seq.*, 40 C.F.R. pt. 1502, Director’s Order #12, and the DO-12 Handbook.

<sup>59</sup> *See* Director’s Order #11B, pt. III.B (“All information will be accurate...”). Where, as here, a NEPA document, such as the DEIS, is based on “incomplete or unavailable information,” it must be “ma[d]e clear that such information is lacking.” 40 C.F.R. § 1502.22.

<sup>60</sup> *See* Director’s Order #11B, pt. III.B (“All information will be ... timely, and reflect the most current available information.”).

<sup>61</sup> *See id.*, pts. III, VI.C. Information in those publications must be “presented in ... [a] clear, complete, and unbiased manner” and “within a proper context.” *Id.*, pt. VI.C. And where, as here, scientific information is involved, NPS has an affirmative obligation to ensure that the substantive content itself (e.g., data, factual assertions, tables, figures) is “unbiased.” *See id.* Moreover, because the DEIS was prepared pursuant to NEPA, it is subject to 40 C.F.R. pt. 1502, which, *inter alia*, prescribes information-quality-related standards for environmental impact statements. The DEIS

- highly transparent about data, sources, and methods;<sup>62</sup>
- reproducible by qualified third parties;<sup>63</sup>
- generated using site-specific data and on-site measurements, where required by NEPA, binding NPS policy, and other applicable law;<sup>64</sup>
- based on reliable data and sound and well-accepted scientific practices for data collection and analysis;<sup>65</sup> and
- based on the best available science and supporting studies.<sup>66</sup>

Specific conclusions reached in the DEIS and Atkins Peer Review Report fail to meet these minimum information quality standards. Section 7 below identifies and explains the flaws in the scientific evidence presented in the DEIS and Atkins Peer Review Report, and provides the corrections necessary.

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must therefore “provide full and fair discussion of [claimed] significant environmental impacts,” 40 C.F.R. § 1502.1, and “[r]igorously explore and *objectively evaluate* all reasonable alternatives,” 40 C.F.R. § 1502.14(a) (emphasis added).<sup>62</sup> See Director’s Order #11B, pt. III.A (“[I]nformation will be made transparent, to the maximum extent practicable....Influential information will be produced with a high degree of transparency about data and methods.”); *id.*, pt. III.B (“All information sources will be documented.”); *id.*, pt. III.A (NPS must use “accurate documentation”); *see also* DOI Guidelines, pt. VII.3(b)(ii) (with respect to “influential scientific information,” such as the DEIS and Atkins Peer Review, “a high degree of *transparency* about data and methods” is required “to facilitate the *reproducibility* of such information by qualified third parties” (emphasis in original)).

<sup>63</sup> See Director’s Order #11B, pt. III.A (Information must “be reproducible to the extent possible.”).

<sup>64</sup> Where information (e.g., site-specific sound measurements of DBOC boats and equipment) is “essential to a reasoned choice among alternatives” and “relevant” to evaluation of environmental impacts, NPS is required to obtain that information (e.g., by actually measuring sound generated by DBOC boats and equipment), so long as “the overall costs of obtaining it are not exorbitant” (measured in both time and money). *See* 40 C.F.R. § 1502.22(a); *see also* DO-12 Handbook, § 4.5.G.3 (discussing NPS’s obligations under 40 C.F.R. § 1502.22(a)). Director’s Order #47 prescribes additional information-quality standards that apply to soundscape analysis. *See* Director’s Order #47, pt. C (“NPS will apply the following requirements to its soundscape and noise management activities.”). It establishes that where, as here, human-made sound allegedly causes a “noise issue,” human-made “sounds and sound levels ... need to be measured and evaluated in the park planning processes...”<sup>64</sup> *Id.*, pt. D.5. Cf. DO-12 Handbook, § 1.6 (a “decision-maker,” such as the Secretary, must have access to “site-specific information”). Further, Director’s Order #47 requires NPS to develop a Soundscape Preservation and Noise Management Plan that “identif[ies] the sound level, nature and origin of internal and external noise sources” when doing so is necessary to address a “complex[] ... noise issue.” Director’s Order #47, pt. C.3. NPS did not develop a Soundscape Preservation and Noise Management Plan in connection with the DEIS.

<sup>65</sup> See DOI Guidelines, pt. II.4(b) (publications that disseminate “influential scientific information” must solely “[u]se data collected by standard and accepted methods or best available methods” and “[u]se the *best available ... supporting studies* conducted in accordance with sound and objective scientific practices” (emphasis added)); Director’s Order #11B, III.A (“Information will be developed only from reliable data sources based on accepted practices and policies using accepted methods for information collection and verification.”); *id.*, pt. VI.C (Information “*shall be developed*[] using sound statistical and research methods” (emphasis added)).

<sup>66</sup> See DOI Guidelines, pt. II.4(b) (publications that disseminate “influential scientific information” must solely “[u]se the *best available science and supporting studies* conducted in accordance with sound and objective scientific practices” (emphasis added)); *accord* Management Policies 2006, § 2.1.2 (NPS must solely “use the best available scientific analysis and technical information and scholarly analysis.”).

## 7. Description of Inaccurate, False, or Deliberately Misleading “Information” Disseminated in the DEIS and Atkins Peer Review Report that Fails to Comply With Applicable Information-Quality Standards and Must Be Immediately Corrected.

### 7.1 Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit (Sept. 2011).<sup>67</sup>

The specific “information” to be immediately corrected within the DEIS includes false representations of key acoustic data in Chapter 3 and Chapter 4 and incorrect findings of “major” and “moderate” impacts in Chapter 2 and Chapter 4. The statements in the DEIS that are the subject of this Complaint include, but are not limited to, the following:

#### 7.1.1 DEIS References to Alternative A Using “Expected Future Conditions” as a Baseline for Assessing Environmental Impact.

##### Statements to be Corrected:

- All statements referring to or based on the hypothetical environmental impact of adopting Alternative A: No New Special Use Permit—Conversion to Wilderness (No-Action) in Table 2-6 and Chapters 2, 3, and 4 of the DEIS.

➤ **Recommended Correction:** All such statements should be deleted.

##### 7.1.1.1 Environmental-Impact Analysis in the DEIS that Uses “Expected Future Conditions” as the Baseline, Instead of Current Conditions, is Not Based on the Best Available Science and Sound and Objective Scientific Practices.

The no-action alternative in the DEIS, Alternative A, uses an “expected future conditions” baseline for environmental-impact analysis that is not based on the best available science and is inconsistent with sound and objective scientific practices,<sup>68</sup> which require that Alternative A be compared with the status quo: *current* conditions at Drakes Estero. According to the DO-12 Handbook, a no-action alternative provides “important context information in determining the relative magnitude and intensity of [environmental] impacts” by “set[ting] a baseline of *existing impact continued into the future* against which to compare impacts of action alternatives.”<sup>69</sup> A

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<sup>67</sup> Available at <http://parkplanning.nps.gov/document.cfm?parkID=333&projectID=33043&documentID=43390>.

<sup>68</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2; DOI Departmental Manual, 305 DM 3, § 3.7.A(1); see also Director’s Order #11B, pt. III.A (“Information will be developed only from reliable data sources based on accepted practices and policies utilizing accepted methods for information collection and verification.”).

<sup>69</sup> DO-12 Handbook, § 2.7.C (emphasis added). As the DO-12 Handbook makes clear, “[a]ccurately and completely describing the impacts of existing sources—that is, of continuing actions—is critical to understanding the context, duration and intensity of new impacts.” *Id.*, § 2.7.C.3. Consequently, “a full analysis of no action is required in all NPS EISs and EAs.” *Id.* NPS personnel are required to adhere to the procedures set forth in the DO-12 Handbook. See *id.*, § 1.1.B (“The processes described in this handbook are binding on all NPS personnel.”).

“no-action” alternative is clearly defined as “continuing as is,”<sup>70</sup> measuring “the impacts of *existing activities or conditions* (man-made or natural) projected into the future.”<sup>71</sup>

Here, in violation of binding agency policy, Alternative A sets as a baseline for environmental-impact analysis in the DEIS a hypothetical future at Drakes Estero without DBOC, measuring environmental impacts based on “*expected future conditions*”<sup>72</sup>—i.e., based on sheer speculation. Unlike existing conditions at Drakes Estero, which can be measured in accordance with sound and objective scientific practices, “expected future conditions” cannot be measured, as they are merely hypothetical possibilities.<sup>73</sup> This failure to use the best available science materially deviates from sound and objective scientific practices in violation of NPS’s information-quality guidelines.

### 7.1.2 Table 3-3. Noise Generators at DBOC.<sup>74</sup>

#### Statements to be Corrected:

- Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC “Motorboat” (a skiff with a 20 HP, 4-cycle engine attached) is 71 dBA.
  - **Source of data:** NOISE UNLIMITED, INC., BOAT NOISE TESTS USING STATIC AND FULL-THROTTLE METHODS (1995) (tests conducted off the coast of New Jersey at request of the New Jersey State Police).
  - **Conclusion:** Measurements of sound generated by a Kawasaki 750 cc, 2-stroke, 70 HP jet ski operating at static level off of the New Jersey Coast in 1995 taken *from 2 feet away* are

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<sup>70</sup> *Id.*, § 2.7.C.

<sup>71</sup> *Id.*, § 2.7.C.3 (emphasis added); accord 43 C.F.R. § 46.415(b)(1) (contemplating that “the effects of the no-action alternative” should be analyzed “by contrasting the current condition and expected future condition”). Cf. *American Rivers v. FERC*, 201 F.3d 320, 328-29 (9th Cir. 2000) (endorsing use of current conditions as appropriate environmental baseline under NEPA); *Town of Cave Creek, Arizona v. FAA*, 325 F.3d 320, 328-29 (D.C. Cir. 2003) (same). See generally *NRDC v. Rodgers*, 381 F. Supp. 2d 1212, 1229 (E.D. Cal. 2005) (“In other words, the environmental baseline is a ‘snapshot in time,’ which allows agencies to understand existing conditions before they consider the effects of a proposed action on those conditions.”).

<sup>72</sup> DEIS, *supra* note 5, at 234 (emphasis added).

<sup>73</sup> The National Marine Fisheries Service (NMFS) has highlighted this information-quality deficiency caused by NPS’s failure to use the appropriate, mandatory baseline in a written comment NMFS submitted concerning the DEIS: “[W]e recommend that NPS: Modify the methodology so that all the alternatives are compared to the existing conditions baseline (as described in sections 1502.14, 1502.15, and 1502.16 in the CEQ regulations...)...” Letter from Rodney R. McInnis, Regional Administrator, National Marine Fisheries Service, to Cicely Muldoon, Superintendent, Point Reyes National Seashore, p. 2 (Nov. 17, 2011); see National Marine Fisheries Service Comments on the Draft Environmental Impact Statement for Drakes Bay Oyster Company Special Use Permit, 6 (Nov. 17, 2011) (“NMFS questions whether it is appropriate to compare the impacts of one alternative to one baseline, and then compare impacts of other alternatives to a different baseline in the DEIS. NMFS recommends all the alternatives be compared to the existing conditions baseline.”) (Exhibit 20).

<sup>74</sup> DEIS, *supra* note 5, at 204.

“representative” of sound generated by an oyster skiff with 360 cc, 4-stroke, 20 HP out-board engine at 50 feet.<sup>75</sup>

- **Actual Measurement for DBOC Skiff Powered by 20 HP, 4-Cycle Engine at 50 feet:** 58 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>76</sup>
- **Overstated Factor:** 19 (i.e., it would require 19 identical DBOC boats operating in the same location at the same time and emitting a passby  $L_{eq}$  of 58 dBA to generate the 71 dBA  $L_{eq}$  that the DEIS claims this 1 boat generates).
- **Recommended Correction:** 58 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>77</sup>
- Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC “Motorboat” (a skiff with a 40 HP, 4-cycle engine attached) is 71 dBA.
  - **Source of data:** NOISE UNLIMITED, INC., BOAT NOISE TESTS USING STATIC AND FULL-THROTTLE METHODS (1995) (tests conducted off of the coast of New Jersey at request of the New Jersey State Police).
  - **Conclusion:** Measurements of sound generated by a Kawasaki 750 cc, 2-stroke, 70 HP jet ski operating at static level off of the New Jersey Coast in 1995 taken from 2 feet away are “representative” of sound generated by an oyster skiff with 40 HP, 4-cycle engine attached at 50 feet.
  - **Actual Measurement for DBOC Skiff Powered by 40 HP, 4-Cycle Engine at 50 feet:** 60 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>78</sup>
  - **Overstated Factor:** 12 (i.e., it would require 12 identical DBOC boats operating in the same location at the same time and emitting a passby  $L_{eq}$  of 60 dBA to generate the 71 dBA  $L_{eq}$  that the DEIS claims this 1 boat generates).
  - **Recommended Correction:** 60 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>79</sup>

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<sup>75</sup> The only place that the 71 dBA figure appears in the 1995 Noise Unlimited study is with respect to a Kawasaki 750 cc, 2-stroke, 70 HP jet ski. However, Amy Trainer, Executive Director of the Environmental Action Committee of West Marin, has proffered an alternate explanation. According to Ms. Trainer, NPS used a “Police Patrol Boat” powered by a 175 HP, 2-stroke, V6 engine and operating at 81 dBA to “represent” DBOC’s oyster boats and arbitrarily reduced the figure by a round, even number to 71 dBA. See Goodman Power Point, *supra* note 29, pt. 2, Appendix, Slides 1-2. If true, this methodology would also violate applicable information-quality guidelines.

<sup>76</sup> ENVIRON REPORT, *supra* note 15, Table H-1 (DBOC Source Noise Sound Levels Reported in DEIS and Actual (dBA)).

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> *Id.*

- Statement that the “Representative Sound Level at 50 Feet (dBA)” for DBOC’s “Oyster Tumbler,” which is powered by a small 1/4 HP, 12 volt “electric motor,” is 79 dBA.
  - **Source of data:** FEDERAL HIGHWAY ADMINISTRATION, ROADWAY CONSTRUCTION NOISE MODEL USER’S GUIDE (2006).
  - **Conclusion:** Measurements of sound generated by a “Concrete Mixer Truck,” “Drill Rig Truck,” “Front End Loader,” “Rivet Buster/chipping gun,” and “Ventilation Fan” (“Actual Measured Lmax @ 50ft (dBA, slow)”) are “representative” of sound generated by DBOC’s “Oyster Tumbler,” which is powered by a small 1/4 HP, 12 volt “electric motor.”
  - **Actual Measurement for DBOC’s 1/4 HP, 12 Volt Oyster Tumbler at 50 feet:** 49.8 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>80</sup>
  - **Overstated Factor:** 825 (i.e., it would require 825 identical oyster tumblers operating in the same location at the same time and emitting a passby  $L_{eq}$  of 49.8 dBA to generate the 79 dBA  $L_{eq}$  that the DEIS claims this 1 DBOC oyster tumbler generates).
  - **Recommended Correction:** 49.8 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>81</sup>
  
- Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC forklift (referred to in the DEIS as a “Front End Loader”) powered by a 60 HP diesel engine is 79 dBA.
  - **Source of data:** FEDERAL HIGHWAY ADMINISTRATION, ROADWAY CONSTRUCTION NOISE MODEL USER’S GUIDE (2006).
  - **Conclusion:** Measurements of sound generated by a large “Front End Loader (“Actual Measured Lmax @ 50ft (dBA, slow)”) used for heavy roadside construction are “representative” of sound generated by DBOC’s forklift, which is powered by a 60 HP diesel engine.
  - **Actual Measurement for Small DBOC Forklift at 50 feet:** 64-65 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>82</sup>
  - **Overstated Factor:** 25 (i.e., it would require 25 identical DBOC forklifts operating in the same location at the same time and emitting a passby  $L_{eq}$  of 64-65 dBA to generate the 79 dBA  $L_{eq}$  that the DEIS claims this 1 forklift generates).

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<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

<sup>82</sup> *Id.*

- **Recommended Correction:** 64-65 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>83</sup>
- Statement that the Representative Sound Level at 50 Feet (dBA) of DBOC’s “[h]andheld hydraulic drills” is 85 dBA.
  - **Source of data:** FEDERAL HIGHWAY ADMINISTRATION, ROADWAY CONSTRUCTION NOISE MODEL USER’S GUIDE (2006).
  - **Claim:** Measurements of sound generated by “Pneumatic Drills” (i.e., jackhammers used in roadside construction projects) are “representative” of sound generated by handheld hydraulic drills.<sup>84</sup>
  - **Actual Measurement for DBOC’s Handheld Drill at 50 Feet:** 70.4 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>85</sup>
  - **Overstated Factor:** 29 (i.e., it would require 29 identical handheld hydraulic drills operating in the same location at the same time and emitting a passby  $L_{eq}$  of 70.4 dBA to generate the 85 dBA  $L_{eq}$  that the DEIS claims this 1 handheld hydraulic drill generates).

**Recommended Correction:** 70.4 dBA ( $L_{eq}$ ) (taken by ENVIRON International on November 22, 2011, using a B&K 2250 Type 1 sound level meter).<sup>86</sup>

7.1.2.1 Using Data from 1995 Noise Unlimited Study and 2006 FWHA Study to “Represent” Sound Generated by DBOC Equipment and Boats Violated Information-Quality Standards for Accuracy.

The grossly exaggerated “representative” sound levels for DBOC boats and equipment in the DEIS fail to meet minimum information-quality standards because they are inaccurate<sup>87</sup> and were not derived from on-site measurements.<sup>88</sup> On November 22, 2011, ENVIRON International, an independent consulting firm, took on-site measurements of noise generated by DBOC boats and equipment using a standard, well-accepted scientific technique.<sup>89</sup> Those measurements

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<sup>83</sup> *Id.*

<sup>84</sup> DBOC owns two identical handheld hydraulic drills.

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> See Director’s Order #11B, pt. III.B (“All information will be accurate....”).

<sup>88</sup> See 40 C.F.R. 1502.22(a) (“If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.”); DO-12 Handbook, § 1.6 (directing NPS to obtain site-specific information); Director’s Order #47, pt. D.5 (directing NPS to measure human-made sound and sound levels in park planning process). As stated above, the data in Table 3-3 was imported from an obscure 1995 study measuring noise generated by jet skis and racing and police patrol boats off of the New Jersey coast, see NOISE UNLIMITED STUDY, *supra* note 13, and a 2006 study measuring sound levels generated by heavy highway construction equipment, see FHWA STUDY, *supra* note 14.

<sup>89</sup> See ENVIRON REPORT, *supra* note 15, at 33-37 & Table H-1 (DBOC Noise Sound Levels Reported in DEIS and Actual (dBA)).



conclusively demonstrate that DBOC boats and equipment generate substantially less noise than is claimed in Table 3-3.

After he was made aware of the ENVIRON International data, the peer reviewer responsible for assessing the Soundscape section of the DEIS, Dr. Christopher Clark, accepted the new data.<sup>90</sup> He described the ENVIRON data as “credible data” collected “using appropriate techniques” that was “appropriate and helpful in that it provides some actual noise level measurement data for specific DBOC noise-generating activities at close range.”<sup>91</sup> Dr. Clark concluded that the ENVIRON International data “revise the noise levels” for DBOC boats and equipment “as presented in the DEIS,” which were “not representative of actual DBOC noise-generating activities.”<sup>92</sup> In fact, in an e-mail to Dr. Goodman, Dr. Clark explained that the “reality of where the measurements [in Table 3-3] came from or the inappropriate and significantly higher noise level values (from NJ!) [scientifically] change . . . [his] opinion as to the fundamentals of the EIS,” insofar as “the acoustic footprints of individual anthropogenic activities would be significantly smaller than assessed from the values in Table 3.3....”<sup>93</sup>

The “representative” sound levels for DBOC boats and equipment are demonstrably false for a second reason. In 2009, in connection with a joint Federal Aviation Administration (FAA)/John A. Volpe National Transportation Systems Center (Volpe Center) study conducted “with the cooperation of the National Park Service,”<sup>94</sup> a sophisticated government microphone (hereinafter “PORE 004 microphone”) was intentionally placed in a sound-sensitive area on the shore of Drakes Estero.<sup>95</sup> Although NPS has claimed otherwise,<sup>96</sup> the PORE 004 microphone was placed in an ideal location to record DBOC boats and equipment without any physical obstruction between the microphone and the DBOC boats in Drakes Estero.<sup>97</sup>

In 2009, the Lunnys installed GPS equipment in their 20 and 40 HP oyster boats capable of measuring speed, location, time, and direction of DBOC boat trips. Sound recordings from the PORE 004 microphone, coupled with overlapping GPS data from the Lunnys’ boats, prove that the PORE 004 microphone only recorded the boats on the few occasions that those boats passed within a few hundred feet of the microphone (at levels consistent with the ENVIRON International data).<sup>98</sup> Further, the fact that the PORE 004 microphone did not record DBOC boats and equipment when it should have if the “representative” sound levels in Table 3-3 were correct also demonstrates that those sound levels are substantially exaggerated.<sup>99</sup>

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<sup>90</sup> Re-Review, *supra* note 16, at 3.

<sup>91</sup> *Id.* at 4.

<sup>92</sup> *Id.*

<sup>93</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, “Re: time sensitive request” (March 21, 2012, 12:40:06 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS,” pt. 2, Appendix #2, p. 20 (June 25, 2012).

<sup>94</sup> VOLPE REPORT, *supra* note 18, at E-15.

<sup>95</sup> NPS was aware of and had access to this data prior to preparing the DEIS (an NPS employee personally selected the sound-sensitive location where it was placed). *See id.* at v (“We would also like to thank Bill Shook [an NPS employee] at Point Reyes National Seashore for their [sic] expertise and assistance during site selection and deployment.”).

<sup>96</sup> *See infra* Section 7.1.9.

<sup>97</sup> *See* Goodman Power Point, *supra* note 29, at pt. 4.

<sup>98</sup> *See id.*

<sup>99</sup> *See id.*

The NPS staff and scientists are aware of these data. Kevin Lunny disclosed the existence of the GPS recordings at the February 2010 Marine Mammal Commission (MMC) panel meeting at Point Reyes, and he offered to make this data available to the MMC panel members and NPS scientists. As far as undersigned counsel is aware, to date, Dr. Goodman is the only scientist to have ever requested and obtained the DBOC GPS data.

In September 2010, Dr. Goodman tested the clock on DBOC's GPS recordings by comparing the GPS recordings to time- and date-stamped photographs from covertly installed, high-resolution NPS cameras (disclosed in summer 2010).<sup>100</sup> He found that the photos and GPS data match precisely in terms of time and location.

In April 2012, Dr. Goodman matched the January-February 2010 GPS recordings from the DBOC oyster boats with the audio recordings from the Volpe (FAA) microphone PORE 004. First, by using Google Earth elevation analysis, he established that the PORE 004 microphone had an unobstructed sound path from the DBOC boats in either the main channel, lateral channel, or west channel near sandbars OB and UEN in Drakes Estero.<sup>101</sup>

He then examined the PORE 004 recordings when the DBOC boats were in the main channel.<sup>102</sup> By matching the GPS data on DBOC boat location and speed, Dr. Goodman was able to determine that the PORE 004 microphone did indeed record the DBOC boats when they were a few hundred feet from the microphone during their weekly trip to the main channel of Drakes Estero to collect samples for California Department of Health Services (CDHS), and that those sound levels were consistent with the ENVIRON recordings.<sup>103</sup>

Dr. Goodman proceeded to examine the PORE 004 recordings when the DBOC boats were at the west end of the lateral channel as they worked on the oyster bags at sandbars UEN and OB. DBOC makes such boat trips several times each week, and often daily. In such cases, the oyster boats are more than 600 yards, and often 750 yards or more, from the harbor seals hauled out at sandbar OB. The PORE 004 microphone did not record any of those DBOC boat trips. He did a similar analysis for the July-August 2009 PORE 004 recordings. Although DBOC did not have GPS data for that period, the NPS had sophisticated high-resolution cameras operating during that summer.<sup>104</sup> Again, photographs of DBOC boats coming and going from the west end of the lateral channel matched with the audio recordings from the PORE 004 microphone. The PORE 004 microphone did not record any of those DBOC boat trips.<sup>105</sup>

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<sup>100</sup> As discussed in greater detail above, NPS's 280,000-plus time- and date-stamped photographs are publicly available on the NPS website at the following web address: [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_photographs\\_videos.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_photographs_videos.htm) (last visited July 17, 2012). See *supra* note 20.

<sup>101</sup> Dr. Goodman subsequently obtained photographs taken by FAA scientists showing a clear, unobstructed visual and sound path from the boats to the microphones, confirming the Google Earth elevation analysis. See Goodman Power Point, *supra* note 29, at pt. 4.

<sup>102</sup> DBOC is required by the California Department of Health Services (CDHS) to take weekly water and shellfish samples out near the mouth of Drakes Estero to test for red tide. These measurements are usually, but not always, taken on Tuesdays in the main channel of Drakes Estero.

<sup>103</sup> See Goodman Power Point, *supra* note 29, at pt. 4, Slides 60-79, 86.

<sup>104</sup> See *supra* note 20.

<sup>105</sup> See Goodman Power Point, *supra* note 29, at pt. 4, Slides 59-86.

The PORE 004 microphone was placed about 3,200 feet from the DBOC boats in the west end of the lateral channel. If the data in Tables 3-3 and 4-2 of the DEIS were correct, then the DBOC boats should have been heard for up to 7,062 feet (1.3 miles) and certainly recorded by the PORE 004 microphone at only 3,200 feet.<sup>106</sup> But the DBOC boats were not recorded by the PORE 004 microphone. Moreover, when the DBOC boats were in the main channel during their weekly trip to collect samples for CDHS, the PORE 004 microphone did record the DBOC boats at a distance of several hundred feet, and these recordings were consistent with the ENVIRON Report data. Thus, the recordings from FAA's PORE 004 microphone confirm the ENVIRON data and contradict the NPS data presented in Tables 3-3 and 4-2 concerning the sound levels allegedly generated by DBOC oyster boats.

Third, the sound level data for DBOC boats and equipment in Table 3-3 were proven false by sound meter measurements taken on site by the Lunnys. With a commercially available sound meter, they were able to measure a distance of 50 feet and measure decibel levels of boats and equipment over the course of approximately one hour. These tests confirmed the ENVIRON International measurements.<sup>107</sup> Further, a recording of a conversation between Kevin Lunny (standing 2-4 feet from a running DBOC boat engine) and NPS and VHB employees (standing less than 10 feet from the running engine) independently establishes that DBOC's oyster boats generate far less than the 71 dBA at 50 feet (which would be 85 dBA at 10 feet) claimed in the DEIS.<sup>108</sup>

7.1.2.2 Because the 1995 Noise Unlimited and 2006 Federal Highway Administration Studies Were Not the Most Current Information Available and Were Untimely, Stale, and Dated, Use of Those Studies Violated NPS's Information-Quality Guidelines.

The data in Table 3-3 also does not meet information-quality standards related to timeliness and fails to use the most current information available, as required by Director's Order #11B.<sup>109</sup> The Noise Unlimited study—which was conducted in 1995 (more than fifteen years before the DEIS was prepared)—is stale, dated, untimely, and not the most current information available concerning noise generated by DBOC's oyster boats for three reasons: (1) in 2009, the PORE 004 microphone actually recorded noise generated by DBOC's oyster boats; (2) even if it was appropriate for NPS to compare sound levels generated by DBOC's oyster boats to those generated by jet skis and other random motorized vessels, NPS should have used the noise measurements taken by a contractor *hired by NPS in 2001*—measurements that NPS has used in

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<sup>106</sup> As discussed in greater detail below, Table 4-2 (Estimated Motor Boat Sound Dissipation) grossly exaggerates the distance and volume at which DBOC boats can be heard. See *infra* Section 7.1.5.

<sup>107</sup> Such measurements were made and published in an article. See John Hulls, "Unsound Advice: NPS and its Drakes Estero DEIS Consultant" (May 16, 2012), available at <http://russianrivertimes.wordpress.com/> (last visited July 18, 2012) (Exhibit 22).

<sup>108</sup> See DEIS, *supra* note 5, at 206, Table 3-4 (vocal communication is difficult at distances of greater than 2 feet over sound at 80 dBA). NPS's Natalie Gates (PRNS Chief of Natural Resources, and a major NPS staffer of the EIS) and VHB's Nancy Barker (Federal Program Manager, and a major VHB staffer of the EIS) were present when this conversation was recorded.

<sup>109</sup> See Director's Order #11B, pt. III.B ("All information will be ... timely, and reflect the most current information available.").

other EISs;<sup>110</sup> and (3) due to changes in technology, jet skis and other motorized vessels generate far less noise today than they did in 1995.<sup>111</sup>

Likewise, the on-site sound level data collected in 2009 by the PORE 004 microphone render the sound level measurements of heavy highway construction equipment found in the 2006 Federal Highway Administration study untimely and not the most current available information relevant to assessing noise generated by DBOC equipment. NPS's failure to use the on-site 2009 sound recordings by the NPS-placed PORE 004 microphone and GPS data from DBOC oyster boats as sources of data for determining the amount of sound generated by DBOC boats and equipment is inconsistent with its information-quality obligations.

#### 7.1.2.3 Data in Table 3-3 was Not Transparent About Sources and Methods Used, in Violation of Applicable Information-Quality Standards.

Moreover, the data in Table 3-3 does not comply with minimum information-quality standards because it is not transparent,<sup>112</sup> let alone "highly transparent."<sup>113</sup> Indeed, that data was sufficiently nontransparent that the peer reviewer of the Soundscape section of the DEIS, Dr. Christopher Clark, believed that the Noise Unlimited study provided on-site noise level data from DBOC boats and equipment, stating in the Atkins Peer Review Report that the "measured levels included noise from DBOC operations ... collected by Noise Unlimited, Inc. ...."<sup>114</sup> Dr. Clark's subsequent statements confirm that he was unaware that Table 3-3 did not use on-site sound level measurements: after being informed that the DEIS did not use actual sound-level measurements of DBOC boats and equipment, he had to *ask* Dr. Goodman in an e-mail about the source of "representative" sound levels for DBOC's boats in Table 3-3.<sup>115</sup>

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<sup>110</sup> See Personal Watercraft Use at Lake Mead National Recreation Area, Final Rule, 68 Fed. Reg. 17,292, 17,298 (April 9, 2003) (to be codified at 36 C.F.R. pt. 7) ("There is no definitive literature describing scientific measurements of PWC noise.... To address this lack of scientific data, the National Park Service contracted noise measurements of motorized vessels, including PWC, at Glen Canyon in 2001.... At Glen Canyon, sound measurements were made of a number of boats and PWC as they passed by a microphone mounted above the front of an instrumented boat.... [C]ontrolled pass-by measurements of three PWC and one motorboat were conducted at several different speeds. Many boats and PWC were also randomly measured.").

<sup>111</sup> Even the Personal Watercraft Industry Association (as far as undersigned counsel is aware, the *only* organization that makes a copy of the obscure, dated Noise Unlimited study publicly available) qualifies the accuracy of the that study: "Please keep in mind that this test was conducted in 1995, and personal watercraft manufacturers have achieved a 70% reduction in sound levels since 1998." See Personal Watercraft Industry Association, Sound Level Comparisons, at <http://www.pwia.org/sound/level.aspx> (last visited July 13, 2012).

<sup>112</sup> See Director's Order #11B, pt. IIIA (all information NPS disseminates must be "transparent, to the extent practicable").

<sup>113</sup> See *id.* ("Influential information," such as the DEIS, must "be produced with a high degree of transparency about data and methods.").

<sup>114</sup> ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 83 (Review of Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit, Christopher W. Clark, Cornell University (February 23, 2012)).

<sup>115</sup> See E-mail from Dr. Christopher Clark to Dr. Corey Goodman, "Re: time sensitive request" (March 21, 2012, 12:40:06 PM PDT) ("So for the two motorboat sound levels, they too seem to have arrived in the EIS table from the New Jersey shore—correct?"), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, "Re: Dr. Chris Clark's re-review of the DEIS," pt. 2, Appendix #2, p. 20 (June 25, 2012).

Dr. Clark’s initial confusion is understandable. NPS personnel provided full citations to Table 3-3’s data sources in the *nonpublic* June 2011 administrative version of the DEIS, but removed these and substituted nontransparent shortened citations in the *publicly released* September 2011 version of the DEIS—the version that was provided to the peer reviewers.

- The *nonpublic* June 2011 administrative version of the DEIS used the following full citations in Table 3-3, entitled “Noise Generators at DBOC”:
  - “Noise Unlimited, Inc. Boat Noise Tests Using Static and Full Throttle Measurement Methods for the New Jersey State Police (1995).”<sup>116</sup>
  - “FHWA Construction Noise User’s Guide (2006).”<sup>117</sup>
- The *publicly released* version of the DEIS that the peer reviewers had access to uses the following shortened citations:
  - “Noise Unlimited, Inc., 1995.”<sup>118</sup>
  - “FHWA 2006.”<sup>119</sup>

Similarly, NPS personnel failed in their transparency obligation by omitting material qualifications of data and sources in Table 3-3 from the *publicly released* September DEIS.<sup>120</sup> The nonpublic June 2011 version of the DEIS stated that the 2006 FHWA study and 1995 Noise Unlimited study were simply “Sources for Sound *Estimates*” that provided an “*Estimated* dBA at 50 feet (Hourly Value).”<sup>121</sup> The publicly released September 2011 DEIS misleadingly recharacterized those studies as “Sources” for “*Representative* Sound Level[s] at 50 feet (dBA).”<sup>122</sup> In addition, there is no way to determine what, if any, method and criteria NPS used to select “representative” sound level data from the studies measuring sound generated by loud, fast, old racing and police patrol boats and jet skis and heavy highway construction equipment.<sup>123</sup>

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<sup>116</sup> See DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT: DRAFT ENVIRONMENTAL IMPACT STATEMENT, INTERNAL REVIEW DRAFT, Table 3-3 (June 9, 2011) [hereinafter INTERNAL REVIEW DRAFT DEIS]. To see a visual comparison of the Internal Review Draft DEIS with the publicly released DEIS, see Goodman Power Point, *supra* note 29, pt. 6, Slides 12-20.

<sup>117</sup> See *id.*

<sup>118</sup> See DEIS, *supra* note 5, at 204, Table 3-3.

<sup>119</sup> See *id.* Dr. Clark does not mention the FHWA study in the Atkins Peer Review, which suggests that he believed that all of the data in Table 3-3 was derived from the Noise Unlimited study, *supra* note 13.

<sup>120</sup> See Director’s Order #11B, pt. III.A.

<sup>121</sup> See INTERNAL REVIEW DRAFT DEIS, *supra* note 116 (emphasis added). To see a visual comparison of the Internal Review Draft DEIS with the publicly released DEIS, see Goodman Power Point, *supra* note 29, pt. 6, Slides 12-20.

<sup>122</sup> See DEIS, *supra* note 5, at 204 (emphasis added).

<sup>123</sup> See, e.g., Director’s Order #11B, pt. III.A (mandating a “high degree of transparency”); 40 C.F.R. § 1502.24 (requiring agencies to “identify any methodologies used and ... make explicit reference by footnote to the scientific and other sources relied upon” in an EIS). It is unclear what method and criteria, if any, NPS used to conclude that data from those studies was “representative” of sound generated by DBOC boats and equipment. Likewise, it is unclear what specific pieces of heavy highway construction equipment, racing and police patrol boats, and jet skis NPS thought it appropriate to claim as “representative” of DBOC’s 20 and 40 HP oyster boats, 1/4 HP, 12 volt oyster tumbler, two handheld drills, and small forklift.

By claiming that data from the Noise Unlimited and FWHA studies is “representative” of sound levels generated by DBOC boats and equipment and obfuscating the sources of its data, NPS has even potentially falsified data—a form of “scientific misconduct” that violates DOI policy.<sup>124</sup>

#### 7.1.2.4 Data in Table 3-3 is Not Reproducible.

Applicable information quality guidelines also require that data be reproducible, but the sound level measurements for DBOC boats and equipment used in Table 3-3 have never been able to be reproduced—probably because they cannot be.<sup>125</sup> ENVIRON International measured actual noise levels of DBOC boats and equipment and could not reproduce the data in Table 3-3. Dr. Goodman analyzed PORE 004 microphone recordings and matched them with GPS data from DBOC’s boats, but was also unable to reproduce the data in Table 3-3. The Lunnys’ attempts to reproduce data in Table 3-3 were equally unsuccessful.

#### 7.1.2.5 Table 3-3 was Not Based on the Best Available Science and Data Using the Best Available Methods.

The soundscape data concerning noise generated by DBOC boats and equipment was not based on the best available science and data using the best available methods, thereby violating applicable information-quality guidelines for yet another reason.<sup>126</sup> Taking on-site sound level measurements would have been the best available science and generated the best available data using the best available method.<sup>127</sup> ENVIRON International demonstrated the simplicity and efficiency of taking actual on-site measurements of sound levels (in decibels) at 50 feet from DBOC boats and on-shore equipment.<sup>128</sup> Richard Steffel, the acoustics scientist who made those measurements, took actual on-site measurements over the course of a few hours on one afternoon.<sup>129</sup>

The NAS review panel, which is tasked with evaluating the adequacy of certain aspects of the DEIS and Atkins Peer Review Report, called attention to NPS’s failure to actually measure sound levels generated by DBOC boats and equipment. Dr. Kurt Frstrup, a member of the Fort Collins Soundscape Group, indicated that he had even recommended that direct underwater

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<sup>124</sup> See DOI Departmental Manual, § 3.7.B(2).

<sup>125</sup> See Director’s Order #11B, pt. III.A.

<sup>126</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2; DOI Departmental Manual, 305 DM 3, § 3.7.A(1); Director’s Order #11B, pt. III.A. NPS’s failure to actually measure sound generated by DBOC noise generators and include that data in the DEIS violated 40 C.F.R. § 1502.22(a) as well.

<sup>127</sup> NPS was independently required to take site-specific sound level measurements of DBOC boats and equipment by both NPS Management Policies 2006 and Director’s Order #47. See Director’s Order #47, pts. C.3, D.5; Management Policies 2006, § 4.9 (NPS “will monitor human activities that generate noise ... , including noise caused by mechanical or electronic devices.”).

<sup>128</sup> The scientists employed by Vanasse Hangen Brustlin, Inc. (VHB), the outside consultant that assisted NPS in drafting the DEIS, pride themselves in their expertise in soundscape analysis and they have produced first-rate soundscape analysis in previous EIS and EA statements they have helped prepare for various state and federal agencies. Moreover, if for any reason the NPS scientists and staff at PRNS were not up to making these easy measurements, NPS has excellent scientists at Fort Collins in the NPS Natural Sounds and Night Skies Division.

<sup>129</sup> See ENVIRON REPORT, *supra* note 15, at pt. H4.

measurements be taken.<sup>130</sup> Above-water measurements would have been drastically less expensive and quicker and easier to obtain. And in July 2010—more than one year before the DEIS was made publicly available—a federal district judge harshly criticized NPS’s decision to import old, stale soundscape data involving noise generated by jet skis into another NEPA analysis, concluding that NPS’s decision to use that data, rather than NPS’s most recent data, was arbitrary and capricious and violated its NEPA obligations.<sup>131</sup>

When this DEIS was prepared, NPS was on notice that importing this sort of data was unacceptable, yet the agency did it anyway—and deliberately obscured its failure to adhere to the best available scientific methods by substituting shortened citations that even confused NPS’s designated peer reviewer.

### 7.1.3 Claims Regarding Frequency and Duration of DBOC Boat Trips

#### Statements to be Corrected:

- Statement in Table 3-3 that DBOC’s 20 HP and 40 HP oyster boats make “[u]p to 12 40-minute trips/day.”<sup>132</sup>
  - **Recommended Correction:** Table 3-3 should be corrected to state: “On average, one 40-minute trip/day.”
- Statement that DBOC oyster boats “operate for up to 8 hours per day, 6 days per week, year round.”<sup>133</sup>
  - **Recommended Correction:** The DEIS should be revised to state: “DBOC boats typically operate for 1-2 hours per day (and often only 30-40 minutes) out near sandbars OB and UEN. Moreover, the work is seasonal.”

#### 7.1.3.1 Claims Exaggerating the Frequency and Duration of DBOC Boat Trips are Demonstrably False and Not Based on the Most Current Information Available.

These claims are not accurate and are not based on the most current information available, as required by NPS’s information-quality guidelines.<sup>134</sup> GPS data measuring speed, location, time, and direction of DBOC boat trips starting in 2009 irrefutably demonstrate that these

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<sup>130</sup> See National Academy of Sciences, NRC Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit Committee, Drakes Bay Video OI, 1:34:31-1:34:50 (July 10, 2012), available at [http://practiceproducer.com/20120710\\_NAS.html](http://practiceproducer.com/20120710_NAS.html) (last visited August 5, 2012).

<sup>131</sup> See *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 41 (D.D.C. 2010) (“The soundscapes analysis for PIRO is even more problematic than that conducted by Defendants for GUIs. The Pictured Rocks EA, which was produced in 2002, did not use the most recent data collected by NPS in its 2001 study of PWC noise levels. As a result, there is little data presented that measures decibel levels at PIRO.” (emphasis added)).

<sup>132</sup> DEIS, *supra* note 5, at Table 3-3, p. 204.

<sup>133</sup> *Id.* at 298.

<sup>134</sup> See Director’s Order #11B, pt. III.B (“All information will be accurate, timely, and reflect the most current information available.”).

statements are exaggerated and misleading: neither of DBOC's small oyster skiffs has made twelve (12) 40-minute trips on any one day.<sup>135</sup>

NPS was aware of and had access to three kinds of data regarding DBOC boat trips that pertained directly to the DEIS's analysis: (1) DBOC logs of boat trips; (2) DBOC GPS records of boat trips; and (3) NPS time- and date-stamped photographs and detailed logs of DBOC boat trips.<sup>136</sup> None of those records, which were collected over a several-year period, show "up to 12 40-minute boat trips/day." Instead, with respect to boat trips to tend the oyster bags at sandbars OB and UEN, the DBOC logs, DBOC GPS data, and NPS photographic data show an average of one trip per day (six days per week); at times, two trips in a single day; and, on very rare occasions, as many as three trips in a single day.<sup>137</sup>

#### 7.1.3.2 Ignoring Detailed GPS Data Reflecting Frequency and Duration of DBOC Boat Trips is Not a Sound and Accepted Scientific Practice.

Consciously ignoring detailed, highly reliable, accurate, timely data reflecting frequency and duration of DBOC boat trips is not a sound and accepted scientific practice and is contrary to NPS's obligation to use the best available science and data.<sup>138</sup> Kevin Lunny installed GPS equipment in his two oyster boats at his own expense, made NPS personnel aware of the existence of this data, and offered to provide it to NPS to allow them to accurately determine the frequency and duration of DBOC boat trips. NPS refused to evaluate this data and include it in the DEIS, thereby violating its information-quality guidelines.

#### 7.1.4 Measurements of Ambient Sound Level

##### Statements to be Corrected:

- "Topography can affect sound transmission through air. Steep topography such as the bluffs around some of Drakes Estero can block sound transmission. Because the 2009 sound measurements used in this EIS were taken on a bluff well above Drakes Estero, the measurements may have recorded limited mariculture-related noises."<sup>139</sup>

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<sup>135</sup> Three sources of data—two from DBOC and one from NPS—conclusively show that this claim in the DEIS is highly exaggerated. Disturbingly, NPS knew or should have known that this claim was false: NPS has records from its detailed logs of NPS's own photographs that irrefutably prove that this claim is incorrect and exaggerated. The detailed NPS logs of the photographs from pupping season (March to May) for 2008 and 2009 show conclusively that DBOC boats take one or at most two trips per day to sandbars OB and UEN—certainly not twelve boat trips per day.

<sup>136</sup> For a detailed discussion of NPS's 280,000-plus time- and date-stamped photographs, see *infra* Section 7.1.9.1; see also FROST REPORT, *supra* note 20.

<sup>137</sup> DBOC boats typically operate for 1-2 hours per day (and often only 30-40 minutes) out near sandbars OB and UEN. Moreover, the work is seasonal. They are not harvesting during storms, and there are some months in which harvest is less than other months.

<sup>138</sup> See *supra* notes 65-66 and accompanying text.

<sup>139</sup> DEIS, *supra* note 5, at 204.



➤ **Recommended Corrections:**

- This section of the DEIS should be revised to make clear that topography did not affect or block sound measurements by the PORE 004 microphone in 2009, which had a straight line of site to the areas in Drakes Estero in which the DBOC oyster boats operate and other DBOC equipment is used.
- This section of the DEIS should be revised to make clear that the 2009 measurements were taken from a sound-sensitive area, selected by NPS's then-Chief of Natural Resources, Bill Shook, in an ideal location to measure noise generated by DBOC boats and equipment.
- This section of the DEIS should be corrected to state that the PORE 004 microphone did record DBOC boats when those boats were operating within 400 hundred feet of its location at a dBA level that is consistent with data in the ENVIRON Report but inconsistent with the data in Table 3-3 *and failed to record* those boats at distances where it should have recorded them if the DEIS's soundscape data and factual assertions concerning sound-dissipation distances for DBOC's boats and equipment were accurate.

7.1.4.1 This Claim is Demonstrably False and Thus Not Accurate as Required by Part III.B of Director's Order #11B.

This statement is not true and thus not “accurate,” as required by NPS's information-quality guidelines,<sup>140</sup> and NPS knew or should have known this. In fact, it is demonstrably false for two reasons: first, NPS's own time- and date-stamped photographs<sup>141</sup>—and a photograph in the Volpe Report<sup>142</sup>—conclusively establish that the PORE 004 microphone was placed in a location with a clear, unobstructed path to DBOC operations; second, publicly available Google Earth elevation profiles independently confirm that the PORE 004 microphone was placed in an ideal location to record DBOC boats and equipment.

First, photographs taken by the FAA scientists (and provided to Dr. Goodman in response to a FOIA request) conclusively prove that there is a clear, unobstructed visual and sound path from the DBOC boats to the PORE 004 microphone.<sup>143</sup> The FAA scientists took sev-

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<sup>140</sup> See Director's Order #11B, pt. III.B.

<sup>141</sup> NPS installed covert cameras in Drakes Estero in positions ideally suited to monitoring DBOC's activities in an effort to demonstrate that DBOC operations adversely affected local harbor seals. See *infra* Section 7.1.9. Beginning May 5, 2007, over a period of more than three years, those cameras took about 281,000 time- and date-stamped photographs, none of which indicated that DBOC's mariculture-related activities adversely affected harbor seals. Because one of those cameras was placed near the sound-sensitive location where the PORE 004 microphone was placed, NPS's own photographs show that the PORE 004 microphone was placed in an area with a clear, unobstructed path to DBOC operations—sound transmission was not blocked by the bluffs. (NPS also prepared detailed logs regarding those photographs.) Curiously, NPS did not meaningfully discuss these photographs or otherwise rely on them in the DEIS, even in the section discussing alleged harms to harbor seals. NPS's proffered reason for not including those photographs was that there was no protocol for analyzing those photographs. See DEIS, *supra* note 5, at 295.

<sup>142</sup> See VOLPE REPORT, *supra* note 18, at Appx. A, p. 67, Figure 53.

<sup>143</sup> See Goodman Power Point, *supra* note 29, at pt. 4.

eral photographs pointing directly through the microphone and accompanying equipment, aimed at a DBOC boat in its normal location at the west end of the lateral channel. The same is true for the harbor seals at OB and the main channel. The FAA photographs show an unobstructed view and sound path.

Second, Google Earth elevation profiles (using the GPS coordinates of the FAA microphone PORE 004, as provided in the Volpe Report, coupled with GPS coordinates of the DBOC boats, as provided by DBOC) establish that the sound path from the DBOC boats to the PORE 004 microphone is unobstructed.<sup>144</sup>

In fact, the site where the PORE 004 microphone was placed was selected with the assistance NPS's then-Chief of Natural Resources, Bill Shook, *because it was a particularly sound-sensitive location ideally suited to recording DBOC boats and equipment.*<sup>145</sup> Mr. Shook worked with FAA staff, under the guidance of PRNS Superintendent Don Neubacher, to carefully pick the location of microphone PORE 004 along the east shore of Drakes Estero, close to the location of the NPS secret cameras. Mr. Shook picked the location because it was a sound-sensitive area that was near the DBOC oyster boats and the harbor seals. During the summer of audio recordings, NPS's secret cameras continued to take time- and date-stamped photographs. The visual and audio paths from NPS's cameras and PORE 004 microphone to DBOC's boats and the harbor seals were clear and unobstructed.

#### 7.1.4.2 The DEIS's Conclusory Dismissal of Highly Probative Soundscape Data is Not Based on the Best Available Science and Data Using the Best Available Method and Omits Critical Data from the DEIS.

Because the DEIS's conclusion that the PORE 004 microphone "may have recorded limited mariculture-related noises" is purely speculative, demonstrably false, not grounded in any accepted scientific methodology, and does not use or meaningfully acknowledge the existence of the best available data, it does not meet minimum information-quality standards for a third reason.<sup>146</sup> Indeed, the material, intentional omission of critical data—NPS's own photographic evidence confirming that the PORE 004 microphone was placed in a location well suited to recording DBOC boats and equipment<sup>147</sup>—is independently prohibited by Section 3.6(2) of DOI's Departmental Manual, as it is a form of "falsification" and thus constitutes "scientific misconduct."<sup>148</sup>

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<sup>144</sup> See Goodman Power Point, *supra* note 29, at pt. 4.

<sup>145</sup> Mr. Shook accompanied the FAA scientists on July 17, 2009, when they picked the location for the PORE 004 microphone. This is beyond dispute, as there are photographs of him with the FAA scientists while the microphone is being installed. See Goodman Power Point, *supra* note 29, at pt. 4.

<sup>146</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2. DOI Departmental Manual, 305 DM 3, § 3.7.A(1); see also Director's Order #11B, pt. III.A.

<sup>147</sup> The probative value of this evidence is discussed in detail in Section 7.1.9, *infra*.

<sup>148</sup> See DOI Departmental Manual, 305 DM 3, § 3.6.B(2).

7.1.5 Claims Regarding Measurements of Ambient Sound Level Using Nonstandard, Unprecedented Metrics in Tables 4-2, 4-3, and 4-4 and accompanying text. pp. 354-58.

Statement to be Corrected:

- Statements in Tables 4-2, 4-3, and 4-4 and accompanying text concerning the “median ambient sound level from the lowest daily ambient level measured” and “lowest daily median ambient sound levels measured” in Drakes Estero.<sup>149</sup>
  - **Source of data:** U.S. DEPT OF TRANSPORTATION, FEDERAL AVIATION ADMIN., JOHN A. VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER, BASELINE AMBIENT SOUND LEVELS IN POINT REYES NATIONAL SEASHORE (2011) (hereinafter “Volpe Report”).
  - **Conclusion:** According to the Volpe Report, the “median ambient sound level from the lowest daily ambient level measured” (or “lowest daily median ambient sound levels measured”) for Drakes Estero is 24 dBA.
  - **Recommended Correction:** All references to “median ambient sound level from the lowest daily ambient level measured” or “lowest daily median ambient sound level measured” for Drakes Estero and all calculations, statements, figures, and tables referring to, based on, or otherwise using that metric should be removed from the DEIS.

7.1.5.1 Claim that the Volpe Report Found that the “Median Ambient Sound Level from the Lowest Daily Ambient Level Measured” for Drakes Estero is 24 dBA is Not Accurate, as Required by Part III.B of Director’s Order #11B.

The DEIS’s reliance on the Volpe Report for its conclusion that the “median ambient sound level from the lowest daily ambient level measured,” or “lowest daily median ambient sound levels measured,” for Drakes Estero is 24 dBA is demonstrably false and thus not “accurate”; therefore, this conclusion does not meet NPS’s baseline information-quality standards and must be immediately corrected.<sup>150</sup>

The Volpe Report does not measure the ambient sound level of Drakes Estero using either of these nonstandard, unprecedented measurements. Neither the text nor the summary table of the Volpe Report refers to “lowest daily median ambient sound level,” as that study did not attempt or purport to measure “lowest daily median ambient sound level.”<sup>151</sup> Rather, the Volpe Report only measured the ambient sound level using standard, scientifically accepted  $L_{Aeq}$ ,  $L_{50}$ , and  $L_{90}$  metrics,<sup>152</sup> none of which can fairly be characterized as “lowest daily median ambient sound levels.” Likewise, the 24 dBA data point for Drakes Estero is not in the Volpe Re-

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<sup>149</sup> See DEIS, *supra* note 5, at 354-64.

<sup>150</sup> See Director’s Order #11B, pt. III.B.

<sup>151</sup> See VOLPE REPORT, *supra* note 18, at p. 20; ES-23, Table 2; p. 25, § 5.6 (Ambient Descriptors); p. 31, Table 8.

<sup>152</sup> See *id.* at ES-23, Table 2; p. 31, Table 8.

port.<sup>153</sup> In fact, the 24 dBA “lowest daily median ambient sound level” is substantially lower than even the L<sub>90</sub> (dBA) measurement<sup>154</sup> in the Volpe Report (25.7 dBA).<sup>155</sup>

When NPS used “median ambient sound level from the lowest daily ambient level measured” in Tables 4-2, 4-3, and 4-4, NPS implied that this measurement of ambient noise levels at Drakes Estero, like all of their discussion of ambient noise levels, came from the Volpe Report and PORE 004 microphone. However, it did not. The words “median ambient sound level from the lowest daily ambient level measured” are not found in the Volpe Report.<sup>156</sup> One can search all of the NPS EIS documents over the past decade, as well as all of the EIS and EA documents produced by VHB, and find this metric in none of them: NPS invented it.

NPS used the L<sub>50</sub> from the Volpe Report in the text of the DEIS<sup>157</sup> as well as for calculations of distance in Figure 4-1.<sup>158</sup> But in Tables 4-2, 4-3, and 4-4, NPS used “median ambient sound level from the lowest daily ambient level measured,”<sup>159</sup> a measurement found in no other document, including the Volpe Report.

For Drakes Estero, the L<sub>eq</sub> is about 41 dBA and the L<sub>50</sub> is about 34 dBA.<sup>160</sup> In the DEIS, NPS quotes the “median ambient sound level from the lowest daily ambient level measured” as 24 dBA.<sup>161</sup> The number “24” cannot be located in any table or graph or text in the Volpe Report.

For reference, according to NPS data provided in Table 3-2, the sound level in an empty concert hall (i.e., no people, no noise-generators) is 25 dBA.<sup>162</sup> The sound level of a quiet rural area in the nighttime is 25 dBA.<sup>163</sup> An empty theater or library is 40 dBA.<sup>164</sup> Quiet conversation

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<sup>153</sup> See *id.* The Volpe Report concluded that that “[t]he overall median daytime sound level during the summer season was 33.8 dBA” and “[t]he overall median daytime sound level during the winter season was 35.8 dBA (only 2 dBA louder than summer)...” *Id.* at Appx. A, p. 67.

<sup>154</sup> Part D.4 of Director’s Order #47 explains that this metric can be used to measure background sound levels when “it is not possible to measure the natural ambient sound level with certainty because of high levels of human-made sound.” This statistic “represents the sound level that is exceeded 90 percent of time.” *Id.* 24 dBA is softer than a whisper.

<sup>155</sup> See VOLPE REPORT, *supra* note 18, at p. 20; ES-23, Table 2; p. 25, § 5.6 (Ambient Descriptors); p. 31, Table 8.

<sup>156</sup> Rather, the Volpe Report used two standard measurements: the LA<sub>eq</sub> (where A represents a certain frequency range) and L<sub>50</sub>. See *id.* at ES-23, Table 2. These are the two standard measurements in the literature, the two standard measurements used in other EIS and EA reports, and the two standard measurements cited by Skip Ambrose and the other NPS soundscape scientists from the soundscape group at Fort Collins. Skip Ambrose & Shan Burson, *Soundscape Studies in National Parks*, THE GEORGE WRIGHT FORUM, V. 21, No. 1 (2004).

<sup>157</sup> See, e.g., DEIS, *supra* note 5, at 202.

<sup>158</sup> *Id.* at 356, Figure 4-1.

<sup>159</sup> See *id.* at 355, Table 4-2 (Estimated Motor Boat Sound Dissipation); *id.* at 358, Table 4-3 (Estimated Forklift and Oyster Tumbler Sound Dissipation); *id.*, Table 4-4 (Estimated Pneumatic Drill Sound Dissipation).

<sup>160</sup> See VOLPE REPORT, *supra* note 18, at ES-23, Table 2. For the “Summer Season,” the L<sub>eq</sub> is 40.3 dBA and the L<sub>50</sub> is 33.8 dBA; for the “Winter Season,” the L<sub>eq</sub> is 41.6 dBA and the L<sub>50</sub> is 35.8 dBA. See *id.* The DEIS purports to solely use ambient sound-level data from the Volpe Report.

<sup>161</sup> See DEIS, *supra* note 5, at 355, Table 4-2 (Estimated Motor Boat Sound Dissipation); *id.* at 358, Table 4-3 (Estimated Forklift and Oyster Tumbler Sound Dissipation); *id.*, Table 4-4 (Estimated Pneumatic Drill Sound Dissipation).

<sup>162</sup> *Id.* at 203, Table 3-2.

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

at 1 meter is 55 dBA.<sup>165</sup> Drakes Estero is a very exposed area, with high winds and waves and lots of sounds of birds, insects, and other wildlife, especially during the summer. To claim that 24 dBA represents the ambient sound level of Drakes Estero *during the summer* (inexplicably, the DEIS does not use data generated by PORE 004 during the winter months)<sup>166</sup>—using a number lower than an empty concert hall, according to the DEIS<sup>167</sup>—is absurd.

#### 7.1.5.2 Citing the Volpe Report for Sound Measurements Not Found in that Report and Claiming that the Volpe Report Used a Metric that It Had Not In Fact Used Is Not An Accepted Scientific Practice and Does Not Use Best Available Science and Methods.

It is not an accepted scientific practice to cite a report for data and analysis not found in that report.<sup>168</sup> The DEIS's claim that the Volpe Report used a nonstandard, unprecedented metric and concluded that the “lowest daily median ambient sound level” for Drakes Estero is 24 dBA when the Volpe Report neither uses that metric nor contains the 24 dBA figure constitutes “falsification” and “fabrication” and thus “scientific misconduct,” which is prohibited.<sup>169</sup> Further, use of a nonstandard metric for measuring sound that is not found in relevant literature<sup>170</sup> and other EISs is not a sound statistical research method and not based on the best available science.<sup>171</sup> Arbitrarily inventing a data point is not a sufficiently reliable method of collecting data.

EIS and EA reports generally would have used the  $L_{eq}$  of 41 dBA—consistent with scientific norms.<sup>172</sup> NPS could justify using the  $L_{50}$  of 34 dBA, so long as it was properly defined and the reason why this metric was chosen was adequately justified.<sup>173</sup> But use of the 24 dBA “median ambient sound level from the lowest daily ambient level measured” is inconsistent with NPS's information-quality obligations.

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<sup>165</sup> *Id.*

<sup>166</sup> Compare DEIS, *supra* note 5, at 202 (purporting to use PORE 004 measurements taken “over the course of 30 days in July/August of 2009”), with VOLPE REPORT, *supra* note 18, at 10 (PORE 004 recorded data for “30 days” in “Summer” and “29 days” in “Winter”).

<sup>167</sup> See DEIS, *supra* note 5, at 203, Table 3-2.

<sup>168</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2; DOI Departmental Manual, 305 DM 3, § 3.7.A(1); see also Director's Order #11B, pt. III.A (“Information will be developed only from reliable data sources based on accepted practices and policies utilizing accepted methods for information collection and verification.”).

<sup>169</sup> DOI Departmental Manual, 305 DM 3, § 3.6(2).

<sup>170</sup> A 2004 article, “Soundscape Studies in National Parks,” explains that, in addition to using A-weighted  $L_{eq}$  as a metric for measuring sound, the following supplemental metrics are also useful: “One-third octave band data; Exceedence percentiles ( $L_{50}$ ,  $L_{90}$ ,  $L_x$ ); Sound exposure level; Number of events/time; Time above an appropriate baseline or pre-selected level; Percent time audible; and Noise-free interval.” See Ambrose & Burson, *supra* note 156, at 34. Conspicuously absent from this laundry list of appropriate, scientifically accepted supplemental metrics is any mention of “lowest daily median ambient sound level.”

<sup>171</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2. DOI Departmental Manual, 305 DM 3, § 3.7.A(1); see also Director's Order #11B, pt. III.A.

<sup>172</sup> See Ambrose & Burson, *supra* note 156, at 34 (“Traditionally, acoustical studies and impact assessment in national parks have relied on a single metric,  $LA_{eq}$  (A-weighted  $L_{eq}$ ).

<sup>173</sup> Citing both the  $L_{eq}$  of 41 dBA and the  $L_{50}$  of 34 dBA in the DEIS certainly would satisfy NPS's information-quality obligations with respect to ambient noise level.

7.1.5.3 Citing the Volpe Report for Sound Measurements and Analysis Not Found in that Report and Claiming that the Volpe Report Used a Metric Not Used in that Report is Not Transparent.

The DEIS's use of 24 dBA "lowest daily median ambient sound level" in Tables 4-2, 4-3, and 4-4 is nontransparent, thereby violating NPS's information-quality guidelines for yet another reason. The DEIS fails to disclose where this measurement is found in the Volpe Report; further, it fails to disclose the method used, if any, to generate this data point. Thus, this information was not "made transparent, to the maximum extent practicable, through accurate documentation" and certainly was not "produced with a high degree of transparency about data and methods," as required by NPS's information-quality guidelines.<sup>174</sup>

7.1.6 Claims Regarding Sound-Dissipation Distances for Noise Allegedly Generated by DBOC Boats and Equipment in Tables 4-2, 4-3, and 4-4 and accompanying text.<sup>175</sup>

Statements to be Corrected:

- All sound-dissipation distances in Table 4-2 (Estimated Motorboat Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.

➤ Recommended Corrections:

- Statement that the "Sound Energy (dBA)" of DBOC oyster boats is 24 dBA at a distance of 7,062 feet from the motorboat should be deleted.
- Statement that DBOC's oyster boats generate 71 dBA of sound energy at 50 feet should be changed to reflect correct sound-level measurement of 58.2/60.1 dBA.
- Table 4-2 should be revised to state that DBOC's oyster boats generate a sound-energy level of 41 dBA (the actual  $L_{eq}$  ambient sound level measurement for Drakes Estero found in the Volpe Report) at 400 feet and therefore can only be heard from a distance of less than 400 feet.
- Distance at which DBOC's oyster boats generate "Sound Energy (dBA)" of 35 dBA should be changed from 2,658 feet to the correct distance of 790 feet, using data from the ENVIRON Report.
- Distance at which DBOC's oyster boats generate "Sound Energy (dBA)" of 44 dBA should be changed from 1,048 feet to the correct distance of 280 feet, using data from the ENVIRON Report.

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<sup>174</sup> See Director's Order #11B, pt. III.A.

<sup>175</sup> See DEIS, *supra* note 5, at 354-58.

- Distance at which DBOC's oyster boats generate "Sound Energy (dBA)" of 52 dBA should be changed from 435 feet to the correct distance of 110 feet, using data from the ENVIRON Report.
- All sound-dissipation distances in Table 4-3 (Estimated Forklift and Oyster Tumbler Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.

➤ **Recommended Corrections:**

- Statement that the "Sound Energy (dBA)" of DBOC's oyster tumbler is 24 dBA at a distance of 12,450 feet from DBOC's oyster tumbler should be deleted.
- Table 4-3 should be revised to state that DBOC's oyster tumbler generates a sound-energy level of 41 dBA (the actual  $L_{eq}$  ambient sound level measurement for Drakes Estero found in the Volpe Report) at 140 feet and therefore can only be heard from a distance of less than 140 feet.
- Statement that DBOC's oyster tumbler and small forklift generate 79 dBA of sound energy at 50 feet should be changed to reflect correct sound-level measurements of 50 dBA for DBOC's oyster tumbler.
- Distance at which DBOC's oyster tumbler generates "Sound Energy (dBA)" of 35 dBA should be changed from 5,529 feet to the correct distance of 270 feet, using data from the ENVIRON Report.
- Distance at which DBOC's oyster tumbler generates "Sound Energy (dBA)" of 44 dBA should be changed from 2,408 feet to the correct distance of 100 feet, using data from the ENVIRON Report.
- Distance at which DBOC's oyster tumbler generates "Sound Energy (dBA)" of 52 dBA should be changed from 1,048 feet to the correct distance of 40 feet, using data from the ENVIRON Report.
- All sound-dissipation distances in Table 4-4 (Estimated Pneumatic Drill Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.

➤ **Recommended Corrections:**

- Statement that the "Sound Energy (dBA)" of DBOC's handheld oyster drill is 24 dBA at a distance of 17,650 feet from DBOC's handheld oyster drill should be deleted.
- Table 4-3 should be revised to state that DBOC's handheld oyster drill generates a sound-energy level of 41 dBA (the actual  $L_{eq}$  ambient sound level measurement for

Drakes Estero found in the Volpe Report) at 1,480 feet (.28 miles) and therefore can only be heard from a distance of less than 1,480 feet.

- Statement that DBOC's handheld oyster drill generates 85 dBA of sound energy at 50 feet should be changed to reflect correct sound-level measurements of 70 dBA for DBOC's handheld oyster drill.
- Distance at which DBOC's handheld oyster drill generates "Sound Energy (dBA)" of 35 dBA should be changed from 8,862 feet to the correct distance of 2,940 feet, using data from the ENVIRON Report.
- Distance at which DBOC's oyster tumbler generates "Sound Energy (dBA)" of 44 dBA should be changed from 4,256 feet to the correct distance of 1,040 feet, using data from the ENVIRON Report.
- Distance at which DBOC's oyster tumbler generates "Sound Energy (dBA)" of 52 dBA should be changed from 1,969 feet to the correct distance of 420 feet, using data from the ENVIRON Report.

7.1.6.1 Because the Sound-Dissipation Distances in Tables 4-2, 4-3, and 4-4 and Statements Concerning those Distances were Generated Using Artificially Low Ambient Sound Level Data Without Scientific Basis and Substantially Exaggerated, Demonstrably False "Representative" Sound Levels for DBOC Oyster Skiffs and Equipment, Those Sound-Dissipation Distances Do Not Meet Minimum Information-Quality Standards for Accuracy.

The sound-dissipation distances in Tables 4-2, 4-3, and 4-4 and statements about those distances violate accuracy-related information-quality guidelines.<sup>176</sup>

In Tables 4-2, 4-3, and 4-4, using the noise generator numbers from the loud, fast boats off the New Jersey shore and from the loud highway construction equipment to exaggerate the DBOC boats and equipment, and calculating the distance required for the sounds to dissipate using the equally exaggerated (in the other direction) lowest daily ambient level, NPS derived highly exaggerated sound-dissipation distances—*at times, by between one and two orders of magnitude*. For example, the DEIS claims that it would take 7,062 feet for the sound of the oyster boat to dissipate, but the Environ measurement of 58 dBA, when combined with the  $L_{eq}$  of 41 dBA, suggests (correctly) that the sound will dissipate in about 400 feet. Indeed, the most flagrant exaggeration in the DEIS concerns the oyster tumbler. According to the DEIS, DBOC's 1/4 HP, 12 volt oyster tumbler generated 79 dBA at 50 feet.<sup>177</sup> The DEIS claimed that the oyster tumbler can be

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<sup>176</sup> See Director's Order #11B, pt. III.B ("All information will be accurate, timely, and reflect the most current information available.")

<sup>177</sup> As discussed in Section 7.1.2, the 79 dBA figure was imported from a dated FHWA study measuring sound levels generated by heavy highway construction equipment; the 79 dBA data point NPS imported from that study is the sound-level measurement for a "Concrete Mixer Truck," a "Drill Rig Truck," "Rivit Buster/chipping gun," and a "Front End Loader" at 50 feet, which is louder than the 76 dBA generated by a "Dump Truck" and the 78 dBA generated by a "Slurry Plant." See FHWA STUDY, *supra* note 14, at 3, Table 1. Clearly, oyster tumblers are not used in highway construction. The oyster tumbler has a 1/4 HP, 12 volt electric engine. Claiming that it generates sound levels



heard for 2.4 miles, or 12,450 feet. The ENVIRON numbers suggest it can be heard for 140 feet. That is an exaggeration of 89 fold, or nearly two orders of magnitude.

The exaggerated sound-dissipation distances for DBOC's oyster boats and equipment can be conclusively refuted for a second reason. As discussed in detail in Section 6.1.2.1, Dr. Goodman's analysis of the 2009 PORE 004 microphone recordings establishes that those sound-dissipation distances are dramatically overstated. If the sound-dissipation data in Tables 4-3 and 4-4 was accurate, the PORE 004 would have recorded DBOC equipment. It did not. And if the sound-dissipation data in Table 4-2 was accurate, the PORE 004 microphone would have recorded DBOC's oyster boats at distances greater than 400 feet. It did not. Because the PORE 004 microphone did not record DBOC boats and equipment at distances at which it would have recorded them if the sound-dissipation distances in Tables 4-2, 4-3, and 4-4 were accurate, we know that the data in those tables is inaccurate.

For reasons that remain unclear, Tables 4-2, 4-3, and 4-4 in the DEIS actually made calculation errors in incorrectly decreasing sound by 6 dBA with every doubling of distance—the DEIS's own stated rule for calculating sound-dissipation distances.<sup>178</sup> For example, consider the 1/4 HP, 12 volt electric oyster tumbler. If one uses the DEIS's misrepresentation of 79 dBA for the oyster tumbler *and* false representation of 24 dBA for the ambient sound level, then the real distance for sound to dissipate to the ambient noise level (the distance at which it can no longer be heard) for the oyster tumbler would be 28,120 feet, or 5.3 miles. Compared to 140 feet, that is an over-estimate of 201 fold, or well over two orders of magnitude.

Curiously, the June 2011 nonpublic administrative version of the DEIS contained tables that included sound-dissipation distances that would be accurate if the DEIS's "representative" sound levels for DBOC boats and equipment and ambient sound level measurements were correct. Consider the oyster tumbler. If it did generate 79 dBA at 50 feet, then at 100 feet, it would generate 73 dBA; at 200 feet, 67 dBA; at 400 feet, 61 dBA; at 800 feet, 55 dBA; at 1,600 feet, 49 dBA; at 3,200 feet, 43 dBA; at 6,400 feet, 37 dBA; at 12,800 feet, 31 dBA; and at 25,600 feet, 25 dBA. Those are just the sorts of tables that are found in the June nonpublic version of the DEIS. But in the September public version of the DEIS, NPS miscalculates and lists 24 dBA at 12,450 feet, when, in fact, 24 dBA is not reached until 28,120 feet if NPS had followed its own rule. In other words, had the DEIS made the right calculations using its own stated rule, the distances would have been even more absurd, with the oyster boat being heard (according to the NPS numbers) for 2.1 miles, the oyster tumbler for 5.3 miles, and the handheld drill for 10.6 miles.

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equivalent to those generated by several-hundred-horsepower "Concrete Mixer Trucks" and the like is a gross misrepresentation.

<sup>178</sup> According to the DEIS, there "an approximate 6 dBA reduction for every doubling of distance." DEIS, *supra* note 5, at 204. The grossly exaggerated sound-dissipation distances in Tables 4-2, 4-3, and 4-4 were not even calculated using the DEIS's own stated rule for determining sound dissipation distances. Even assuming that the ambient sound levels and "representative" sound levels for DBOC boats and equipment the DEIS uses to calculate sound-dissipation distances were accurate, the sound-dissipation distances in Tables 4-2, 4-3, and 4-4 are still inaccurate.

#### 7.1.6.2 Sound-Dissipation Data in Tables 4-2, 4-3, and 4-4 and Statements About that Data in Chapter 4 are Not Transparent, in Violation of Applicable Information-Quality Standards.

Because the data points in Tables 4-2, 4-3, and 4-4 were calculated using nontransparent measurements of noise generated by DBOC boats and equipment and the ambient sound level, in violation of applicable transparency-related guidelines *and* without even using NPS's stated method for calculating sound-dissipation distances, data in those tables also violates applicable transparency-based information-quality guidelines.<sup>179</sup> As the National Marine Fisheries Service (NMFS) indicated in its comments on the DEIS, NPS's methodology for calculating sound-dissipation distances is unclear: "NPS should provide additional information describing how the noise generated and the propagation from the sound source was estimated or modeled."<sup>180</sup>

#### 7.1.6.3 Sound-Dissipation Data in Chapter 4 of the DEIS is Not Reproducible.

As explained above, these figures are not reproducible by qualified third parties, such as ENVIRON and Dr. Goodman. Therefore, they violate applicable reproducibility-related information-quality guidelines.

#### 7.1.6.4 Sound-Dissipation Data in Chapter 4 of the DEIS is Not Based on the Best Available Science and Data Using the Best Available Methods.

The sound-dissipation distances in Tables 4-2, 4-3, and 4-4 do not constitute the best available science using the best available data and methods—and thus do not meet minimum information-quality standards—for three reasons: (1) they were not calculated using actual measurements of sound generated by DBOC boats and equipment; (2) they were calculated using a nonstandard, artificially low ambient sound level metric and an invented "24 dBA" figure for that metric; and (3) data in these tables was not even calculated using NPS's own stated rule for determining sound-dissipation distances.

### 7.1.7 Claim that Granting DBOC a 10-Year SUP Will Cause "Long-Term Major Adverse Impacts on Wilderness."

#### Statements to be Corrected:

- All statements in the DEIS, including those in Chapters 3 and 4 and Table 2-6, referring to, relying on, based on, or otherwise using the following "Intensity Definitions" for impacts on "wilderness" allegedly caused by DBOC:

**Minor:** Impacts on qualities of wilderness character would occur, but would be small and, if noticeable, would be highly localized.

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<sup>179</sup> See Director's Order #11B, pt. III.A.

<sup>180</sup> National Marine Fisheries Service Comments on the Draft Environmental Impact Statement for Drakes Bay Oyster Company Special Use Permit, 17 (Nov. 17, 2011). With respect to the sound-dissipation calculations concerning DBOC's 20 and 40 HP oyster boats and the DEIS's claim that "[o]n a calm day, it may take over 3,200 feet (0.6 miles) for this sound to dissipate to natural sound levels," the National Marine Fisheries Service stated simply: "NPS should explain how this distance was calculated." *Id.* at 18.

**Moderate:** Impacts on qualities of wilderness character would occur and would be measurable and readily apparent, but somewhat localized.

**Major:** Impacts on qualities of wilderness character would occur and would be measurable, readily apparent, and widespread.<sup>181</sup>

- **Recommended Correction:** The foregoing “Intensity Definitions” and all statements referring to, relying on, based on, or otherwise using those definitions should be deleted.
- All statements in the DEIS, including those in Chapters 3 and 4 and Table 2-6, referring to, relying on, based on, or otherwise using the following “four qualities” for evaluating the extent to which DBOC operations affect “wilderness values”:
  - Untrammelled**—Wilderness is essentially unhindered and free from modern human control or manipulation.
  - Natural**—Wilderness ecological systems are substantially free from the effects of modern civilization.
  - Undeveloped**—Wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern human occupation.
  - Solitude or a primitive and unconfined type of recreation**—Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.<sup>182</sup>
- **Recommended Correction:** The foregoing “qualities” of “wilderness values” and all statements referring to, relying on, based on, or otherwise using those qualities of wilderness values should be deleted.
- Statements that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a “long-term major adverse impacts on wilderness.”<sup>183</sup>
  - **Recommended Correction:** These statements should be revised to state that “granting DBOC a 10-year SUP will have no impact on wilderness” or deleted.
- Statements in Table 2-6 and accompanying text in Chapter 2 of the DEIS claiming that DBOC’s oyster skiffs and equipment cause a “major” long-term adverse impact on wilderness, as well as all similar statements in Chapter 4 of the DEIS.
  - **Recommended Correction:** Revise Final EIS to state “no impact.”

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<sup>181</sup> DEIS, *supra* note 5, at 366.

<sup>182</sup> *Id.*

<sup>183</sup> *See, e.g., id.* at 374.

### 7.1.7.1 These Statements are Not Based on Sound and Objective Scientific Practices and the Best Available Science.

The DEIS's "Impact Intensity" definitions and "qualities" for evaluating "wilderness values" are not based on science—let alone the best available science—and are inconsistent with sound, objective, and accepted scientific practices and thus do not meet minimum information-quality standards.<sup>184</sup> The extent to which DBOC's operations impact the wilderness of Drakes Estero is a scientific question and, therefore, must be evaluated using objective, quantifiable standards and criteria that are consistent with the scientific method. On their face, the foregoing "Impact Intensity" definitions and "qualities" for evaluating "wilderness values" call for standardless, value-laden, highly subjective normative and policy-based judgments. Thus, factual statements in the DEIS that refer to, are based on, rely on, or otherwise use those definitions and qualities, e.g., those to the effect that granting DBOC a 10-year SUP will have "long-term major adverse impacts on wilderness," are grounded in nothing more than the arbitrary and capricious subjective judgments of the DEIS's drafters regarding the relative value of wilderness.

In fact, federal courts, which generally defer to agencies' scientific judgments based on perceived agency expertise, have repeatedly concluded that "unbounded terms" may not be used to measure impacts and set thresholds.<sup>185</sup> More specifically, federal courts have explained that using the following sorts of unbounded, purely subjective qualifying language in definitions and standards used to measure impacts is arbitrary and capricious, as such language is devoid of objective, quantifiable meaning: "frequently throughout the day,"<sup>186</sup> "moderate levels,"<sup>187</sup> "infrequently at higher levels,"<sup>188</sup> "occasionally,"<sup>189</sup> "much faster,"<sup>190</sup> "readily detectable, long-term, and localized,"<sup>191</sup> "substantial consequences on a regional scale for long periods of time,"<sup>192</sup> "severely adverse."<sup>193</sup> As one federal court *again* reminded NPS in 2010 in the course of concluding that its NEPA-based environmental-impact analysis was inadequate, arbitrary and capricious, and unlawful: "An unbounded term cannot suffice to support an agency's decision because it provides no objective standard for determining what kind of differential makes one impact more or less

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<sup>184</sup> See DOI Guidelines, pt. II.4(a) ("information" must be based on "the best available science and supporting studies conducted in accordance with sound and *objective scientific practices*" (emphasis added)); Management Policies 2006, § 2.1.2; DOI Departmental Manual, 305 DM 3, § 3.7.A(1); Director's Order #11B, pt. III.A. The extent to which DBOC's operations impact the wilderness of Drakes Estero is a scientific question and, therefore, must be evaluated using objective, quantifiable standards and criteria that are consistent with the scientific method.

<sup>185</sup> See, e.g., *Tripoli Rocketry Ass'n v. BATFE*, 437 F.3d 75, 81 (D.C. Cir. 2006) ("AFTE's unbounded relational definition ... does not suffice, because it says nothing about what kind of differential makes one burn velocity 'much faster' than another. Ten millimeters per second? A hundred? A thousand?"); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 33, 39-43 (D.D.C. 2010) ("impairment thresholds are not connected to any objective standards that have been announced or evaluated" was arbitrary and capricious and violated NEPA); *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 108 (D.D.C. 2006) (concluding that NPS's environmental-impact analysis under NEPA was arbitrary and capricious "in particular, [because] of its methodology of describing impacts using conclusory labels and then setting forth a bare conclusion without explanation as to the significance of an impact").

<sup>186</sup> *Bluewater Network*, 721 F. Supp. 2d at 33.

<sup>187</sup> *Id.*

<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

<sup>190</sup> *Tripoli Rocketry Ass'n, Inc.*, 437 F.3d at 81.

<sup>191</sup> *Sierra Club v. Mainella*, 459 F. Supp. 2d at 101.

<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

significant than another.”<sup>194</sup> If use of objectively standardless definitions is arbitrary and capricious, scientific environmental analysis utilizing these sorts of terms cannot be based on the best available science and sound and objective scientific practices and thus violates minimum information-quality standards.

The DEIS’s “Impact Definitions” use unbounded, intentionally vague, subjective terms that are precisely the same as or indistinguishable from those that federal courts have found to be arbitrary and capricious: “impacts ... would occur,” “measurable,” “readily apparent,” “widespread,” “small,” “noticeable,” “highly localized,” “somewhat localized.”<sup>195</sup> The unbounded terms in the DEIS’s “qualities” for evaluating “wilderness values” suffer from the same fatal defect: “essentially unhindered,” “substantially free from the effects of modern civilizations,” “retains its primeval character and influence,” “provides outstanding opportunities for solitude or primitive and unconfined recreation.”<sup>196</sup> Because there is no principled, objective, scientific basis for distinguishing between whether an alleged impact is “measurable” or “readily apparent” or “widespread” or “small” or “noticeable,” allowing drafters of the DEIS to reach any conclusion they wanted based on policy preferences and subjective beliefs,<sup>197</sup> fact-based assertions and analysis using such unbounded terms cannot be consistent with minimum information-quality standards, let alone scientific norms.

#### 7.1.7.2 These Statements are Not Accurate.

Moreover, these statements do not even accurately reflect the views of park visitors regarding DBOC’s impact on Drakes Estero’s “wilderness,” as required by NPS’s own information-quality guidelines.<sup>198</sup> Three kayak companies that “operate at least 85% of the public kayaking tours on Drakes Estero” submitted a joint statement in which they noted that the DEIS “misrepresent[ed] the wilderness experience” in Drakes Estero by claiming that DBOC operations detracted from the wilderness qualities there.<sup>199</sup> As the owners of Drakes Estero’s three major kayak companies explained, “the ‘soundscape’ of the wilderness area has not been impacted by the noise of the farm”: “Oyster boats are rarely seen in action and if we do encounter boats, they are always very respectful of our presence, making sure not to disturb us or wildlife in any way.”<sup>200</sup> Kayakers at Drakes Estero apparently do not share the DEIS’s view that DBOC has a “major” ad-

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<sup>194</sup> *Bluewater Network*, 721 F. Supp. 2d at 33. This is the *second* federal court to do so in less than five years. See *Sierra Club v. Mainella*, 459 F. Supp. 2d at 101-02 (criticizing NPS’s “indeterminate and conclusory nature of labels” NPS used to discuss environmental impacts).

<sup>195</sup> DEIS, *supra* note 5, at 366.

<sup>196</sup> *Id.*

<sup>197</sup> The conclusory labels contained in the DEIS’s “Impact Definitions” and “qualities” for assessing “wilderness values” gave the drafters of the DEIS unfettered discretion to make opinion-based claims regarding DBOC’s alleged impact on the “wilderness qualities” of Drakes Estero.

<sup>198</sup> See Director’s Order #11B, pt. III.B.

<sup>199</sup> Laurie Manarik, Point Reyes Outdoors, Comment Letter, Correspondence ID 51103, Project 33043, Document 43390 (Dec. 8, 2011) (joint comment letter on DEIS submitted by Drakes Estero’s three largest kayak companies: Point Reyes Outdoors, Sea Trek Kayaking, and Blue Waters Kayaking) (Exhibit 23).

<sup>200</sup> *Id.* Tressa Bronner, Point Reyes Outdoors described her experiences with DBOC oyster boats as follows: “I have been guiding on the estero for four years and only once have I encountered a motor boat. And it was on purpose. Kevin Lunny was meeting our group at the oyster beds to discuss the history of aquaculture, and his oyster farming techniques.” *Id.*

verse impact on wilderness.<sup>201</sup> In short, rather than detract from Drakes Estero’s wilderness qualities, DBOC enhances it—as historical and cultural landmark and an important safety resource for Drakes Estero’s visitors.<sup>202</sup>

### 7.1.8 Claim that DBOC Boats and Equipment Cause “Major Adverse Impact on Soundscapes” in Chapter 4 and Related Claims in Chapter 2 and Table 2-6.

#### Statements to be Corrected:

- Statement that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a “long-term major adverse impacts on soundscapes.”<sup>203</sup>
  - **Recommended Correction:** Revise Final EIS to state “no impact” and include Dr. Clark’s e-mail correspondence with Dr. Goodman explaining that DBOC’s noise-generating activities do not biologically affect Drakes Estero’s wildlife.<sup>204</sup>
- Statements in Table 2-6 and accompanying text in Chapter 2 of the DEIS claiming that DBOC’s oyster skiffs and equipment cause a “major” adverse impact on soundscapes.
  - **Recommended Correction:** Revise Final EIS to state “no impact.”
- All other statements in the DEIS to the effect that DBOC has a “long-term major adverse impact” on Drakes Estero’s soundscape.
  - **Recommended Correction:** Revise Final EIS to state “no impact.”

#### 7.1.8.1 These Statements Do Not Meet Applicable Information-Quality Standards Related to Accuracy.

As explained above, these claims are solely supported by and based on data and analysis that falls below minimum applicable information-quality guidelines and thus, in turn, necessarily violate applicable information-quality guidelines related to accuracy. DBOC boats and equipment simply do not generate noise at a level to satisfy the DEIS’s own definition of “major” impact, as discussed above. The DEIS defines a “major” impact on soundscape as follows: “Human-caused noise would be at a level that causes vocal communications to be difficult between peo-

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<sup>201</sup> See *id.* (“We have never heard any complaints from our clients about the noise or distraction of motorboats.” Bob Licht/Owner - Sea Trek Kayak and Paddleboard Center).

<sup>202</sup> See *id.* Laurie Manarik, Point Reyes Outdoors – Point Reyes Station put it thus: “Having the DBOC operation means there is an emergency phone and boats within the estero and accessible to us which provides a welcome level of comfort, knowing help is available in an area that is hard for rescue operations to get to quickly. While this is not a component of wilderness, their generous assistance did help us get a client who was having trouble breathing back to shore quickly and without incident.” *Id.*

<sup>203</sup> DEIS, *supra* note 5, at 360.

<sup>204</sup> See Exhibit 20, pt. 2, Appendix #2, pp. 20-25.

ple separated by less than 16 feet, and the natural soundscape is interfered with more than 10 percent of the time.”<sup>205</sup>

Any person or animal that is 400 feet or more from the DBOC boat will not be impacted according to the “major” impact definition. This is because the DBOC oyster boat generates 40 dBA at 400 feet, and the ambient sound level for Drakes Estero is about 40 dBA  $L_{eq}$ ; thus, at 400 feet the DBOC oyster boat cannot be heard above the natural sound level. No hiking trails or harbor seal hauling areas—indeed, very little of Drakes Estero—falls within this zone.<sup>206</sup> Moreover, the DBOC boats are out for less than 1 hour per day, 6 days per week, or 3% of the time.

The DBOC boats at 800 feet do not create a minor impact given these definitions.<sup>207</sup> The DBOC boat is down to 34 dBA by 800 feet, a distance that does not reach the harbor seals or hiking trails.

The data suggest that the DBOC boats are not having an impact on the harbor seals. The DBOC boats stay over 600 yards (1,800 feet), and often around 750 yards (2,250 feet), from the harbor seals hauled out at sandbar OB, and a sandbar obstructs both the visual and sound path from the boats and workers to the seals. Thus, even using the Volpe  $L_{50}$  ambient noise level, the DBOC boats can only be heard for 800 feet, which is far removed from the harbor seals.

Similarly, the DBOC oyster tumbler sound dissipates in 140 feet and cannot even be heard in the parking lot at the DBOC onshore facility. The onshore equipment certainly does not impact any potential wilderness area or experience.

The noise generated by DBOC boats has, at most, a de minimis impact on birds and bird habitat. The boats’ general path is in the deeper water of the west channel, away from birds and bird habitats, but even in the main channel, the boats only impact birds within 400 feet, and for around 3% of the time.<sup>208</sup>

Thus, as explained above, the scientific data conclusively proves that harbor seals, birds, and other wildlife and human visitors to Drakes Estero cannot detect sound generated by DBOC boats and equipment at a level consistent with the definitions of “major,” “moderate,” or “minor” soundscape impact in the DEIS. Because this claim is demonstrably false, as outlined above, it does not meet minimum applicable information-quality standards.

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<sup>205</sup> DEIS, *supra* note 5, at 351.

<sup>206</sup> In fact, *three* of the local kayak companies filed a joint letter in support of DBOC that explicitly states that *none of their clients have ever complained about the DBOC boats*—for any reason, including the alleged “major” impact on soundscape caused by those boats. See Exhibit 23.

<sup>207</sup> It is questionable whether the “minor” impact definition applies to Drakes Estero because the normal ambient sound level of wind, waves, and wildlife is 41 dBA ( $L_{eq}$ ), and at 32 feet, a normal conversation would be disturbed by around 35 dBA of noise.

<sup>208</sup> The NPS time- and date-stamped photos show DBOC boats going along the main channel. Some of the shore birds right along the edge of the water fly away, but within minutes, the birds are back to their normal foraging behavior. There is no evidence that the DBOC boats or equipment are having any effect on the overall structure of any natural community.

7.1.9 Claim that Over 280,000-Plus Photographs of Drakes Estero Taken By Covertly-Installed NPS Cameras Over A Three-Year Period Are Not Probative Evidence of DBOC's Impact on Harbor Seals and Other Wildlife in Drakes Estero.

Statement to be Corrected:

- “Between spring 2007 and 2010 more than 280,000 digital photographs were taken from remotely deployed cameras overlooking harbor seal haul-out areas in Drakes Estero.... Because the collection of these photos was not based on documented protocols and procedures, the body of photographs does not meet the Department’s [i.e., DOI’s] standards for a scientific product. As a result, the photographs have not been relied upon in this EIS.”<sup>209</sup>
- **Recommended Correction:** This statement should be corrected to make clear that analysis of the digital photographs conclusively demonstrates that DBOC operations have no adverse impacts on wildlife in Drakes Estero, including but not limited to the harbor seals.

7.1.9.1 This Statement Does Not Meet Applicable Information-Quality Standards Related to Accuracy and Objectivity.

This statement is not true and thus not accurate, as required by NPS’s information-quality guidelines.<sup>210</sup> These photographs do, in fact, constitute “research,” “data,” and part of the “research record” under applicable definitions *and* NPS has selectively used and relied on these photographs in other “scientific products” it has disseminated.

By way of background, in 2007, NPS covertly installed remotely deployed cameras in Drakes Estero for the specific purpose of monitoring harbor seals in Drakes Estero; in fact, those cameras were strategically placed in locations ideally suited to record DBOC’s interactions with Drakes Estero’s population of harbor seals and document any disturbances of harbor seals caused by DBOC.<sup>211</sup> Those cameras recorded more than 280,000 photographs taken at one-minute intervals over a three-year period and captured images documenting DBOC’s interactions with Drakes Estero’s harbor seal population.<sup>212</sup> The high-resolution photographs were taken with a sophisticated, high-performance Reconyx silent-image camera<sup>213</sup> and are publicly available on NPS’s website.<sup>214</sup> During the three-year period when the covert Reconyx game cameras were operational, those cameras captured numerous photographs of harbor seals and DBOC boats, *all of which support the conclusion that DBOC’s mariculture activities do not adversely impact the harbor*

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<sup>209</sup> DEIS, *supra* note 5, at 295.

<sup>210</sup> See Director’s Order #11B, pt. III.B (requiring NPS to only disseminate “accurate” information).

<sup>211</sup> See FROST REPORT, *supra* note 20, at 3-4, 35; see also National Park Service, Drakes Estero Camera Angles, available at <http://www.nps.gov/pore/parkmgmt/loader.cfm?csModule=security/getfile&PageID=398425> (last visited July 17, 2012) (NPS map documented camera locations and angles) (Exhibit 24). The Frost Report addressed improprieties related to these covertly obtained photographs.

<sup>212</sup> See DEIS, *supra* note 5, at 245.

<sup>213</sup> See FROST REPORT, *supra* note 20, at 4.

<sup>214</sup> [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_photographs\\_videos.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_photographs_videos.htm) (last visited July 17, 2012). See *supra* note 20.



seals in any way.<sup>215</sup> Thus, as explained below, those photographs are highly probative with respect to the question whether DBOC adversely impacts harbor seals, as claimed in the DEIS.<sup>216</sup>

As a March 22, 2011, “Public Report on Allegations of Scientific Misconduct at Point Reyes National Seashore, California” (hereinafter “Frost Report”) by DOI’s Office of the Solicitor addressing improprieties related to NPS’s covertly obtained photographs of Drakes Estero specifically concluded, as a matter of *common-sense, facts, and logic*, these photographs constitute research and data that should have been part of the research record.<sup>217</sup> In fact, those photographs constitute scientific “research” under NPS’s own definition of that term.<sup>218</sup> Further, the Frost Report explicitly rejected NPS’s claim “that lack of scientific methodology, strict protocols, and scholarly analysis removes the cameras and related materials from the scope of research and data”<sup>219</sup>—in March 2011, more than five months before the DEIS was made publicly available, allowing NPS more than ample time to incorporate data and analysis based on those photos into the DEIS.

Moreover, NPS has analyzed and relied on those photographs to support its scientific analysis and claims in other agency publications. As the Frost Report explained, *NPS has selectively used the covert photographs as a scientific product in other contexts:*

The rebuttal document [generated by NPS to respond to allegations of scientific misconduct related to the covert photographs], *developed in February 2009*, represents the first time that the NPS scientists had reviewed ... the photographs and referenced them in writing. Oddly, the NPS scientists ... cited the data outside the context of assessing the health of harbor seal populations.... *NPS scientists, ... having repeatedly declined to use the research in a manner consistent with [NPS personnel’s] original goal (i.e., installation of cameras to gather the information about harbor seal populations, disturbances, and displacement), now eagerly and actively used the scientific material to challenge the informant’s claim that tidal activity [conclusively refuted allegations of harbor seal disturbances on April 29, 2007].*<sup>220</sup>

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<sup>215</sup> See FROST REPORT, *supra* note 20; National Marine Fisheries Service Comments on the Draft Environmental Impact Statement for Drakes Bay Oyster Company Special Use Permit (Nov. 17, 2011).

<sup>216</sup> See *infra* notes 217-220 and accompanying text.

<sup>217</sup> See FROST REPORT, *supra* note 20, at 28.

<sup>218</sup> See National Park Service, Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines, pt. VIII (Jan. 31, 2008) (defining “research” as, *inter alia*, “[i]nvestigation aimed at the discovery and interpretation of facts”). The Frost Report specifically concluded that these NPS photographs constituted “research” and “data” and cited the foregoing definition of “research” in support of that conclusion. See FROST REPORT, *supra* note 20, at 27. More recently, the Marine Mammal Commission specifically defined those photographs as “data.” See MARINE MAMMAL COMMISSION (MMC), MARICULTURE AND HARBOR SEALS IN DRAKES ESTERO, CALIFORNIA, 5-6 (Nov. 22, 2011) (characterizing NPS photographs as a “source[] of data pertaining to potential harbor seal disturbance”)(Exhibit 25). Curiously, the DEIS states the Final EIS will use the foregoing MMC report on the exact same page that it dismisses the scientific value of the 281,000-plus NPS photographs. See DEIS, *supra* note 5, at 181.

<sup>219</sup> FROST REPORT, *supra* note 20, at 28.

<sup>220</sup> *Id.* at 17 (emphasis added).

NPS's selective use of these photographs in other "scientific products" suggests a lack of objectivity, which independently violates NPS's information-quality guidelines.<sup>221</sup> And NPS's own actions and own definition of "research," as well as an independent DOI investigation of improprieties related to these photographs, belie the DEIS's suggestion that these photographs are not highly probative evidence of DBOC's impact on Drakes Estero's wildlife.

Indeed, because of NPS's omission of this data from the DEIS, the extent and nature of NPS's research regarding DBOC's impact on harbor seals and other wildlife is not accurately represented in the DEIS's research record. Consequently, this glaring omission may rise to the level of "fabrication," a form of "scientific misconduct."<sup>222</sup>

#### 7.1.10 Claims that Granting DBOC a 10-Year SUP Will Cause "Long-Term Moderate Adverse Impacts" on Harbor Seals, Birds and Bird Habitat, and Visitor Experience.

##### Statements to be Corrected:

- All statements in Chapters 2, 3, and 4 of the DEIS and Table 2-6 referring to, using, based on, or otherwise relying on the following definition of "moderate" impact on harbor seals and birds and bird habitat: "Impacts would be clearly detectable and could appreciably affect individuals or groups of species, communities, or natural processes."<sup>223</sup>
  - **Recommended Correction:** All such statements should be deleted.
- All statements in Chapters 2, 3, and 4 of the DEIS and Table 2-6 referring to, using, based on, or otherwise relying on the following definition of "moderate" impact on visitor experience and recreation: "The impacts would be readily apparent in primary resource areas and would affect many visitors. The impacts would somewhat inhibit visitor enjoyment of resources for which the Seashore was established."<sup>224</sup>
  - **Recommended Correction:** All such statements should be deleted.
- Statement that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a "long-term moderate adverse impacts on harbor seals."<sup>225</sup>
  - **Recommended Correction:** This statement should be revised to state "no impact."
- Statement that Alternative B "would result in long-term moderate adverse impacts on birds and bird habitat...."<sup>226</sup>

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<sup>221</sup> See Director's Order #11B, pts. III, VI.C.

<sup>222</sup> See DOI Departmental Manual, 305 DM 3, § 3.5.F ("omitting data or results such that the research is not accurately represented in the research record" constitutes "falsification").

<sup>223</sup> DEIS, *supra* note 5, at 295, 304.

<sup>224</sup> *Id.* at 380.

<sup>225</sup> *Id.* at 298.

- **Recommended Correction:** This statement should be revised to state “no impact.”
- Statement that Alternative B “would result in a long-term, moderate adverse, impact on visitor experience and recreation...”<sup>227</sup>
  - **Recommended Correction:** This statement should be revised to state “no impact.”
- Statements in Table 2-6 and accompanying text in Chapter 2 of the DEIS claiming that DBOC’s oyster skiffs and equipment cause a “moderate” long-term adverse impact on harbor seals, birds, and visitor experience.
  - **Recommended Correction:** These statements should be revised to state “no impact.”

7.1.10.1 Because DEIS’s Claims Regarding DBOC’s Alleged Impact on Wildlife and Visitor Experience Are Based on Subjective, Standardless “Intensity Definitions,” Those Claims Are Not Based on the Best Available Science and Sound, Objective, and Accepted Scientific Practices.

The same fatal defects with the DEIS’s “Intensity Definitions” for evaluating environmental impacts to Drakes Estero’s wilderness inhere to the DEIS’s “Impact Definitions,” apparently intended as standards to evaluate DBOC’s impact on harbor seals, birds and bird habitat, and visitor experience and recreation.

The use of unbounded, standardless criteria that invites arbitrary and capricious, opinion-based, subjective, value-laden normative and policy judgments to measure environmental impacts is inconsistent with NPS’s obligation to use the best available science and sound and objective scientific practices.<sup>228</sup> Here, the “Intensity Definitions” used to allegedly measure DBOC’s impact on harbor seals, birds and bird habitat, and visitor experience and recreation unquestionably use the precise sort of unbounded criteria that federal courts have repeatedly deemed to be arbitrary and capricious, which, by definition, is not scientific: “clearly detectable,” “appreciably affect,” “readily apparent in primary resource areas,” “affect many visitors,” “somewhat inhibit visitor enjoyment of resources.” Thus, any information in the DEIS that refers to or in any way uses these definitions is necessarily inconsistent with minimum information-quality standards.

Moreover, statements to the effect that sound generated by DBOC’s boats and equipment harms local wildlife are not evidence-based, as required by common-sense information-quality standards for scientific information.<sup>229</sup> Because NPS did not actually study the impact of human-made sound on wildlife in Drakes Estero, as even the peer reviewer of the Soundscape and Wilderness sections of the DEIS explained in the Atkins Peer Review Report, the DEIS re-

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<sup>226</sup> *Id.* at 310.

<sup>227</sup> *Id.* at 383.

<sup>228</sup> *See supra* Section 7.1.7.

<sup>229</sup> *See* DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2. DOI Departmental Manual, 305 DM 3, § 3.7.A(1); *see also* Director’s Order #11B, pt. III.A; DO-12 Handbook, § 1.4.B, 1.4.G.

lies on a “working assumption that the loss of the natural soundscape can have impacts” on animals such as “birds and mammals.”<sup>230</sup>

In Appendix F of the 2011 Marine Mammal Commission (MMC) report entitled “Mariculture and Harbor Seals in Drakes Estero, California,”<sup>231</sup> multiple panel scientists described in detail the best available science for evaluating DBOC’s impact on wildlife in Drakes Estero and explained that insufficient data existed to allow NPS to make scientific judgments about DBOC’s impact on wildlife. As one panel member, Brian Kingzett, explained, in order to adequately evaluate DBOC’s impact on harbor seals, NPS would need to “[c]onduct direct studies in partnership with DBOC to observe farm activities in relation to seal behavior,” including seals’ “response[s] to ... sounds etc.”<sup>232</sup> He suggested that until NPS conducted rigorous direct studies of DBOC’s impact on harbor seals, it did not have sufficient data to make scientific, evidence-based judgments as to DBOC’s impact on harbor seals.<sup>233</sup> MMC panel member Michael T. Walsh, DVM, went further, stating that he “fe[lt] very strongly that new observational studies should be performed with a design heavily contributed by third party behaviorists and ethologists... [ , which] should include new points of observation much closer to the sites, video documentation of [DBOC’s] interactions [with harbor seals] and on the ground cooperation with observers...”<sup>234</sup> The foregoing statements are illustrative, rather than exhaustive, of the type and scope of additional information NPS would have needed to make statements in the DEIS regarding DBOC’s impact on wildlife that are consistent with evidence-based, sound, and objective scientific practices and utilize the best available science. NPS did none of those things prior to making speculative claims in the DEIS concerning DBOC’s alleged impact on local wildlife.

In fact, NPS knowingly ignored the photographic data it did have (over 280,000 photographs taken over a three-year period), summarily dismissing the probative value of this data in one sentence in the DEIS. NPS’s failure to fully analyze the still photographs it generated, was aware of, and had access to when it produced the DEIS suggests that certain NPS employees remain willfully blind to highly probative direct evidence that does not support their “preferred environmental alternative.”<sup>235</sup> The Frost Report put it thus:

Boredom with, or insufficient time for, the labor-intensive analytic review process does not excuse any failure to scrutinize all of the research, which ... [NPS personnel] voluntarily initiated to “detect natural and human-induced changes” in the harbor seal populations. *Quite possibly, digital photos from the monitoring cameras definitively prove or disprove that DBOC mariculture operations negatively impact harbor seals*

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<sup>230</sup> ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 84.

<sup>231</sup> MARINE MAMMAL COMMISSION (MMC), MARICULTURE AND HARBOR SEALS IN DRAKES ESTERO, CALIFORNIA, Appendix F (Nov. 22, 2011) (Exhibit 26).

<sup>232</sup> *Id.* at F-47 (Comments of Brian Kingzett, Deep Bay Field Station Manager, Vancouver Island University (June 8, 2010)).

<sup>233</sup> *See id.* at F-49. As Kingzett explained, “A questionable data point should be accepted only if a thorough review of the questionable aspects results in an unequivocal modification; otherwise, the data point should be removed.” *Id.*

<sup>234</sup> *Id.* at F-58 (Comments of Michael T. Walsh, DVM (July 31, 2010)). Walsh echoed his colleague, suggesting that relevant areas in Drakes Estero “should be visually and sound recorded for further review” and that “[o]bservers should be present to record and characterize movement and sound on the ground.” *Id.* at F-65.

<sup>235</sup> The Frost Report noted that prior NPS “mistakes [regarding DBOC’s impact on wildlife] stem from the refusal, by some NPS employees, to modify their ... statistically and scientifically unproven[] belief that DBOC mariculture activities disturb ... harbor seals....” FROST REPORT, *supra* note 20, at 24.

*at upper Drakes Estero. As a direct consequence of ... [NPS's] failure to process the data completely and speedily, potentially powerful evidence remains unknown. This misconduct arose from incomplete and biased evaluation and from blurring the line between exploration and advocacy through research.*<sup>236</sup>

Pointedly, the National Marine Fisheries Service (NMFS)—the federal agency tasked with protecting marine mammals—has taken issue with NPS's claims regarding the environmental impact of DBOC operations on harbor seals and other wildlife. According to NMFS, “[p]otential negative effects of mariculture [i.e., DBOC] operations and activities on the harbor seal population represent the most serious concern expressed in the DEIS, *which cannot be fully evaluated because these effects have not been directly investigated.*”<sup>237</sup> (NMFS has also criticized the DEIS for its failure to include analysis of the secret NPS photographs, “recommend[ing] that the EIS provide information on which photographs, if any, were analyzed for impacts to harbor seals.”)<sup>238</sup>

As NMFS noted, “[b]ased on the evidence and information that has been made available, the harbor seal population in Drakes Estero appears stable and healthy.”<sup>239</sup> NMFS further explained: “We have no documentation of any recent disturbance of harbor seals by the aquaculture operation [i.e., DBOC]. We have no records of violations by DBOC or law enforcement investigations of DBOC....”<sup>240</sup> NMFS went so far as to inform NPS that “[t]here do not appear to be any significant impacts of DBOC operations on Essential Fish Habitat in Drakes Estero overall.”<sup>241</sup> In fact, NMFS indicated that the DEIS's analysis of DBOC's impact on wildlife was too one-sided for a scientific publication, “recommend[ing] that NPS ... [revise the DEIS to p]rovide a more balanced consideration of the ecosystem services and the positive impacts of shellfish aquaculture [i.e., DBOC] on habit and water quality.”<sup>242</sup>

In short, NPS's failure to analyze and include this photographic data and include it in the DEIS does not constitute the best available science and is not in accordance with sound, accepted, and objective scientific practices.

## 7.2 Atkins North America, Final Report on Peer Review of the Science Used in the National Park Service's Draft Environmental Impact Statement: Drakes Bay Oyster Company Special Use Permit.<sup>243</sup>

The specific “information” to be immediately corrected within the Atkins Peer Review Report includes statements in peer reviewer Dr. Christopher Clark's “Summary of Chapter 3

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<sup>236</sup> *Id.* at 35 (emphasis added).

<sup>237</sup> National Marine Fisheries Service Comments on the Draft Environmental Impact Statement for Drakes Bay Oyster Company Special Use Permit, p. 1 (Nov. 17, 2011) (emphasis added).

<sup>238</sup> *Id.* at 4.

<sup>239</sup> Letter from Rodney R. McInnis, Regional Administrator, National Marine Fisheries Service, to Cicely Muldoon, Superintendent, Point Reyes National Seashore, 1 (Nov. 17, 2011).

<sup>240</sup> *Id.*

<sup>241</sup> *Id.*

<sup>242</sup> *Id.* at 2.

<sup>243</sup> Atkins Project No. 10002598 (Mar. 2012), available at <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=284844>.

Soundscape and Wilderness Sections” and “Summary of Chapter 4 Soundscape and Wilderness Sections.”<sup>244</sup> The specific statements in the Atkins Peer Review Report that are the subject of this Complaint include, but are not limited to, the following:

**Statements to be Corrected:**

- Statement that “the Soundscape section provided compelling support for its conclusion that ‘low-frequency, high-amplitude, nearly omnipresent sound produced by roads, vehicles, airports, and mechanical equipment’ can, degrade the acoustic habitat.”<sup>245</sup>
  - **Recommended Correction:** This statement must be deleted.
- Statement that “[t]he data and synthesis” in the Soundscape and Wilderness 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 [sic] wildlife in the Point Reyes National Seashore.”<sup>246</sup>
  - **Recommended Correction:** This statement must be corrected to make clear that the data and synthesis do not support the conclusion that DBOC activities adversely affect wildlife and human experiences in Drakes Estero.
- Statement 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.”<sup>247</sup>
  - **Recommended Correction:** This statement must be revised to make clear that there is no acoustic scientific evidence in the DEIS supporting the conclusion that DBOC noise-generating activities have negative impacts on human visitor experience and the seashore’s wildlife.
- Statement that “[t]he scientific evidence presented leads me to conclude that this DEIS is robust, and that its recommendation for Alternative A is substantial and justifiable.”<sup>248</sup>
  - **Recommended Correction:** This statement must be deleted.

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<sup>244</sup> See ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, pp. 81-86 (Peer Reviewer Dr. Christopher Clark’s review of the Soundscape and Wilderness sections of the DEIS). It should be noted that pursuant to Part III.D of Director’s Order #11B, the Atkins Peer Review Report is subject to the same information-quality standards as the DEIS. See Director’s Order #11B, pt. III.D (The information-quality “standards of these guidelines apply not only to information that NPS generates, but also to information that other parties provide to NPS, if NPS disseminates or relies upon this information.”).

<sup>245</sup> ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 82.

<sup>246</sup> *Id.*

<sup>247</sup> *Id.*

<sup>248</sup> *Id.* at Appx. B, p. 83.

- Statement that the “Chapter 3 Soundscape section” in the DEIS “[p]rovides some sound level data for Drakes Estero using standard techniques and metrics.”<sup>249</sup>
  - **Recommended Correction:** This statement must be deleted.
- Statement that the DEIS “use[d] A-weighted L<sub>50</sub> values” from the 2011 Volpe Report as a measure of ambient noise.<sup>250</sup>
  - **Recommended Correction:** This statement must be deleted.
- Statement that “Table 3-3 shows noise level values within close proximity to specific DBOC noise sources.”<sup>251</sup>
  - **Recommended Correction:** This statement must be deleted.
- Statement that “DBOC noise-making activities do and would continue to have major impacts on the human wilderness experience and likely wildlife....”<sup>252</sup>
  - **Recommended Correction:** This statement must be deleted.
- Statement that “[i]t could be argued that the human noise footprints from DBOC activities could have increased since 1995, but this is never discussed.”<sup>253</sup>
  - **Recommended Correction:** This statement should be corrected to make clear that, if anything, “human noise footprints from DBOC could have *decreased* since 1995,” as modern boat engines are much quieter than 1995 boat engines due to technological advances.

#### 7.2.1 These Statements Does Not Meet Applicable Information-Quality Standards Related to Accuracy.

The portion of the Atkins Peer Review Report evaluating the Soundscape and Wilderness sections of the DEIS is not accurate, as numerous statements are demonstrably false, and therefore fails to comply with baseline minimum information-quality standards.<sup>254</sup> Further, this information was not developed solely using reliable data sources and did not even use the most recent available data, violating NPS information-quality guidelines for a second reason.<sup>255</sup>

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<sup>249</sup> *Id.*

<sup>250</sup> *Id.*

<sup>251</sup> *Id.*

<sup>252</sup> *Id.* at Appx. B, p. 85.

<sup>253</sup> *Id.* at Appx. B, p. 84

<sup>254</sup> See Director’s Order #11B, pt. III.B. Because Dr. Clark’s peer review violated applicable information-quality standards, data and analysis in the DEIS cannot be presumed to be of acceptable objectivity merely because it was subject to peer review.

<sup>255</sup> See *id.*

With respect to accuracy, Dr. Clark's claims regarding the ambient sound level data, so-called "representative" sound level data for DBOC boats and equipment, and the sound-dissipation distances for DBOC boats and equipment are not correct, as explained above. For example, Dr. Clark indicated in the Atkins Peer Review Report that he believed that Table 3-3 in the DEIS "[p]rovides some sound level data for Drakes Estero" from "specific DBOC noise sources,"<sup>256</sup> when Table 3-3 had not. Dr. Clark believed that the 1995 Noise Unlimited report had actually measured sound generated by both DBOC boats and equipment, when Noise Unlimited did neither of those things.<sup>257</sup> Dr. Clark believed that Tables 4-2, 4-3, and 4-4 were based on ambient sound level measurements found in the Volpe Report using A-weighted L<sub>50</sub> values,<sup>258</sup> when those tables used a data and a sound level metric not found in that report, as discussed above.

Due to his initial confusion as to the sources of data used in the Soundscape section of the DEIS—which is understandable in part because, as explained above, the publicly released version of the DEIS used cryptic, ambiguous, nontransparent short citations to the 1995 and 2006 studies measuring noise generated by loud, old, fast racing and police boats and jet skis and heavy highway construction equipment—Dr. Clark incorrectly stated that the DEIS used "standard techniques and metrics."

Presumably at least in part because Dr. Clark was under the misimpression that the soundscape data in the DEIS was accurate and based on standard techniques and metrics, his conclusions about the effects of noise generated by DBOC boats and equipment on the environment are also inaccurate, as he has subsequently admitted in writing to both Dr. Ralph Morgenweck, a DOI Scientific Integrity Officer, and Dr. Goodman. Dr. Clark has effectively retracted his statement that the sound level data for DBOC boats and equipment in "Table 3-3 shows noise levels within close proximity to specific DBOC noise sources"—twice. Dr. Clark explained in a March 21, 2010 e-mail that "the acoustic footprints of individual anthropogenic [i.e., human

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<sup>256</sup> ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 83. Dr. Clark's e-mail correspondence with Dr. Goodman confirms that he was unaware of the true source of data in Table 3-3: "So for the two motorboat sound levels, they too seem to have arrived in the EIS table from the New Jersey shore—correct?" E-mail from Dr. Christopher Clark to Dr. Corey Goodman, "Re: time sensitive request" (March 21, 2012, 12:40:06 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, "Re: Dr. Chris Clark's re-review of the DEIS," pt. 2, Appendix #2, p. 20 (June 25, 2012).

<sup>257</sup> After being informed by Dr. Goodman of the sources of data in Table 3-3, Dr. Clark stated that he had "assumed" that the data in Table 3-3 was generated by field measurements from Drakes Estero and asked, "Is this a joke?" "Notes from phone call between Dr. Corey Goodman and Dr. Christopher Clark, Cornell University, on Wednesday March 21, 2012, 8:04 am PT (607 254-2405)" (Dr. Goodman's detailed, contemporaneous notes from his March 21, 2012, conversation with Dr. Clark), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, "Re: Dr. Chris Clark's re-review of the DEIS," pt. 2, Appendix #1, pp. 12-17 (June 25, 2012). Dr. Clark told Dr. Goodman that he believed that he had been "deceived" by the soundscape analysis in the Draft EIS. *Id.* During that conversation, Dr. Clark commented to Dr. Goodman "on his amazement at the New Jersey police boat numbers, and 'front end loader' and other highway equipment." *Id.* Dr. Clark stated that he "was led to believe these tables [i.e., Tables 3-3, 4-2, 4-3, 4-4] were from field activities of DBOC," explaining that he "thought the tables that ... [he] was asked to evaluate represented DBOC measurements." *Id.*

<sup>258</sup> See ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 83 ("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." (emphasis added)).



caused] activities ... [is] significantly smaller than assessed from the values in Table 3.3...”<sup>259</sup> Likewise, Dr. Clark explained in his Re-Review—after he was informed about the sources of “representative” measurements of sound generated by DBOC boats and equipment and given the ENVIRON International data—that sound “level values in the DEIS Table 3.3 were not representative of actual DBOC noise-generating activities.”<sup>260</sup> Rather, as Dr. Clark indicated in his Re-Review,<sup>261</sup> the (substantially lower) actual on-site measurements of sound levels generated by DBOC boats and equipment using standard and accepted scientific techniques accurately reflect DBOC’s noise-generating activities.

As far as his statement in the Atkins Peer Review Report that the Soundscape section of the DEIS used “measures [that] are reasonable representations of the existing acoustic environment” in Drakes Estero,<sup>262</sup> Dr. Clark has stated in an e-mail that “dBA should not be used when assessing potential effects and influences [of sound] on non-humans: e.g., birds, marine mammals.”<sup>263</sup> It appears that Dr. Clark has also reevaluated his statement in the Atkins Peer Review Report to the effect that soundscape analysis in the DEIS is “robust”.<sup>264</sup> as he recently explained, “the DEIS ... [does not] realistically deal[] with the actual sound fields experienced as a result of exposure to the different sources” of noise in DBOC.<sup>265</sup> Further, Dr. Clark has essentially retracted his claim that the DEIS properly determined that DBOC’s “noise-generating activities have negative impacts on” wildlife in Drakes Estero, writing to Dr. Goodman that he “d[oes] not believe that ... [DBOC] activities have a biologically significant impact on wildlife” in Drakes Estero.”<sup>266</sup>

Aside from accuracy-related problems, Dr. Clark’s statements in the Atkins Peer Review Report were not based on timely data and the most recent information available, violating NPS’s information-quality guidelines for that reason.<sup>267</sup> Dr. Clark was not provided with and did not rely on either the ENVIRON International data, which was submitted as a comment on the DEIS and available as of December 9, 2011, or the 2009 PORE 004 microphone recordings and 2009 GPS data from DBOC boats.<sup>268</sup> Dr. Clark completed his review of the Soundscape and Wilder-

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<sup>259</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, “Re: time sensitive request” (March 21, 2012, 12:40:06 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS,” pt. 2, Appendix #2, p. 20 (June 25, 2012). Dr. Clark has stated in e-mail correspondence with Dr. Goodman that the “reality of where the measurements [in Table 3-3] came from ... [and] the inappropriate and significantly higher noise level values (from NJ!)” change his scientific opinion. *Id.*

<sup>260</sup> Re-Review, *supra* note 16, at 4.

<sup>261</sup> *See id.*

<sup>262</sup> ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 84.

<sup>263</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, “Re: time sensitive request” (March 21, 2012, 2:40:44 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS,” pt. 2, Appendix #2, p. 22 (June 25, 2012).

<sup>264</sup> *See* ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 83.

<sup>265</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, “Re: time sensitive request” (March 21, 2012, 2:40:44 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS,” pt. 2, Appendix #2, p. 22 (June 25, 2012).

<sup>266</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, “Re: time sensitive request” (March 21, 2012, 12:40:06 PM PDT), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS,” pt. 2, Appendix #2, p. 20 (June 25, 2012).

<sup>267</sup> *See* Director’s Order #11B, pt. III.B.

<sup>268</sup> *See supra* Sections 7.1.2.1, 7.1.2.3.

ness sections of the DEIS on February 23, 2012.<sup>269</sup> Thus, to comply with minimum information-quality standards, Dr. Clark was required to factor both the ENVIRON International data and the 2009 PORE 004 and GPS data into his conclusions. He did not. Therefore, his statements in the Atkins Peer Review Report do not meet minimum information-quality standards.

### 7.2.2 These Statements are Not Based on the Best Available Science and Scholarly Analysis and Sound and Objective Scientific Analysis.

Dr. Clark also failed to “verify ... the quality of the” sources of data used in the Soundscape and Wilderness sections of the Draft EIS, in violation of NPS’s information-quality guidelines.<sup>270</sup> Dr. Clark admittedly only “read and relied on” limited portions of Chapter 3 and Chapter 4 of the DEIS.<sup>271</sup> Dr. Clark did not verify *any* of the sources or check any of the (few) critical footnotes; he did not know where the vast majority of the soundscape data was derived from. In fact, by his own admission, Dr. Clark did not consult Chapter 5 of the DEIS (References, Glossary, Index).<sup>272</sup>

Moreover, the portion of the Atkins Peer Review Report drafted by Dr. Clark contains speculative, opinion-based statements that are not based on evidence. For instance, one of Dr. Clark’s few *criticisms* of the DEIS was that it was not sufficiently hypothetical and speculative: “It could be argued that the human noise footprints from DBOC activities could have increased since 1995, but this is never discussed.”<sup>273</sup> (Dr. Clark presumably chose 1995 as a reference point because he believed that the Noise Unlimited study used on-site measurements of DBOC boats and equipment. Noise Unlimited did not do either.) This bald assertion is neither based on research nor consistent with the scientific method.<sup>274</sup> The limited scope of Dr. Clark’s cursory, superficial peer review is not consistent with requirement that it must be based on the best available science and scholarly analysis and thus it does not meet minimum baseline information-quality standards.<sup>275</sup>

### 7.2.3 These Statements Do Not Meet Applicable Information-Quality Standards for Objectivity.

To comply with minimum information-quality standards, factual statements and analysis in the Atkins Peer Review Report must be accurate, reliable, and unbiased and must be presented objectively in a scientifically neutral manner.<sup>276</sup> But Dr. Clark has admitted that he does not believe that science, data, and evidence are of dispositive importance to his role as a peer reviewer of scientific information in government publications:

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<sup>269</sup> See ATKINS PEER REVIEW REPORT, *supra* note 42, at Appx. B, p. 81.

<sup>270</sup> See Director’s Order #11B, pt. III.A.

<sup>271</sup> See ATKINS PEER REVIEW REPORT, *supra* note 32, at Appx. B, pp. 81-82.

<sup>272</sup> See *id.*

<sup>273</sup> See *id.* at Appx. B, p. 84.

<sup>274</sup> See *supra* note 111 (noting “70% reduction in sound levels” generated by personal watercraft, such as jet skis, “since 1998”).

<sup>275</sup> See DOI Guidelines, pt. II.4(a); Management Policies 2006, § 2.1.2; DOI Departmental Manual, 305 DM 3, § 3.7.A(1); see also Director’s Order #11B, pt. III.A (“Information will be developed only from reliable data sources based on accepted practices and policies utilizing accepted methods for information collection and verification.”).

<sup>276</sup> See Director’s Order #11B, pt. VI.C.

[T]o me *this is really not about the science of absolute or even relative sound fields generated by various machines and things that humans do...* Rather, it's about whether or not and just how much society values wilderness. In this case, it really doesn't matter whether the DEIS incorrectly gives 79 dBA or 65 dBA as the sound value for a "Frontend Loader." *The issue is really about whether we, or whomever, decide that there are places that should be left alone in every way possible....*

So I'm not really sure what all the fuss is about, really. Was this deliberate, or just the result of someone cutting and pasting and not understanding sound, sound levels, dBA etc?<sup>277</sup>

This bias makes Dr. Clark an inappropriate choice of peer reviewer. The Wilderness and Sound-scape sections of the Atkins Peer Review Report are not sufficiently objective and include numerous speculative and opinion-based claims and thus do not meet minimum information-quality standards.

## 8. Additional Specific Recommendations for Corrective Action

In addition to the specific recommended corrections set forth above, to remedy the clear violations applicable minimum information-quality standards, Complainants request the following relief:

- (1) All "information" in the DEIS and Atkins Peer Review Report that refers to, uses, relies on, is linked to or contingent on, or is otherwise based on or supported by the defective information that is within the scope of this complaint, either in whole or in part, must be corrected in the Final EIS and a revised Atkins Peer Review Report.
- (2) All other "information" disseminated in the DEIS and Atkins Peer Review Report that fails to conform to applicable information-quality standards must be corrected in the Final EIS and a revised Atkins Peer Review Report to comply with those standards or removed from those publications.
- (3) The Final EIS must be supplemented with data from the ENVIRON Report, as well as that collected by the PORE 004 microphone, NPS cameras, and GPS devices installed on DBOC boats.
- (4) Dr. Corey Goodman's factual findings and analysis concerning inaccurate, misrepresented, false, concealed, or wrongfully omitted data and analysis in the DEIS must be reflected in the Final EIS.

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<sup>277</sup> E-mail from Dr. Christopher Clark to Dr. Corey Goodman, "Re: time sensitive request" (March 21, 2012, 2:40:44 PM PDT) (emphasis added), in Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, "Re: Dr. Chris Clark's re-review of the DEIS," pt. 2, Appendix #2, p. 23 (June 25, 2012).

- (5) The DEIS and Atkins Peer Review Report must be corrected in the Final EIS and a revised Atkins Peer Review Report so as to accurately reflect DBOC's de minimis impact on the Point Reyes National Sea Shore.<sup>278</sup>
- (6) The DEIS and Atkins Peer Review Report must be withdrawn from the public domain, to the extent practicable.

Because of the immediate and significant impact that the DEIS and Atkins Peer Review are having, and will continue to have, on the Lunnys, DBOC, and its employees—which, in turn, impacts the entire oyster industry—and Dr. Goodman, Complainants request that NPS make corrections to the Final EIS and Atkins Peer Review Report necessary to comply with its information-quality obligations in an expeditious and timely manner.

Sincerely,

*/s/ Amber Abbasi*

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Amber D. Abbasi

**Cause of Action**

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James Inhofe, United States Senator (R-OK)  
Cicely Muldoon, Superintendent, Point Reyes National Seashore  
Melanie Gunn, Point Reyes National Seashore Outreach Coordinator  
Vincent Haecker, Special Agent, Department of the Interior Office of the Inspector General  
Mary Kendall, Acting Inspector General, Department of the Interior Office of the Inspector General  
Dr. Gary Machlis, National Park Service Scientific Integrity Officer

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<sup>278</sup> See 40 C.F.R. § 1503.4(a)(4) (agency can “[m]ake factual corrections” in Final EIS).

## List of Exhibits

**Exhibit 1:** DOI OFFICE OF INSPECTOR GENERAL, REPORT OF INVESTIGATION—POINT REYES NATIONAL SEASHORE, Case No. OI-CA-07-0297-1 (July 21, 2008).

**Exhibit 2:** Letter from Rodney R. McInnis, Regional Administrator, National Marine Fisheries Service, to Cicely Muldoon, Superintendent, Point Reyes National Seashore (Nov. 17, 2011).

**Exhibit 3:** NATIONAL PARK SERVICE, ENVIRONMENTAL ASSESSMENT: JOHNSON OYSTER COMPANY, MARIN COUNTY, POINT REYES NATIONAL SEA SHORE (May 1998).

**Exhibit 4:** NATIONAL PARK SERVICE, FINDING OF NO SIGNIFICANT IMPACT (FONSI): JOHNSON OYSTER COMPANY REPLACEMENT AND REHABILITATION OF FACILITIES POINT REYES NATIONAL SEASHORE (August 11, 1998).

**Exhibit 5:** NOISE UNLIMITED, INC., BOAT NOISE TESTS USING STATIC AND FULL-THROTTLE METHODS (1995).

**Exhibit 6:** FEDERAL HIGHWAY ADMINISTRATION, ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE (2006).

**Exhibit 7:** ENVIRON INTERNATIONAL, INC., COMMENTS ON DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT ENVIRONMENTAL IMPACT STATEMENT: POINT REYES NATIONAL SEA SHORE (Dec. 9, 2011).

**Exhibit 8:** Letter from Tom St. Clair to Dr. Ralph Morgenweck, "Response to letter from R. Morgenweck to T. St. Clair dated April 19, 2012" (May 7, 2012).

**Exhibit 9:** FEDERAL AVIATION ADMINISTRATION (FAA) & JOHN A. VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER (VOLPE CENTER), BASELINE AMBIENT SOUND LEVELS IN POINT REYES NATIONAL SEASHORE (2011).

**Exhibit 10:** DOI OFFICE OF THE SOLICITOR, PUBLIC REPORT ON ALLEGATIONS OF SCIENTIFIC MISCONDUCT AT POINT REYES NATIONAL SEASHORE, CALIFORNIA (March 22, 2011).

**Exhibit 11:** National Park Service, Reading Room: Photographs and Videos, *at* [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_photographs\\_videos.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_photographs_videos.htm) (screenshot captured on August 3, 2012).

**Exhibit 12:** National Park Service, Reading Room: Videos: Drakes Estero Wildlife Monitoring Cameras—2008, *at* [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_videos\\_wmc\\_de\\_2008.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_videos_wmc_de_2008.htm) (screenshot captured on August 3, 2012).

**Exhibit 13:** National Park Service, Reading Room: Other Documents of Interest, *at* [http://www.nps.gov/pore/parkmgmt/planning\\_reading\\_room\\_other\\_freq\\_req\\_docs.htm](http://www.nps.gov/pore/parkmgmt/planning_reading_room_other_freq_req_docs.htm) (screenshots captured on August 3, 2012).

**Exhibit 14:** Letter from Dianne Feinstein, U.S. Senator (D-Calif), to Daniel W. Richards, President, California Fish and Game Commission (May 22, 2012).

**Exhibit 15:** Letter from Darrell Issa, Chairman of House Committee on Oversight and Government Reform, to Kenneth L. Salazar, Secretary of the Interior (Oct. 20, 2011).

**Exhibit 16:** Letter from Dr. Corey S. Goodman to National Academy of Science, NRC Panel Reviewing NPS DEIS for DBOC and ATKINS Peer Review (July 3, 2012).

**Exhibit 17:** Dr. Corey S. Goodman, Power Point Presentation, “NPS Misrepresented and Concealed Acoustic Data and Deceived the Public and Peer Reviewers of the Draft Environmental Impact Statement (DEIS) on DBOC” (July 2, 2012).

**Exhibit 18:** Letter from Dr. Corey S. Goodman to Mary Kendall, Acting Inspector General, Department of Interior (April 24, 2012).

**Exhibit 19:** Dr. Corey S. Goodman, “Re: Dr. Chris Clark’s re-review of the NPS DEIS: the data completely changed, but his conclusions did not, suggesting this is policy and politics, not science” (June 18, 2012).

**Exhibit 20:** Letter from Dr. Corey Goodman to Dr. Ralph Morgenweck, Scientific Integrity Officer, Department of the Interior, “Re: Dr. Chris Clark’s re-review of the DEIS” (June 25, 2012).

**Exhibit 21:** National Marine Fisheries Service Comments on the Draft Environmental Impact Statement for Drakes Bay Oyster Company Special Use Permit (Nov. 17, 2011).

**Exhibit 22:** John Hulls, “Unsound Advice: NPS and its Drakes Estero DEIS Consultant” (May 16, 2012), *available at* <http://russianrivertimes.wordpress.com/>.

**Exhibit 23:** Laurie Manarik, Point Reyes Outdoors, Comment Letter, Correspondence ID 51103, Project 33043, Document 43390 (Dec. 8, 2011).

**Exhibit 24:** National Park Service, Map of Drakes Estero Camera Angles (2007-2010), *available at* <http://www.nps.gov/pore/parkmgmt/loader.cfm?csModule=security/getfile&PageID=398425>.

**Exhibit 25:** MARINE MAMMAL COMMISSION (MMC), MARICULTURE AND HARBOR SEALS IN DRAKES ESTERO, CALIFORNIA (Nov. 22, 2011).

**Exhibit 26:** MARINE MAMMAL COMMISSION (MMC), MARICULTURE AND HARBOR SEALS IN DRAKES ESTERO, CALIFORNIA, Appendix F (2010) (Panel Members’ Reports).

## Summary Table of Errors and Required Corrections

Statement(s) to be Corrected	Type of Error(s)	Required Correction(s)
<p>All statements referring to or based on the hypothetical environmental impact of adopting Alternative A: No New Special Use Permit—Conversion to Wilderness (No-Action) in Table 2-6 and Ch. 2, 3, and 4 of the DEIS.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound and objective scientific practices.</li> </ul>	<p>All such statements should be deleted.</p>
<p>Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC “Motorboat” (a skiff with a 20 HP, 4-cycle engine attached) is 71 dBA.</p> <p>DEIS, Table 3-3, p. 204</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<p>The “Representative Sound Level at 50 Feet (dBA)” for DBOC’s 20 HP oyster skiff should be changed to 58 dBA (L<sub>eq</sub>).</p>
<p>Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC “Motorboat” (a skiff with a 40 HP, 4-cycle engine attached) is 71 dBA.</p> <p>DEIS, Table 3-3, p. 204</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<p>The “Representative Sound Level at 50 Feet (dBA)” for DBOC’s 40 HP oyster skiff should be changed to 60 dBA (L<sub>eq</sub>).</p>
<p>Statement that the “Representative Sound Level at 50 Feet (dBA)” for DBOC’s “Oyster Tumbler,” which is powered by a small ¼ HP, 12 volt “electric motor,” is 79 dBA.</p> <p>DEIS, Table 3-3, p. 204</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<p>The “Representative Sound Level at 50 Feet (dBA)” for DBOC’s small ¼ HP, 12 volt electric motor should be changed to 49.8 dBA (L<sub>eq</sub>).</p>

<p>Statement that the “Representative Sound Level at 50 Feet (dBA)” for a small DBOC forklift (referred to in the DEIS as a “Front End Loader”) powered by a 60 HP diesel engine is 79 dBA.</p> <p>DEIS, Table 3-3, p. 204</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<p>The “Representative Sound Level at 50 Feet (dBA)” for DBOC 60 HP forklift should be changed to 64-65 dBA (<math>L_{eq}</math>).</p>
<p>Statement that the Representative Sound Level at 50 Feet (dBA) of DBOC’s “[h]andheld hydraulic drills” is 85 dBA.</p> <p>DEIS, Table 3-3, p. 204</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<p>The “Representative Sound Level at 50 Feet (dBA)” for DBOC’s handheld hydraulic drills should be changed to 70.4 dBA (<math>L_{eq}</math>).</p>
<p>Statement in Table 3-3 that DBOC’s 20 HP and 40 HP oyster boats make “[u]p to 12 40-minute trips/day.”</p> <p>DEIS, Table 3-3, p. 204.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not based on sound and accepted scientific practices.</li> </ul>	<p>Table 3-3 should be corrected to state: “On average, one 40-minute trip/day.”</p>
<p>Statement that DBOC oyster boats “operate for up to 8 hours per day, 6 days per week, year round.”</p> <p>DEIS, p. 298.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent available data.</li> <li>• Not based on sound and accepted scientific practices.</li> </ul>	<p>The DEIS should be revised to state: “DBOC boats typically operate for a maximum of 1-2 hours per day (and often only 30-40 minutes) out near sandbars OB and UEN. Moreover, the work is seasonal. They are not harvesting during storms, and there are some months in which harvest is less than other months.”</p>



<p>“Topography can affect sound transmission through air. Steep topography such as the bluffs around some of Drakes Estero can block sound transmission. Because the 2009 sound measurements used in this EIS were taken on a bluff well above Drakes Estero, the measurements may have recorded limited mariculture-related noises.”</p> <p>DEIS, p. 204.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on best available science and data using the best available methods.</li> </ul>	<ul style="list-style-type: none"> <li>• This section of the DEIS should be revised to make clear that topography did not affect or block sound measurements by the PORE 004 microphone in 2009, which had a straight line of site to the areas in Drakes Estero in which the DBOC oyster boats operate and other DBOC equipment is used.</li> <li>• This section of the DEIS should be revised to make clear that the 2009 measurements were taken from a sound-sensitive area, selected by NPS’s then-Chief of Natural Resources, Bill Shook, in an ideal location to measure noise generated by DBOC boats and equipment.</li> <li>• This section of the DEIS should be corrected to state that the PORE 004 microphone did record DBOC boats when those boats were operating within 400 hundred feet of its location at a dBA level that is consistent with data in the ENVIRON Report but inconsistent with the data in Table 3-3 and failed to record those boats at distances where it should have recorded them if the DEIS’s soundscape data and factual assertions concerning sound-dissipation distances for DBOC’s boats and equipment were accurate.</li> </ul>
<p>Statements in Tables 4-2, 4-3, and 4-4 and accompanying text concerning the “median ambient sound level from the lowest daily ambient level measured” and “lowest daily median ambient sound levels measured” in Drakes Estero.</p> <p>DEIS, pp. 354-58, Tables 4-2, 4-3, and 4-4 and accompanying text.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on sound and accepted scientific practices.</li> <li>• Not based on best available science and best available methods.</li> <li>• Not transparent.</li> </ul>	<p>All references to “median ambient sound level from the lowest daily ambient level measured” or “lowest daily median ambient sound level measured” for Drakes Estero and all calculations, statements, figures, and tables referring to, based on, or otherwise using that metric should be removed from the DEIS.</p>

<p>All sound-dissipation distances in Table 4-2 (Estimated Motorboat Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.</p> <p>DEIS, pp. 354-58, Table 4-2 and accompanying text.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> </ul>	<p>All sound-dissipation distances in Table 4-2 should be recalculated using data from Environ International Report regarding sound levels actually generated by DBOC boats; using actual ambient sound level for Drakes Estero (41 dBA (<math>L_{eq}</math>)); and the DEIS's stated rule for calculating sound-dissipation distances (decreasing sound level by 6 dBA for every doubling of distance). The correct sound-dissipation distances can be found in Section 7.1.6 of the Complaint.</p>
<p>All sound-dissipation distances in Table 4-3 (Estimated Forklift and Oyster Tumbler Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.</p> <p>DEIS, pp. 354-58, Table 4-3 and accompanying text.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> </ul>	<p>All sound-dissipation distances in Table 4-2 should be recalculated using data from Environ International Report regarding sound levels actually generated by DBOC equipment; using actual ambient sound level for Drakes Estero (41 dBA (<math>L_{eq}</math>)); and the DEIS's stated rule for calculating sound-dissipation distances (decreasing sound level by 6 dBA for every doubling of distance). The correct sound-dissipation distances can be found in Section 7.1.6 of the Complaint.</p>
<p>All sound-dissipation distances in Table 4-4 (Estimated Pneumatic Drill Sound Dissipation) and all statements and figures in the DEIS referencing, relying on, or incorporating those distances.</p> <p>DEIS, pp. 354-58, Table 4-4 and accompanying text.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not transparent.</li> <li>• Not reproducible by qualified third parties.</li> </ul>	<p>All sound-dissipation distances in Table 4-2 should be recalculated using data from ENVIRON International Report regarding sound levels actually generated by DBOC equipment; using actual ambient sound level for Drakes Estero (41 dBA (<math>L_{eq}</math>)); and the DEIS's stated rule for calculating sound-dissipation distances (decreasing sound level by 6 dBA for every doubling of distance). The correct sound-dissipation distances can be found in Section 7.1.6 of the Complaint.</p>

<p>All statements in the DEIS, including those in Ch. 3 and 4 and Table 2-6, referring to, relying on, based on, or otherwise using the “Intensity Definitions” for impacts on “wilderness” allegedly caused by DBOC found on page 366 of the DEIS.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on the best available science.</li> <li>• Not based on sound and objective scientific practices.</li> </ul>	<p>Those “Intensity Definitions” and all statements referring to, relying on, based on, or otherwise using those definitions should be deleted.</p>
<p>All statements in the DEIS, including those in Ch. 3 and 4 and Table 2-6, referring to, relying on, based on, or otherwise using the “four qualities” for evaluating the extent to which DBOC operations affect “wilderness values” found on page 366 of the DEIS.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on the best available science.</li> <li>• Not based on sound and objective scientific practices.</li> </ul>	<p>Those “qualities” of “wilderness values” and all statements referring to, relying on, based on, or otherwise using those qualities of wilderness values should be deleted.</p>
<p>Statements that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a “long-term major adverse impacts on wilderness.”</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on the best available science.</li> <li>• Not based on sound and objective scientific practices.</li> </ul>	<p>These statements should be revised to state that “granting DBOC a 10-year SUP will have no impact on wilderness” or deleted.</p>
<p>Statements in Table 2-6 and accompanying text in Ch. 2 of the DEIS claiming that DBOC’s oyster skiffs and equipment cause a “major” long-term adverse impact on wilderness, as well as all similar statements in Ch. 4 of the DEIS.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not based on the best available science.</li> <li>• Not based on sound and objective scientific practices.</li> </ul>	<p>Revise Final EIS to state “no impact.”</p>
<p>Statement that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a “long-term major adverse impacts on soundscapes.”  DEIS, p. 360.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> </ul>	<p>Revise Final EIS to state “no impact” and include Dr. Clark’s e-mail correspondence with Dr. Goodman (Exhibit 20, pt. 2, Appendix #2, pp. 20-25) explaining that DBOC’s noise-generating activities do not biologically affect Drakes Estero’s wildlife.</p>

<p>Statements in Table 2-6 and accompanying text in Ch. 2 of the DEIS claiming that DBOC's oyster skiffs and equipment cause a "major" adverse impact on soundscapes.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> </ul>	<p>Revise Final EIS to state "no impact."</p>
<p>"Between spring 2007 and 2010 more than 250,000 digital photographs were taken from remotely deployed cameras overlooking harbor seal haul-out areas in Drakes Estero.... Because the collection of these photos was not based on documented protocols and procedures, the body of photographs does not meet the Department's [i.e., DOI's] standards for a scientific product. As a result, the photographs have not been relied upon in this EIS."</p> <p>DEIS, p. 295</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not objective.</li> </ul>	<p>This statement should be corrected to make clear that analysis of the digital photographs conclusively demonstrates that DBOC operations have no adverse impacts on wildlife in Drakes Estero, including but not limited to the harbor seals.</p>
<p>All statements in Ch. 2, 3, and 4 of the DEIS and Table 2-6 referring to, using, based on, or otherwise relying on the following definition of "moderate" impact on harbor seals and birds and bird habitat: "Impacts would be clearly detectable and could appreciably affect individuals or groups of species, communities, or natural processes."</p> <p>DEIS, pp. 295, 304.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>All such statements should be deleted.</p>

<p>All statements in Ch. 2, 3, and 4 of the DEIS and Table 2-6 referring to, using, based on, or otherwise relying on the following definition of “moderate” impact on visitor experience and recreation: “The impacts would be readily apparent in primary resource areas and would affect many visitors. The impacts would somewhat inhibit visitor enjoyment of resources for which the Seashore was established.”</p> <p>DEIS, p. 380.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>All such statements should be deleted.</p>
<p>Statement that Alternative B (Issue New Special Use Permit—Existing Onshore Facilities and Infrastructure and Offshore Operations Would Be Allowed for a Period of 10 Years) would have a “long-term moderate adverse impacts on harbor seals.”</p> <p>DEIS, p. 298.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>This statement should be revised to state “no impact.”</p>
<p>Statement that Alternative B “would result in long-term moderate adverse impacts on birds and bird habitat....”</p> <p>DEIS, p. 310.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>This statement should be revised to state “no impact.”</p>
<p>Statement that Alternative B “would result in a long-term, moderate adverse, impact on visitor experience and recreation....”</p> <p>DEIS, p. 383.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>This statement should be revised to state “no impact.”</p>

<p>Statements in Table 2-6 and accompanying text in Ch. 2 of the DEIS claiming that DBOC's oyster skiffs and equipment cause a "moderate" long-term adverse impact on harbor seals, birds, and visitor experience.</p>	<ul style="list-style-type: none"> <li>• Not based on the best available science.</li> <li>• Not based on sound, objective, and accepted scientific practices.</li> </ul>	<p>These statements should be revised to state "no impact."</p>
<p>Statement that "the Soundscape section provided compelling support for its conclusion that 'low-frequency, high-amplitude, nearly omnipresent sound produced by roads, vehicles, airports, and mechanical equipment' can, degrade the acoustic habitat."</p> <p>Atkins Peer Review Report, Appx. B, p. 82.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>
<p>Statement that "[t]he data and synthesis" in the Soundscape and Wilderness 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."</p> <p>Atkins Peer Review Report, Appx. B, p. 82.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be corrected to make clear that the data and synthesis do not support the conclusion that DBOC activities adversely affect wildlife and human experiences in Drakes Estero.</p>
<p>Statement 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."</p> <p>Atkins Peer Review Report, Appx. B, p. 82.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be revised to make clear that there is no acoustic scientific evidence in the DEIS supporting the conclusion that DBOC noise-generating activities have negative impacts on human visitor experience and the seashore's wildlife.</p>
<p>Statement that "[t]he scientific evidence presented leads me to conclude that this DEIS is robust, and that its recommendation for Alternative A is substantial and justifiable."</p> <p>Atkins Peer Review Report, Appx. B, p. 83.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>

<p>Statement that the “Chapter 3 Soundscape section” in the DEIS “[p]rovides some sound level data for Drakes Estero using standard techniques and metrics.”</p> <p>Atkins Peer Review Report, Appx. B, p. 83.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>
<p>Statement that the DEIS “use[d] A-weighted L<sub>50</sub> values” from the 2011 Volpe Report as a measure of ambient noise.</p> <p>Atkins Peer Review Report, Appx. B, p. 83.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>
<p>Statement that “Table 3-3 shows noise level values within close proximity to specific DBOC noise sources.”</p> <p>Atkins Peer Review Report, Appx. B, p. 83.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>
<p>Statement that “DBOC noise-making activities do and would continue to have major impacts on the human wilderness experience and likely wildlife....”</p> <p>Atkins Peer Review Report, Appx. B, p. 85.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement must be deleted.</p>
<p>Statement that “[i]t could be argued that the human noise footprints from DBOC activities could have increased since 1995, but this is never discussed.”</p> <p>Atkins Peer Review Report, Appx. B, p. 84.</p>	<ul style="list-style-type: none"> <li>• Not accurate.</li> <li>• Not timely and not based on most recent information available.</li> <li>• Not objective.</li> <li>• Not based on best available science.</li> </ul>	<p>This statement should be corrected to make clear that, if anything, “human noise footprints from DBOC could have <i>decreased</i> since 1995,” as modern boat engines are much quieter than 1995 boat engines due to technological advances.</p>