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The Role of (Junk) Science in Wilderness Management: Lessons Learned in the Wake of Drakes Bay Oyster Company

*Julia Graeser**

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The term "wilderness" has long captured a tension deeply rooted in the American spirit. It referred to the vast swaths of virgin territory to be settled and sold in the name of progress, while paradoxically also reflecting our unique connection with the natural lands that we, as a young nation, once had in such abundance.¹ Over time, our relationship with wilderness took on spiritual, even transcendental, dimensions. As we have transformed wilderness with people and industry, so too has wilderness transformed us with its awe-inspiring natural bounty.²

"Wilderness" has also become a term of important societal and legal significance, as evidenced by the controversy surrounding California's

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1. Leshy, John, *Contemporary Politics of Wilderness Preservation*, 25 J. LAND RESOURCES & ENVTL. L. 1, 1 (2005).

2. Robert L. Glicksman & George Cameron Coggins, *Wilderness in Context*, 76 DENV. U. L. REV. 383, 384 (1999). For a more fully developed historical account of the wilderness preservation movement, see RODERICK NASH, *WILDERNESS AND THE AMERICAN MIND* (4th ed. 2001).

largest oyster farm operation,³ Drakes Bay Oyster Company (“DBOC”), located about forty miles northwest of San Francisco in western Marin County.⁴ DBOC is situated within the Point Reyes National Seashore on lands that are owned in fee by the United States, administered by the National Park Service, and leased out primarily to local cattle ranchers and dairy farmers.⁵ More specifically, DBOC conducts its operations in Drakes Estero,⁶ a system of five fingerlike branching bays just north of Drakes Bay that Congress designated as “potential wilderness area” over forty years ago.⁷

The question of whether DBOC should be allowed to continue operating on those lands after the expiration of its original lease has not been an easy one to answer. As discussed in this article, the National Park Service (“Park Service”) complicated this question considerably with its haphazard use of science to justify what officials regarded from the beginning as a matter of national wilderness policy.⁸ The answer came on November 29, 2012, when Ken Salazar, the Secretary of the Interior, issued a memorandum of decision announcing that the DBOC lease would not be renewed,⁹ and that Drakes Estero would be converted to the wilderness area

3. Peter Fimrite, *Scientists Side with Drakes Bay Oyster Farmer*, S.F. CHRON., May 6, 2009, <http://www.sfgate.com/bayarea/article/Scientists-side-with-Drakes-Bay-oyster-farmer-3242873.php>.

4. See NAT’L PARK SERV., *DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT DRAFT ENVIRONMENTAL IMPACT STATEMENT [hereinafter DEIS] v* (Sept. 23, 2011), *available at* http://www.nps.gov/pore/parkmgmt/planning_dboc_sup_deis.htm.

5. *Id.* at vi. For a closer look at the relationship between the area’s biological abundance and its local industry and culture, see PAUL SADIN, *MANAGING A LAND IN MOTION: AN ADMINISTRATIVE HISTORY OF POINT REYES NATIONAL SEASHORE 19-25* (2007), *available at* http://www.nps.gov/history/history/online_books/pore/admin.pdf.

6. Drakes Estero encompasses roughly 2,500 acres, and its watershed covers approximately thirty-one square miles. See DEIS, *supra* note 4, at vi.

7. Congress had never used the term “potential wilderness” before October 1976 when it designated the 8,002 acres surrounding Drakes Estero as such, without providing any definition of the term in the statute. See *infra* notes 42-51. An Act to Designate Certain Lands in the Point Reyes National Seashore, California, as Wilderness, Amending the Act of September 13, 1962 (76 Stat. 538), as Amended (16 U.S.C. 459c–6a), and for Other Purposes, Pub. L. No. 94–544, § 1, 90 Stat. 2515 (1976).

8. Memorandum from U.S. Dep’t of the Interior San Francisco Field Solicitor to the Point Reyes National Seashore Superintendent [hereinafter DOI Memo] (Feb. 26, 2004), http://www.mmc.gov/drakes_estero/pdfs/ltr_doi_opinion_22604.pdf.

9. Memorandum of Decision from Secretary Kenneth Salazar, U.S. Dep’t of the Interior, to Dir., Nat’l Park Serv. [hereinafter Salazar decision] 2 (Nov. 29, 2012),

that Congress had originally envisioned.¹⁰ This paper will tell this tale from the beginning of American wilderness protection to what appears to be the end of DBOC,¹¹ and explain how each reflects and relates to the other.

Among the many lessons to be learned from the story, one theme runs throughout—the use and misuse of science in an effort to protect our wilderness. While a critique of the Park Service’s methodology is in order, the decision itself was laudable. Most importantly, it reflected the agency’s responsibility to be transparent about the reasons underlying its decisions. Because of the Park Service’s reliance on scant science and opaque dealings, the Secretary’s decision is remarkable not for the actual conclusion reached, but for the reasons given to support it. Salazar based the decision on plainly stated policy judgments, which recognized existing scientific uncertainties¹² and reflected a difficult choice between different but equally legitimate public values.¹³

I. The Wilderness Act: The Purpose, the Process, and the Legal Regime

Following nine years of deliberation and sixty-five different bills,¹⁴ Congress passed the Wilderness Act in 1964 (hereinafter “the Act”).¹⁵ Though the battle was primarily waged by a so-called “preservationist elite” fighting against dominant economic interests, the Act’s victory represented a widespread change in public opinion about the importance of protecting

<http://www.doi.gov/news/pressreleases/secretary-salazar-issues-decision-on-point-reyes-national-seashore-permit.cfm>.

10. *Id.* at 5, 7.

11. On February 25, 2013, the Ninth Circuit granted Plaintiff’s emergency motion for an injunction pending appeal of the District Court’s denial of preliminary injunction, set to be heard in May of 2013, *Drakes Bay Oyster Co., et al. v. Salazar, et al.*, No. 13-15227 (9th Cir. filed Feb. 25, 2013), available at http://cdn.ca9.uscourts.gov/datastore/general/2013/02/25/13-15227_order_granting_injunction_pending_appeal_and_expediting_calendar.pdf. (last visited Mar. 1, 2013). For more information on the current litigation, see *infra* notes 127-131.

12. *Id.* at 5.

13. *Id.* at 6 (“I am aware that allowing DBOC’s existing authorizations to expire by their terms will result in dislocation of DBOC’s business and may result in the loss of jobs for the approximately 30 people currently employed by DBOC.”).

14. Daniel Rohlf & Douglas L. Honrold, *Managing the Balances of Nature: The Legal Framework of Wilderness Management*, 15 *ECOLOGY* L.Q. 249, 251 (1988).

15. Wilderness Act of 1964, Pub. L. No. 88-577, § 1-7, 78 Stat. 890 (codified as amended at 16 U.S.C. §§ 1131-1136 (2006)).

our yet undeveloped areas.¹⁶ The Act created the National Wilderness Preservation System with over 9.1 million acres that had already been classified by the U.S. Forest Service,¹⁷ and provided that only Congress could add to the system by making future designations.¹⁸ Since its creation, the National Wilderness Preservation System has grown almost every year to encompass more land than the size of California, approximately 5% of the entire United States.¹⁹

In outlining the purposes of the Act, Congress articulated goals that are interrelated but conceptually distinct.²⁰ The Act was intended to first protect existing wilderness lands from “expanding settlement and growing mechanization,” and second, to preserve them “for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness.”²¹ Legislative history indicates, however, that it was not just preservation for its own sake that provided the necessary impetus. Preserving opportunities for recreation and scientific study in wild areas were also primary motives.²² Additionally, at least one scholar has argued that another goal of the Act was to accommodate select local and commercial interests.²³

The Act bars most commercial enterprise, permanent and temporary roads, and motorized vehicles and equipment from designated wilderness areas.²⁴ Furthermore, the Act withdrew wilderness areas from consideration for mineral appropriation and leasing.²⁵ But Congress had to accommodate the communities and industries already present in the areas designated as wilderness, and commercial activity was therefore not prohibited across the

16. Delbert V. Mercure, Jr. & William M. Ross, *The Wilderness Act: A Product of Congressional Compromise*, in CONGRESS AND THE ENVIRONMENT 47 (Richard A. Cooley & Geoffrey Wandesfore-Smith eds., 1970).

17. 16 U.S.C. § 1131 (1982); *see also* Rohlf & Honrold, *supra* note 14, at 251.

18. *See* 16 U.S.C. § 1133(c) (“A recommendation of the President for designation as wilderness shall become effective only if so provided by an Act of Congress”).

19. Leshy, *supra* note 1, at 1.

20. Rohlf & Honrold, *supra* note 14, at 279.

21. 16 U.S.C. § 1131(a).

22. Rohlf & Honrold, *supra* note 14, at 255-256.

23. *Id.* at 258.

24. 16 U.S.C. § 1134(c) (“Except as specifically provided for in this chapter, and subject to existing private rights, there shall be no commercial enterprise . . . within any wilderness area designated by this chapter”).

25. *Id.* § 4(d)(3) (“Commercial services may be performed within [] wilderness areas . . . to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.”).

board.²⁶ The statute's principal management directive is found in section 4(b), which affirmatively requires an administering agency²⁷ to preserve the pristine character of designated wilderness areas, subject to exceptions set forth in later provisions.²⁸ Section 4(c) lists the type of activities and objects to be banned from wilderness areas, including roads, motorized vehicles and equipment, permanent structures, and commercial enterprises.²⁹

However, an administering agency may permit commercial services in wilderness areas pursuant to section 5 when "proper for realizing the recreational or other wilderness purposes."³⁰ For example, established uses of aircraft or motorboats may be permitted,³¹ as well as other commercial services necessary for valid wilderness pursuits.³² In contrast, other exceptions protect existing private rights that the agency is bound to recognize.³³ Especially important to a ranching community like Point Reyes is the Act's allowance of continued livestock grazing, where previously established, subject to reasonable regulation.³⁴

26. *Id.*

27. When Congress designates an area for inclusion in the National Wilderness Preservation System, the federal agency with jurisdiction over the area immediately prior to the designation continues to manage it. *See* 16 U.S.C. § 1133(b).

28. The requirements of section 4(b) apply "[e]xcept as otherwise provided in this chapter." *Id.*

29. Section 4(c) provides in full: "Except as specifically provided for in this chapter, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this chapter and, except as necessary to meet minimum requirements for the administration of the area for the purpose of the this chapter (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motor boats, no land of aircraft, no other form of mechanical transport, and no structure or installation within any such area." *Id.* § 1133(c).

30. *Id.* § 1133(d).

31. *See id.* § 4(d)(1).

32. *See id.* § 4(d)(6).

33. *See id.* § 4(c) ("*subject to existing private rights, there shall be no commercial enterprise . . .*") (emphasis added). For a detailed description of the Act's exceptions to prohibited uses in designated wilderness areas, see Nell Green Nylem, Elisabeth Long, Mary Loum, Heather Welles, Dan Carlin, Brynn Cook, & Sage Adams, *Will Wilderness be Diluted in Drakes Bay?*, 39 *ECOLOGY LAW CURRENTS* 46, 51 (2012), <http://elq.typepad.com/currents/2012/currents39-05-greennylen-2012-0826.pdf>.

34. *See* 16 U.S.C. § 1133(d)(4).

The Act contains more significant exceptions as well, which reflect the major political compromise required to successfully pass the Act.³⁵ For example, the President has open-ended authority to approve reservoirs and major water works, power projects, and “other facilities needed in the public interest.”³⁶ The Act also provided for a twenty-year window in which hard-rock mining companies could stake new mining claims and the Secretary of the Interior could issue new oil, gas, and coal leases in national forest wilderness areas.³⁷ Despite the Act’s overarching preservationist mandate, these exceptions demonstrate the significant amount of discretion afforded to the executive branch, on which wilderness protection would largely depend.

II. Point Reyes National Seashore Establishment and Wilderness Designation

In 1962, Congress established the Point Reyes National Seashore (“the Seashore”) as a new type of operating unit within the national park system.³⁸ Seeking to preserve the peninsula’s agricultural traditions, Congress included a large “pastoral zone” within the Seashore to accommodate lease agreements with existing dairy farmers and ranchers.³⁹ There was subsequently a great deal of controversy over the Park Service’s plans to develop the area for tourism.⁴⁰ It was not long after the Act was passed that local residents and environmental groups began pushing for the heightened protection that could only be assured through congressional designation as wilderness.⁴¹

In 1976, Congress designated 25,370 acres of the Seashore as wilderness and identified another 8,003 acres (including Drakes Estero) as “potential wilderness” in Public Law 94-567.⁴² No such category existed in

35. *Mercure & Ross, supra* note 16, at 58 (“[I]n the fall of 1963 it became obvious to the preservations that time and the realities of congressional power were against them and that it was better to get some protection rather than none at all. It was also recognized that while they had to invest huge amounts of money in an attempt to arouse the public, the opposition had friends of long standing in Congress who could block the measure forever.”); *see also* Leshy, *supra* note 1, at 2-3.

36. *See* 16 U.S.C. § 1133(d)(4).

37. *Id.* § 1133(d)(3).

38. *See* Pub. L. No. 94-544, § 1, 90 Stat. 2515 (1976); *see also* SADIN *supra* note 5, 109-110.

39. Pub. L. No. 87-657, § 4, 76 Stat. 538 (1962).

40. SADIN, *supra* note 5, at 165-168.

41. *Id.* at 169-170.

42. Pub. L. No. 87-657, 76 Stat. 538 (1962).

the Wilderness Act of 1964,⁴³ and this was the first time Congress had used the term, though it included no definition within the text of the statute.⁴⁴ Accompanying Public Law 94-567 was a House Report stating that areas designated as potential wilderness “will be essentially managed as wilderness, to the extent possible, with the efforts to steadily continue to remove all obstacles to the eventual conversion of these lands and waters to wilderness status.”⁴⁵ Public Law 94-567’s Senate Report added that Drakes Bay would achieve full wilderness status “when the Federal government gains full title to these lands and when non-conforming uses and/or structures are eliminated.”⁴⁶

Although the Park Service has not promulgated official regulations, it has adopted internal management policies that define potential wilderness areas as “lands that are surrounded by or adjacent to lands proposed for wilderness designation but that do not themselves qualify for immediate designation due to temporary, nonconforming, or incompatible conditions.”⁴⁷ These lands must be managed as wilderness to the extent that existing nonconforming conditions allow, with non-conforming uses phased out “as soon as practicable.”⁴⁸ This policy applies equally to congressionally designated potential wilderness areas as to undesignated potential wilderness areas—that is, those that the agency has merely recommended for designation because of their wilderness characteristics.⁴⁹ In either instance, the Park Service policy is that all nonconforming uses are to “be eliminated as soon as practicable.”⁵⁰

The 1976 statute contains language that is more passive. It states only that potential wilderness additions would become designated wilderness when “all uses thereon prohibited by the Wilderness Act. . . . have ceased.”⁵¹ DBOC supporters argue that, even without DBOC, this is not the case in

43. *Id.*

44. *Id.*; *see* 16 U.S.C. §§ 1131-1136.

45. H.R. REP. NO. 94-1680, at 3 (1976).

46. S. REP. NO. 94-1357, at 7 (1976).

47. NAT’L PARK SERV., MANAGEMENT POLICIES, 6.2.2.1 (2006) (6.2.2.1 Potential Wilderness), *available at* <http://www.nps.gov/policy/mp2006.pdf>.

48. *Id.*, 6.3.1 (Wilderness Resource Management, General Policy).

49. *Id.* For a fuller discussion of the differences between designated and undesignated potential wilderness areas, *see* Nylem et al., *supra* note 33, at 54.

50. NAT’L PARK SERV., Director’s Order 41: Wilderness Preservation and Management § B(3)(d)(vi) (1999), <http://www.nps.gov/refdesk/DOrders/DOrder41.html>.

51. S. REP. NO. 94-1357, at 7 (1976).

Drakes Estero because of California's retained rights to fishing and mining.⁵² They highlight the "full title" language included in Public Law 94-567's Senate Report to assert that full wilderness conversion is inappropriate.⁵³ Although the notice published in the *Federal Register* converting Drakes Bay to full wilderness declared Drakes Estero to be "entirely in federal ownership,"⁵⁴ DBOC argues this statement cannot be true given California Department of Fish and Game's intention to continue leasing Drakes Estero for shellfish cultivation.⁵⁵ Because of this inconsistency, DBOC supporters contend that the area's conversion to full wilderness actually contravenes congressional intent.⁵⁶

Wilderness supporters consider the congressional intent more broadly, in light of the statute's basic purposes and strict prohibitions. A piece written by a group of law students at UC Berkeley entitled "*Will Wilderness be Diluted in Drakes Bay?*" carefully outlines the twenty-nine congressionally designated potential wilderness areas and describes in detail the nonconforming uses thereon.⁵⁷ Compared to other nonconforming uses, the authors determine that "DBOC operations constitute a highly unusual nonconforming use" and, thus, that an extension for a "non-recreation-focused commercial enterprise" would "be unique and without precedent."⁵⁸ Not only would such an extension lack precedent, it would "contravene the designating legislation's intent, the Wilderness Act's purpose and substance, and NPS's own management guidance."⁵⁹

What is incontrovertible is that at the time that Congress passed the Point Reyes Wilderness Act, the area was already home to dairy farmers, ranchers, and shellfish farmers.⁶⁰ Mariculture entrepreneurs had been operating in Point Reyes since the early 1900s.⁶¹ After the establishment of the Seashore, a decade-long negotiation ensued between the Park Service and Charles Johnson, the owner of the locally based Johnson Oyster

52. Appellant's Opening Brief at 26, *Drakes Bay Oyster Co., et al. v. Salazar, et al.*, No. 13-15227 (9th Cir. filed Feb. 25, 2013); *see also* Declaration in Support of Appellant's Motion (Ex. 9) (CFGC letter stating that it "has clearly authorized" DBOC's shellfish cultivation "through at least 2029" in "the proper exercise of its jurisdiction.").

53. *Id.*

54. 77 Fed. Reg. 71826 (Dec. 4, 2012).

55. Appellant's Opening Brief, *supra* note 52, at 27.

56. *Id.* at 26.

57. *See* Nylem et al., *supra* note 33.

58. *Id.* at 56-57.

59. *Id.* at 63.

60. *See* SADIN, *supra* note 5, 19-25.

61. *See* DEIS, *supra* note 4, at v.

Company.⁶² Johnson sold five acres to the Park Service but retained a forty-year reservation of use and occupancy (RUO) allowing him to continue operations on one and a half acres.⁶³ This RUO provided Johnson

[and] its successors and assigns, a terminable right to use and occupy the . . . property . . . for a period of 40 years for the purpose of processing and selling wholesale and retail oysters [and] seafood . . . the interpretation of oyster cultivation to the visiting public, and residential purposes reasonably incidental. . . . Upon expiration of the reserved term, a special use permit *may* be issued for the continued occupancy of the property and the herein described purposes."⁶⁴

It is the last sentence of the RUO that would become the source of considerable debate.

Over thirty years later, in late 2004, a local rancher named Kevin Lunny purchased Johnson Oyster Company's assets and renamed the operation Drakes Bay Oyster Company. With the purchase, Lunny assumed the remainder of the forty-year onshore RUO, considered a deeded property interest, and a special use permit (SUP) for a septic leach field and well on an adjacent property, set to expire in 2008.⁶⁵ Despite the RUO's renewal clause, the Park Service was transparent about the fact that renewing the RUO was against the agency's management policies as well as the congressional wilderness mandates to which it was bound.⁶⁶ At the time, Lunny was aware of the Park Service's position that the RUO would terminate without renewal, after which no SUP would be granted.⁶⁷

The SUP that was signed in 2008, which was to expire concurrently with the RUO, allowed DBOC to continue its onshore motorboat operations and maintain 142 acres of shellfish beds within Drakes Estero.⁶⁸ As a part of the negotiations surrounding the SUP, Lunny agreed to clean and update the oyster operation to conform to existing "state of the art" environmental standards.⁶⁹ He reportedly spent more than \$300,000 on renovations: a new

62. *Id.*

63. *Id.*

64. *Id.* (emphasis added).

65. *Id.* at 19, 77-78.

66. DOI Memo, *supra* note 8.

67. *Id.*; see also *Oyster Farming in Drakes Bay* (KQED Public Radio, hosted by Scott Shafer, June 30, 2009) [hereinafter 2009 KQED broadcast], <http://www.kqed.org/a/forum/R906301000>.

68. DEIS, *supra* note 4, at vi.

69. 2009 KQED broadcast, *supra* note 67.

septic system, demolition of existing buildings that were not up to environmental standards, permitting water systems, and hauling out 1800 cubic yards of debris left behind by the Johnson family operation.⁷⁰

As the largest oyster farm in California,⁷¹ DBOC produces roughly a third of the state's supply of shellfish⁷² and regularly employs around thirty people at a time.⁷³ Since 2004, it has expanded to produce approximately 460,000 pounds of shucked oysters and one million Manila clams each year.⁷⁴ To accomplish this, nearly 1,000 oyster bags have been distributed throughout the estuary.⁷⁵ The company also uses oyster racks, some of which are located outside the area permitted by the SUP, and employs small motorboats and trucks that run at least once a day.⁷⁶ Since 2007, the California Coastal Commission ("CCC") has taken repeated action against DBOC for various state law violations including unpermitted development and discharge of marine debris.⁷⁷ These actions culminated on February 6, 2013, when the California Coastal Commission voted 8-0 to implement its most recent Cease and Desist order.⁷⁸ Lunny maintains that he applied for the necessary coastal development permit in 2005 and had been in the

70. *Id.*

71. Fimrite, *supra* note 3.

72. Lunny stated in an interview that the often-quoted 40% figure does not come DBOC, rather from California Fish and Game. He neither supported nor denied its accuracy. See *Drakes Bay Oyster Company Sues to Stay* (KQED Public Radio, hosted by Michael Krasny, Dec. 5, 2012) [hereinafter 2012 KQED broadcast], <http://www.kqed.org/a/forum/R201212050900>.

73. Paul Payne, *Oyster farm's closure could lead to higher oyster prices*, PRESSDEMOCRAT.COM, Dec. 6, 2012, <http://www.pressdemocrat.com/article/20121205/ARTICLES/121209773/1350?p=1&tc=pg>.

74. Fimrite, *supra* note 3.

75. DEIS, *supra* note 4, at 61, 67.

76. The 2008 SUP includes a harbor seal protocol that restricts operations, including boat travel, in certain areas. Though the Park Service issued a letter to DBOC in January of 2013 asserting that their actions violated the plain language of this provision, DBOC has maintained that its operations are not in compliance. See NAT'L PARK SERV., *DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT FINAL ENVIRONMENTAL IMPACT STATEMENT* [hereinafter FEIS] 100 (Nov. 20 2012), available at <http://parkplanning.nps.gov/document.cfm?parkID=333&projectID=33043&documentID=50651>.

77. For more information, see the California Coastal Commission website, <http://www.coastal.ca.gov/>.

78. A video of the Feb. 6 public hearing is available at mms://media.cal-span.org/calspan/Video_Files/CCC/CCC_13-02-07/CCC_13-02-07.wmv [beginning at 2:09:38] (last visited Feb. 28, 2013); see also Cease and Desist Order No. CCC 13-CD-01 (Nov. 29, 2007), <http://documents.coastal.ca.gov/reports/2007/12/W6-12-2007.pdf>.

process of seeking to obtain that permit ever since.⁷⁹ In Lunny's view, the same activists who have fought the lease renewal from the beginning are the ones who also alleged the CCC violations⁸⁰—" [w]e know we're under the microscope," Lunny stated,⁸¹ "[t]he last thing we're doing is violating any rules."⁸²

III. Science Enters the Scene

The "microscope" that Lunny describes is the result of a debate that began in 2006 when local newspapers reported various scientific studies suggesting the DBOC had only a negligible effect on the Estero ecosystem.⁸³ In response, the Park Service published on its website a report entitled "Drakes Estero: A Sheltered Wilderness Estuary" ("Sheltered Wilderness report") written by a senior Park Service scientist, Dr. Sarah Allen.⁸⁴ Allen's report claimed that the oyster farm damaged eelgrass beds, reduced the number of harbor seals, potentially hastened the spread of nonnative species, and increased sedimentation in the estuary.⁸⁵ Of greatest concern was the Park Service's allegation that DBOC was solely to blame for an 80% decline in the local harbor seal population.⁸⁶

It is hard to imagine that anyone in the Park Service could have anticipated the controversy soon to follow. Dr. Corey Goodman, a local neurobiologist and member of the National Academy of Sciences, was shocked by the report and immediately requested to review the data. Jonathan Jarvis, National Park Service Director of Pacific West Region, denied access to the data citing "deliberative process privilege." Goodman then went to Senator Dianne Feinstein with his concerns and, a month later, in July of 2007, the two went to Point Reyes to discuss the problem with Park

79. See 2012 KOED broadcast, *supra* note 72.

80. *Id.*

81. *Id.*

82. *Id.*

83. DEP'T OF INTERIOR, OFFICE OF THE INSPECTOR GEN., INVESTIGATIVE REPORT: POINT REYES NATIONAL SEASHORE 7 (July 11, 2008) [hereinafter INS. GEN. REPORT] (citing Peter Jamison, *Drakes Bay Oyster Company Has Little Impact on Estero*, PT. REYES LIGHT, May 16, 2006), available on the Department of Interior website, <http://www.doi.gov/oig/reports/index.cfm>.

84. DRAKES ESTERO: A SHELTERED WILDERNESS, POINT REYES NATIONAL SEASHORE (May 11, 2007) [hereinafter SHELTERED WILDERNESS], http://mmc.gov/drakes_estero/pdfs/nps_swilderness_51107.pdf.

85. INS. GEN. REPORT, *supra* note 83, at 10-16.

86. *Id.* at 16.

Service officials.⁸⁷ Feinstein directed Jarvis to take down the report from the website and turn over the data upon which it had relied in reaching its conclusions.⁸⁸

After Feinstein's summit meeting, the Park Service promptly removed the Sheltered Wilderness report from its website and published a "Clarification of Law, Policy, and Science on Drakes Estero" ("Clarification report") two months later.⁸⁹ The Clarification report acknowledged "several discrepancies" and revised its statements on DBOC's ecological impacts.⁹⁰ The revised report, however, did not include contributions from peer reviewers.⁹¹ Although the Park Service purported to retract its claims against DBOC in the Clarification report, it did so with conspicuous subtlety. Lunny and Goodman, of course, considered it "intentionally misleading," and claimed the Park Service had "buried these retractions in the middle of paragraphs and sections that appeared to the casual reader to be a validation of the [Park Service's] claims and a rebuttal to Goodman."⁹²

An example of this reporting tactic appears in the Park Service's treatment of the harbor seal data, previously reported as an 80% decline resulting from DBOC operations. The data NPS turned over to Goodman showed that only one of the eight subsites studied had declined by 80% in 2007, and that subsite was actually *in the designated wilderness area*, far away from the oyster farm, and the decline was most likely attributable to park

87. *Id.* at 17-18.

88. *Id.* at 7.

89. NATIONAL PARK SERVICE CLARIFICATION OF LAW, POLICY, AND SCIENCE ON DRAKES ESTERO (Sept. 18, 2007) [hereinafter CLARIFICATION], http://www.npca.org/assets/pdf/nps_drakes_estero.pdf; *see also* Ins. Gen. Report, *supra* note 83, at 16.

90. *Id.* at 16; *see also* COMM. ON BEST PRACTICES FOR SHELLFISH MARICULTURE AND THE EFFECTS OF COMMERCIAL ACTIVITIES IN DRAKES ESTERO, NAT'L RESEARCH COUNCIL, SHELLFISH MARICULTURE IN DRAKES ESTERO, POINT REYES NATIONAL SEASHORE, CALIFORNIA 72-79 (2009) [hereinafter NRC REPORT] (comparing the Clarification with earlier versions of the Sheltered Wilderness report).

91. Letter from Dr. Corey Goodman to Ken Salazar 7 (May 16, 2009) ("Dr. Peter Gleick, NAS member, MacArthur Fellow, Founder of the Pacific Institute, and well-known environmentalist, reviewed Jarvis' "Clarification" document, and wrote: "... this NPS 'rebuttal' ... acknowledges very clearly that the NPS was wrong and Goodman was right, over and over and over again, but couched in language that pretends the opposite."), http://www.eenews.net/assets/2012/02/13/document_gw_02.pdf.

92. Letter from Cause of Action to Doris Lowery, Nat'l Park Serv. Washington Admin. Program Ctr. (Aug. 7, 2012) (containing Information Quality Act complaint), *available at* <http://www.scribd.com/doc/102351268/Lunny-and-Goodman-Complaint-About-Information-Quality-to-NPS-08-07-2012>.

visitors.⁹³ Nevertheless, the Clarification report stated merely that “[m]ore focused analyses are required to determine if oyster operations are affecting seal distribution and productivity within Drakes Estero.”⁹⁴

Those reports were just the beginning of the scrutiny soon to follow. Senator Feinstein petitioned the National Academy of Sciences to conduct a formal, independent National Research Counsel (“NRC”) review,⁹⁵ and Lunny requested that the Interior Department conduct an investigation. The Inspector General then interviewed seventy-eight individuals, searched Seashore offices with a Computer Crimes Unit, and reviewed over 1,100 documents and e-mails.⁹⁶

In a July 2008 report, the Inspector General concluded that Seashore officials made “concerted attempts” to find environmental harm and, in doing so, had “misrepresented” their scientific research.⁹⁷ For example, the Wilderness Report stated that DBOC oysters were “the primary source” of sedimentation in Drakes Estero, when in fact outside studies showed only that oyster waste was a *factor* in sedimentation in the specific water bodies where the studies were conducted.⁹⁸ Similarly, the Park Service claimed that the oyster racks “severely restricted” eelgrass growth, although available research showed “no pronounced impacts” on eelgrass.⁹⁹ The Inspector’s report also highlighted Dr. Allen’s actions as lead scientist, such as withholding information contrary to characterizations later made in the 2007 Sheltered Wilderness report and deleting e-mails that should have been released in response to multiple Freedom of Information Act (“FOIA”) requests.¹⁰⁰ The report presented the Inspector’s factual findings without making any subjective judgments about the appropriateness of the officials’ conduct. This task was apparently left to Mary Bomar, the Director of the Park Service, to whom the report was directed “for whatever administrative action she deems appropriate.”¹⁰¹

The NRC accepted Feinstein’s request for review and commenced a panel of experts to “assess the scientific basis” for the Park Service’s public presentations and Sheltered Wilderness report.¹⁰² In May of 2009, the

93. Fimrite, *supra* note 3; *see also* NRC REPORT, *supra* note 82, at 4-5, 77.

94. CLARIFICATION, *supra* note 89, at 13.

95. NRC REPORT, *supra* note 90, at 18-19.

96. INS. GEN. REPORT, *supra* note 83, at 5-6.

97. *Id.* at 2.

98. *Id.* at 12.

99. *Id.* at 19.

100. *Id.* at 2 (Allen “was privy to information contrary to her characterization[s] . . . and did nothing to correct the information before its release to the public.”).

101. *Id.* at 1.

102. NRC REPORT, *supra* note 90, at 2.

NRC's report was released. It found a "lack of strong scientific evidence" that oyster farming had major adverse ecological effects on the Estero.¹⁰³ Moreover, it found that there was insufficient data to reach any conclusions about impacts to harbor seals or other wildlife, and reported that oysters, which have a beneficial localized filtering effect, could enhance overall ecosystem services in the Estero.¹⁰⁴ As for the Park Service's conduct, the NRC panel concluded that the Sheltered Wilderness report interpreted existing science in a manner that "exaggerated the negative and overlooked potentially beneficial effects" of the oyster culture operation.¹⁰⁵ The NRC found "several instances" where the Park Service "selectively presented, over-interpreted, or misrepresented" the available science on potential impacts.¹⁰⁶

Media coverage of the report varied. Local news sources painted the committee's conclusions in adversarial terms, while both DBOC and Seashore officials seemed to consider the report an exoneration.¹⁰⁷ Seashore officials also criticized the NRC's report and formally challenged many of its findings.¹⁰⁸ By and large, however, the hyperbole surrounding the controversy and the weight of the decision cannot be overstated.¹⁰⁹ Local environmental advocates, scholars, and laypeople argued that renewal of the DBOC lease would jeopardize the wilderness system as a whole.¹¹⁰

103. *Id.* at 6, 86. The report generally accepted the data as presented in the Clarification but highlighted two major weaknesses: First, it had over-interpreted incomplete harbor seal disturbance data and, second, it did not recognize an ecological baseline where native oysters played a historical role in structuring the estuary's ecosystem.

104. *Id.* at 2, 68-69, 82.

105. *Id.* at 3, 73.

106. *Id.* at 72-73.

107. Fimrite, *supra* note 3 (reporting that oyster farm supporters "claimed victory," and that the report is "seen as vindication for the oyster company").

108. Dr. John G. Dennis, Comment on the NRC REPORT, on behalf of the NAT'L PARK SERVICE (June 16, 2009), available at http://mmc.gov/drakes_estero/pdfs/comm_dennis_nas_rpt.pdf.

109. Felicity Barringer, *A Park, an Oyster Farm and Science: Epilogue*, N.Y. TIMES, Dec. 4, 2012, <http://green.blogs.nytimes.com/2012/12/04/a-park-an-oyster-farm-and-science-epilogue/> (last visited Feb. 27, 2013) ("The hyperbole accompanying the debate over the site's future was bewilderingly grandiose.").

110. *Id.*; see also Nylem et al., *supra* note 33, at 64-65 ("This outcome, and its likely repetition across the country, would both harm local wilderness values and chip away at the integrity of the Wilderness Act itself.").

Meanwhile, supporters of DBOC alleged widespread corruption, and even conspiracy, among high-level Park Service officials.¹¹¹

On May 5, 2009, the day the NRC report was released, Senator Feinstein sent a letter to Interior Secretary Ken Salazar about the “troubling and unacceptable” exaggerations made by the Park Service.¹¹² A month later, Feinstein succeeded in attaching a rider to the Senate Interior Department appropriations.¹¹³ The rider provided that: “[N]otwithstanding any other provision of law, the Secretary of the Interior is *authorized* to issue a special use permit with the same terms and conditions as the existing authorization, except as provided herein, for a period of 10 years from November 30, 2012.”¹¹⁴

The rider known now as section 124 required the Secretary to “take into consideration” the NRC report regarding maricultural best practices in making his decision.¹¹⁵ Finally, section 124 expressly foreclosed its application in any other wilderness area and disclaimed any precedential force for the decision.¹¹⁶

The rider was supported largely on the basis of the “bad science” allegations.¹¹⁷ Just the year before, in 2008, Feinstein had proposed a rider to extend the lease by ten years but was unsuccessful.¹¹⁸ The first version of the 2009 bill provided for automatic extension, but when the head of the CCC came forward with details of DBOC’s regulatory violations, Senator Feinstein changed the bill to merely grant the Secretary discretion to extend the lease “notwithstanding any other provision of law.”¹¹⁹

The Park Service subsequently undertook an environmental review under the National Environmental Policy Act (“NEPA”) to evaluate the

111. See Jane Gyorgy, Oyster Zone Blog, <http://oysterzone.wordpress.com/> (last visited Dec. 17, 2012); see also *The Framing of an Oyster Farm* (Visual Record, Oct. 28, 2012), <http://vimeo.com/52331881> (last visited Feb. 27, 2013).

112. Ian Fein, *Reassessing the Role of the National Research Council: Peer Review, Political Tool, or Science Court?*, 99 CAL. L. REV. 465, 494 (2011) (describing the history of the rider).

113. See Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010, Pub. L. No. 111-88, § 124, 123 Stat. 2932 (2009).

114. *Id.* (emphasis added).

115. *Id.*

116. *Id.* (“Nothing in this section shall be construed to have any application to any location other than Point Reyes National Seashore; nor shall anything in this section be cited as precedent for management of any potential wilderness outside the Seashore.”).

117. See Fein, *supra* note 112, at 502–04.

118. *Id.*; see also Fimrite, *supra* note 3.

119. See Fein, *supra* note 112, at 502–04.

effects of issuing an SUP to DBOC.¹²⁰ The draft environmental impact statement (“DEIS”), published in March of 2011, found that DBOC has a “major impact” on the soundscape, a “major impact” on wilderness, and an “adverse impact” on harbor seals, birds, and visitors’ recreational experience.¹²¹ These findings have been peer reviewed multiple times, and still uncertainty lingers. In 2011, Congress directed the National Academy of Science to conduct another study, this time assessing “the validity of the science underlying the DEIS.”¹²² The NAS assembled another panel, which determined that the Park Service’s findings were uncertain at best, given that the Park Service had little primary data on which to base the DEIS.¹²³ Of the eight resource categories examined, the projected impact levels had moderate to high levels of uncertainty, such that it would be “equally reasonable” to find lower impacts in many of these categories.¹²⁴ The Department of the Interior also commissioned an outside review of the DEIS by Atkins North America.¹²⁵ Although the reviewers identified minor “data gaps” and “factual errors,” they ultimately found “no fundamental flaw with the larger scientific underpinning of the DEIS.”¹²⁶

On November 20, 2012, the final environmental impact statement (“FEIS”) was released online, nine days before the Secretary’s November 29, 2012, decision, without publishing a notice in the *Federal Register*.¹²⁷ DBOC supporters maintain that the FEIS did not comply with NEPA’s procedural

120. See DEIS, *supra* note 4, 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.”); see also 75 Fed. Reg. 65, 373 (Oct. 22, 2010) (“Pursuant to [NEPA], the National Park Service is preparing an Environmental Impact Statement (EIS) for the Drakes Bay Oyster Company Special Use Permit”). For more information on NEPA, see 42 U.S.C. § 4332 (2006).

121. NRC REPORT, *supra* note 90, at 12.

122. H.R. REP. NO. 112-331, at 1057 (2011).

123. See NATIONAL ACADEMY OF SCIENCES, SCIENTIFIC REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT: DRAKES BAY OYSTER COMPANY SPECIAL USE PERMIT (Mar. 2012) [hereinafter 2012 NRC Report], available at http://www.nap.edu/catalog.php?record_id=13461.

124. *Id.* at 3.

125. See ATKINS NORTH AMERICA, 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), available at <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=284844>.

126. *Id.* at 8.

127. See FEIS, *supra* note 78.

requirements.¹²⁸ In furtherance of this claim, they highlight the Park Service's changed interpretation of its responsibilities under NEPA.¹²⁹

IV. The Secretary's Memorandum of Decision: Finality at Last

On November 29, 2012, after much anticipation, Secretary Ken Salazar announced the DBOC lease would be allowed to expire, thereafter converting Drakes Estero to full wilderness status.¹³⁰ The Secretary's memorandum of decision expressly interprets section 124 as exempting the Secretary from the requirements of NEPA.¹³¹ Salazar explained that his decision was *not* based on scientific data, but "on matters of law and policy."¹³² The two principal considerations were (1) the explicit terms of the 1972 conveyance, which after much bargaining guaranteed no more than 40-years of continued occupancy; and (2) Park Service policy regarding commercial use of wilderness land and nonconforming uses of potential wilderness, fashioned in conformance with Wilderness Act of 1964 and the Point Reyes Wilderness Act of 1976.¹³³

Although the Secretary conceded that "scientific methodology employed by the NPS . . . generated much controversy and ha[s] been the subject of several reports,"¹³⁴ the decision was otherwise silent on the issue of scientific misconduct. There was little reason to tread upon such a

128. NEPA requires that a federal agency submit its FEIS to EPA and provide at least a thirty-day notice-and-comment period from the time of publication in the *Federal Register* before the agency may make or record decision on the proposed action. See 40 C.F.R. § 1506.9 and 40 C.F.R. §1506.10(b)(2).

129. Discussing its obligations under NEPA, the DEIS and FEIS differ in the way each finishes the following statement: "Although the Secretary's authority under Section 124 is not withstanding any other provision of law, the Department has determined that . . ." The DEIS follows with, "it is *appropriate* to prepare an EIS and otherwise follow the procedures of NEPA." DEIS, *supra* note 4, at iii (emphasis added). Whereas the FEIS reads, "it is *helpful to generally follow* the procedures of NEPA." FEIS, *supra* note 68, at 2 (emphasis added).

130. Salazar decision, *supra* note 9.

131. *Id.* at 5, fn. 4 ("Sec. 124 does not require me (or the NPS) to prepare a DEIS or an [sic] FEIS or otherwise to comply with the National Environmental Policy Act of 1969 (NEPA) or any other law Sec. 124 expressly exempts my decision from any substantive or legal requirements.").

132. *Id.*, fn. 5 ("My decision today is based on the incompatibility of commercial activities in wilderness and not on the [EIS] data that was asserted to be flawed.").

133. *Id.* at 1.

134. Salazar decision, *supra* note 9, at 5.

politically sensitive subject years after its occurrence, when it was not the basis of the decision. But the Park Service's sloppy science, and the response of its officials, continues to be relevant in evaluating the final outcome of the controversy, as well as agency decision-making more broadly.

One month after the Secretary issued his decision, Lunny challenged the decision in the U.S. District Court in the Northern District of California, seeking declaratory and injunctive relief under NEPA, the Administrative Procedure Act ("APA"), and the Fifth Amendment.¹³⁵ Specifically, Lunny alleged that the Secretary's interpretation of section 124 as relieving the agency of its NEPA obligations was "arbitrary and capricious" under section 706 of the APA.¹³⁶ Furthermore, Lunny claimed that, despite express statements to the contrary, the Secretary *had* relied on flawed data in the FEIS and therefore failed to base the decision on "best available science," as he was obligated to do.¹³⁷ The court disagreed that there had been reliance on flawed scientific data,¹³⁸ and ultimately held that the decision was committed to agency discretion and therefore unreviewable under section 701(a)(2) of the APA.¹³⁹

V. Scientific Misconduct: Definition and Response

The Solicitor of the Interior's office investigated allegations of scientific misconduct in a memorandum released to the public in 2011.¹⁴⁰ It was then revealed that between 2007 and 2010, the Park Service had installed hidden cameras, without the knowledge of DBOC or the public, and collected nearly 300,000 photographs and detailed observational logs.¹⁴¹ Seashore officials failed to turn over this data, which belied any evidence of harbor seal disturbances,¹⁴² to the NRC panel tasked with reviewing their

135. Complaint at 6-7, *Drakes Bay Oyster Co., et al. v. Salazar, et al.*, 2013 WL 451860 (No. 12-CV-06134-YGR)(N.D. Cal. Feb. 4, 2013).

136. *Id.*

137. *Id.* at 20.

138. *Drakes Bay Oyster Co., et al. v. Salazar, et al.*, 2013 WL 451860, *16 (N.D. Cal. Feb. 4, 2013.)

139. *Id.* at *11.

140. DOI OFFICE OF THE SOLICITOR, PUBLIC REPORT ON ALLEGATIONS OF SCIENTIFIC MISCONDUCT AT POINT REYES NATIONAL SEASHORE, CALIFORNIA (Mar. 22, 2011) [hereinafter FROST REPORT], available at <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=238859>.

141. *Id.* at 24.

142. *Id.* at 28.

research during this time, or in response to Dr. Goodman's FOIA request.¹⁴³ The officials justified this by explaining that they did not consider the camera surveillance system to be photographic research because the photographs lacked established methodology and quality controls.¹⁴⁴ Frost questioned why, if this were true, the Park Service would continue the research program without improving research quality.¹⁴⁵ Nonetheless, he determined that officials *did* intend to disclose the data.¹⁴⁶ He found this intent on the basis of a briefing statement submitted to Regional Director Jon Jarvis three days before the NRC report was released to the public that included an attachment with three photographs.¹⁴⁷ He therefore concluded, "NPS employees erred but did not misstep in any manner defined as criminal misconduct or scientific misconduct for which the agency could impose and successfully defend disciplinary action."¹⁴⁸

The obvious question, then, is what actions *are* sufficient to constitute scientific misconduct? The answer is found in the actor's intent. Scientific misconduct would arise in situations where:

[I]ntentional acts produced a research record that did not accurately represent information found in the photographic data . . . [Whereas] no scientific or research misconduct would exist if unintentional, negligent mishandling of the photographic data on and after those dates resulted in a research record that inaccurately represented the digital photos and related information.¹⁴⁹

This definition is consistent with other definitions of misconduct used within the executive and legislative branches. In 2000, the President's Office of Science and Technology Policy issued a unified policy applicable to all federal-research-grant recipients, which remains in effect today, defining research misconduct as "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research

143. *Id.* at 31.

144. *Id.* at 28.

145. *Id.* at 31.

146. *Id.* at 29 ("[N]o NPS employee manipulated or intentionally omitted the photographic research in an effort to defraud, deceive, or mislead any person or organization.").

147. *Id.* at 18 (describing the attachment, which included three photos taken from one camera).

148. *Id.* at 35.

149. *Id.* at 29.

results.”¹⁵⁰ According to the National Academy of Sciences, fabrication consists of making up data or results, falsification means changing data or results, and plagiarism is using the ideas or words of another person without giving appropriate credit.¹⁵¹

Many scholars have argued for a broader view of scientific integrity, one that encompasses more than the absence of overt fabrication, falsification, and plagiarism.¹⁵² To begin with, we must understand scientific misconduct in terms that encompass more shades of gray than what those three categories allow. A key element in determining scientific misconduct on the part of the investigative bodies is false representation; that is, “reporting data that have not been observed or passing off for the observation of nature what is a product of one’s imagination”¹⁵³—all of which requires intent to deceive.

Frost’s report demonstrates, however, that a definition that hinges on the actor’s mental state will too often be difficult to prove and easy to manipulate. The definition should be expanded to include a scientist’s failure to include contradictory data in a publicly released report, where he or she is shown to have had knowledge of its existence. In such a case, failure to disclose seems reckless at best and intentional at worst—certainly beyond an act of negligence. As long as scientific misconduct requires a finding of fraudulent intent, independent investigations into agency science may be vulnerable to conclusions that are, or appear to be, politically motivated.

Assuming the best about the Solicitor’s findings—that is, there was insufficient proof that the Park Service’s conduct amounted to the *legal* standard of scientific misconduct—the agency unquestionably failed to live up to its *own* standard of scientific conduct. By the time Frost conducted his investigation, the Park Service had released an Interim Code of Scientific and Scholarly Conduct, which did not exist at the time of the Sheltered Wilderness report.¹⁵⁴ An early draft of the Code of Scientific and Scholarly Conduct was issued in 2004, but never actually finalized or formally applied to employees.¹⁵⁵ The Interim Code of Scientific and Scholarly Conduct required all Park Service employees working with scientific information to: “process data from, and communicate the results of scientific and scholarly activities honestly, objectively, thoroughly, and expeditiously” and “fully

150. Holly Doremus, *Scientific and Political Integrity*, 86 TEX L. REV 1601, 1066, fn. 128 (2008).

151. NRC REPORT, *supra* note 90, at 5.

152. Doremus, *supra* note 150, at 1622.

153. GERALD DWORKIN, MORALITY, HARM, AND THE LAW 69 (1984).

154. FROST REPORT, *supra* note 140, at 9-10.

155. *Id.* at 10, fn. 8.

disclose all research methods used [and] available data . . . in a timely manner and consistent with all laws and policy.”¹⁵⁶ The Interim Guidance, now superseded by the formal policy on “Integrity of Scientific and Scholarly Activities,”¹⁵⁷ became effective in January of 2008.¹⁵⁸

Publicly putting forth such a standard is an important first step in ensuring agency accountability. Frost’s report stated that the Department “may address the mistakes and restore public trust by concluding that several NPS employees could and should have handled research differently and by modifying the future behavior of NPS employees with education and corrective action as deemed appropriate.”¹⁵⁹ To that end, the Park Service issued the Clarification report discussed earlier, as well as an “Acknowledgement of Corrections,”¹⁶⁰ stating that it had “incorrectly interpreted” the studies cited in its Wilderness report. Such a gentle admission of error is not enough to restore public trust.

Evidence that the issue is not yet moot is found in the Inspector General’s most recent investigation, released February 7, 2013, in response to allegations that the Park Service and its consultant had committed scientific misconduct in the DEIS.¹⁶¹ Specifically, it was alleged that Park Services officials had misrepresented soundscape data by using inaccurate proxies for DBOC equipment rather than taking on-site noise measurements.¹⁶² The Inspector General ultimately concluded there was no fraud, waste, abuse, or misrepresentation of data by researchers who found that DBOC boats had an impact on nearby harbor seals.¹⁶³ As for the Park Service’s use of proxy data, the report stated it was “reasonable and justified

156. *Id.* at 10 (discussing the “Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resources Disciplines”).

157. NAT’L PARK SERVICE, Director’s Order #79: Integrity of Scientific and Scholarly Activities 2 (Sept. 19, 2012), [fhttp://www.nps.gov/policy/Director's_Order_79.pdf](http://www.nps.gov/policy/Director's_Order_79.pdf); *see also* FROST REPORT, *supra* note 140, at 10, fn. 8.

158. *Id.* at 9.

159. *Id.* at 32.

160. NAT’L PARK SERV., *Acknowledgment of corrections to previous versions of the Park News document “Drakes Estero—A Sheltered Wilderness Estuary,”* http://www.mmc.gov/drakes_estero/pdfs/corr_nps_072507.pdf (last visited Feb. 28, 2013).

161. U.S. DEP’T OF INTERIOR, INVESTIGATIVE REPORT OF DRAKES BAY OYSTER COMPANY ENVIRONMENTAL IMPACT STATEMENT (Feb. 7, 2013), *available at* http://www.doi.gov/oig/reports/upload/DrakesBayOysterCompany_Public.pdf. While the report does not directly identify the complainant, it describes him as “an elected member of the National Academy of Sciences and adjunct professor at a California University.” *Id.* at 2.

162. *Id.* at 1.

163. *Id.*

based on mechanical similarities” to DBOC equipment,¹⁶⁴ especially given that “company noise emissions had never been named as having a potential impact on the environment or wildlife.”¹⁶⁵ One wonders, then, why the Park Service bothered collecting, or even approximating such data from the beginning. However, the Inspector General reported that the EIS was not viewed as a “scientific research paper,”¹⁶⁶ and the Park Service need not collect new data for an EIS “unless there is a clear data gap.”¹⁶⁷

At the time that the Park Service issued the Sheltered Wilderness report, the DBOC had no entitlement to lease renewal, and the Department of the Interior had already taken the position that it had no such authority.¹⁶⁸ Nonetheless, Park Service officials no doubt anticipated that nonextension of the DBOC lease would create controversy and, in anticipation of public response, it may have released the report for the purpose of turning the public against continued DBOC operations. In light of the difficult decision it faced, the agency was right to look to objective measures, including scientific study, to fully account for the costs and benefits of allowing DBOC to continue operating in what otherwise would be full wilderness. The problem was that the Park Service used science to shield itself from exposing political judgments that would likely be unpopular in the local community. Had the agency been subtler about its scientific claims, or had key community players not gotten involved, the tactic might have been successful in deflecting political pressure—but at what cost?

VI. The Role of Science in the Secretary’s Decision

Though the Secretary acknowledged the “scientific uncertainty” and “lack of consensus” surrounding the DBOC’s environmental impacts, he stated that the DEIS and FEIS “have informed me with respect to the complexities, subtleties, and uncertainties of this matter and have been helpful to me in making my decision.”¹⁶⁹ Both the DEIS and the FEIS supported the proposition that removal of DBOC would provide long-term beneficial impacts to Drakes Estero.¹⁷⁰ Furthermore, while section 124 would have allowed him to issue a new SUP regardless, it did not require him to, as

164. *Id.* at 10.

165. *Id.* at 37.

166. *Id.* at 24.

167. *Id.* at 10.

168. DOI Memo, *supra* note 8.

169. Salazar decision, *supra* note 9, at 5.

170. *Id.*

section 124 “in no way overrides the intent of Congress as expressed in the 1976 act to establish wilderness at the Estero.”¹⁷¹

Despite the manifold criticism surrounding the Park Service’s allegations of DBOC’s deleterious impacts, my research has revealed nothing that would refute the only scientific claim relied upon in making the decision, which is that DBOC’s removal will have a long-term benefit on the Estero’s natural environment.¹⁷² It is far more difficult to prove that DBOC’s operations are ecologically harmful than it is to claim that its removal will be ecologically beneficial in the long-term. It seems hard to refute as a matter of basic intuition and common sense, given the farm’s heavy shellfish output and the traffic it creates. While the uncertain science has led to a series of prominent reviews by the National Academy of Sciences in 2009 and again in 2012, the Marine Mammal Commission,¹⁷³ the U.S. Geological Survey,¹⁷⁴ and Atkins North America,¹⁷⁵ these reports largely center on matters of methodology and magnitude. They stress the uncertainty of the scientific analyses rather than provide new facts about which all parties can be certain. Borrowing from the field of criminal law, one might say these peer reviews demonstrate that DBOC is “not guilty” of the ecological harm the Park Service had accused them of, but they prove nothing close to DBOC ecological “innocence.”

The trouble is, however, that wilderness is actually a cultural concept rather than an ecological one.¹⁷⁶ The Act’s description of land “untrammeled by man . . . retaining . . . primeval character and influence”¹⁷⁷ reflects a conception of wilderness that is far more sociological than biological—a conviction to protect and preserve those few areas yet untouched by the destructive human hand. From that standpoint, the conversion of Drakes Estero to full wilderness status in 2012 presented a political problem from

171. *Id.* at 6.

172. Salazar decision, *supra* at 9, at 5 (“Although there is scientific uncertainty and a lack of consensus in the record regarding the precise nature and scope of the impacts that DBOC’s operations have on wilderness resources, . . . the DEIS and FEIS support the proposition that the removal of DBOC’s operations in the estero would result in long-term beneficial impacts to the estero’s natural environment.”).

173. MARINE MAMMAL COMMISSION, MARICULTURE AND HARBOR SEALS IN DRAKES ESTERO, CALIFORNIA (Nov. 22, 2011), http://mmc.gov/drakes_estero/welcome.html.

174. U.S. GEOLOGICAL SURVEY, ASSESSMENT OF PHOTOGRAPHS FROM WILDLIFE MONITORING CAMERAS IN DRAKES ESTERO, POINT REYES NATIONAL SEASHORE, CALIFORNIA (Nov. 26, 2012), *available at* <http://pubs.usgs.gov/of/2012/1249/pdf/OFR2012-1249.pdf>.

175. ATKINS REPORT, *supra* note 125.

176. Leshy, *supra* note 1, at 1-2 (describing the origins of today’s wilderness movement).

177. 16 U.S.C. § 1131(c).

the beginning. As biologically important as Drakes Estero may be, it is simply not a place “untrammelled by man.” However rural its landscape, it has not retained its “primeval character and influence.” Worse yet, DBOC enjoyed a great deal of community support and a reputation as a local, even sustainable, food source. The Point Reyes National Seashore was full of pristine locales already, and DBOC does not on first blush appear to be so different from the agricultural operations nearby. The cultural case against DBOC—that is, for full wilderness designation—would have been hard to win, even in the left-leaning community of Point Reyes. It is no surprise then that the Park Service turned to science to justify what would certainly be a politically unpopular decision, even if it considered the decision to be mandated by law.

In some ways, the actions taken by the Park Service can be understood, perhaps even explained, by looking to the larger social and legal forces from which they sprang. The Park Service found itself pressured by the increasing public expectation that sound science ought to be the major driver of regulatory decisions.¹⁷⁸ The use of science in natural resource management ensures that the most precise and accurate information available is factored into decisions made by agencies in furtherance of societal goals.¹⁷⁹ Not only does it assist decision-makers, but it also constrains them in limiting the exercise of discretion and guarding against anti-regulatory influences and interests.¹⁸⁰ In other words, there are good reasons to insist that agencies make discretionary decisions in accordance with, or at least not in contravention of, clearly established scientific data. But even if the Park Service properly felt it was accountable to the public for the scientific validity of its decisions, the manner in which it chose to meet that obligation not only threatened public confidence in the Park Service, but also in agency decision-making more broadly.

Opponents of the lease renewal have argued that the critique of junk science is merely a red herring in the quest for wilderness protection. In their estimation, Lunny and his supporters have cleverly inflated scientific uncertainties and exploited public perception in order to achieve an outcome that would otherwise have been impossible under the Wilderness Act as it has been applied by the Park Service and interpreted by the courts. The American public, acting through Congress, chose to create a national wilderness preservation system at the expense of local commercial interests, and it further chose to designate Drakes Bay as a place worthy of such

178. Holly Doremus, *Using Science in a Political World: The Importance of Transparency in Natural Resource Regulation*, in *RESCUING SCIENCE FROM POLITICS* 158 (Wendy Wagner & Rena Steinzer eds., 2006).

179. Holly Doremus & A. Dan Tarlock, *Science, Judgment, and Controversy in Natural Resource Regulation*, 26 *PUB. LAND & RESOURCES L. REV.* 1, 3 (2005).

180. *Id.* at 4.

protection. The terms of the statute and the accompanying legislative reports reveal that it intended Drakes Estero to receive official wilderness status as soon as the 40-year lease expired, with very little room for agency discretion. Both the Wilderness Act and the Point Reyes National Seashore wilderness designation were borne out of the democratic process, and after such intensive national deliberation, the goals reflected therein *should* be treated as controlling.

Though these arguments are very compelling, it is nonetheless important to recognize that the end does not justify the means. In fact, the means threaten the very end wilderness proponents seek to protect. In this case, the “means” bear on the basic functionality of our representative government—the legitimacy of our political institutions, the trustworthiness of federal officials, and the willingness of community members to engage in the political process. If land management agencies are permitted to use such tactics when we happen to approve of their overarching objective, there is nothing to protect against the same kind of tactics from being used in furtherance of an environmentally deleterious one. In some ways, it is a good thing that the Park Service’s scientific methods were so lackluster because it has provided an opportunity to address the underlying problem of secretive data gathering and improper public presentation. Without such verifiably false scientific allegations, the harm would certainly manifest itself later when those same problematic practices were employed again with an inevitably less fortuitous result. Thus, the Drakes Bay controversy provides what might be a rare opportunity to critique the agency’s decision-making *process* rather than its ultimate outcome.

It is no coincidence that many American conservation heroes have historically been trained in the sciences.¹⁸¹ It is often thought, or hoped, that requiring agencies to base their regulatory decisions on science will tone down intense conflicts over the allocation of scarce natural resources.¹⁸² But as this case illustrates, it also has the potential to do just the opposite. When scientific evidence is improperly collected and reported in an effort to support agency decision-making as it was here, what is at stake is not just passing public outrage, but lingering distrust. Because science is often considered the arbiter of truth in the modern era, its misuse has profoundly detrimental impacts. If we no longer trust science as a check on technically complex agency decision-making, what else do we have?

The public distrust of the Park Service continues to manifest itself long after the original Sheltered Wilderness report and the cover-up that followed. What is significant about the most recent Inspector General report

181. For example, Rachel Carson, Paul Ehrlich, Aldo Leopold, Thomas Lovejoy, Gifford Pinchot, George Perkins Marsh, John Muir, Norman Myers, Barry Commoner, and Edward O. Wilson.

182. Doremus & Tarlock, *supra* note 179, at 5.

is that it confirms the real-world consequences of having lost the public's confidence. When science fails to provide these reassurances, we are left with internal watchdogs whose investigations necessarily occur behind closed doors. There is no "peer review," and thus, the value of their conclusions is limited by the trust we place in them. Although the Office of the Inspector General is an entity distinct from the Park Service, whose purpose is to provide an independent voice,¹⁸³ they are both housed within the Department of the Interior; therefore distrust of the former bleeds into the latter. Thus, everyone suffers when agencies use science inappropriately in their decision-making—the public is left with no meaningful mechanism for reassurance and the government is left with no meaningful way to provide it. The public will continue making allegations of misconduct, and the government in turn will spend precious tax dollars refuting them. The problem is not just abstract or academic.

Wilderness management is fundamentally different from most other legal mechanisms for natural resource protection. Here, the wilderness management directives are unusually clear, and the law upon which it is based overwhelmingly favors preservation over commerce.¹⁸⁴ The Wilderness Act is unlike other environmental statutes in that it does not place much emphasis on precision and accuracy. Rather than providing for technical formulations, the Act is poetic in language and broad in application. The statute includes far-reaching prohibitions on commercial enterprise with limited exceptions made to accommodate historical use and allow for the basic necessities of wilderness management,¹⁸⁵ to the extent necessary for "realizing the recreational or other wilderness purposes of the area."¹⁸⁶ Regardless of how one sees DBOC—at best, the provider of a sustainable food source, a historical relic of the area's maricultural traditions, even an integral part of visitors' recreational enjoyment—it does not fall into the Act's allowable exceptions. Although Congress did not explicitly dictate in the Act that these prohibitions apply equally to potential wilderness areas, it did clearly express such intent in its accompanying reports. Like all issues involving congressional intent, there may be some room for leeway, but in the long run, DBOC would have to go.

There might have been good reasons to extend the lease, but an additional ten years would only have prolonged the acrimonious debate. The scientific basis of the Secretary's decision, as well as the administrative

183. See Inspector General Act of 1978, 5 U.S.C. § 6 (a).

184. See *Wilderness Soc'y v. U.S. Fish & Wildlife Service*, 353 F.3d 1051, 162 (9th Cir. 2003) (en banc) (rejecting the idea that the Wilderness Act intended to strike a balance between interests).

185. 16 U.S.C. § 1133(d)(5) (allowing for commerce necessary to control disease, fire, and insects).

186. *Id.* at § 1133(c)(5).

actions that preceded it, remain the source of great controversy. No doubt more scientific reports and expert testimony will be generated in the course of the litigation following it. But science will not provide the definitive answer to the case, nor will it in the wilderness management decisions of the future. Rather, judicial precedent and national wilderness policy will circumscribe these decisions, so long as the statutory scheme and agency management policies remain as they are. In the meantime, our political decision-makers must use careful analysis, subject to peer review, to *inform* value-laden decisions, not *disguise* them. Thus, the Secretary's decision is to be applauded insofar as it openly accounted for the difficult political judgments made in reaching it. And for those who would like more flexibility in wilderness management to allow local food producers on such lands, we must look to our congressional representatives to properly drive that change.

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