# Keeping Track of Conservation

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*Throughout the world, governments require land protection in exchange for development permits. Unfortunately, oftentimes scant attention has been paid to these land protection programs after development. Agencies and permit applicants agree on mitigation rules, but there appears to be little follow-up. When we do not know where conservation is occurring and cannot determine the rules of mitigation projects, the likelihood that they will be successful or enforced diminishes. I journeyed to California in search of answers by tracing four mitigation plans associated with the Federal Endangered Species Act. While I anticipated some difficulties, the tale is more alarming than expected. The government entities involved struggled to locate and understand the permits themselves, let alone the details of the compensatory mitigation projects. A common land protection tool in this context is the conservation easement. These exacted conservation easements exchange public goods for private gain. Attempting to locate and understand these mitigation easements revealed pervasive problems with tracking mitigation in the United States. The federal agencies had trouble finding and understanding records. The county offices charged with recording property restrictions often had inadequate records of land use restrictions. These challenges exacerbate the accountability and enforceability concerns already associated with mitigation programs. Such uncertainty calls into question this method of environmental conservation. This Article highlights pressing concerns with our current mitigation paradigm and calls for reform of federal programs through promulgating new regulations and updating agency guidance. Furthermore, this project calls upon citizens and researchers to turn their eyes to mitigation programs generally and to question whether such programs truly compensate for the environmental harms they facilitate.*

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## INTRODUCTION

Imagine this:

Every spring, you and your kids spend your weekends on small trails in a nearby marsh. The property is not particularly breathtaking, but it is a small piece of local nature where you catch butterflies, watch for birds, and teach your kids about frogs and salamanders. It's a place where you all can put on your Wellies and go hunting for bugs. Important to you personally, this land is also valued by many unwittingly as providing a variety of ecosystem services, as well as habitat to a few endangered species. One day, you notice surveyors marking the land. Soon thereafter, construction of a new subdivision begins. You learn that to obtain the right to build this subdivision, the developer had to apply for and obtain several federal, state, and local permits. The local paper discusses the development and mentions that other lands will be protected in exchange for the loss of this habitat.

Curious, you want to see what the developers are going to do. What did they have to do in exchange for the right to destroy this habitat? You want to

know what new marsh the birds and butterflies will travel to. You want to figure out what the local paper meant when it referred to newly protected areas. What did your community gain when it sacrificed this land to development? What will prevent the newly protected land from simply turning into a subdivision next year? If you came back to the agreement ten years from now, would you be able to answer these same questions? Would you be able to locate the protected parcels and evaluate plant and animal survival?

This Article seeks to make such an inquiry. Interested to find out what benefits the public gets in exchange for rights to develop endangered species habitat, I tracked the mitigation measures associated with four endangered species incidental take permits in California. I initially thought that the property restrictions might be challenging to discern. I soon learned that the problem was more serious than that, and that the public's concern with conservation projects should be heightened. Indeed, in some cases it was challenging to obtain even basic information about a project's permit, let alone determine the status of mitigation. Every case study below was complicated by either an inability to obtain needed information or concerns with mitigation format, sometimes both. This research demonstrates a real need to rethink the existing habitat conservation model and challenge our public institutions to be more accountable for their permitting programs. This Article demonstrates that the time has come for (1) a Government Accountability Office investigation into endangered species mitigation projects, specifically examining the use of conservation easements to meet mitigation requirements; (2) agency regulations governing the use of conservation easements in mitigation plans; and (3) agency guidance that does not prioritize preservation over other mitigation measures. These three steps would improve our mitigation efforts. Ultimately, this research should cause us to question an overarching approach to conservation that hides the results of conservation efforts and neglects to follow up with mitigation programs once established.

## I. HABITAT CONSERVATION PLANNING

To embark on a journey to track mitigation projects, one needs some basic understanding of the federal habitat conservation planning process. Therefore, this Part begins by discussing the Federal Endangered Species Act (ESA or the Act) and its associated mitigation programs. The following Parts outline the case study method, discuss the case studies themselves, and highlight the concerns associated with the mitigation methods used (particularly with the exacted conservation easements that appear to provide the core of many habitat mitigation programs). This Part describes the ESA generally and the permitting process of the ESA in detail. Note that the ESA is just one law requiring mitigation of environmental harms; we could engage in a similar inquiry of the

Clean Water Act,[1] the California Environmental Quality Act,[2] the California Coastal Act,[3] or any number of state and local laws covering development.[4] Thus, the ESA and the case studies in this Article are but examples of a larger phenomenon in environmental law where difficulties in understanding and tracking mitigation are likely to hamper fulfillment of conservation goals.

### *A. Basics of the Endangered Species Act*

In 1973, Congress passed the ESA.[5] The Act establishes a program to protect threatened and endangered species and the ecosystems upon which they depend.[6] Federal protection for a species commences once the Department of the Interior[7] lists the species in the Federal Register as either threatened or endangered.[8] Alongside listing a species, the Act requires designation of critical habitat—habitat that is "essential to the conservation of the species."[9]

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1. Section 404 of the Clean Water Act governs wetland protection and requires mitigation for any conversion of wetlands in keeping with the federal government's no net loss of wetlands policy. Oliver A. Houck, *More Net Loss of Wetlands: The Army-EPA Memorandum of Agreement on Mitigation under the § 404 Program*, 20 Envtl. L. Rep. (Envtl. Law Inst.) 10,212, 10,212 (1990); *see also* Jessica Owley, *Preservation Is a Flawed Mitigation Strategy*, 42 ECOLOGY L. CURRENTS 101 (2015), *available at* http://elq.typepad.com/files/preservation-is-a-flawed-mitigation-strategy-new.pdf.

2. CAL. PUB. RES. CODE §§ 21002, 21081.5 (West 2014); CAL. CODE REGS. tit. 14, §§ 15126.4, 15370 (2015); *see* Robert A. Johnston & Wade S. McCartney, *Local Government Implementation of Mitigation Requirements under the California Environmental Quality Act*, 11 ENVTL. IMPACT ASSESSMENT REV. 53, 53 (1991).

3. CAL. PUB. RES. CODE §§ 30000–30900 (West 2014); *see, e.g.*, *id.* §§ 30607.1, 30171.5, 30233(a); *see also* Margaret Seluk Race & Donna R. Christie, *Coastal Zone Development: Mitigation, Marsh Creation, and Decision-Making*, 6 ENVTL. MGMT. 317, 318 (1982).

4. *See generally* David R. Godschalk et al., *Integrating Hazard Mitigation and Local Land Use Planning*, *in* COOPERATING WITH NATURE: CONFRONTING NATURAL HAZARDS WITH LAND-USE PLANNING 85 (Raymond J. Burby ed., 1998).

5. 16 U.S.C. § 1531 (2012). The Senate approved the ESA by a vote of 92-0. *Endangered Species Act*, BALLOTPEDIA, http://ballotpedia.org/Endangered_Species_Act (last visited Feb. 8, 2015). The House then approved a slightly altered version 355-4. *Id.* President Nixon signed the bill into law on December 28, 1973. Endangered Species Act, Pub. L. No. 93-205, 87 Stat. 844 (1973).

6. 16 U.S.C. § 1531(b); *see also* Robert L. Fischman, *Endangered Species Conservation: What Should We Expect of Federal Agencies?*, 13 PUB. LAND L. REV. 1 (1992) (discussing how the ESA operates and what motivates government agencies at various stages of ESA compliance and implementation).

7. The Act is most commonly carried out by the Department of Interior via the U.S. Fish and Wildlife Service (FWS or the Service). For those species that spend at least part of their life in the ocean, the Department of Commerce via the National Marine Fisheries Service (NMFS) carries out the obligations of the Act. This Article tends to refer to the Department of Interior and FWS because they carry out the bulk of endangered species protection and are the entities involved in the case studies discussed below.

8. 16 U.S.C. § 1533; *see also* Holly Doremus & Joel E. Pagel, *Why Listing May Be Forever: Perspectives on Delisting under the U.S. Endangered Species Act*, 15 CONSERVATION BIOLOGY 1258 (2001) (describing the listing process and discussing the implications of the relatively few delisting decisions).

9. 16 U.S.C. § 1533(a)(3)(A)(i); *see also* Dave Owen, *Critical Habitat and the Challenge of Regulating Small Harms*, 64 FLA. L. REV. 141 (2012); J.B. Ruhl, *Regional Habitat Conservation Planning under the Endangered Species Act: Pushing the Legal and Practical Limits of Species Protection*, 44 SW. L.J. 1393, 1396–97 (1991). While economic considerations cannot be a basis for listing decisions (which must be made solely on the basis of the best scientific and commercial data

Section 7 of the ESA requires federal agencies to ensure that their actions will not put any listed species in "jeopardy."[10] The ESA itself does not define jeopardy, and it can be a difficult concept to assess.[11] The U.S. Fish & Wildlife Service (FWS or the Service), the agency that has chief responsibility for carrying out the ESA, defines jeopardy as occurring "when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced."[12] Jeopardy considers a species as a whole, not impacts on individual members of the species.[13]

In carrying out section 7, federal agencies must consult with the FWS[14] to assess whether any intended major activities will either jeopardize the continued existence of a species or result in adverse modification of designated critical habitat.[15] The ESA itself offers little guidance regarding consultation, stating only that the Secretary of the Interior must provide "a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat."[16] To provide clarity in the section 7 consultation process, the Service issued nonbinding agency guidance in the form of the Section 7 Handbook.[17]

In the first step of the consultation process, the action agency (that is, the agency carrying out or funding an activity that may affect listed species) checks with the Service to determine whether a listed species may be present in the

available), the Service can consider economics in designating critical habitat. Andrew J. Plantinga et al., *Critical Habitat for Threatened and Endangered Species: How Should the Economic Costs be Evaluated?*, 134 J. ENVTL. MGMT. 127, 127 (2014). Although the ESA requires designation of critical habitat concurrently with the listing of species, this rarely occurs; critical habitat designations generally follow at a much later date, if at all. *See* Kalyani Robbins, *Recovery of an Endangered Provision: Untangling and Reviving Critical Habitat under the Endangered Species Act*, 58 BUFF. L. REV. 1095, 1107 (2010).

10. 16 U.S.C. § 1536(a)(2); *see also* Dave Owen, *Sea-Level Rise and the Endangered Species Act*, 73 LA. L. REV. 119, 125–26 (2012) (describing the no-jeopardy requirements of the ESA).

11. Ruhl, *supra* note 9, at 1401. *See generally* Daniel J. Rohlf, *Jeopardy under the Endangered Species Act: Playing a Game Protected Species Can't Win*, 41 WASHBURN L.J. 114 (2001) (describing the challenge of understanding jeopardy and implementing plans to protect species based on that standard).

12. *Section 7 Consultation*, U.S. FISH & WILDLIFE SERV. (June 30, 2014), http://www.fws.gov/Midwest/endangered/section7/section7.html; *see also* U.S. FISH & WILDLIFE SERV. & NAT'L MARINE FISHERIES SERV., ENDANGERED SPECIES CONSULTATION HANDBOOK: PROCEDURES FOR CONDUCTING CONSULTATION AND CONFERENCE ACTIVITIES UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT 4-25 to 4-38 (1998) [hereinafter SECTION 7 HANDBOOK] (describing the Service's jeopardy analysis process).

13. Rohlf, *supra* note 11, at 139.

14. Or, for oceanic species, federal agencies must consult with NMFS.

15. 16 U.S.C. § 1536(a)(2).

16. § 1536(b)(3)(A).

17. SECTION 7 HANDBOOK, *supra* note 12, at 4-37 to 4-39 (describing the Service's jeopardy analysis process).

project area.[18] If so, the action agency provides the Service with a biological assessment of the impact of the proposed action.[19] Based on that assessment, the Service issues a biological opinion.[20] This biological opinion is the written secretarial statement required by statute.[21] If, in its biological opinion, the Service finds that the agency action is likely to jeopardize the continued existence of a listed species or adversely modify critical habitat, the Service must suggest "reasonable and prudent alternatives" that could be implemented to avoid such an outcome.[22]

In making an assessment regarding the jeopardy or adverse modification of critical habitat (often called a section 7(a)(2) assessment or a jeopardy assessment), the Secretary can reach three conclusions. First, the Secretary could find that the action is not likely to jeopardize a species or adversely modify critical habitat. We can call this a "no jeopardy opinion." In such cases, the agency is free to pursue action without section 7 restrictions and FWS oversight.[23]

Second, the Secretary could find that the action is likely to either jeopardize the continued existence of a species or adversely modify critical habitat, but there are reasonable and prudent alternatives that can minimize or mitigate the impact to a level at which the project will not jeopardize the species or adversely modify critical habitat. The Service and commentators tend to call these "no jeopardy opinions,"[24] but a better label would be a "jeopardy opinion with reasonable and prudent alternatives."[25] In such cases,

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18. § 1536(a)(2); Oliver A. Houck, *The 'Institutionalization of Caution' under § 7 of the Endangered Species Act: What to Do When You Don't Know*, 12 Envtl. L. Rep. (Envtl. Law Inst.) 15,001, 15,002 (1982).

19. § 1536(i)(1).

20. § 1536(b)(3).

21. § 1536(b)(3)(A).

22. *Id.*; Hannah Gosnell, *Section 7 of the Endangered Species Act and the Art of Compromise: The Evolution of a Reasonable and Prudent Alternative for the Animas-La Plata Project*, 41 NAT. RESOURCES J. 561, 563 (2001); Ruhl, *supra* note 9, at 1398.

23. For a time, it was standard practice for the Service to issue incidental take statements for all no jeopardy opinions, even if take was not likely to occur. The Ninth Circuit pointed out that this policy was not logical and that incidental take statements belonged to the realm of situations with likely (or at least potential) incidental takes. Ariz. Cattle Growers' Ass'n v. U.S. Fish & Wildlife Serv., 273 F.3d 1229, 1243 (9th Cir. 2001) (holding that an incidental take statement is only required where there is "a reasonable basis to conclude that a take will occur as a result of the anticipated lawful activity"). As with everyone within the jurisdiction of the United States, the action agency will remain bound by the take prohibition of section 9. Ruhl, *supra* note 9, at 1393.

24. *See, e.g.*, Oceana, Inc. v. Evans, 384 F. Supp. 2d 203, 211 (D.D.C. 2005) (describing a "no jeopardy" opinion that was accompanied by an incidental take statement for loggerhead turtles). *But see* Biodiversity Legal Found. v. Norton, 285 F. Supp. 2d 1, 15 (D.D.C. 2003) (describing a biological opinion with reasonable and prudent alternatives as a "jeopardy" opinion).

25. While this may seem like pure semantics, these labels can lead to miscommunications. In theory, a "no jeopardy opinion" should be one for which there is no need for reasonable and prudent alternatives. Yet, the Section 7 Handbook explains that the Service should issue incidental take statements whenever it concludes that the agency action is likely to result in jeopardy or adverse modification. SECTION 7 HANDBOOK, *supra* note 12, ch. 4. Thus, a jeopardy opinion in agency parlance appears to be one where there are no reasonable and prudent alternatives that could protect species. This

the Secretary must issue an incidental take statement.[26] This written statement determines the impact of any incidental taking on the species, specifies the reasonable and prudent alternatives that the Secretary considers appropriate to minimize the impact, and sets forth the terms and conditions with which the federal agency must comply.[27]

Third, the Secretary could find that the action will either jeopardize the continued existence of a listed species or adversely modify critical habitat and there are no reasonable and prudent alternatives that will remove that possibility. We can call this a jeopardy opinion. Where the Secretary makes a jeopardy finding without offering any reasonable and prudent alternatives, the action agency should not move forward with its proposed action. However, the action agency has not actually violated the ESA until its actions result in jeopardy, adverse modification, or take.[28] An agency acting in defiance of a jeopardy opinion does so at its own peril and risks violating the law.[29] Where an agency acts in accordance with an incidental take statement outlining reasonable and prudent alternatives, it is protected from liability under section 9 (described below).[30] The FWS rarely issues jeopardy opinions.[31]

The ESA instructs that all agencies involved "use the best scientific and commercial data available" in performing section 7(a)(2) consultation, but it does not provide any other guidance for completing biological opinions or offering reasonable and prudent alternatives.[32] This differs greatly from section 4, which gives the Secretary detailed instructions on making listing decisions for species. For instance, section 4 requires that the Secretary base his decision "solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species, and after taking into

small conflict over terminology has created confusion in multiple conversations I have had with scholars, attorneys, and agency officials.

26. 16 U.S.C. § 1536(b)(4); Ruhl, *supra* note 9, at 1399.

27. § 1536(b)(4)(C)(i)–(iv); *see* Katherine Renshaw, *Leaving the Fox to Guard the Henhouse: Bringing Accountability to Consultation under the Endangered Species Act*, 32 COLUM. J. ENVTL. L. 161, 180–81 (2007).

28. Renshaw, *supra* note 27, at 180 n.78.

29. Bennett v. Spear, 520 U.S. 154, 170 (1997) ("The action agency is technically free to disregard the Biological Opinion and proceed with its proposed action, but it does so at its own peril . . . , for 'any person' who knowingly 'takes' [a listed] species is subject to substantial civil and criminal penalties, including imprisonment.").

30. SECTION 7 HANDBOOK, *supra* note 12, at 4-45 ("[An incidental take statement] provides an exemption from the taking prohibitions of [s]ection 9 only when the agency and/or applicant demonstrate clear compliance with the implementing terms and conditions.").

31. LAWRENCE R. LIEBESMAN, FEDERAL AGENCY CONSULTATION AND RECOVERY PLANNING UNDER THE ENDANGERED SPECIES ACT—A SIGNIFICANT FACTOR IN THE CWA SECTION 404 PERMIT PROGRAM 663 (2008); Robert L. Fischman & Jaelith Hall-Rivera, *A Lesson for Conservation from Pollution Control Law: Cooperative Federalism for Recovery under the Endangered Species Act*, 27 COLUM. J. ENVTL. L. 45, 75 (2002); Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1, 22 (1997); Lawrence R. Liebesman & Rafe Petersen, *Federal Agency Conservation Obligations and Consultation under Section 7 of the ESA*, 33 Envtl. L. Rep. (Envtl. Law Inst.) 10,939, 10,948 (2003); Rohlf, *supra* note 11, at 151.

32. 16 U.S.C. § 1536(a)(2); Conner v. Burford, 848 F.2d 1441, 1454 (9th Cir. 2005) (holding that the Service failed to use the best available science when reaching its jeopardy determination).

account those efforts, if any, being made by any State or foreign nation, . . . to protect such species."[33] The lack of guidance on consultation is particularly troubling because the ESA also fails to define jeopardy or discuss standards for assessing adverse modification.[34] This vague language has led commentators to conclude that the Secretary has a lot of discretion in section 7 determinations.[35]

While section 7 imposes relatively stringent limits on agency action (at least in theory), it is the take prohibition of section 9 that gets the most attention. Section 9 prohibits any person from "taking" any listed wildlife or fish species.[36] Under the Act, "take" includes "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect."[37] Although "harass" is not defined by statute, regulations define harass as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering."[38] Harm is further defined in agency regulations as "an act which actually kills or injures wildlife," potentially including "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."[39] This take prohibition applies to everyone and includes actions on private land, while section 7's limitations only apply to federal agencies.[40] However, section 7 reaches further than one might think at first glance because it encompasses federal actions including decisions to issue permits, rights-of-way, and other government decisions that affect private development projects.[41] Together,

33. § 1533(b)(1)(A). Section 4 also provides the Secretary with a list of factors to consider when making the listing determination. § 1533(a)(1).

34. *See* Greenpeace Action v. Franklin, 14 F.3d 1324, 1337 (9th Cir. 2011) (holding that NMFS could issue a "no jeopardy opinion" and an incidental take statement for Steller sea lions even where there were high levels of scientific uncertainty).

35. *See, e.g.*, Renshaw, *supra* note 27, at 170, 174.

36. § 1538(a)(1)(B); *see* Michael C. Blumm & George Kimbrell, *Flies, Spiders, Toads, Wolves, and the Constitutionality of the Endangered Species Act's Take Provision*, 34 ENVTL. L. 309, 326 (2004).

37. § 1532(19); *see also* Babbitt v. Sweet Home Chapter, 515 U.S. 687, 690 (1995).

38. 50 C.F.R. § 17.3 (2014); *see also* Alicia M. Griffin, Note, *Beyond "Harm": Abandoning the Actual Injury Standard for Certain Prohibited Takings under the Endangered Species Act by Giving Independent Meaning to "Harassment,"* 52 VAND. L. REV. 1831, 1860 (1999) (discussing definitions of harass in sections 7 and 9).

39. 50 C.F.R. § 17.3. *See generally* Nancy Greif, *Is Habitat Modification That Kills or Injures Endangered Wildlife Prohibited under the Endangered Species Act?*, 35 NAT. RESOURCES J. 189 (1995) (describing an earlier version of the regulation and the then-pending *Babbitt* case).

40. Karin P. Sheldon, *Habitat Conservation Planning: Addressing the Achilles Heel of the Endangered Species Act*, 6 N.Y.U. ENVTL. L.J. 279, 288 (1998).

41. *See* Rohlf, *supra* note 11, at 125; *see also* Amy Wilson Morris & Jessica Owley, *Mitigating the Impacts of the Renewable Energy Gold Rush*, 15 MINN. J.L. SCI. & TECH. 293, 318–19 (2014) (explaining that the Bureau of Land Management must comply with section 7 consultation requirements when issuing rights-of-way for transmission lines and renewable energy facilities on federal lands).

sections 7 and 9 affect many actions that involve land conversion or development.[42]

In 1982, Congress felt pressure from developers to amend the ESA.[43] Developers and landowners complained that section 9's complete prohibition on take, where take includes habitat modification, was onerous.[44] Congress sought to provide partial relief from the section 9 ban on habitat modification.[45] Acknowledging a need to balance economic pressures and species preservation, Congress designed a framework to help foster "creative partnerships" between the public and private sectors and among state, municipal, and federal agencies.[46] The amendments added section 10 to the Act, authorizing the Secretaries of Commerce and the Interior to issue incidental take permits.[47] These permits allow landowners to develop their land even when that land serves as endangered species habitat as long as the taking of individual listed species is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."[48] To obtain an incidental take permit, applicants must submit a "comprehensive plan,"[49] known as a Habitat Conservation Plan (HCP).[50] An HCP must assess the impact on listed species of the proposed activity,[51] analyze alternatives to the proposed activity,[52] identify steps to be

42. *See* TIMOTHY BEATLEY, HABITAT CONSERVATION PLANNING: ENDANGERED SPECIES AND URBAN GROWTH 15–18 (1994); Craig Anthony Arnold, *Conserving Habitats and Building Habitats: The Emerging Impact of the Endangered Species Act on Land Use Development*, 10 STAN. ENVTL. L.J. 1, 20 (1991); Houck, *supra* note 18, at 15,001 ("[I]t is . . . difficult to identify a single, major development in the United States—no matter whether privately financed—which is not potentially subject to [section 7's] reach."); Robert Innes et al., *Takings, Compensation and Endangered Species Protection on Private Lands*, 12 J. ECON. PERSP. 35, 36 (1998); J.B. Ruhl, *The Endangered Species Act and Private Property: A Matter of Timing and Location*, 8 CORNELL J.L. & PUB. POL'Y 37, 47 (1998). *See generally* Albert Gidari, *The Endangered Species Act: The Impact of Section 9 on Private Landowners*, 24 ENVTL. L. 419 (1994).

43. Endangered Species Act Amendments of 1982, Pub. L. No. 97-304, 96 Stat. 1411 (1982); *see* Federico M. Cheever, *An Introduction to the Prohibition against Takings in Section 9 of the Endangered Species Act of 1973: Learning to Live with a Powerful Species Preservation Law*, 62 U. COLO. L. REV. 109, 176 (1991); Jessica Owley, *Exacted Conservation Easements: The Hard Case of Endangered Species Protection*, 19 J. ENVTL. L. & LITIG. 293, 320 (2004); *see also* Thomas F. Darin, *Designating Critical Habitat under the Endangered Species Act: Habitat Protection Versus Agency Discretion*, 24 HARV. ENVTL. L. REV. 209, 222 (2000) (providing a detailed legislative history of the ESA with respect to critical habitat provisions).

44. *See generally* Gidari, *supra* note 42 (arguing that "harm" should not be interpreted to include habitat destruction on private lands).

45. *See* H.R. REP. No. 97-835, at 29 (1982); Robert D. Thornton, *Searching for Consensus and Predictability: Habitat Conservation Planning under the Endangered Species Act of 1973*, 21 ENVTL. L. 605, 606 (1991).

46. H.R. REP. No. 97-835, at 30.

47. 16 U.S.C. § 1539(a)(1)(B) (2012).

48. § 1539(a)(1)(B).

49. § 1539(a)(2)(A).

50. Thornton, *supra* note 45, at 607.

51. § 1539(a)(2)(A)(i).

52. § 1539(a)(2)(A)(iii).

taken to minimize and mitigate the impact,[53] and describe the funding available to implement such steps.[54]

Essentially, an HCP details what an applicant must do to protect listed species that might be impacted by the proposed activities. For example, a developer might hope to build a hospital on land that she then learns is occupied by a listed insect. The presence of the insect does not need to prevent her hospital project. Instead, she creates a plan to avoid and minimize any impact to the insect during the construction and operation of the hospital. To the extent that there are unavoidable impacts to the species that rise to the level of section 9 violations, the developer creates a plan to mitigate for the impact. This plan, the HCP, must also contain other elements, such as confirming funding. Even where HCPs cover one species and one project, they are still often long and complicated documents. As HCPs expand to include multiple projects, jurisdictions, and listed species, the complication (and the complexity of mitigation requirements) increases. The case studies presented below give a fuller picture of how HCPs work and what type of mitigation they entail. Where the developer complies with the HCP, she can be protected from liability when anticipated takes occur.[55]

Although section 10 was added in 1982, section 10 permits were not immediately embraced. Both the FWS and the National Marine Fisheries Service (NMFS)[56] were slow to promulgate implementing regulations,[57] and

53. § 1539(a)(2)(A)(ii).

54. *Id.* Additionally, the Secretary may require any other measures she deems necessary or appropriate for purposes of the plan. § 1539(a)(2)(B).

55. This was strengthened in 1996 with the addition of the "No Surprises" policy that protects landowners from prosecution under section 9 as long as they are in compliance with their section 10 permits. Spirit of the Sage Council v. Norton, 411 F.3d 225, 229 (D.D.C. 2005). This remains true even through changes in the status of species on the property; moreover, the No Surprises policy clarifies that landowners complying with HCPs (and the associated section 10 incidental take permits) will never be required to "provide a greater financial commitment or accept additional land use restrictions on property available for economic use or development." *Notice of Availability*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/endangered/laws-policies/policy-final-hcp-handbook.html (last visited Feb. 8, 2015); *see also* U.S. FISH & WILDLIFE SERV. & NAT'L MARINE FISHERIES SERV., HABITAT CONSERVATION PLAN HANDBOOK ch. 3 (1996) [hereinafter HCP HANDBOOK] (discussing the No Surprises policy). HCPs are supposed to consider likely or projected changes but need not incorporate unforeseen changes and will not be subject to additional mitigation requirements when unforeseen circumstances occur. *See* Holly Doremus, *The Endangered Species Act: Static Law Meets Dynamic World*, 32 WASH. U. J.L. & POL'Y 175, 211–12 (2010); J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 B.U. L. REV. 1, 50 (2008).

56. Officially renamed the National Oceanic and Atmospheric Administration Fisheries, but still commonly called NMFS. *Our Mission*, NOAA FISHERIES, http://www.fisheries.noaa.gov/aboutus/our_mission.html (last visited Jan. 10, 2015).

57. The FWS published its final regulations implementing the section 10 permit program in the Federal Register on September 30, 1985. Endangered and Threatened Wildlife and Plants; Prohibitions and Permits, 50 Fed. Reg. 39,681, 39,691 (Sept. 30, 1985) (to be codified at 50 C.F.R. pts. 13, 17). NMFS published final regulations for the program on May 18, 1990. Endangered Fish or Wildlife; Permits for Incidental Taking of Endangered Marine Species, 55 Fed. Reg. 20,603 (May 18, 1990) (to be codified at 50 C.F.R. pt. 222). Even after the Services issued their regulations, there was uncertainty about how to proceed. This led to the publication of the HCP Handbook in 1996.

only three HCPs were adopted between 1982 and 1989.[58] By the time the amendment was ten years old, the Services had issued only fourteen permits.[59] Incidental take permits were not used extensively until the Clinton administration, when their use presented an opportunity to stave off attacks on the ESA by hostile Republicans in the U.S. House of Representatives.[60] Within four years, the Services issued over a hundred permits.[61] Today, there are nearly 700 HCPs.[62] HCPs are growing in coverage area as well as in number.[63] In many cases, they are evolving from a process focused on single development projects to a broad-based landscape-level planning tool.[64] While larger-scale HCPs are not part of the case studies examined below, they demonstrate the potential for HCPs to be part of combined efforts to both develop and conserve important ecological resources.[65]

To clarify HCP requirements, in 1996, the Services published the HCP Handbook, a nonbinding agency guidance document.[66] HCPs and accompanying permit requirements are complex, and the statutory and

58. JOHN COPELAND NAGLE & J.B. RUHL, THE LAW OF BIODIVERSITY AND ECOSYSTEM MANAGEMENT 286 (2002). The first HCP was litigated in Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976 (9th Cir. 1985).

59. HCP HANDBOOK, *supra* note 55, at i.

60. Karkkainen, *supra* note 31, at 59; Press Release, U.S. Fish & Wildlife Serv., Habitat Conservation Planning Is Streamlined under New Guidelines Announced by Two Agencies (Dec. 3, 1996), *available at* http://www.fws.gov/news/Historic/NewsReleases/1996/19961203.pdf; *see also* Shi-Ling Hsu, *The Potential and the Pitfalls of Habitat Conservation Planning under the Endangered Species Act*, 29 Envtl. L. Rep. (Envtl. Law Inst.) 10,592, 10,594 (1999); Patrick Parenteau, *Rearranging the Deck Chairs: Endangered Species Act Reforms in an Era of Mass Extinction*, 22 WM. & MARY ENVTL. L. & POL'Y REV. 227, 284–86 (1998).

61. *Endangered Species Act Document Library*, U.S. FISH & WILDLIFE SERV., http://www.fws.gov/endangered/esa-library/index.html#hcp (last visited Feb. 8, 2015) (listing all HCPs, Safe Harbors Plans, and Candidate Conservation Agreements).

62. *Id.* As of October 12, 2014, the Services had approved 695 HCPs and issued 805 incidental take permits. *Id.*

63. U.S. FISH & WILDLIFE SERV., HABITAT CONSERVATION PLANS: SECTION 10 OF THE ENDANGERED SPECIES ACT (2005), *available at* http://www.fws.gov/endangered/esa-library/pdf/HCP_Incidental_Take.pdf ("Most of the earlier HCPs were for planning areas of less than 1,000 acres; now 10 exceed 500,000 acres, with several larger than 1,000,000 acres."). The Services have not updated this information in nearly ten years, so it is hard to track the changing acreage. *See also* Notice of Availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process, 65 Fed. Reg. 35,248 (June 1, 2000) (explaining that many HCPs are increasing in scope even though most of them are smaller than 1000 acres).

64. HCP HANDBOOK, *supra* note 55, at i. FWS endorses large, community-wide HCPs because, among other reasons, they spread the burden associated with the HCP permit application process. *Id.*

65. *See also* Christian Langpap & Joe Kerkvliet, *Endangered Species Conservation on Private Land: Addressing the Effectiveness of Habitat Conservation Plans*, 64 J. ENVTL. ECON. & MGMT. 1, 2 (2012) (finding that HCPs that cover larger areas have recovery benefits but unable to determine whether adding species to a multispecies plan has additional benefits); Matthew E. Rahn et al., *Species Coverage in Multispecies Habitat Conservation Plans: Where's the Science?*, 56 BIOSCIENCE 613 (2006) (examining the conservation benefits of multispecies HCPs).

66. *See* HCP HANDBOOK, *supra* note 55. An Addendum was added in 2000. U.S. FISH & WILDLIFE SERV. & NAT'L OCEANIC & ATMOSPHERIC ADMIN., ADDENDUM TO THE HCP HANDBOOK: EXECUTIVE SUMMARY (2000) [hereinafter ADDENDUM TO THE HCP HANDBOOK], *available at* https://www.fws.gov/endangered/esa-library/pdf/Executive_Summary.pdf.

regulatory language lacks clarity.[67] The Handbook, while far from extensive, seeks to establish standards that ensure consistent implementation of the section 10 program nationwide.[68] Still, it is hard (and perhaps undesirable) to obtain uniformity. Additionally, because each field office issues permits separately, there can be considerable variance in HCPs, including, for example, the structure of the mitigation provisions and the choice of mitigation tools.[69]

ESA regulations provide for limited public review of HCPs. There is a required thirty-day public comment period for all formal HCP applications, but the Services often expand the comment period to sixty days for large-scale HCPs.[70] Generally, the Services publish notices of the availability of HCPs in local newspapers and hold informational public meetings.[71] Because the development of an HCP is the responsibility of an applicant, not the permit-issuing agency, there is no requirement that the public be involved in the creation of the HCP.[72] However, the Services encourage applicants for larger or more controversial projects to provide opportunities for public involvement.[73] Indeed, most HCPs are the result of negotiations and cooperation among many participants, including community members, nonprofit organizations, project proponents, and representatives from all levels of government.[74]

Support for HCPs is mixed. The most significant critique is that ultimately HCPs and their accompanying permits enable habitat destruction.[75] Indeed, Professor J.B. Ruhl characterizes HCPs and incidental take permits as licenses

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67. As Professor J.B. Ruhl has explained, the statute only "loosely defined" the HCP requirements and the regulations "merely parrot the statutory language . . . fail[ing] to give meaning to the various criteria imposed [by section 10]." Ruhl, *supra* note 9, at 1400.

68. HCP HANDBOOK, *supra* note 55, at 1-1. The Handbook falls short of being a comprehensive guide because it also seeks to ensure that the Services retain flexibility and discretion in the HCP process. *Id.* This makes the HCP Handbook a somewhat conflicted document. It seeks to provide guidance to ensure that the section 10 process will be consistent, but then specifically acknowledges that HCPs are individually crafted and negotiated. *Id.* at 1-1 to 1-3.

69. *Id.*

70. ADDENDUM TO THE HCP HANDBOOK, *supra* note 66.

71. *Id.*

72. *See also* John Kostyack, *Habitat Conservation Planning: Time to Give Conservationists and Other Concerned Citizens a Seat at the Table*, 14 ENDANGERED SPECIES UPDATE 51, 52 (1997) (expressing concern over the lack of public involvement in the formation and approval of HCPs).

73. ADDENDUM TO THE HCP HANDBOOK, *supra* note 66.

74. For example, the San Bruno Mountain HCP was constructed based on the input of representatives from housing developments, landowners, prospective developers, San Mateo County, the cities of Brisbane, Daly City, and South San Francisco, the California Department of Fish and Game, the FWS, and a citizens' environmental group called the Committee to Save San Bruno Mountain. Arnold, *supra* note 42, at 20. This assortment of participants, although large, is typical for HCPs.

75. *See* Fraser Shilling, *Do Habitat Conservation Plans Protect Endangered Species?*, 276 SCIENCE 1662 (1997) (discussing concern that HCPs further habitat destruction); *see also* Gregory A. Thomas, *Where Property Rights and Biodiversity Converge Part II: The Role of Science*, 18 ENDANGERED SPECIES UPDATE 6 (2001) (encouraging HCPs to have a net survival benefit for species and to increase the use of independent scientists in creating HCPs).

to kill endangered species.[76] Some environmentalists and scholars argue that HCP permits allow landowners to harm species in ways that could jeopardize the species' existence.[77] The first HCP, for example, permitted destruction of 14 percent of endangered butterfly habitat and resulted in a 3 to 6 percent increase in the likelihood that the species would become extinct.[78] Other HCPs present statistics that are no more cheerful. The Coachella Valley HCP preserves only 11 percent of the remaining occupiable habitat for an endangered lizard.[79] Such critiques are bolstered by studies questioning the effectiveness of HCPs for species protection and recovery.[80]

Some environmentalists worry that the Services and permit applicants develop HCPs without clear scientific guidance, thereby locking the public into contracts with private property owners that might not actually be beneficial to the species in question.[81] Given the uncertainty inherent in the conservation biology of endangered species and unknown potential ecosystem effects,[82] HCPs can never account for all potentialities. The dynamic nature of ecosystems makes it impossible to predict the needs of species or the pressures on a species that will occur in the future.[83] Additionally, scientists agree that adaptive management and ecosystem-level programs provide the best protection for species and their habitat.[84] A locked-in agreement between the

76. J.B. Ruhl, *How to Kill Endangered Species, Legally: The Nuts and Bolts of Endangered Species Act "HCP" Permits for Real Estate Development*, 5 ENVTL. L. 345 (1999).

77. *See, e.g.*, Jacqueline Lesley Brown, *Preserving Species: The Endangered Species Act Versus Ecosystem Management Regime, Ecological and Political Considerations, and Recommendations for Reform*, 12 J. ENVTL. L. & LITIG. 151, 200 (1997).

78. TRA ENVTL. SCIS., SAN BRUNO MOUNTAIN HABITAT CONSERVATION PLAN 3–5 (2014), *available at* http://parks.smcgov.org/sites/parks.smcgov.org/files/documents/files/SBM%20HCP%20Covered%20Species%20Activity%20Annual%20Report%202013.pdf.

79. Arnold, *supra* note 42, at 25; Richard E. Webster, *Habitat Conservation Plans under the ESA*, 24 SAN DIEGO L. REV. 243, 251 (1987).

80. *See, e.g.*, REED F. NOSS ET AL., THE SCIENCE OF CONSERVATION PLANNING: HABITAT CONSERVATION UNDER THE ENDANGERED SPECIES ACT 49–51 (1997); PETER KAREIVA ET AL., NAT'L CTR. FOR ECOLOGICAL ANALYSIS & SYNTHESIS, USING SCIENCE IN HABITAT CONSERVATION PLANS (n.d.), *available at* https://www.nceas.ucsb.edu/files/Kareiva%20Using%20science%20in%20habitat%20conservation%20plans.pdf (evaluating the role of science in the HCP process); Rahn et al., *supra* note 65.

81. Michael Lipske, *Giving Rare Creatures a Fighting Chance*, NAT'L WILDLIFE FED'N (June 1, 1998), *available at* http://www.nwf.org/news-and-magazines/national-wildlife/green-living/archives/1998/giving-rare-creatures-a-fighting-chance.aspx.

82. *See, e.g.*, Borja Jimenez-Alfaro et al., *Modeling the Potential Area of Occupancy at Fine Resolution May Reduce Uncertainty in Species Range Estimates*, 147 BIOLOGICAL CONSERVATION 190 (2012) (describing and offering methods for reducing uncertainties regarding spatial distributions of rare species); Langpap & Kerkvliet, *supra* note 65, at 3 (describing the context of biological uncertainty during the HCP process).

83. NAGLE & RUHL, *supra* note 58, at 295.

84. *See* Michelle M. McClure et al., *Incorporating Climate Science in Applications of the U.S. Endangered Species Act for Aquatic Species*, 27 CONSERVATION BIOLOGY 1222, 1230 (2013) (describing adaptive management as an important tool for the protection of aquatic species); *see also* Stelios Katsanevakis et al., *Ecosystem-Based Marine Spatial Management: Review of Concepts, Policies, Tools, and Critical Issues*, 54 OCEAN & COASTAL MGMT. 807 (2011) (describing ecosystem-based management as a cornerstone in conservation of marine biodiversity).

federal government and a property owner can inhibit changes to particular parcels as knowledge about a species or ecosystem increases.[85]

HCPs are essentially long-term contracts, binding on both parties,[86] but it is difficult to know when the HCPs are doing the right thing for listed species.[87] Few studies show whether HCPs have actually been successful in terms of species recovery and rehabilitation.[88] As one scholar noted, "Granting permits based on inaccurate or incomplete information about an ecosystem could result in species decimation, which would thwart the goals of the ESA."[89] Many of the critiques of HCPs have to do with problems of uncertainty, which abounds in the case of endangered species.[90] Scientists are still learning about habitat needs.[91] Neither scientists nor policy makers fully understand the potential implications of climate change.[92]

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85. *See* Jessica Owley, *Property Constructs and Nature's Challenge to Perpetuity*, *in* ENVIRONMENTAL LAW AND CONTRASTING IDEAS OF NATURE: A CONSTRUCTIVIST APPROACH 64 (Keith Hirokawa ed., 2014).

86. *See* Donald C. Baur & Karen L. Donovan, *The No Surprises Policy: Contracts 101 Meet the Endangered Species Act*, 27 ENVTL. L. 767, 788–89 (1997); David Dana & Susan P. Koniak, *Bargaining in the Shadow of Democracy*, 148 U. PA. L. REV. 473, 475–76 (1999); Jean O. Melious & Robert D. Thornton, *Contractual Ecosystem Management under the Endangered Species Act: Can Federal Agencies Make Enforceable Commitments?*, 26 ECOLOGY L.Q. 489, 490–91 (1999); *see also* Daniel A. Hall, *Using Habitat Conservation Plans to Implement the Endangered Species Act in Pacific Coast Forests: Common Problems and Promising Precedents*, 27 ENVTL. L. 803, 807 (1997); Eric Fisher, Comment, *Habitat Conservation Planning under the Endangered Species Act: No Surprises & the Quest for Certainty*, 67 U. COLO. L. REV. 371, 389 (1996) (describing the implementing agreement that accompanies the HCP and incidental take permit as the contractual element).

87. *See* Rahn et al., *supra* note 65 (suggesting that the benefits of some HCPs may be overstated).

88 *See, e.g.*, Bruce B. Bingham & Barry R. Noon, *Mitigation of Habitat "Take": Application to Habitat Conservation Planning*, 11 CONSERVATION BIOLOGY 127, 128 (1997) (commenting on the arbitrary nature of HCP mitigation requirements).

89. Lara M. Bernstein, *Ecosystem Communities: Zoning Principles to Promote Conservation and the Economy*, 35 SANTA CLARA L. REV. 1309, 1344 (1995). While external reports are few, HCPs often include various reporting requirements. *See, e.g.*, TRA ENVTL. SCIS., *supra* note 78 (reporting on species covered by the plan). San Mateo County Parks is currently conducting a thirty-year assessment of habitat management and biological monitoring. In November 2014, the draft report was under review by the San Bruno Mountain Technical Advisory Committee. STU WEISS ET AL., DRAFT ASSESSMENT OF THE PAST 30 YEARS OF HABITAT MANAGEMENT AND COVERED SPECIES MONITORING EFFORTS ASSOCIATED WITH THE SAN BRUNO MOUNTAIN HABITAT CONSERVATION PLAN (2014).

90. *See, e.g.*, Robin Gregory et al., *Structuring Decisions for Managing Threatened and Endangered Species in a Changing Climate*, 27 CONSERVATION BIOLOGY 1212 (2013) (discussing challenges, including dealing with uncertainty, in endangered species management).

91. *See, e.g.*, Antoine Guisan, *Biodiversity: Predictive Traits to the Rescue*, 4 NATURE CLIMATE CHANGE 175 (2014) (describing computer models and surrogates that might be used to reduce uncertainty regarding species' needs); Michael C. Runge, *An Introduction to Adaptive Management for Threatened and Endangered Species*, 2 J. FISH &WILDLIFE MGMT. 220, 220 (2011) (describing the challenge of making management decisions with uncertainty regarding habitat and other species' needs).

92. *See, e.g.*, Jie Chen et al., *Uncertainty of Downscaling Method in Quantifying the Impact of Climate Change on Hydrology*, 401 J. HYDROLOGY 190 (2011); John F. Sternman, *Communicating Climate Change Risks in a Skeptical World*, 108 CLIMATE CHANGE 811 (2011); Elke U. Weber & Paul C. Stern, *Public Understanding of Climate Change in the United States*, 66 AM. PSYCHOL. 315, 315 (2011) (discussing polarization of U.S. public opinion of climate change despite strong scientific evidence).

Some scholars worry that HCPs are inadequately funded and monitored.[93] Effective conservation programs are generally both expensive and extensive.[94] Additionally, HCP permits last longer than other permits.[95] It is common for the FWS to issue incidental take permits lasting fifty to one hundred years.[96] Understandably, uncertainty governs funding determinations for such long-term projects.[97] It is difficult to determine how much money will be necessary to implement and enforce the HCPs upon which permits rely. Long-term monitoring and enforcement is also difficult.[98]

Not all environmentalists are as skeptical of HCPs. Some see the potential of HCPs to increase habitat protection and make the ESA less vulnerable to attack by conservatives and private property rights advocates.[99] They view HCPs as flexible tools allowing for creativity and innovation.[100] Because the agreements are tailored to specific sites and species and the regulations avoid inflexible dictates of specific measures, HCP participants have the freedom to explore new options, potentially incorporate adaptive management policies, and protect land that would have remained at risk of development.[101]

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93. *See, e.g.*, NAGLE & RUHL, *supra* note 58, at 294–95; David E. Moser, *Habitat Conservation Plans under the Endangered Species Act: The Legal Perspective*, 26 ENVTL. MGMT. S7, S11 (2000); Parenteau, *supra* note 60, at 306; Thomas Douglas Feldman, Local Solutions to Land Use Conflict under the ESA: Habitat Conservation Planning in Riverside County (1995) (unpublished Ph.D. dissertation, University of California, Riverside) (on file with Riverside Library, University of California) (questioning funding sources for HCP mitigation projects).

94. David Farrier, *Conserving Biodiversity on Private Land: Incentives for Management or Compensation for Lost Expectations?*, 19 HARV. ENVTL. L. REV. 303, 324 (1995) (noting need for extensive management and restoration for conservation projects); Stephanie Stern, *Encouraging Conservation on Private Lands: A Behavioral Analysis of Financial Incentives*, 48 ARIZ. L. REV. 541, 547, 550 (2006) (noting the unanticipated expense of conservation requirements under the ESA); Amy J. Dona, Note, *Crossing the Border: The Potential for Trans-Boundary Endangered Species Conservation Banking*, 16 N.Y.U. ENVTL. L.J. 655, 679 (2008) (explaining that species with larger ranges need more extensive protected areas).

95. *See Conservation Plans and Agreements Database*, U.S. FISH & WILDLIFE SERV., http://ecos.fws.gov/conserv_plans/public.jsp (last updated Feb. 10, 2015) (showing many permits lasting over fifty years and most over thirty).

96. *Id.*

97. Albert C. Lin, Comment, *Participants' Experiences with Habitat Conservation Plans and Suggestions for Streamlining the Process*, 23 ECOLOGY L.Q. 369, 403 (1996).

98. *See, e.g.*, NAGLE & RUHL, *supra* note 58, at 294; Parenteau, *supra* note 60, at 293.

99. The National Wildlife Federation argues that the plans work well as long as safeguards are in place. Press Release, Nat'l Wildlife Fed'n, U.S. District Court Ruling in California Will Improve Wildlife Safeguards Nationwide (Aug. 16, 2000), *available at* http://www.nwf.org/smartgrowth/natomas.html. The National Audubon Society has criticized HCPs but believes that there is potential for improvements in habitat protection with changes to the current implementation scheme. NAT'L AUDUBON SOC'Y, REPORT OF THE NATIONAL AUDUBON SOCIETY TASK FORCE ON HABITAT CONSERVATION PLANS (1995), *available at* http://www.audubon.org/campaign/esa/task_force.html.

100. *See, e.g.*, J.B. Ruhl, *Endangered Species Act Innovations in the Post-Babbittonian Era—Are There Any?*, 14 DUKE ENVTL. L. & POL'Y 419, 432 (2004). *But see* Graham M. Lyons, *Habitat Conservation Plans: Restoring the Promise of Conservation*, 23 ENVIRONS 83, 96 (1999) (suggesting that too much flexibility can hamper achieving species protection goals).

101. *See generally* HCP HANDBOOK, *supra* note 55, ch. 1 (emphasizing flexibility in developing HCPs). While the Handbook suggests that HCPs could incorporate adaptive management principles, the current structure of most HCPs does not include room for change or revisitation as would occur in an

HCPs alleviate some of the criticisms of the ESA from the right.[102] Private landowners benefit from HCPs because they allow development of land otherwise unavailable due to the presence of endangered species.[103] HCPs still represent an obstacle for developers, however. Although its goal is to increase flexibility, the HCP requirement imposes a cumbersome ordeal.[104] The lengthy permitting process imposes direct costs and causes building delays.[105] One of the most burdensome requirements for permit applicants may be the need to mitigate potential impacts to species.

### *B. Mitigation under the Endangered Species Act*

Incidental take permits (and the HCPs that accompany them) seek to protect species through their requirements to avoid, minimize, and mitigate the impact of incidental takes, including potential harm to species from habitat modification. While these requirements sound protective of listed species, neither the statute nor the regulations offer much guidance for what form mitigation should take. The Services may not issue incidental take permits unless the permit applicant can demonstrate that "to the maximum extent practicable," the applicant will "minimize and mitigate the impacts" of any incidental takes and that adequate funding is available for minimization and mitigation.[106] The Secretary is required to revoke an incidental take permit where a permit holder is not complying with the terms of the permit.[107] Presumably this includes complying with the minimization and mitigation requirements. The statutory language provides no further guidance regarding mitigation, and the regulations simply repeat the requirement to fund minimization and mitigation of impacts.[108] The regulations also require permits to include terms detailing monitoring requirements, but offer nothing specific about format or level of mitigation.[109]

While the regulations do not offer much guidance regarding mitigation projects, they are relatively clear about protections offered to landowners who comply with their HCPs. Of particular significance, the statute provides

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adaptive approach. George F. Wilhere, *Adaptive Management in Habitat Conservation Plans*, 16 CONSERVATION BIOLOGY 20, 20 (2002).

102. *See* Michael A. O'Connell & Stephen P. Johnson, *Improving Habitat Conservation Planning: The California Natural Community Conservation Model*, 14 ENDANGERED SPECIES UPDATE 1 (1997), *available at* http://www.umich.edu/~esupdate/library/97.01-02/contents.html (noting that the HCP process is still subject to criticism by landowners and other private sector actors).

103. *See id.*

104. Arnold, *supra* note 42, at 14.

105. Bernstein, *supra* note 89, at 1343–44.

106. 16 U.S.C. §§ 1539(a)(2)(A)(ii) (2012) (noting HCP requirements), 1539(a)(2)(B) (clarifying that the Secretary must issue a section 10 permit where the applicant has met the requirements of this section including demonstrating that "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking").

107. § 1539(a)(2)(C).

108. 50 C.F.R. § 17.22(a) (2014).

109. § 17.22(a)(3).

assurances for landowners regarding changed and/or unforeseen circumstances.[110] The regulations clarify the assurances that landowners receive by participating in the section 10 permitting process.[111] Presumably acknowledging that landscapes and access to information about ecosystems and listed species may change, the regulations explain what happens where the Services deem that additional conservation and mitigation measures are necessary to protect the listed species.[112] In some circumstances, changes may be foreseeable enough that the HCP contains contingencies for updating conservation actions in response to changed circumstances.[113] Where the changed circumstances were not directly addressed in the HCP but the Services deem new conservation measures to be necessary, the Services "will not require any conservation and mitigation measures in addition to those provided for in the plan without the consent of the permittee, provided the plan is being properly implemented."[114] For unforeseen circumstances, the assurances are even more favorable to landowners.[115] As these changed circumstances are not foreseeable, they are understandably not included in the HCP. The regulations explain that even if the Services determine that additional conservation or mitigation measures are provided, the Services will not require any additional commitments of "land, water, or financial compensation," nor will the Services impose additional restrictions on land (or other natural resource) use unless the permittee agrees to the restrictions voluntarily.[116] The Services are limited to modifications of mitigation approaches within already conserved areas.[117]

Thus, the regulations do little more than mirror the requirements of the statute plus provide additional assurances regarding permit reliability.[118] The regulations do not discuss mitigation or minimization or offer any real guidance as to the components of mitigation plans, how they will be monitored, or the possible public role in the process beyond the ability of an interested party to object to the issuance of a permit during the public comment period.[119] Nor do the regulations illuminate the practicability standard, a statutory requirement that directs permit applicants to demonstrate that they will minimize and mitigate impacts on species "to the maximum extent practicable."[120] Neither

110. § 17.22(b)(5).

111. *Id.*

112. § 17.22(b)(5)(iii).

113. § 17.22(b)(5)(i).

114. § 17.22(b)(5)(ii); *see also* Holly Doremus, *Water, Population Growth, and Endangered Species in the West*, 72 U. COLO. L. REV. 361, 396 (2001).

115. § 17.22(b)(5)(iii).

116. § 17.22(b)(5)(iii)(B).

117. *Id.*; *see also* Gabriel Eckstein & Jesse Snyder, *Endangered Species in the Oil Patch: Challenges and Opportunities for the Oil and Gas Industry*, 1 TEX. A&M L. REV. 379, 389–91 (2013).

118. *See* Ruhl, *supra* note 76, at 378.

119. § 17.22(e).

120. *See* 16 U.S.C. § 1539(a)(2)(B) (2012); *see also* Bldg. Indus. Ass'n v. State Water Res. Control Bd., 22 Cal. Rptr. 3d 128, 145 (Ct. App. 2005) (discussing the lack of clarity of the meaning of practicable in the context of the Clean Water Act) ("[T]he maximum extent practicable standard is a

the statute nor the regulations offer guidance on how one should assess practicability. Does it involve economic feasibility? Must it rely on best available science?

Because the regulations do not detail what HCP mitigation projects should look like and how the HCP process should work, the Services provided guidance in the jointly issued HCP Handbook in 1996.[121] The Handbook uses the definition of mitigation from the regulations implementing the National Environmental Policy Act (NEPA)[122]:

1) Avoiding the impact altogether by not taking a certain action or parts of an action.
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5) Compensating for the impact by replacing or providing substitute resources or environments.[123]

Where this definition of mitigation is used in other parts of the law (for example, with wetlands mitigation),[124] it is considered a sequencing approach. That is, the items are listed in the order in which one should approach a mitigation project, from most preferred to least preferred.[125] Notably, the first two items on the list do not merit the term mitigation. They represent premitigation steps that one should take. When facing a project that will impact endangered species, one should first avoid harm to the species and then minimize the degree of harm that might be caused. The unavoidable harm that remains should be the focus of mitigation projects, which can take the form of the last three methods of rectifying, reducing, or compensating.[126]

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highly flexible concept that depends on balancing numerous factors . . . , [and] is a term of art, and is not a phrase that can be interpreted solely by reference to its everyday or dictionary meaning.").

121. *See* HCP HANDBOOK, *supra* note 55.

122. 40 C.F.R. § 1508.20 (2014).

123. HCP HANDBOOK, *supra* note 55, at 3-19, 8-4 (mentioning that other "not mentioned" mitigation types could also be used).

124. *See* Royal C. Gardner, *Banking on Entrepreneurs: Wetlands, Mitigation Banking, and Takings*, 81 IOWA L. REV. 527, 535 (1996).

125. The Services acknowledge that avoidance of take should always be the first step. Where avoidance is possible, an incidental take permit (and often the associated section 7 process) is unnecessary. *See* HCP HANDBOOK, *supra* note 55, at 14.

126. As I have discussed elsewhere, the final prong of compensation does not sit easily with me as a mitigation strategy. This is particularly true because our compensatory mitigation often comes in the form of preservation. Preservation as mitigation is dissatisfying because the newly preserved habitat should have already been protected. For example, if we are seeking to protect the California red-legged frog and we allow destruction of some frogs and their habitat in exchange for preserving other red-legged frog habitat, what have we gained? That other habitat site should have already been protected under the ESA. Thus, such mitigation only results in a net gain for a species where the other habitat site was at risk or where it is protected in conjunction with habitat creation or enhancement techniques. *See*

The Services specifically avoid giving too many guidelines for mitigation plans because they believe each project must develop mitigation plans individually and that too many rules might stifle creative approaches to species protection.[127] Striking the right balance between allowing flexibility and providing for consistency and quality is tricky. The HCP Handbook suggests that mitigation programs be based on "sound biological rationale"[128] while also being practicable (not defined)[129] and commensurate with the impacts they address (presumably already required by *Dolan*).[130]

The HCP Handbook describes the process of mitigating for habitat loss:

> Potential types of habitat mitigation include, but are not limited to: (1) acquisition of existing habitat; (2) protection of existing habitat through conservation easements or other legal instruments; (3) enhancement or restoration of disturbed or former habitat; (4) prescriptive management of habitat to achieve specific biological characteristics; and (5) creation of new habitats.[131]

The Handbook puts these mitigation approaches on equal footing,[132] leaving field offices without instructions to focus on particular mitigation methods. The only preference stated is for acquisition of high quality existing habitat, but this comment is followed by the acknowledgment that a focus on such a technique can ultimately result in net loss of habitat value.[133] Essentially, the FWS encourages a method that it knows may result in net loss of habitat.

The Handbook acknowledges that one of the struggles with HCPs is determining how long mitigation land must be preserved (including the challenge generally of assessing how long mitigation rules must be in place).[134] Where habitat loss is permanent, land conservation efforts should also be permanent or "in perpetuity."[135] In fact, the Handbook acknowledges that

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*generally* Owley, *supra* note 1; Jessica Owley, *Preserved Wetlands Are a Net Loss*, *in* BEYOND JURISDICTION: WETLANDS POLICY FOR THE NEXT GENERATION (Kim Connolly ed., forthcoming 2015).

127. HCP HANDBOOK, *supra* note 55, at 3-19 ("Mitigation programs under HCPs and section 10 permits are as varied as the projects they address. Consequently, this handbook does not establish specific 'rules' for developing mitigation programs that would limit the creative potential inherent in any good HCP effort.").

128. *Id.*

129. *See id.* ch. 8 (presenting the definitions).

130. Dolan v. City of Tigard, 512 U.S. 374, 391 (1994) (requiring that permit conditions, or exactions, be roughly proportional to the harm to the public resulting from issuance of the permit).

131. HCP HANDBOOK, *supra* note 55, at 3-21 to 3-22.

132. The order of this list is particularly interesting. Although the Handbook does not indicate that the order reflects any preference for a particular mitigation scheme, the high placement of conservation easements on the list is telling. The final three mitigation types would actually appear to go much further toward mitigating habitat modification than the first two. Not only are there no hints that the order of this list makes a difference, but there is no other mitigation approach preference mentioned.

133. HCP HANDBOOK, *supra* note 55, at 3-22.

134. *Id.*

135. *Id.*

perpetual protection may even be appropriate where impacts on species are only temporary.[136]

### *C. Exacting Conservation Easements under the Endangered Species Act*

In our journey to understand what we get in exchange for allowing conversion of endangered species habitat, we need to hone in on the mitigation element. Putting aside the avoidance and minimization elements that are more properly labeled premitigation measures, this subpart examines preservation as mitigation. Because the Services' mitigation approach favors perpetual land protection, many HCPs include real property interests known as conservation easements as part of their mitigation program. Because of their prevalence and elusive nature (described below), this Article focuses on conservation easements for mitigation and tracks their use through four California case studies. This subpart outlines the basic contours of conservation easements, demonstrates their use within HCPs, and offers a few cautionary notes about the use of conservation easements for habitat protection. The following Part then brings this background material together, walking through mitigation case studies to examine the use of conservation easements as mitigation and the difficulty of tracking mitigation efforts generally.

Conservation easements are property rights in land held by someone other than the landowner.[137] They restrict landowner behavior with the goal of yielding a conservation benefit.[138] Conservation easements are governed by state property law. All fifty states now have conservation easement statutes, encumbering nearly nine million acres of land nationwide.[139] The oldest identifiable conservation easement statutes were adopted in 1956 in Massachusetts[140] and 1959 in California.[141] Originally, the Massachusetts and

136. *Id.* However, you would need to demonstrate that a perpetual restriction for a temporary impact will not violate constitutional requirements for exactions as outlined in *Dolan*. 512 U.S. 374, 391 (1994).

137. Nancy A. McLaughlin, *Condemning Conservation Easements: Protecting the Public Interest and Investment in Conservation*, 41 U.C. DAVIS L. REV. 1897, 1899 (2008).

138. Roger Colinvaux, *The Conservation Easement Tax Expenditure: In Search of Conservation Value*, 37 COLUM. J. ENVTL. L. 1, 3 (2012).

139. KATIE CHANG, LAND TRUST ALLIANCE, 2010 NATIONAL LAND TRUST CENSUS REPORT: A LOOK AT VOLUNTARY LAND CONSERVATION IN AMERICA 5 (2011), *available at* www.landtrustalliance.org/land-trusts/land-trust-census/2010-final-report. The Land Trust Alliance's census calculates the amount of land protected by conservation easements held by land trusts but does not include national land trusts like The Nature Conservancy. Because the acreage protected by government entities is unknown, the total number of protected acres is much higher.

140. 1956 Mass. Acts 565.

141. The Scenic Easement Deed Act of 1959, CAL. GOV'T CODE §§ 6950–6954 (West 2014). Although these are the oldest conservation easement statutes, scholars show conservation easements as dating back much further. The first American conservation easement appears to have been written in the late 1880s to protect the parks and parkways of Boston designed by Frederick Law Olmsted. Julie Ann Gustanski, *Protecting the Land: Conservation Easements, Voluntary Actions, and Private Lands*, *in* PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT, AND FUTURE 9 (Julie Ann Gustanski & Roderick H. Squires eds., 2000). Older conservation easements did not have statutory authorization, likely making conservationists hesitant to use the tool. The first publication using the term

California statutes authorized only government entities to hold conservation easements, but in 1969, Massachusetts became the first state to allow nonprofit organizations to hold conservation easements and other states followed suit.[142] Many states with conservation easement statutes modeled their legislation on the Uniform Conservation Easement Act,[143] which the National Conference of Commissioners on Uniform State Laws approved in 1981.[144]

The Uniform Conservation Easement Act defines a conservation easement as:

> [A] nonpossessory interest of a holder in a real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open-space values of real property, assuring its availability for agriculture, forest, recreational or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological, or cultural aspects of real property.[145]

When an owner places a conservation easement on her land, whether by donating it, selling it, or creating it to meet mitigation requirements, she is agreeing to refrain from exercising certain rights.[146] These rights can include things like the right to develop, the right to farm in a certain manner,[147] and the

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"conservation easement" was in 1959. WILLIAM H. WHYTE, JR., SECURING OPEN SPACE FOR URBAN AMERICA: CONSERVATION EASEMENTS (1959); *see also* Jean Hocker, *Foreword*, *in* PROTECTING THE LAND, *supra*, at vii.

142. Shea B. Airey, *Conservation Easements in Private Practice*, 44 REAL PROP., TR. & EST. L.J. 745, 750 (2010) (citation omitted).

143. *Legislative Fact Sheet—Conservation Easement Act*, UNIFORM L. COMMISSION, http://www.uniformlaws.org/LegislativeFactSheet.aspx?title=Conservation%20Easement%20Act (last visited Jan. 10, 2015).

144. NAT'L CONFERENCE OF COMM'RS ON UNIF. STATE LAWS, UNIFORM CONSERVATION EASEMENT ACT (1981), *available at* http://www.uniformlaws.org/shared/docs/conservation_easement/ucea81.pdf. The National Conference of Commissioners on Uniform State Laws, now incorporated into the Uniform Law Commission, is a nonprofit, nongovernmental entity that prepares proposed laws. The uniform laws are drafted by subcommittees of the over three hundred members of the commission. *About the ULC*, UNIFORM L. COMMISSION, http://www.uniformlaws.org/Narrative.aspx?title=About%20the%20ULC (last visited Jan. 10, 2015).

145. UNIFORM CONSERVATION EASEMENT ACT, *supra* note 144, § 1(1).

146. Although we generally think of conservation easements as negative restrictions preventing landowners from doing certain actions, conservation easements may also have affirmative obligations such as requiring restoration projects. *See* Alexander R. Arpad, Comment, *Private Transactions, Public Benefits, and Perpetual Control over the Use of Real Property: Interpreting Conservation Easements as Charitable Trusts*, 37 REAL PROP. PROB. & TR. J. 91, 112–21 (2002) (explaining that the affirmative aspect of conservation easements is often ignored). States often explicitly recognize both negative restrictions and affirmative duties in their state conservation easement statutes. *See, e.g.*, ARIZ. REV. STAT. ANN. § 33-271(1) (2015); KY. REV. STAT. ANN. § 382.800 (West 2014); OR. REV. STAT. ANN. § 271.715(1) (West 2015); S.C. CODE ANN. § 27-8-20(1) (2015); WIS. STAT. ANN. § 700.40(1)(a) (West 2015).

147. *See, e.g.*, Cal. Farm Bureau Fed'n v. Cal. Wildlife Conservation Bd., 49 Cal. Rptr. 3d 169, 181 (Ct. App. 2006) (describing a wildlife protection conservation easement that required conversion of a property from agricultural to habitat use).

right to fill in wetlands.[148] Conservation easements are rights of enforcement, mostly of negative servitudes.[149] The holder of the conservation easement has the right to bring an action against the landowner if the landowner violates its terms.[150] Under most state laws, the conservation easement holder can be either a government entity or a nonprofit conservation organization.[151] Increasingly, instead of being part of private decisions about the future of one family's farm, conservation easements are part of large development projects with complex permitting programs.[152] When developers and individual landowners want to make changes to the land, there are often local, state, and federal permit requirements.[153] Many of these permit programs require the permittees to incorporate mitigation measures.[154] As with the HCP program described above, conservation easements are one of the most common methods of meeting these mitigation requirements.[155] These mitigation conservation easements are a form of exactions.[156]

The exact number of HCPs using conservation easements as mitigation is unavailable. There are nearly 700 HCPs,[157] and no electronic database of documents is available to the public.[158] The FWS provides an online listing of all HCPs, but only provides basic facts (name, acreage, species protected) without any information about mitigation.[159] With the name of an HCP, one

148. *See, e.g.*, Conservation Comm'n v. DiMaria, No. CV054009431S, 2008 WL 3307154 (Conn. Super. Ct. July 21, 2008) (describing a wetlands protection conservation easement).

149. *See* Gerald Korngold, *Privately Held Conservation Servitudes: A Policy Analysis in the Context of in Gross Real Covenants and Easements*, 63 TEX. L. REV. 433, 435, 467 (1984).

150. *See* Jessica E. Jay, *Third Party Enforcement of Conservation Easements*, 29 VT. L. REV. 757, 758 (2005).

151. Daniel P. Harvey, *Conservation Easements and the Doctrine of Changed Conditions: A Comparative Analysis of the New York and Arkansas Statutes*, 18 BUFF. ENVTL. L.J. 267, 268 (2011).

152. *See generally* Jessica Owley, *The Emergence of Exacted Conservation Easements*, 84 NEB. L. REV. 1043, 1089 (2006).

153. *See, e.g.*, Koontz v. St. Johns River Water Mgmt. Dist., 133 S. Ct. 2586, 2588–90 (2013) (describing conservation easements exacted to meet local land use permitting requirements).

154. *See id.* at 2588–89; *see also* Ctr. for Sierra Nev. Conservation v. Cnty. of El Dorado, 136 Cal. Rptr. 3d 351, 354 (Ct. App. 2012) (describing an oak woodland management plan mitigation requirement); Cal. Native Plant Soc'y v. Cnty. of El Dorado, 88 Cal. Rptr. 3d 530, 532–33 (Ct. App. 2009) (describing mitigation requirements from the California Environmental Quality Act and other local land use laws); In re Freshwater Wetlands Protection Act Rules, 852 A.2d 167, 173–74 (N.J. 2004) (describing wetlands mitigation requirements).

155. *See, e.g.*, Bldg. Indus. Ass'n of Cent. Cal. v. Cnty. of Stanislaus, 118 Cal. Rptr. 3d 467, 471 (Ct. App. 2010) (describing use of conservation easements to mitigate for loss of agricultural land); Pepin v. Div. of Fisheries & Wildlife, 4 N.E.3d 875, 877–78 (Mass. 2014) (exacting conservation easement to meet state endangered species act requirements); Perlmutter v. Twp. of Toms River Planning Bd., Nos. L-4322-10, L-4565-10, L-4670-10, L-1784-12, L-1200-13, 2014 WL 2457241 (N.J. Super. Ct. App. Div. June 3, 2014) (describing conservation easement used to meet multiple mitigation requirements).

156. *See Koontz*, 133 S. Ct. at 2599 (clarifying that the scope of exactions is broad enough to encompass fees).

157. As of October 12, 2014, the Services had approved 695 HCPs and issued 805 incidental take permits. *Conservation Plans and Agreements Database*, *supra* note 95.

158. Holly Doremus, *Constitutive Law and Environmental Policy*, 22 STAN. ENVTL. L.J. 295, 370–71 (2003).

159. *Conservation Plans and Agreements Database*, *supra* note 95.

can file Freedom of Information Act (FOIA) requests to obtain documents, but this can be a slow and, at times, expensive process.[160] Not only is it difficult to find HCPs, the actual HCP document may not provide the information needed. The section 10 permit, implementing agreement, amendments to the HCP, and environmental review documents are all essential to evaluate and understand fully an HCP and its mitigation requirements. Yet, as demonstrated below, these documents can also be hard to track down. Additionally, there may be state laws requiring documentation beyond federal requirements, like California's ESA and the California Environmental Quality Act. These documents would also likely provide important information about permitting requirements.

The role of conservation easements within HCPs highlights some of the difficulties of environmental mitigation. Individual FWS field offices negotiate HCPs on a case-by-case basis, operating under the guidance of the statute, regulations, and the HCP Handbook. However, these sources do not indicate how to structure conservation easements. The FWS does not require conservation easements to meet certain standards, nor does the HCP Handbook provide a sample conservation easement.[161] Additionally, there is no requirement that the FWS be involved in the composition or even enforcement of conservation easements covered by an HCP.[162] An HCP could merely require conservation easements without dictating their form. Alternatively, an HCP might provide information about the form exacted conservation easements should take, but including this information does not necessarily mean that the Service played a role in structuring the resulting agreement. Because the FWS is not usually a party to exacted conservation easements, the terms could be negotiated by the conservation easement holders and the permit applicant without federal involvement.[163]

The preceding paragraph is peppered with phrases like "could," "might," and "usually" precisely because there are no overarching principles or practices at work here. To determine the role played by conservation easements in HCPs, to assess their terms, or to examine the role the FWS plays in conservation easement formation, one must undertake an in-depth investigation of each HCP. This case-by-case nature of ESA-exacted conservation easements makes them both hard to find and difficult to assess.

160. Because HCPs are so long, the copying costs alone can be high. However, my most recent FOIA requests have been delivered on compact disk via Federal Express and without charge. But, as detailed in the case studies below, not all responses were rapid.

161. *See* HCP HANDBOOK, *supra* note 55.

162. *See id.*

163. *Cf.* Jessica Owley & Stephen J. Tulowiecki, *Who Should Protect the Forest?: Conservation Easements in the Forest Legacy Program*, 33 PUB. LAND & RESOURCES L. REV. 47, 92–93 (2012) ("Currently, the Forest Service does not require that it be identified as a co-holder, a third-party beneficiary, or third-party enforcer [of conservation easements arising under the Forest Legacy Program].").

The use of exacted conservation easements within HCPs magnifies the concerns already present with HCPs.[164] Although HCPs are subject to public review after their completion, critics argue that the public should also be able to participate in their development.[165] Because so much time, energy, and money go into the formation of an HCP, large changes after its issuance are unlikely. Exacted conservation easements within HCPs are even further removed from public review than HCPs. Because conservation easements may not be agreed to or even drafted until long after the HCP has gone into effect, they do not go through public notice and comment review. Even when sample exacted conservation easement language is subject to review, the negotiated easements are not usually part of the HCP, permit, or environmental review documents.[166]

Critics complain that a chief problem with HCPs is their lack of adequate funding.[167] It is difficult to determine how much money will be necessary to implement and enforce the HCPs upon which permits rely.[168] Although permits are for limited periods, the mitigation projects on which permits are conditioned may be perpetual. Exacted conservation easements are a prime example of this phenomenon. Regardless of the length of the issued permits, ESA-exacted conservation easements are usually agreements in perpetuity. Managing for perpetuity is even more uncertain than managing for the duration of permits.[169] Consequently, it is difficult to determine at the outset of a development project how much money will be necessary to fund the perpetual aspects of the mitigation program. Additionally, if the permit term ends and the provided funding runs out, who supplies the needed funds for managing or

164. *See* Owley, *supra* note 43.

165. Craig W. Thomas, *Habitat Conservation Planning*, *in* DEEPENING DEMOCRACY: INSTITUTIONAL INNOVATIONS IN EMPOWERED PARTICIPATORY GOVERNANCE 144, 144 (Archon Fung & Erik Olin Wright eds., 2003); Holly Doremus, *Preserving Citizen Participation in the Era of Reinvention: The Endangered Species Act Example*, 25 ECOLOGY L.Q. 707, 712–16 (1999).

166. Other critiques of HCPs have to do with problems of uncertainty. Conservation biologists argue that principles of adaptive management and ecosystem-level planning would better suit the needs of species. *See* CARL J. WALTERS, ADAPTIVE MANAGEMENT OF RENEWABLE RESOURCES 2–3 (1986) (promoting adaptive management). In theory, there is no reason why adaptive management and ecosystem planning cannot occur with exacted conservation easements. *See* Adena R. Rissman et al., *Conservation Easements: Biodiversity Protection and Private Use*, 21 CONSERVATION BIOLOGY 709, 716–17 (2007). However, despite this potential, many exacted conservation easement agreements do not include adaptive management elements and instead frame themselves in terms of one static state of the land. *See id.*; Adena R. Rissman et al., *Adapting Conservation Easements to Climate Change*, CONSERVATION LETTERS, 2014, at 1, 1 *available at* http://www.landtrustalliance.org/climate-change-toolkit/adapting-conservation-easements-to-climate-change (noting absence of adaptive structures in most conservation easements). Thus, the use of exacted conservation easements as HCP mitigation measures exacerbates these problems of uncertainty.

167. NAGLE & RUHL, *supra* note 58, at 294–95; Moser, *supra* note 93, at S11.

168. Fischman & Hall-Rivera, *supra* note 31, at 71.

169. *See* Jessica Owley, *Changing Property in a Changing World: A Call for the End of Perpetual Conservation Easements*, 30 STAN. ENVTL. L.J. 121, 122–23 (2011); Abebayehu Tegene et al., *Irreversible Investment under Uncertainty: Conservation Easements and the Option to Develop Agricultural Land*, 50 J. AGRIC. ECON. 203 (1999).

stewarding the exacted conservation easement? It is unclear whether the conservation easement holder or the FWS would bear this burden.[170]

There is already considerable uncertainty in monitoring and enforcement of HCPs.[171] When exacted conservation easements play a key role in HCP mitigation programs, this uncertainty increases. Perhaps the most pressing issue is that it is not clear who has the responsibility (or ability) to monitor and enforce exacted conservation easements. The conservation easement holder has a *right*, but not necessarily a duty, to do so. The uncertainty surrounding the enforceability of conservation easements calls into question the validity of exacted conservation easements as mitigation measures. If these mitigation measures are hard to track and difficult to enforce, reliance on HCPs becomes even more problematic. The purpose of HCPs is to provide ecosystem benefits in exchange for allowing development that would otherwise violate the ESA's provisions; if they fail to deliver verifiable benefits, developers get a free pass to violate the law.

## II. CASE STUDIES

Because of the public investments involved and public interests impaired, ensuring the viability of mitigation projects is vital. As most ESA mitigation projects involve conservation easements, fully understanding mitigation requirements means being able to obtain information about both the ESA incidental take permits and the conservation easements exacted under them to meet mitigation requirements. Where are the protected parcels? What are the terms of the conservation easements? Who can enforce mitigation requirements and how can they do so? As demonstrated below, the answers to these questions are hard to find; in fact, the permit enforcers themselves often seem

170. For example, conservation easement holders increasingly require stewardship funds from landowners to cover the costs of monitoring and enforcing the conservation easement. *See An Introduction to Stewardship Funding Arrangements*, CONSERVATION TOOLS, http://conservationtools.org/guides/show/108-An-Introduction-to-Stewardship-Funding-Arrangements (last visited Feb. 26, 2015) (noting that landowners may agree to pay easement holders to support stewardship of eased property, and that "[t]hese arrangements may be customized to fit the stewardship demands created by the particular conservation easement and the financial circumstances of the owner"); *see also* CHANG, *supra* note 139, at 12–13 (showing increases in funding for stewardship and monitoring between 2005 and 2010). Where enforcement becomes necessary, particularly where enforcement results in litigation, the stewardship fund could be exhausted quickly. Is the conservation easement holder then on the hook for any additional stewardship costs? The landowner? The FWS? The answer to this question may vary based on who holds the conservation easement and how the holder acquired it. While beyond the purview of this Article, it is worth noting that the rules regarding enforcement of these conservation easements are already hazy. *See generally* Jessica Owley, *The Enforceability of Exacted Conservation Easements*, 36 VT. L. REV. 261 (2011). Exacted conservation easements may also have costs based on the active management obligations of either the landowner or conservation easement holder. Wetlands mitigation projects provide an example of possible challenges. In some cases, the active management obligations are not upheld over time, leaving questions regarding not only who will step in to maintain the wetland but also who will cover the cost. *See, e.g.*, Kelly Chinners Reiss et al., *Evaluation of Permit Success in Wetland Mitigation Banking: A Florida Case Study*, 29 WETLANDS 907, 907 (2009).

171. Parenteau, *supra* note 60, at 292–93 (monitoring), 298 (enforcement).

to lack basic information about permit terms and requirements, making the long-term viability of exacted conservation easements (and perhaps the section 10 permits themselves) questionable.

This Article uses a case study approach to illustrate the concerns associated with finding, understanding, and enforcing mitigation requirements. Its focus is four HCPs in California. Because the rules concerning conservation easements vary by state, analyzing the enforceability of exacted conservation easements must be a state-by-state inquiry. Selecting examples within California simplifies the analysis by holding state law constant. California is also an optimal study site because it has more HCPs than any other state.[172] Not only did HCPs originate in California, but over one-fifth of all HCPs today are in California.[173] Thus, in studying the viability of HCP mitigation measures, California is a good place to start. I chose the oldest and newest HCPs (on the date the research project began), along with two HCPs from intervening years.

The first case study is the first-ever HCP: the San Bruno Mountain HCP, approved in 1983.[174] Congress lauded the San Bruno Mountain model and encouraged others to follow it.[175] The San Bruno Mountain HCP's mitigation approach involves exacted conservation easements,[176] demonstrating the early acceptance of conservation easements as viable mitigation. Moreover, this is an important HCP because Congress explicitly set it forth as an example of how the HCP processes should proceed.[177] Because it is the first HCP, one might expect this example to be problematic. HCPs were new. Conservation easements were relatively new. There was little experience to instruct the policy makers, permit issuers, or HCP drafters. Indeed, those involved in the San Bruno Mountain HCP today say things would be done differently these days.[178] The fact that the HCP has been amended five times[179] illustrates

172. As of August 1, 2014, 146 of 694 HCPs or a little over 20 percent of the HCPs listed on the FWS's HCP database were in California. *See Conservation Plans and Agreements Database*, *supra* note 95. Additionally, many of the largest HCPs are in California. *Id.* The second largest group is in Texas, but the numbers are hard to assess because many of them are small HCPs covering adjacent small parcels but listed separately. *Id.*

173. *Id.*

174. Press Release, U.S. Fish & Wildlife Serv., Nation's First Formal Plan to Save Endangered Species Set for Update (July 22, 2004), *available at* http://www.fws.gov/news/ShowNews.cfm?ID=ED17B12A-65B8-D693-7F41483FEC50F96B (noting that the San Bruno Mountain HCP was adopted in 1983).

175. H.R. REP. NO. 97-835, at 30–31 (1982); Endangered Species Permit; Receipt of Application, 47 Fed. Reg. 54,366-04, 54,366 (Dec. 2, 1982).

176. SAN BRUNO MOUNTAIN HABITAT CONSERVATION PLAN STEERING COMM., 1 SAN BRUNO MOUNTAIN AREA HABITAT CONSERVATION PLAN V-10 (1982) [hereinafter SBMHCP], *available at* http://parks.smcgov.org/sites/parks.smcgov.org/files/documents/files/SBM_HCP_Final_Volume1_November1982.pdf.

177. *See supra* note 175.

178. Telephone Interview with Mark Thomas, Fish & Wildlife Biologist, Sacramento Fish & Wildlife Office, U.S. Fish & Wildlife Serv. (Aug. 7, 2014).

improving practices and changing attitudes. As explained below, despite efforts at improvements (and potentially because of them), it is difficult to understand the mitigation measures involved and challenging to track down the conservation easements.

Because of its stature and complexity, the San Bruno Mountain HCP is the longest and most detailed case study below. The subsequent three case studies illuminate the range of problems involved with tracking ESA mitigation. Examining the first HCP and then HCPs over the years facilitates tracking the extent to which mitigation programs have changed and (hopefully) improved. For ease of review, these were all single-project HCPs (as opposed to the increasingly popular regional HCPs) that involved fewer than five species. Thus, while this study examines a range of HCPs over a span of thirty years in California, it does not examine the full variety of HCPs available.[180]

### *A. Case Study One: San Bruno Mountain HCP*

The nation's first HCP was the San Bruno Mountain Area HCP. San Bruno Mountain is south of San Francisco and encompasses nearly 3600 acres.[181] In the 1970s, a conflict arose between developers and conservationists over the rare Mission Blue butterfly, whose habitat is limited to San Bruno Mountain and several other locations in Coastal California.[182] This species was (and still is) threatened by human and natural forces, primarily habitat destruction.[183] Off-road vehicle and dirt bike traffic on San Bruno Mountain also disturbed the butterflies, destroyed much of their original grassland habitat, and encouraged growth of brush and exotic species.[184]

As increasingly rare open space near the always-growing San Francisco Bay Area, San Bruno Mountain is a highly desirable site for development.[185] In the early 1970s, Visitacion Associates gradually purchased parcels of land until

179. San Bruno Mountain Area Habitat Conservation Plan Trustees' Meeting, Draft Minutes, June 26, 2013, at 2, *available at* https://parks.smcgov.org/sites/parks.smcgov.org/files/062613%20HCP%20Trustees%20Minutes.pdf.

180. Such further studies are undoubtedly necessary. For example, researching larger multispecies and regional HCPs might present a different picture. It is possible that high-profile HCPs involving more parties would change the course of mitigation projects or at least the documentation thereof. Expanding the scope of this study is thus a logical next step in assessing HCP mitigation.

181. SBMHCP, *supra* note 176, at I-1.

182. Background information about San Bruno Mountain can be found in the SBMHCP and in Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 979–80 (9th Cir. 1985).

183. *See* Travis Longcore et al., *Extracting Useful Data from Imperfect Monitoring Schemes: Endangered Butterflies at San Bruno Mountain, San Mateo County, California (1982-2000) and Implications for Habitat Management*, 14 J. INSECT CONSERVATION 335, 335, 345 (2010).

184. SBMHCP, *supra* note 176, at I-1.

185. *See* Edward F. Connor et al., *Insect Conservation in an Urban Biodiversity Hotspot: The San Francisco Bay Area*, 6 J. INSECT CONSERVATION 247, 254 (2002) (explaining that the combination of several endangered insects and a popular urban area has led to "a hotspot for threatened biodiversity"); *see also* David Schooley, *San Bruno Mountain*, *in* TEN YEARS THAT SHOOK THE CITY: SAN FRANCISCO 1968–1978, at 209 (Chris Carlsson & Lisa Ruth Elliott eds., 2011) (marveling that San Bruno Mountain escaped development).

it owned most of the land on the mountain.[186] In 1975, Visitacion proposed a development project that included 7655 residential units and two million square feet of office and commercial space.[187] However, there was intense local opposition to developing some of the last remaining open space in the Bay Area.[188] These struggles were already underway when FWS discovered the Mission Blue butterfly (*Icaricia icariodes missionensis*).[189] The San Bruno Elfin butterfly, another listed species, was also found on the mountain.[190]

The discovery of the Mission Blue butterfly seemingly put an end to Visitacion's plans, as it did not appear there was any way to develop the land without taking butterflies, which ESA section 9 prohibited.[191] Before 1982, there were no exceptions for incidental take.[192] To find an acceptable future for all interested parties, several stakeholders met and structured a proposed

186. Steven White, *Where Have All the Butterflies Gone? Ninth Circuit Upholds Decision to Allow Incidental Taking*, 16 GOLDEN GATE U. L. REV. 93, 94 (1986).

187. Arnold, *supra* note 42, at 19. Visitacion first proposed a commercial and residential development project in 1975. Schooley, *supra* note 185, at 212. In 1976, the San Mateo County Board of Supervisors adopted an amendment to the county general plan specifically targeting San Bruno Mountain. Arnold, *supra* note 42, at 19. Called the San Bruno Mountain General Plan Amendment, it allowed construction of only 2235 residential units and limited office and commercial space. *Id.* The amendment designated the bulk of the land on the mountain to open space. *Id.* Not surprisingly, Visitacion was unhappy with this change to the general plan and sued the county. *Id.* The litigation settled in 1978. *Id.* As part of the settlement, Visitacion sold 1100 acres of the mountain to the county for $6.2 million and donated an additional 546 acres. *Id.*; SBMHCP, *supra* note 176, at II-1. The following year, at the State of California's request, Visitacion Associates negotiated to preserve additional acreage. SBMHCP, *supra* note 176, at II-2. The state purchased forty-two acres for five million dollars and Visitacion conveyed 256 acres to the state for a park. *Id.* In the end, one-third of the mountain was designated for development while two-thirds was set aside for parks and open space. *Id.* at IV-1. All of this occurred before any of the participants even knew of the presence of endangered species on the land. W. W. Dean & Assocs. v. City of S.S.F., 236 Cal. Rptr. 11, 13 (Ct. App. 1987).

188. *W. W. Dean & Assocs.*, 236 Cal. Rptr. at 13.

189. Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 979 (9th Cir. 1985).

190. SBMHCP, *supra* note 176, at III-21; Arnold, *supra* note 42, at 20. Although the FWS considered listing the Callippe Silverspot butterfly in the 1970s when it listed the Mission Blue butterfly, the species was not endangered when the San Bruno Mountain HCP was formulated. DEP'T OF ENVTL. MGMT., SAN MATEO CNTY. PLANNING & BLDG. DIV., AGREEMENT WITH RESPECT TO THE SAN BRUNO MOUNTAIN HABITAT CONSERVATION PLAN 5 (1982) [hereinafter SBMHCP IMPLEMENTATION AGREEMENT], *available at* http://parks.smcgov.org/sites/parks.smcgov.org/files/documents/files/SBM_Agreement_HCP_November198.pdf. Instead, the species was listed in 1997. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Callippe Silverspot Butterfly and the Behren's Silverspot Butterfly and Threatened Status for the Alameda Whipsnake, 62 Fed. Reg. 64,306 (Dec. 5, 1997) (to be codified at 50 C.F.R. pt. 17); *see also* Sw. Diversified, Inc. v. City of Brisbane, 280 Cal. Rptr. 869, 870–72 (Ct. App. 1991) (discussing the timeline of discovering and listing the Callippe Silverspot and how it affected the development of San Bruno Mountain). While some sources list the San Francisco garter snake as being found on the mountain, it hasn't been seen since adoption of the HCP and there is doubt that its habitat ever existed on the mountain because there is no nearby habitat for its standard food supply, the also-listed California red-legged frog. E-mail from Sam Herzberg, Senior Planner, San Mateo Cnty. Parks & Recreation Dep't, to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Nov. 6, 2014) (on file with author); *see also* Letter from U.S. Fish & Wildlife Serv. to Sam Herzberg, Senior Planner, San Mateo Cnty. Parks & Recreation Dep't (Mar. 2, 2009) (on file with author).

191. *See W. W. Dean & Assocs.*, 236 Cal. Rptr. at 13.

192. *Jantzen*, 760 F.2d at 980.

conservation and development plan.[193] Congress ratified this plan as section 10 of the ESA, explicitly modeling the HCP program after the efforts to balance development interests and species protection on San Bruno Mountain.[194] Thus, HCPs and incidental take permits were born. Congress lauded the San Bruno Mountain model and encouraged others to follow it.[195]

### 1. *Tracking Down the Documents*

The San Bruno Mountain HCP facilitated development of San Bruno Mountain and conversion of endangered butterfly habitat.[196] Ultimately, the plan allowed for development of 330 acres while protecting 2750 acres, and many believe that those acres would have been developed absent the HCP.[197] With full implementation, the San Bruno Mountain HCP permitted destruction of 14 percent of endangered butterfly habitat, and by its own assessment likely resulted in a 3 to 6 percent increase in the likelihood that the species would become extinct.[198] Given these impacts on the public interest, it makes sense that members of the public might want to view the mitigation requirements for the HCP. What is the public getting in exchange for the taking of butterflies and the loss of biodiversity and ecosystem services? To make this assessment, one must first find the incidental take permit, HCP, and any implementation agreements. Those documents should reveal the mitigation requirements. Unfortunately, as this discussion reveals, obtaining these documents can be challenging. Moreover, determining mitigation provisions can be confusing. After all that, actually finding the exacted conservation easements implementing the mitigation can be even more complicated.

To begin an investigation of ESA section 10 mitigation, one should start by obtaining the HCP and its associated documentation. HCPs are accompanied by one or more incidental take permits, and there are also often implementing agreements that describe how the HCP will be put into effect.[199] There may also be documents generated under section 7 of the ESA. Because the issuance of a section 10 permit is a federal action, triggering section 7,[200] section 7 consultation is required. Section 7 consultation, even where the FWS is

193. *Id.*

194. H.R. REP. NO. 97-835, at 30–31 (1982); Endangered Species Permit; Receipt of Application, 47 Fed. Reg. 54,366-04, 54,366 (Dec. 2, 1982); HCP HANDBOOK, *supra* note 55, at 1-2 to 1-3.

195. HCP HANDBOOK, *supra* note 55, at 1-2 to 1-3.

196. Timothy R. New et al., *Butterfly Conservation Management*, 40 ANN. REV. ENTOMOLOGY 57, 69 (1995).

197. E-mail from Herzberg to Owley, *supra* note 190.

198. SBMHCP, *supra* note 176, at S-8, IV-3 to IV-5. This increase in extinction risk plus habitat destruction is the likely result even with full implementation of all mitigation measures. Where mitigation measures are not fully or properly implemented, the risk to the butterfly increases. Moreover, while these numbers may initially appear low, it is important to remember that the FWS has already determined that this species is at a high risk of extinction, meaning that small perturbations in population or habitat availability could have devastating effects.

199. HCP HANDBOOK, *supra* note 55, at 1-9.

200. *Id.*

consulting with itself, should result in a biological opinion and an accompanying incidental take statement evaluating whether the permit issuance will jeopardize the continued existence of the species or adversely modify critical habitat.

Environmental review documents completed to comply with NEPA or related state laws can also be helpful.[201] For the federal process, one would look for an Environmental Assessment (EA), Environmental Impact Statement (EIS), a Finding of No Significant Impact (FONSI), and/or a statement of categorical exclusion.[202] Thus, even without looking to state law, there should be a fair amount of documentation available detailing the state of the endangered species habitat and discussing alternatives and mitigation efforts. Yet, sometimes one can get stymied in seeking to obtain these records. For example, for the San Bruno Mountain HCP, all of these documents were difficult to acquire. Although an HCP is a public document, none of the public agencies involved were initially able to provide the HCP, incidental take permit, environmental review documents, or related materials. It took several years and multiple contacts before I had the materials in hand. The following paragraphs detail my efforts to track down the San Bruno Mountain HCP documentation and to understand how the plan's mitigation programs function.[203]

The FWS maintains a website listing details about approved HCPs.[204] This website provides the official name of each HCP, the regional and field offices responsible for the HCP (here, the Sacramento field office in Region 8), basic permit information, and other details about the HCP including species listed, size, and applicant type;[205] however, the site does not provide the name of the applicant.[206] The database indicates that there is one permit associated with the San Bruno Mountain HCP, and that the Service issued it on March 4, 1983. As a thirty-year permit,[207] this permit should have expired in 2013, but it

201. *See id.*

202. *Id.* at 1-6.

203. In tracking the mitigation efforts at issue in these case studies, I did not attempt to evaluate the actual mitigation progress. That is, I did not conduct any habitat assessments, species counts, or other ecological evaluations. Such work is vital. If anything, my research indicates the challenge of public or academic efforts to do such work. Where one cannot even determine what the operative mitigation measures are or which lands are being preserved, habitat assessment becomes moot.

204. *Conservation Plans and Agreements Database*, *supra* note 95 (updated frequently); *see also Choose a Habitat Conservation Plans Report*, U.S. FISH & WILDLIFE SERV., http://ecos.fws.gov/conserv_plans/PlanReportSelect?region=9&type=HCP (last updated Feb. 11, 2015) [hereinafter *HCP Database*]. When I began researching HCPs in 2003, this website was clunky but easily accessible. Now, the website will periodically boot users without government passwords off the system, and calls to the FWS helpline have not been fruitful.

205. *HCP Database*, *supra* note 204. In this case, I started with an HCP that I knew existed. If one is interested in researching the HCPs in an area, search by region. Although there is not a map of HCPs, the Service's website provides a regional list and states which county (or counties) each HCP is located in.

206. *Id.* (running the Plan Report for San Bruno Mountain HCP).

207. The duration of the permit is also provided in the database. *Id.*

is not listed as such.[208] Under "NEPA Process," the database indicates that an EA was completed. The website sometimes contains links to ESA or NEPA documents but not for the San Bruno Mountain HCP.[209]

The most straightforward way to obtain copies of the pertinent ESA and NEPA documents should be to contact the permit-issuing authority, but that was not the case here. Calls to the Sacramento FWS field office were not initially helpful.[210] Staff members originally told me that they did not know where such documents were stored or how to find them.[211] It was only after multiple calls and e-mails over the course of several years that I was finally put into contact with FWS employees who were able to provide me with the pertinent documents. That is, when I first started researching the San Bruno Mountain HCP in 2003, no one at FWS knew where to find the HCP or even the permit.[212] When I tried contacting the office again in 2011, no one returned

208. A San Mateo County official informed me that he had extended the permit for another thirty years, but initially I could find no public record of such an extension. Telephone Interview with Sam Herzberg, Senior Planner, San Mateo Cnty. Parks & Recreation Dep't (Aug. 5, 2014). The FWS's database should include information on permit renewal or extensions. A blank space after "Date Permit Expired" is insufficient to confirm that a permit is still under operation and clearly does not provide the permit's new expiration date. One would hope that at a minimum, members of the public could review the database and determine which ESA permits are currently operating. The county updated its website in fall 2014, and the permit extension is available there. *San Bruno Mountain Habitat Conservation Plan (HCP)*, COUNTY SAN MATEO PARKS DEP'T, http://parks.smcgov.org/documents/san-bruno-mountain-habitat-conservation-plan-hcp (last visited Feb. 26, 2015); *see also* U.S. FISH & WILDLIFE SERV., FEDERAL FISH AND WILDLIFE PERMIT: SAN BRUNO MOUNTAIN HCP PERMITTEES (Mar. 29, 2013), *available at* http://parks.smcgov.org/sites/parks.smcgov.org/files/documents/files/SBM%20HCP%20extention_3-29-13.pdf (showing new expiration date of Mar. 29, 2043).

209. *HCP Database*, *supra* note 204 (running the Plan Report for San Bruno Mountain HCP).

210. I talked to FWS staff in 2011, but they shuffled me to voicemail boxes that did not result in returned calls, and my more recent calls went unanswered and unreturned. The Conservation Planning Division neither answered its phone nor had a voicemail box that received messages. I left messages with the Coast Bay Division (covering San Mateo County) but never received return calls. This really turned around once I had names of specific employees. An extremely helpful FWS employee compiled all the requested documents and mailed them to me on a CD-ROM. He also repeatedly followed up to ensure I had what I needed.

211. Presumably, these documents would have been available through FOIA requests, but the officials I spoke with simply did not know where they would find a copy and were uncertain where to direct me. My phone calls to the field office occurred over the span of seven years. I first went in search of the San Bruno Mountain HCP as part of my dissertation research in 2003. I contacted the field office again in 2004, 2005, and 2011 and received similar answers; the staff simply did not know who I should talk to. As the FWS's FOIA information page states, "The FWS is highly decentralized and does not maintain a central database of records in its possession." *Freedom of Information Act (FOIA)*, U.S. FISH & WILDLIFE SERV., http://www.fws.gov/irm/bpim/foia.html (last updated Jan. 12, 2015). It calls for parties to address requests to particular regions or offices. *Id.* This lack of a unified approach or organization likely explains the disparity in responses to the requests that I made. More recently, the FWS's FOIA officers have proven more helpful in locating and sending me documents that the field office staff had told me for years did not exist. This is helpful in terms of members of the public being able to locate the documents, but it is still a bit disconcerting, to say the least, that the field offices supposedly overseeing incidental take permits could not find the permit or the documents associated with it.

212. Jessica Owley, Exacted Conservation Easements 153 n.543 (Dec. 2005) (unpublished Ph.D. dissertation, University of California, Berkeley) (on file with Doe Library, University of California, Berkeley).

my many phone calls. When I tried one last time in 2014, no one returned my phone calls or responded to e-mails. Through phone conversations with the permit holder in 2014, I learned the names of the FWS employees that worked directly on the HCP. When contacted directly via e-mail, the FWS employees responded promptly, provided documents, and answered all my inquiries.[213] Before I had been able to reach the appropriate FWS employees, I had tried to obtain the appropriate materials via the permit holders and others, as detailed below.

The announcement of the San Bruno Mountain HCP permit application in the Federal Register lists the permit applicants as the County of San Mateo and the cities of Brisbane, Daly City, and South San Francisco.[214] Often, if a local government administers an HCP, it agrees to regulate development permits within its boundaries. In such cases, the mitigation may be exacted from developers. For example, if a county is the HCP permit holder, it may place restrictions on anyone applying for grading permits within designated habitat zones. When a landowner applies for a grading permit, the county might exact a conservation easement.[215] When I first embarked on this research in 2003, San Mateo County staff member Sam Herzberg acknowledged that the county was the holder of the incidental take permit but told me that the county did not have copies of the incidental take permit, HCP, or other documents.[216] When I

213. I am immensely grateful to Joseph Terry and Mike Thomas at the FWS Sacramento field office. My ten-year struggle with finding the right people at the FWS is telling. As an uninformed member of the public, I used the website and phone book to find telephone numbers and e-mail addresses. I used Federal Register notices to find the names of people who I thought would be appropriate contacts. I left many voicemails in various boxes and every time I reached a live person, I was simply transferred to someone else. Multiple times I was transferred to voicemail boxes, which told me "the person you have reached does not accept voice mail messages." It wasn't until a county official (much gratitude again to Sam Herzberg of San Mateo County) provided me with individual names and e-mail addresses that I was able to actually contact helpful FWS employees. At that point, the process was friendly and simple with quick e-mail responses and CD-ROMs of documents sent my way.

214. Endangered Species Permit; Receipt of Application, 47 Fed. Reg. 54,366-04 (Dec. 2, 1982).

215. This is an exacted conservation easement, but it is exacted by the county for the grading permit—not for an incidental take permit under the ESA. The conservation easement may still protect endangered species habitat covered by an HCP, but because the landowner was not the HCP applicant, the exacted conservation easement is not part of the permit. These examples serve to demonstrate the potential complexities in the HCP permitting process. It can be difficult to diagram who the permit holder is or where the conservation easement is coming from. Additionally, determining what entity is actually doing the exacting may not be a trivial task. Exacted conservation easements may be involved even though not directly part of the ESA process. That is, there are many mitigation requirements that are hard to trace back to the environmental harm they are supposedly mitigating. Indeed, a grading permit applicant may not even realize that the requirements are stemming from the ESA. Although this Article does not explore complex cases like this one in detail, it is important to realize that the entire planning process for a region may need examination to comprehend fully the role of conservation easements in carrying out ESA goals.

216. Upon reviewing a draft of this Article, Herzberg informed me that he could have provided those documents. He has been an invaluable source for me since 2011, but during my investigations in 2004 and 2005 he told me that he did not actually have copies of any of the documents. Generally, as I provided a draft of this Article to various officials to review, documents suddenly became more forthcoming. While I believe that everyone I spoke with along the way was trying to be helpful, there is no question that some of these details appearing in print inspired offices to take more time to search for

contacted the county ten years later, the same staff person was now able to give me more extensive information about the HCP and associated documents.[217] During the intervening ten years of working on the HCP for the county, he had developed greater expertise and knowledge of the project and its mitigation. Now a fount of information, Herzberg had extensive records about the history of the HCP, the various documents and amendments that had been filed, and current efforts. Herzberg described all the documents involved as being a "full library of records." Unfortunately, due to multiple office relocations, this library is now in storage, and even Herzberg does not have easy access to the materials.[218] At some point, the county created a webpage regarding the San Bruno Mountain HCP and made some of the documents available there. They have been gradually adding documents to the site; at the end of 2014, it included part of the original HCP, implementing agreement, and permit, but it still lacked the HCP amendments, biological opinions, and some of the environmental review documents.[219]

Because the Federal Register lists South San Francisco, Brisbane, and Daly City as co-holders of the permit,[220] I contacted the three city governments

documents. It may also have been simply that they did not fully understand what I was looking for until they read the Article.

217. Telephone Interview with Sam Herzberg, Senior Planner, San Mateo Cnty. Parks & Recreation Dep't (Aug. 4, 2014).

218. A repeated lesson throughout the years I have been involved in this project has been the importance of individuals. As different employees gain expertise, get reassigned, and leave their jobs, access to and understanding of the projects change. One hopes that San Mateo County will be able to find someone who is able to understand and track the San Bruno Mountain HCP as well as Herzberg when he leaves. The permit has been renewed for another thirty years, so it seems likely that many of the current staff working on it—various government entities, consultants, and nongovernmental organizations—will move on before its expiration. When San Mateo County Parks was downsized and incorporated into San Mateo County Public Works, copies of all park-planning documents were scanned and put into an electronic library. Using this database should help the county find documents in the future and provide new employees with a full picture of the activities associated with the HCP. E-mail from Herzberg to Owley, *supra* note 190.

219. On August 4, 2014, the website had links to four documents: the 2008 San Bruno Mountain HCP Management Plan, the Covered Species Activity Annual Report for 2013, the Vegetation Management Annual Report for 2013, and the San Bruno Mountain HCP Site Activity Review Application. *San Bruno Mountain Habitat Conservation Plan (HCP)*, *supra* note 208. On October 18, 2014, the website had links to eight documents, including the newly added San Bruno Mountain Area Habitat Conservation Plan–Volume One–November 1982; Agreement with Respect to the San Bruno Mountain Habitat Conservation Plan–November 1982 (the implementing agreement); Adoption of San Bruno Mountain HCP and Endangered Species Act Section 10(a) Permit–November 1982 (the Environmental Impact Report under the California Environmental Quality Act and the EA under NEPA); and the San Bruno Mountain Habitat Conservation Plan Extension–March 2013 (the permit extension). *Id.* The HCP available here is only part of the first volume. The first volume is 109 pages, but only 96 pages appear on the website. Pages III-1 to III-20 are missing (which covers some of the mitigation details). The second volume, which is almost 350 pages, contains site-specific information including maps and details regarding the operation and management of various locations, but as of March 2015 it was not available on San Mateo's website.

220. Amendment to the Incidental Take Permit for the San Bruno Mountain Habitat Conservation Plan in San Mateo County, CA, 74 Fed. Reg. 50,985-01 (Oct. 9, 2009); Receipt of an Application to Amend the Incidental Take Permit for the San Bruno Mountain Habitat Conservation Plan, San Mateo County, CA, 64 Fed. Reg. 7662-02 (Feb. 16, 1999) (listing permit holders as County of San Mateo and

to see if they had copies of the permits or associated documents. No one was able to answer this question immediately, but helpful staff set to work tracking down appropriate people and documents. Planners in the City of South San Francisco spent ten days tracking down information, which was relatively easily obtained in the end only because there was a staff person who had been with the office since 1985 and remembered the HCP process. Most city officials, while helpful, were at a loss as to how to direct my call. They did not know where to get a copy of the HCP nor did they know the history of the HCP.[221] In Daly City, the city manager's office directed me to San Mateo County, indicating that they did nothing more with the HCP and permit other than send project developers to San Mateo County to ensure HCP compliance. Daly City did not have a copy of the permit itself, nor were any city employees aware of its contents.[222] While the Brisbane city manager did not immediately know what the HCP was or how to find it, the staff there quickly sent me some links to their website, which directs potential developers to San Mateo County.[223] Brisbane too had neither a copy of the HCP nor related documents.

To summarize, with five public entities involved (FWS, San Mateo County, Daly City, South San Francisco, and the City of Brisbane), initially I was able to obtain only basic information about the HCP from the FWS database and some management and reporting documents from the county. No

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cities of South San Francisco, Daly City, and Brisbane); Availability of an Environmental Assessment and Receipt of an Application to Amend the San Bruno Mountain Habitat Conservation Plan Pursuant to Section 10(a) of the Endangered Species Act, 60 Fed. Reg. 36,826-01 (July 18, 1995) (listing San Mateo County as permit holder); Availability of an Environmental Assessment and Receipt of an Application to Amend the San Bruno Mountain Habitat Conservation Plan Pursuant to Section 10(a) of the Endangered Species Act, 57 Fed. Reg. 8674-01 (Mar. 11, 1992) (listing San Mateo County as permit holder); Receipt of Permit Amendment Requests; County of San Mateo and City of Brisbane, CA, 53 Fed. Reg. 35,117-02 (Sept. 9, 1988); Denial of Application for Amendment to Permit for Incidental Take of Endangered Species, 51 Fed. Reg. 2767-02 (Jan. 21, 1986); Issuance of Permit Amendment for Incidental Take of Endangered Species, 51 Fed. Reg. 690-02 (Jan. 7, 1986) (listing permit holders as County of San Mateo and cities of South San Francisco, Dale [sic] City, and Brisbane); Receipt of Permit Amendment Requests, 50 Fed. Reg. 43,292-01 (Oct. 24, 1985) (listing permit applicants as the County of San Mateo and Daly City); Issuance of Permit Amendment for Incidental Take of Endangered Species, 50 Fed. Reg. 37,059-01 (Sept. 11, 1985) (misspelling Daly City as Dale City); Receipt of Application for Permit, 50 Fed. Reg. 28,288-01 (July 11, 1985) (listing permit applicants as the County of San Mateo and the City of South San Francisco); Issuance of Permit for Incidental Take of Endangered Species, 48 Fed. Reg. 10,136-01 (Mar. 10, 1983); Endangered Species Permit; Receipt of Application, 47 Fed. Reg. 54,366-04 (Dec. 2, 1982).

221. One staff member was quite excited to learn that the city was the holder of the first HCP, perhaps explaining her particular eagerness (and helpfulness) in tracking down the documents and people involved.

222. This does not mean that Daly City was not complying with the HCP or the incidental take permit, merely that the city was not tracking it. This lack of supervision is a bit surprising considering that San Mateo County's website lists the city managers for Brisbane, Daly City, and South San Francisco, along with the San Mateo county manager, as the "HCP Trustees" that provide oversight over the management of the HCP. *San Bruno Mountain Habitat Conservation Plan (HCP)*, *supra* note 208.

223. E-mail from Angel Ibarra, Office Specialist, City of Brisbane, to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Aug. 4, 2014) (on file with author); *see Public Works Permits*, CITY BRISBANE, http://www.ci.brisbane.ca.us/departments/public-works/permits (last visited Aug. 5, 2014).

one was able to provide the HCP, the permit, the implementing agreement, the biological opinion, the NEPA documents, or any related state environmental review documents until 2014. Through internet research and with some of the other documents in 2004, I was able to determine the name of the environmental consulting firm that worked on the HCP and the staff there sent me a copy of the HCP.[224] There have been five amendments to the San Bruno Mountain HCP,[225] and these amendments were even harder to track down than the original agreement. Serendipitously, I was able to get a hard copy of the HCP, updates to the HCP, and the HCP's implementing agreement from local land use lawyers.[226]

When researching HCPs, environmental review documents can also be helpful. FWS's HCP database lists what type of federal environmental review documents the agency filed to comply with NEPA.[227] Where a major federal action is likely to result in significant adverse environmental impacts, agencies are required to complete an EIS evaluating environmental impacts and discussing both potential mitigation of those impacts and alternatives to the proposed action.[228] Where it is not initially clear whether a major federal action will have significant negative environmental impacts, agencies may instead prepare a more streamlined EA.[229] An EA informs the agency as to whether an EIS should be completed or if the action will be below the impact threshold, in which case the agency prepares a FONSI.[230] Thus, environmental review processes end with either the completion of an EIS or a FONSI, unless the projects fall under a categorical exemption.[231] In the case of the San Bruno Mountain HCP and its amendments, the Service's database indicates that the Service completed "environmental assessments."[232] Because the Service's database does not list an EIS under the San Bruno Mountain listings, it is likely the agency filed a FONSI instead. Indeed, HCPs often generate FONSIs instead of EISs.[233] I was eventually able to obtain a copy of the FONSIs in late August

224. The firm's name is TRA Environmental Sciences, Inc.

225. *See HCP Database*, *supra* note 204 (running an individual report for the San Bruno Mountain HCP).

226. Thanks to Clark Morrison of Cox, Castle & Nicholson LLP and Alicia Guerra of Buchalter Nemer. It was pure luck that I happened to chat with Clark about my interest in HCPs and he then offered to share with me copies of HCPs that he had in his office. I was delighted to learn that the San Bruno Mountain HCP was one of them.

227. *See HCP Database*, *supra* note 204 (running an individual report for the San Bruno Mountain HCP).

228. National Environmental Policy Act, 42 U.S.C. § 4332(C) (2012); *see* Bradley C. Karkkainen, *Whither NEPA?*, 12 N.Y.U. ENVTL. L.J. 333, 344 (2004).

229. EAs are not mentioned in the statute. They are a creation of the Council on Environmental Quality. The council's NEPA regulations explain that an EA is a public document used to determine whether an EIS will be necessary. 40 C.F.R. § 1508.9(a) (2014); *see also* RONALD E. BASS ET AL., THE NEPA BOOK: A STEP-BY-STEP GUIDE ON HOW TO COMPLY WITH THE NATIONAL ENVIRONMENTAL POLICY ACT 43–44 (2d ed. 2001).

230. 40 C.F.R. § 1508.13; *see also* BASS ET AL., *supra* note 229, at 43–44, 58.

231. 40 C.F.R. § 1508.4; *see also* BASS ET AL., *supra* note 229, at 35, 58.

232. *HCP Database*, *supra* note 204.

233. HCP HANDBOOK, *supra* note 55.

2014 from the FWS, when this Article was already beginning the publication process. It took many e-mails and phone calls over multiple years to receive this information.

As explained above,[234] section 7 of the ESA, which governs agency action, is also pertinent to HCPs. I was initially unable to find any section 7 materials—such as biological opinions with associated incidental take statements—for amendments to the San Bruno Mountain permit, but I finally obtained the original biological opinion with a host of documents from the FWS in late August 2014.

With at least some of the documents in hand, I searched through them for the mitigation requirements. The mitigation plans in the San Bruno Mountain HCP are unclear.[235] The HCP explains that mitigation will focus on preservation, but does not provide details.[236] The HCP implementation agreement described four mitigation requirements. First, landowners must dedicate any land in the designated "Conserved Habitat" area to the public.[237] The dedications put fee ownership of conserved habitat lands in the hands of San Mateo County.[238] The original HCP requires private landowners to dedicate 793 acres to the county as permanent open space.[239] Second, landowners must fund preservation activities through development fees that go into a trust fund to promote the ecology of the area.[240] Third, landowners must establish buffer areas on their land.[241] The details regarding buffer areas were hammered out in development agreements between landowners and local planning agencies that are not part of the HCP records.[242] Fourth, landowners must limit pesticide use.[243] The use of pesticides is supposedly restricted by

234. *See supra* note 200 and accompanying text.

235. This is my assessment, but the permit issuer and permit holders agree. Joseph Terry of the FWS described the mitigation requirements as "not clear" and "confusing," citing as an example a lack of any mention of mitigation ratios or details about habitat protection requirements. Telephone Interview with Joseph Terry, Fish & Wildlife Biologist, U.S. Fish & Wildlife Serv. (Aug. 5, 2014). Sam Herzberg of San Mateo County said that the initial HCP did not fully explain the type of funding the mitigation required and stated that the original drafters of the agreement had not fully contemplated what the rules for development dedications should be. Telephone Interview with Sam Herzberg, *supra* note 208. Together, this means that the entities working with the HCP did not know how many acres should be acquired or what state the land needed to be in at the time of dedication.

236. *See* SBMHCP, *supra* note 176, at S-8.

237. SBMHCP IMPLEMENTATION AGREEMENT, *supra* note 190, at 12.

238. *Id.*; Telephone Interview with Sam Herzberg, *supra* note 208; *see* SAN MATEO CNTY., SAN BRUNO MOUNTAIN STATE AND COUNTY PARK MASTER PLAN 7-2 to 7-7 (1999), *available at* https://parks.smcgov.org/sites/parks.smcgov.org/files/documents/files/San%20Bruno%20Mountain%20Master%20Plan.pdf (laying out standards for the acceptance of any dedicated lands by the County of San Mateo in accordance with the San Bruno Mountain HCP); E-mail from Herzberg to Owley, *supra* note 190.

239. Arnold, *supra* note 42, at 21. The county also holds 750 acres of habitat easements apart from the fee dedications. Telephone Interview with Sam Herzberg, *supra* note 208. It is not clear whether these habitat easements are meeting the dedication requirement or the buffer requirement.

240. SBMHCP IMPLEMENTATION AGREEMENT, *supra* note 190, at 12–13, 21–22.

241. *Id.* at 13, 16, D-33 to D-34.

242. Owley, *supra* note 212, at 149.

243. SBMHCP IMPLEMENTATION AGREEMENT, *supra* note 190, at 16.

covenants running with the land that are in favor of the local agency that has jurisdiction over the specific parcel.[244] There are additional requirements for reclamation plans for any areas where grading is needed.[245]

Although this list of four mitigation measures from the HCP's implementation agreement appears relatively straightforward, the county described the mitigation elements differently. In 2005, Sam Herzberg summarized the main elements of mitigation within the San Bruno Mountain HCP as follows:

1) clustered and increased density,
2) required dedications of lands,
3) required conservation easements in graded areas located on the slopes over the developments so that they could be returned and maintained as habitat and not be developed, and
4) required contributions towards the habitat management activities on the mountain to protect, maintain, and enhance the butterfly populations. San Mateo County Parks is the sole beneficiary of these lands dedicated in fee title and by easement.[246]

Herzberg did not mention buffer areas or pesticides. This lack of clarity regarding the mitigation requirements is problematic.

At first pass, it was not clear whether the FWS exacts conservation easements under the HCP. The San Bruno Mountain HCP's mitigation sections do not mention conservation easements or any type of partial interests in land beyond access easements. Instead, the HCP focuses on habitat conservation through public ownership of targeted lands.[247] The "Plan Overview" section of the HCP does not mention conservation easements either. However, the HCP's glossary offers the following definition:

> Habitat Easement - a recorded restriction on the use of property to prevent uses which are inconsistent with use of the land as habitat by the Mission Blue, Callippe Silverspot and other species of concern.[248]

Over two hundred pages later, habitat easements appear in the details of plans for some of the areas affected by the HCP. For example, the part of the HCP covering the South East Ridge of San Bruno Mountain discusses the obligations of a quarry owner. The landowner is required to grant a habitat

244. Owley, *supra* note 212, at 149.

245. SBMHCP IMPLEMENTATION AGREEMENT, *supra* note 190, at 14–21.

246. E-mail from Sam Herzberg, Senior Planner, San Mateo Cnty. Parks & Recreation Dep't, to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (May 4, 2005) (on file with author). After reviewing a draft of this Article, Herzberg informed me that there were conservation easements "associated with lands remediated to prevent future landslides above subdivisions in the cities of Brisbane, Daly City and South San Francisco. County Counsel facilitated imposition of conservation easements as required by cities as part of development approval process as part of HCP compliance." E-mail from Herzberg to Owley, *supra* note 190.

247. *See* SBMHCP, *supra* note 176, at I-3.

248. *Id.* at G-4.

easement or dedicate land.[249] Ten pages later, the HCP explains that the landowner must grant a habitat easement in perpetuity over six acres of land.[250] Although the HCP does not provide examples of habitat easements or many details about them, it does explain that they may "be released if conserved habitat becomes isolated from adjacent habitat as a result of future development of other parcels."[251] The HCP outlines similar habitat easement requirements for two other areas.[252]

*2. Tracking the Mitigation*

The HCP's vague references to habitat easements sounded like exacted conservation easements, but did not provide details regarding the easements—not even clarifying who the holder of the conservation easements would be. Three things, however, indicate that the San Bruno Mountain HCP likely included exacted conservation easements. First, the definition of "habitat easements" sounds like conservation easements. Second, the implementation agreement's mention of buffer zone restrictions indicates that conservation easements might be used to protect such areas. Third, Sam Herzberg stated that the HCP requires conservation easements over graded areas.[253] With this information, I went in search of any conservation easements associated with the San Bruno Mountain HCP. Unfortunately, finding the exacted conservation easements was even more challenging than finding the HCP.

In 2003, FWS's Sacramento field office did not understand how the exacted conservation easement agreements were different from the HCP or why one might want these documents.[254] Similarly, the deputy county counsel of San Mateo County was surprised by a request for the conservation easements, but agreed to send copies of the documents. When the documents arrived, they were largely not conservation easements, but documents reflecting land dedications. Most of the documents and maps reflected land the county owns in fee simple. Only one of the documents was an exacted conservation easement: the "Smith Easement."[255]

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249. *Id.* at VII-139.

250. *Id.* at VII-149.

251. *Id.* at VII-158c.

252. *Id.* at VII-224, VII-274 (requiring habitat easements over areas with native vegetation).

253. In a more recent conversation (conducted after my field work), Herzberg told me that the county holds 750 acres of habitat easements, but he could not provide me with an example or any copies until I provided him a parcel number. Telephone Interview with Sam Herzberg, *supra* note 208. If one is trying to determine where habitat mitigation is occurring, you are unlikely to know the parcel numbers. You might not even know that there are parcels to look for. San Mateo County is in the process of updating and digitizing more of its records, and it is possible that at a future date one would be able to search for "habitat easements," or perhaps search for easements that reference the San Bruno Mountain HCP, but as my efforts indicate, this is not currently possible. Herzberg suggested that one could hire county recorder staff to research the issue, a potentially costly enterprise that I did not investigate further.

254. Owley, *supra* note 212, at 153.

255. For the privacy of the landowners, I refer to them inaccurately as the Smiths. Grant of Easement, No. 90099860, San Mateo County Official Records (recorded July 27, 1990) [hereinafter

The Smith Easement labels itself an "easement," but it is not designated as an exacted conservation easement, conservation easement, scenic easement, or open space easement. The conservation easement deed does not adopt the title "habitat easement" from the HCP, but the map accompanying the Smith Easement describes it as a "habitat easement" in the remarks section. The Smith Easement does not reference or invoke any of the California laws relating to conservation easements. It does, however, proclaim that it "shall run with and burden the Property, and all obligations, terms, conditions and restrictions running with the land in perpetuity . . . ."[256]

The grantors of the Smith Easement are the landowners (the Smiths), and the grantee is the County of San Mateo.[257] The grant is in consideration for (1) redesigning a portion of the parcel to "planned status," and (2) issuing a building permit for construction of a single-family home.[258] The Smith Easement mentions the public benefit arising from the San Bruno Mountain HCP, including a description of the main goals of the HCP. Thus, on the face of the agreement, one can tell it is an exaction and that it is associated with an HCP. Although the conservation easement specifically mentions the HCP, it does not directly refer to the ESA or state whether the conservation easement is serving to meet requirements of the San Bruno Mountain HCP. Readers of the document may realize that HCPs are linked to the ESA, but this is not common knowledge.[259]

Under the terms of the Smith Easement, only the grantors and the grantees may enforce it. The conservation easement is labeled as perpetual but could potentially terminate if adjacent properties "are developed such that the Easement becomes an island habitat area.[260] If the Easement becomes an island

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Smith Easement], *available in* Owley, *supra* note 212, app. B. Despite contacting the county and the FWS several more times in pursuit of the exacted conservation easements, I was not able to obtain any documents beyond this original package. It is not clear how many conservation easements or other land restrictions have come out of the San Bruno Mountain HCP. Although the HCP identifies habitat easements and the county asserts that preservation by conservation easements is one of the chief methods for mitigation of development harms, there is no list of exacted conservation easements. E-mail from Herzberg to Owley, *supra* note 246. Because conservation easements are negotiated separately and made between different parties, there is no way of knowing whether the Smith Easement is typical of the conservation easements exacted in conjunction with the San Bruno Mountain HCP. Searching for the Smith Easement in the San Mateo County Recorder's Office, I stumbled across a deed restriction burdening other San Bruno Mountain property also owned by the Smiths and referencing the HCP directly, indicating that there are likely other exacted conservation easements and property restrictions in the area. Declaration of Covenants and Restrictions on Real Property on San Bruno Mountain, Parcel No. 007570230, No. 1999-143779 (recorded Aug. 20, 1999).

256. Smith Easement, *supra* note 255, at 2.

257. *Id.* at 1.

258. *Id.*

259. The deed restriction on the Smiths' other parcel is in sharp contrast. It mentions the San Bruno Mountain HCP and the county resolution adopting the HCP, discusses implementation of the HCP, and lists the entities that are party to the HCP's implementing agreement. Declaration of Covenants and Restrictions on Real Property on San Bruno Mountain, *supra* note 255.

260. This is a tricky point under California law. California's main conservation easement law requires conservation easements to be perpetual. CAL. CIV. CODE § 815.2 (West 2014). Thus, a conservation easement providing terms for termination might not meet the requirements of perpetuity

habitat area, Grantee shall reconvey the Easement upon demand by Grantor."[261] The document does not define island habitat area. The Smith Easement differs from many conservation easements because it states that the county cannot assign or transfer its rights.[262]

> The use of the Easement by Grantee shall be limited to reclamation activities, monitoring, and inspection of the Easement in accordance with the San Bruno Mountain Area Habitat Conservation Plan (HCP) and Agreement. The terms of this grant are not intended to extend the authority of the Grantee beyond that defined in the HCP and Agreement. Grantor retains the right to use the Property in any way not inconsistent with the HCP and Agreement. The Easement shall be left in its natural state, and no construction or conversion to urban uses, including but not limited to gardening or landscaping, shall be permitted on the Easement. Grantor shall retain the right and authority to take such action with respect to the Easement as may be necessary to ensure compliance with fire safety regulations applicable to the Property.[263]

In summary, this conservation easement is a simply worded document restricting development, permitting fire control, and obliging the parties to comply with the HCP, but it does not explicitly reference its relation to the ESA, the incidental take permit, or the conservation easement's status as an exacted conservation easement. The conservation easement does, however, reference an HCP, indicate that it is exacted, and makes it clear that it is a servitude created for conservation purposes. Although this was the only San Bruno Mountain HCP exacted conservation easement I was able to obtain,

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under the California Conservation Easement Act. Jessica Owley, *Exacting Conservation Easements in California*, 21 ENVTL. L. NEWS 3, 4 (2012). It is possible that this is an open space easement under the California Open Space Easement Act. CAL. GOV'T CODE § 51050 (West 2014). Indeed, this appears the more likely statute because the Smith Easement as filed in the San Mateo County Recorder's Office contained a copy of a county resolution approving the easement, something required under the California Open Space Easement Act. The text of the Smith Easement does not indicate which law it was created under. There is also an argument that it need not adhere to any state law requirements because it was created as part of a federal scheme. Additionally, if categorized as an exaction, the Smith Easement could be enforced as an exaction, not as an open space easement. *See* Ojavan Investors, Inc. v. Cal. Coastal Comm'n, 32 Cal. Rptr. 2d 103, 109 (Ct. App. 1994) (indicating that exactions need not comply with California property law restrictions); Rossco Holdings Inc. v. State, 260 Cal. Rptr. 736, 742 (Ct. App. 1989) (holding that landowners cannot challenge permit conditions after acquiescing to the permit conditions and obtaining permit benefits). *But see* Trancas Prop. Owners Ass'n v. City of Malibu, 41 Cal. Rptr. 3d 200 (Ct. App. 2006) (holding that a city may not enter into an agreement with a developer that runs contrary to state property law).

261. Smith Easement, *supra* note 255, at 4.

262. One of the chief allures of conservation easements is their assignability. State conservation easement statutes specifically sought to avoid common law restrictions on assignment (or transfer) and have explicit provisions permitting assignment. *See* John L. Hollingshead, *Conservation Easements: A Flexible Tool for Land Preservation*, 3 ENVTL. LAW. 319, 335 (1997).

263. Smith Easement, *supra* note 255, at 2.

there are likely many others for the reasons stated above. Unfortunately, there is nothing to indicate whether the Smith Easement is typical of the other exacted conservation easements.

*3. Site Visits*

With all these documents in hand, I headed out to San Mateo County and San Bruno Mountain to see how the conservation easements were recorded and to look at the land. Even with a copy of the conservation easement, it took me two days of working with the employees of the county recorder's office to track it down. That is, I wanted to see if a concerned citizen who knew that there was an encumbrance on the land could go to the county recorder's office and get a copy of the conservation easement and learn of its requirements. In California (as in much of the United States), county recorder's offices operate independently and there are no uniform state or federal standards for land recordation. Thus, each county has its own method of listing parcels and its own system for locating recordings. In San Mateo County, you can look up a document by the name of the grantor/grantee. I looked up the Smiths and found no record of the document that I had received from San Mateo County. I tried looking by grantee (the County of San Mateo) and did not find any records of any conservation easements or related servitudes on any parcel anywhere in the county where San Mateo County serves as a grantee. If the county holds many conservation easements, as indicated in my conversations with county employees, they should have been listed. Unfortunately, if the county recorder's office does not list the county as the grantee on their database, a search will not yield results.[264]

The documents I had received from San Mateo County indicate the Smith Easement was recorded, as it contained a signature, stamp, and file number.[265] Yet, the recorder's office could find no record of it. The staff told me that it had not actually been recorded and stated that they always have trouble finding conservation easements.[266] Searching by parcel number (which I determined from the documents I possessed and from maps of the area) revealed no documents related to this parcel.

I looked up the Smiths by name and found no conservation easements for any landowners with that name. A search under Smith did, however, yield a "Declaration of Covenants and Restrictions on Real Property on San Bruno Mountain" that appeared to be encumbering a property owned by the same family.[267] This 1999 deed restriction on a different piece of property in

264. County Real Property is currently creating a database of the county's fee title properties and conservation easements in hopes of creating comprehensive records in a geographic information system database. E-mail from Herzberg to Owley, *supra* note 190.

265. *Id.*

266. Visit to San Mateo County Recorder's office in July 2011.

267. The property was close to the one supposedly encumbered by the Smith Easement, and the landowners had the exact same names, including middle initials.

Brisbane specifically mentions the San Bruno Mountain HCP.[268] Yet, it had not been in the batch of materials I had received from the county in 2004. The declaration also required that the Smiths dedicate some property to San Mateo County. I looked up that property by parcel number and found no restrictions upon it. Thus, even when there are restrictions, they can be hard to find, as the county recorder's office appeared inconsistent in its approach to registering and cataloguing deeds.

The date stamp on the Smith Easement I had received from the county enabled a search by date. Reviewing the more than 500 entries recorded on that date, I realized that the document numbering system must have changed since the recordation in 1999. This may have been the reason the staff had not been able to locate the document. I found an entry for a "deed" on the right date. I then was able to find the document on microfilm. Once I had the document, I saw that the official version had two more pages than I had been given by the county, including references to a county resolution.[269]

Although I found the document in the end, this is a dismaying tale. I took a document that I not only knew existed but one that I actually had a copy of in my hands. It took two days and three staff members to help me locate the officially recorded version. I would not have been able to find the document without already having a copy of it to refer to. This search demonstrates that there is currently no easy way to search for conservation easements in San Mateo County. In fact, the Smith Easement was not even recorded as an easement, let alone a conservation easement. An initial search by address also turned up only a few documents, none of which included the exacted conservation easement. I was eventually able to find the document based on knowing the landowner's name and the date it was recorded, but this is a piece of information members of the public would normally be the least likely to have. Where a member of the public is interested in assessing habitat mitigation measures, this would have been a discouraging order of events. The reason we want such documents to be readily obtainable is because they provide details regarding habitat protection. Often, HCPs simply indicate that conservation easements will be created in exchange for conversion of habitat. Without the conservation easements themselves, you cannot determine the exact rules regarding the property, making it more challenging to assess permit compliance.

Shaking my head, I climbed into my rental car and drove out to the property. While I was able to get close to the property, I was unable to actually reach it because it was located on a private dirt road. What was clear is that this is a desirable piece of land in the Bay Area with great views because of the elevation and adjacency to open space. Much of the area appeared to be

268. Declaration of Covenants and Restrictions on Real Property on San Bruno Mountain, *supra* note 255.

269. The county resolution may have been there as standard practice or to make the easement valid under California's Open Space Easement Act. *See supra* note 260.

developed and also eroding. There was not an immediate sense that the public was getting much benefit here from allowing this family to build a high value property on this hill. Without the benefit of a biologist or baseline documentation, I was uncertain as to the value of the butterfly habitat.[270] Unlike most conservation easements, the Smith Easement had few details outlining what specific activities were prohibited.[271]

### *B. Case Study Two: Lytle Creek Turnout Low-Effect HCP*

After examining the San Bruno Mountain HCP, I returned to FWS's registry of HCPs. I selected the Lytle Creek Turnout Low-Effect HCP because, on that date, it was the most recent HCP in California.[272]

The Service's publicly available internet database states that the Lytle Creek Turnout HCP was administered by the Carlsbad field office and resulted in permit TE157909-0, issued in August of 2009 and set to expire a year later.[273] The Lytle Creek Turnout HCP covered a 2.16-acre area inhabited by the endangered San Bernardino Merriam's kangaroo rat (*Dipodomys Merriami parvus*).[274] The online database did not provide links to the HCP or any other

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270. Generally, conservation easements are accompanied by baseline documentation that details what the property looks like, including maps, pictures, and wildlife and vegetation reports. *See* ELIZABETH BYERS & KARIN MARCHETTI PONTE, THE CONSERVATION EASEMENT HANDBOOK 100–15 (2005) (describing baseline documentation practices and their role in conservation easements). Because one must pay per page for recording conservation easements (and because baseline documentation is not always completed at the time of recordation), it is rare to find baseline documentation in the county recorder's office. *Id.* at 112 (explaining that per page fees discourage recordation, as do rules restricting recordation of photographs and "nonstandard materials" in some jurisdictions).

271. The actual text of this conservation easement is less than four pages, making it one of the shortest I have come across. *See* Smith Easement, *supra* note 255. In a recent project examining conservation easements over time in six different states, researchers noted that, generally, conservation easements are getting longer and more complicated. *See* Jessica Owley & Adena R. Rissman, Trends in Private Land Conservation: Increasing Complexity, Shifting Definitions of Conservation and Allocable Private Land Use (2015) (unpublished manuscript) (on file with author). A recent conservation easement I reviewed in New York was over 250 pages. New York State Dep't of Envtl. Conservation, Sustainable Forestry Conservation Easement between Chateaugay Woodlands LLC and the People of the State of New York, No. 2008-00005069 (recorded Dec. 24, 2008, Franklin County, N.Y.) (on file with author).

272. *HCP Database*, *supra* note 204 (running a report for Region 8 (California and Nevada)). Permits have been issued under at least five more HCPs in California since the Lytle Creek Turnout Low-Effect HCP, but are beyond the scope of this study. *See id.*

273. *Id.* This isn't actually correct. The first permit was issued in 2007 and lasted two years. Federal Fish & Wildlife Permit for West Valley Water District, No. TE157909-0 (recorded Aug. 20, 2007) (on file with author). The 2009 to 2010 permit was a one-year extension. Federal Fish & Wildlife Permit for West Valley Water District, No. TE157909-0 (Aug. 20, 2009) (on file with author). The database does correctly note that the HCP led to a two-year permit with a one-year extension, but the permit issuance and expiration dates are those for the extension, not the original permit. *HCP Database*, *supra* note 204 (running an individual report for the Lytle Creek Turnout Low-Effect HCP, formerly West Valley Water District, San Bernardino County, CA). This could be standard practice of listing the most recent permit issued under the HCP, or it could be a function of an inadequate online system that does not allow for multiple permit dates to be listed. In general, this is a helpful but incomplete database, often missing key dates, documents, or information.

274. *See HCP Database*, *supra* note 204 (running an individual report for the Lytle Creek Turnout Low-Effect HCP).

documents as it does for some projects, but it did note that issuance of the Lytle Creek Turnout HCP was subject to a categorical exclusion under NEPA (as are all low-effect HCPs, as described below) and that notice of the HCP was published in the Federal Register on June 7, 2007.[275] This information facilitated tracking the associated documents.

The June 7, 2007 Federal Register entry was a Notice of Availability of a Proposed HCP.[276] The Notice explained that the West Valley Water District applied for an incidental take permit to complete a proposed pipeline improvement and extension project.[277] The project site is both actual and critical habitat for the San Bernardino kangaroo rat.[278] The Notice stated that there would likely be temporary impacts on the kangaroo rat and explained that the applicant would mitigate its impacts on the listed species by purchasing two acres of credit within the Cajon Creek Conservation Bank in San Bernardino County, California.[279] As the Notice states, the HCP contains more details regarding these plans, minimization strategies, and potential impacts.[280]

### *1. Tracking the Documents*

The Lytle Creek Turnout Low-Effect HCP was somewhat challenging to obtain. The Carlsbad FWS office was happy to provide copies of the permit, the one-year permit extension, and some of the NEPA and section 7 documents (detailed below). However, the Carlsbad office did not have a copy of the actual HCP, explaining that it did not hold onto such documents after the expiration of the notice and comment period.[281] While it makes sense to file away an expired permit, doing so ignores the fact that the mitigation obligations in the permit do not expire. Where mitigation measures are supposedly perpetual, one would hope that the FWS would maintain appropriate documents to be able to monitor compliance with permit obligations. The office instead suggested that I request a copy from either the permit applicant (West Valley Water District) or the consultants hired by the applicant. I contacted both, and they readily supplied the permits and HCPs.[282]

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275. *Id.*

276. Proposed Low Effect Habitat Conservation Plan for the Lytle Creek Turnout, County of San Bernardino, CA, 72 Fed. Reg. 31,603-01 (June 7, 2007).

277. *Id.* at 31,603.

278. *Id.* at 31,604.

279. *Id.*

280. *Id.* at 31,603.

281. E-mail from Nancy Ferguson, Chief, San Bernardino Cnty. Div., U.S. Fish & Wildlife Serv., to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Sept. 24, 2010) (on file with author).

282. Although the HCPs I received had the same date on the front cover, they were not the same. The HCP from the applicant appeared to be the latest version, while the consultant's was incomplete (containing statements like "write more here"). The consultant did provide an earlier version of the HCP from before the project was designated low-effect. This was helpful as it contained maps and enabled me to easily find the project site. This was lucky happenstance, however, as the maps and other documents are not part of the public records. To confirm what type of HCP is on file with the FWS (assuming someone, somewhere has a copy), I later filed a FOIA request (June 5, 2013) (on file with

For low-effect HCPs, the FWS also prepares a set of findings, evaluating the permit application in the context of permit-issuance criteria.[283] The Carlsbad office was able to supply a copy of that document.[284]

As a low-effect HCP, the Lytle Creek Turnout HCP has fewer associated documents than other HCPs. Low-effect HCPs are subject to a categorical exclusion for review under NEPA. NEPA requires environmental review of "major Federal actions significantly affecting the quality of the human environment."[285] While issuance of an incidental take permit qualifies as a major federal action, FWS has determined that projects associated with low-effect HCPs do not "individually or cumulatively have a significant effect on the human environment"[286] and therefore qualify as categorical exclusions under NEPA.[287] Categorical exclusions do not require environmental review beyond a threshold determination that the action falls under an appropriate categorical exclusion.[288] Because the Lytle Creek Turnout HCP was a low-effect HCP categorically excluded from NEPA review, FWS completed an Environmental Action Statement (sometimes called an Environmental Action Memorandum).[289] This brief document explains why the Service feels the project qualifies for a low-effect HCP and no further environmental review is necessary.

For low-effect HCPs, the Service conducts a formal section 7 intraservice consultation process.[290] Formal consultation involves preparation of a biological opinion.[291] Biological opinions consider the proposed action, the species involved, the environmental baseline, and the cumulative effects of other actions in the project area.[292] As with the other documents involved in this case, the biological opinion was issued on August 20, 2007 and was

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author). I received the HCP, the original permit, and the findings and recommendations. I also requested the Federal Register notice of the issuance of the permit and copies of any comments filed during the notice and comment period. Because I did not receive such a notice or any comments in the response to my FOIA request, I assume no such documents exist. Later FOIA requests regarding the mitigation bank went unanswered (Sept. 20, 2013) (on file with author).

283. HCP HANDBOOK, *supra* note 55, at 1-9.

284. Findings and Recommendations for the Issuance of Endangered Species Act Section 10(a)(1)(B) Permit TE-157909-0 to Authorize Incidental Take of San Bernardino Kangaroo Rat Associated with the Low-Effect Habitat Conservation Plan for the Lytle Creek Turnout Project, City of Rialto, San Bernardino County, California (Aug. 20, 2007) (on file with author).

285. 42 U.S.C. § 4332(C) (2012).

286. 40 C.F.R. § 1508.4 (2014).

287. HCP HANDBOOK, *supra* note 55, at 5-2.

288. BASS ET AL., *supra* note 229, at 35. However, there is an exception to the exclusion where it appears that the action will nevertheless have a significant impact on the environment. *See* Kevin H. Moriarty, *Circumventing the National Environmental Policy Act: Agency Abuse of the Categorical Exclusion*, 79 N.Y.U. L. REV. 2312, 2323 (2004).

289. Screening Form for Low-Effect HCP Determinations for the West Valley Water District Lytle Creek Turnout (Aug. 20, 2007) (on file with author).

290. HCP HANDBOOK, *supra* note 55, at 1-9.

291. SECTION 7 HANDBOOK, *supra* note 12, at E-21 to E-22.

292. *Id.*

completed by the Carlsbad FWS office.[293] In it, the Service concludes that the proposed action, when accompanied by the planned mitigation measures, would not jeopardize the continued existence of the kangaroo rat or result in adverse modification of its critical habitat.[294] No jeopardy biological opinions are accompanied by incidental take statements where the opinions demonstrate potential impacts on individuals of a species. Similar to section 10 incidental take permits, section 7 incidental take statements address the prohibition on take from section 9 of the Act. The incidental take statement here was part of the biological opinion and did not impose any requirements or limitations different from those included in the HCP.[295]

*2. Tracking the Mitigation*

The ESA documents associated with this project indicated that the potential impacts of the project would be mitigated by purchasing credits from a conservation bank. The website of California's Department of Fish and Wildlife states that Cajon Creek is a private conservation bank.[296] Under state law, private conservation banks in California must be encumbered with conservation easements.[297] Thus while one could debate whether the Cajon Creek Conservation Bank's conservation easements merit the label "exacted conservation easements," there is no question that the Lytle Creek Turnout HCP ultimately relies on conservation easements to meet its mitigation requirements. Neither FWS nor the incidental take permit applicant had copies of the conservation easements or even knew anything about them. It appears those parties viewed their mitigation obligations as complete once they had

293. Intra-Service Section 7 Consultation for the Issuance of an Endangered Species Act 10(a)(1)(B) Permit for the Lytle Creek Turnout Project, City of Rialto, San Bernardino County, California 5, 17 (1-6-07-F-5313.2) (Aug. 20, 2007) (on file with author).

294. *Id.* at 16. The biological opinion concludes there may be take of kangaroo rats occupying the land during project construction. Presumably, this level of take does not reach the level of jeopardy. But the take is offset by purchasing credits from a conservation bank. The conservation bank, however, is on critical habitat. If that habitat is already protected, what have we gained by purchasing credits in it? The biological opinion notes that the project will also result in adverse modification of critical habitat (both the project site and the conservation bank land are critical habitat), but because it is such a small amount of critical habitat, and it will be re-vegetated, there will be no permanent loss of function. Such a conclusion raises the question of whether temporary adverse impacts to critical habitat are not included in sections 7's prohibition on adverse modification of critical habitat. There does not appear to be any such exception in the statute or regulations.

295. There is no implementing agreement for low-effect HCPs.

296. *Conservation and Mitigation Banks in California Approved by CDFW*, CAL. DEP'T FISH & WILDLIFE, https://www.wildlife.ca.gov/Conservation/Planning/Banking/Approved-Banks (last visited Oct. 18, 2014) (listing a private company—Vulcan Materials Company—as the contact name). The agency changed its name from the California Department of Fish and Game to the California Department of Fish and Wildlife in 2013, explaining why the website name conflicts with the name on legal documents. Press Release, Cal. Dep't of Fish & Wildlife, Department Name Change Effective Tomorrow (Dec. 31, 2012), *available at* http://cdfgnews.wordpress.com/2012/12/31/department-name-change-effective-tomorrow/.

297. Douglas P. Wheeler & James M. Strock, *Official Policy on Conservation Banks*, CAL. NAT. RESOURCE AGENCY (Apr. 7, 1995), http://ceres.ca.gov/wetlands/policies/mitbank.html.

ensured purchase of credits from an approved conservation bank. FWS entrusts conservation bank oversight in this case to the state agency and does not maintain records regarding the conservation bank, nor does it monitor the bank.[298]

Finding copies of the conservation easements in this case proved easier than obtaining copies of the HCP, reversing the trend with the San Bruno Mountain HCP. This is due to the involvement of a state-certified conservation bank. The California Department of Fish and Wildlife maintains a website of approved conservation and mitigation banks in the state.[299] The Department's contact person for conservation banking was able to provide me with a copy of the conservation easements encumbering the property. Additionally, the underlying landowner (and owner of the conservation bank), Vulcan Materials Company, provided copies of the conservation easements and the related memorandum of understanding between the parties.

The conservation easements associated with the Lytle Creek HCP encumber the property of Vulcan Materials Company (formerly CalMat) in San Bernardino County approximately one mile from the West Valley Water District's pipeline project.[300] In the early 1990s, CalMat applied for permits for its excavation activities from state and federal authorities.[301] In return for those permits, CalMat dedicated some land to the state, established conservation easements over a portion of its property, and agreed to establish the Cajon Creek Conservation Bank.[302] The Cajon Creek Conservation Bank is a 610-acre parcel of Riversidean Sage Scrub providing habitat to the kangaroo rat.[303] Since 1998, CalMat has been selling acres of credit in its bank.[304] These acres are protected by a temporary conservation easement. The landowner and the California Department of Fish and Wildlife informed me that the plan is to convert the temporary conservation easement to a permanent one once the

298. Telephone Interview with Heather A. Pert, Envtl. Scientist, Cal. Dep't of Fish & Game (Sept. 2010). FOIA requests to FWS regarding the conservation bank yielded no documents. *See supra* note 282 and accompanying text.

299. *Conservation and Mitigation Banks in California Approved by CDFW*, *supra* note 296.

300. Temporary Conservation Easement Grant, No. 19980046436 (Feb. 9, 1998) (on file with author); Conservation Easement Grant, No. 19980046435 (Feb. 9, 1998) (on file with author).

301. Memorandum of Understanding and Implementation Agreement for the Cajon Creek Habitat Conservation Management Area 2 (July 26, 1996) [hereinafter Cajon Creek Conservation Bank MOU], *available at* http://www.sbcity.org/civicax/filebank/blobdload.aspx?BlobID=13480; *see also* Linda Mitrovich et al., *Case Study: Cajon Creek Habitat Conservation Management Area*, 35 TRANSACTIONS W. SEC. WILDLIFE SOC'Y 57, 57 (1999).

302. Cajon Creek Conservation Bank MOU, *supra* note 301, at 15–16.

303. *Id.* at 2–3, 15; *Wildlife Habitat Enhancement*, VULCAN MATERIALS, http://www.vulcanmaterials.com/social-responsibility/safety-health-environment/wildlife-habitat-enhancement (click "Cajon Creek in San Bernardino, CA") (last visited Feb. 27, 2015); *see also* Mitrovich et al., *supra* note 301, at 58.

304. Mitrovich et al., *supra* note 301, at 61; Alan Schnepf, *Ensuring a Safe Habitat for the SB Kangaroo Rat: Company Profits Off Others' Land Damage*, SAN BERNARDINO COUNTY SUN, Dec. 5, 2004 (on file with author); Memorandum from Sheri Ortega, Vulcan Materials Co. (formerly CalMat), to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Sept. 23, 2010) (on file with author).

entire 610 acres of habitat credits have been sold.[305] There is nothing in the temporary conservation easement documents to indicate that this is the plan.

The Cajon Creek conservation easement is a five-page agreement.[306] The agreement states that the conservation easement is temporary but does not explain when or how the agreement would expire. The conservation easement is to be in accordance with the memorandum of understanding and implementation agreement for the Cajon Creek Habitat Management Area, which is incorporated into the conservation easement by reference but not recorded with it.[307] The conservation easement states that it is governed by the California Conservation Easement Act.[308] There is no reference to the Lytle Creek HCP or its associated incidental take permit.

One thing that is not clear from the conservation easement documents nor from my discussions with the parties involved is whether there is one temporary conservation easement over all 610 acres that was established in 1998, or whether they add new temporary conservation easements each time they sell more credits in the bank. If it is the latter, then it appears that they merely add another map of the encumbered land onto the appendix of the conservation easement each time. A California statute requires the registration of any conservation easements created using state money or held by the state after 2000.[309] The Cajon Creek conservation easement does not appear in this registry. This indicates that the conservation easement is older than 2000. If it is an older conservation easement that has been amended to encumber additional acres, logically the amendments should have triggered recordation in the registry but that does not appear to have occurred.

The FWS office with the duty to enforce the permit did not keep a copy of the HCP. It did not even hold on to the HCP during the life of the permit, as it disposed of it after the notice and comment period.[310] Thus, it had no record of the HCP's requirements and would not know whether an HCP was being violated. For example, the HCP provides several requirements relating to

305. Cajon Creek Conservation Bank MOU, *supra* note 301, at 15; Memorandum from Ortega to Owley, *supra* note 304; E-mail from Heather A. Pert, Envtl. Scientist, Cal. Dep't of Fish & Game, to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Sept. 23, 2010) (on file with author).

306. Temporary Conservation Easement Grant, No. 19980046436, *supra* note 300, app. B. The maps and legal descriptions of parcels that served as attachments to the agreement are omitted from the appendix. This conservation easement is relatively simple. The Land Trust Alliance's model conservation easements contain twice as many clauses and usually thrice as many pages. BYERS & PONTE, *supra* note 270, app. 5, ch. 21 (sample documents on CD-ROM).

307. Cajon Creek Conservation Easement 1 (on file with author). Although the California Department of Fish and Game was unable to provide a copy of this document, the landowner provided it.

308. *Id.* at 2 (citing CAL. CIV. CODE § 815 (West 2014)). A later reference to section 185 of the California Civil Code is likely a typo as there is no such section. *See id*. at 4.

309. CAL. GOV'T CODE § 27255 (West 2014); County Records: Conservation Easement Registry, S.B. 1360, 2005–2006 Leg. (Cal. 2006); *see also* Amy Wilson Morris & Adena R. Rissman, *Public Access to Information on Private Land Conservation: Tracking Conservation Easements*, 2009 WIS. L. REV. 1237, 1256–60 (2009) (describing the somewhat confusing requirements of conservation easement registration laws).

310. *Supra* note 281 and accompanying text.

minimizing impacts on species, including rules regarding employee training and invasive species removal.[311] These requirements are not in the permit. Without a copy of the HCP, it seems hard for the FWS to adequately monitor and enforce the permit. The HCP did not contain any copies of the conservation easements, meaning that the exact details and rules regarding habitat protection were not available for review during the public permitting process. Additionally, the conservation easements involved did not mention the HCP or the ESA, making it hard to know what was sacrificed in exchange for the conservation easements. Even more alarming was the fact that this habitat was protected by a temporary conservation easement. That is not permissible under California law. In fact, the statute cited within the conservation easement deed specifically prohibits nonperpetual conservation easements.

*3. Site Visits*

Although I was able to obtain copies of the conservation easements (both temporary and permanent) from the state and the conservation bank operator, I also wanted to determine whether one could easily find a copy of the conservation easement through the land title offices. As mentioned above, each county recorder's office in California has its own system for cataloguing documents. Although most of these services have been computerized, one must physically be in the county recorder's office to look up and access the information.[312] In San Bernardino County, one can look up properties by signatory or by document type. I was able to find the conservation easement encumbering the Cajon Creek Conservation Bank because I knew the name of the landowner (the grantor on the conservation easement). Both the temporary and permanent conservation easements appeared properly recorded. San Bernardino County also categorizes documents by type and allows searches by type. Curious, I asked to see all the conservation easements in the county. This yielded only two documents; neither of which was a conservation easement for the Cajon Creek Conservation Bank.[313] It is not clear how the recorder's office categorized the conservation easement.

311. Habitat Conservation Plan for the Issuance of an Incidental Take Permit under Section 10(a)(1)(B) of the Endangered Species Act for the Federally Endangered San Bernardino Kangaroo Rat on the Proposed Lytle Creek Turnout, City of Rialto, San Bernardino County, California 7 (Sept. 2006).

312. As an aside, it is not clear to me why this is so. Making such materials available remotely would increase accessibility to information and reduce the costs associated with tracking conservation and other land use and real estate issues. If recorders' offices are worried about loss of printing and copying fees, they could charge for downloading documents or accessing the site.

313. I am not sure what I would have done without the landowner's name. It is possible to determine the name of a landowner by looking through maps at the assessor's office. This will only yield the name of the current landowner, and as the county sorts conservation easements by grantor, this method only leads you to the document if the current landowner occupied the land when the conservation easement was recorded. If not, it may be possible to do a daisy-chain style search, linking back landowner-to-landowner and searching under previous landowners' names to see if any conservation easements might have been recorded.

Using the conservation easements and information for the ESA documents, I reviewed maps and located the site of the conservation bank. I went to the site and saw clearly marked preservation areas. Even though the area was between a railroad, gravel mine, and freeway it was actually quite lovely without any signs of disturbance to the ground or obvious violations of the conservation easement terms.

### *C. Case Study Three: Cushenbury Sand and Gravel (Channel & Basin) HCP*

The first two case studies are the oldest and newest available. To enrich the picture of tracking mitigation through conservation easements, I researched two more HCPs from intervening years. I selected HCPs between San Diego and San Francisco with different landowner types and species involved.[314]

In 1996, Channel and Basin Reclamation, Inc. proposed developing 123 acres of occupied desert tortoise (*Gopherus agassizii*) habitat in southeastern San Bernardino County for a sand and gravel mine. As the proposed mine would disrupt habitat, the FWS was concerned that it could lead to take of tortoise. In response, Channel and Basin developed an HCP and applied for a section 10 permit.

#### *1. Tracking the Documents*

The FWS's HCP database indicates that the Ventura field office was in charge of this HCP. I contacted the office and requested a copy. FWS employees originally told me that after extensive searching, they were unable to find a copy of the HCP or related documents.[315] The employees surmised that the project might not have commenced construction, and suggested that the HCP was likely destroyed in 2006.[316] The Ventura office employees stated that the field office does not hold onto HCPs more than ten years after their expiration.[317] Then, I received an e-mail from a FWS Ventura field office employee informing me that he had located a copy of the HCP in the Sacramento office.[318] He then sent me the document. Note, again, that the office in charge of enforcing the permit did not retain the permit because it had

314. Follow-up work should examine larger, regional HCPs or Natural Community Conservation Plans in conjunction with California's conservation laws to determine how those larger (and arguably more significant) conservation programs fare. *See Natural Community Conservation Planning (NCCP)*, CAL. DEP'T FISH & WILDLIFE, https://www.wildlife.ca.gov/Conservation/Planning/NCCP (last visited Feb. 27, 2015).

315. E-mail from Anonymous Employee (requested to remain anonymous), Ventura Fish & Wildlife Office, U.S. Fish & Wildlife Serv., to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (July 26, 2011, 1:13 PM) (on file with author) ("I'm sorry to inform you that after an extensive search, I was unable to find any records pertaining to the Cushenbury HCP here in the Ventura Fish and Wildlife Office.").

316. *Id.*

317. *Id.*

318. E-mail from Anonymous Employee (requested to remain anonymous), Ventura Fish & Wildlife Office, U.S. Fish & Wildlife Serv., to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Aug. 5, 2011) (on file with author).

expired. However, expiration of a permit does not mean termination of mitigation obligations, as explained below. Without the permit or HCP on hand, it is unclear how the FWS could track continued compliance. Yet, where the permit applicant discontinues a project, the remedy for lack of compliance with the permit is uncertain. If incidental takes are no longer likely, there appears little reason to require continued compliance with mitigation provisions unless early stages involved significant habitat impacts.

I also searched for Channel and Basin but was not able to find a working telephone number, e-mail, or website. I found mention of a consulting firm that worked with Channel and Basin. The consulting firm confirmed its work on the HCP but stated that it was not able to locate a copy of any of the documents.[319]

### *2. Tracking the Mitigation*

On January 23, 1996, Channel and Basin Reclamation, Inc. received a thirty-year incidental take permit from the FWS.[320] The permit authorizes incidental take of tortoise during sand and gravel mining activities and during construction and operation of the mine as long as the permittee is in compliance with the HCP and general tortoise handling protocols recommended by FWS.[321] The permit includes handling instructions for sick and injured tortoises as well as requirements for annual reporting.[322] There is no specific mention of mitigation plans.

This intraservice biological opinion done in compliance with section 7 was completed by Region 1.[323] The biological opinion mentions both the tortoise and the Parish's daisy (*Erigeron parishii*), two threatened species, along with the Alkali mariposa lily, a candidate for listing.[324] The opinion explains that the impacts to the plants would be "avoided" by establishment of a thirty-nine-acre reserve encompassing the zones within the proposed action area where the daisy and lily occur.

Channel and Basin proposed development of 123 acres of desert tortoise habitat in Lucerne Valley.[325] As compensatory mitigation for the development, Channel and Basin agreed to transfer 123 acres of desert tortoise habitat to the California Department of Fish and Game.[326] Public commenters were confused

319. E-mail from Lilburn Corp. to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (June 28, 2011) (on file with author).

320. Federal Fish & Wildlife Incidental Take Permit, No. PRT-795218 (Jan. 23, 1996) (on file with author).

321. *Id.*

322. *Id.* ¶¶ G, I.

323. Region 1 arguably took a better approach to this biological opinion than its earlier biological opinion for Lytle Creek.

324. Intra-Service Section 7 Biological Opinion on the Proposed Issuance of Section 10(a)(1)(B) Incidental Take Permit, No. PRT-795218 (June 16, 1995) (on file with author).

325. This is near Big Bear—a recreational destination of great scenic value.

326. Findings and Recommendations on Issuance of an Incidental Take Permit for Desert Tortoises at the Cushenbury Sand and Gravel Site by Channel and Basin Reclamation, Inc., San Bernardino County, California, No. PRT-795218 (Jan. 23, 1996) [hereinafter ITP for Desert Tortoises]

about the size of the plant reserve, but final documents clarify that the reserve is to be thirty-nine acres.[327] It appears that this thirty-nine-acre reserve was to remain in the ownership of Channel and Basin with conservation easements restricting the use and development of the land. A lack of further documentation or conservation easements leaves this uncertain. Indeed, it is not clear that anything even happened on the property.

Although a several hours drive from the Cajon Creek Conservation Bank, the Cushenbury gravel site is also in San Bernardino County. Searching through records for this project yielded no results. I was not able to find a record of any conservation easement, deed restriction, or other servitude on Channel and Basin's property by searching under grantor/grantee. Nor was information available by viewing assessor's maps or going over all the parcels in the area covered by the HCP. The parcel maps showed different property lines than those on the FWS's documents. A site visit revealed active mining operations in the area, but I did not have enough information to determine the exact location of the supposed flower reserve.[328] Although the FWS database lists this HCP and its associated permit, it may be that none of the terms of the HCP were fulfilled because it is unclear to what extent the project proceeded. While there does appear to be mining at the location, one FWS employee suggested that the project was halted in 1996. It was frustrating to not even be able to determine the answer to the simple question of whether this permit was enforced or whether the mitigation projects occurred.

### *D. Case Study Four: Wildcat Line Low-Effect HCP*

HCPs vary in size and scope. An example of a smaller project, the Wildcat Line Property HCP involved the building of a single house in the foggy hills of Monterey County. Wildcat Line, LP, a development company, applied for and received an incidental take permit for development of a single-family residence in the Carmel Highlands.[329] Expensive real estate, exclusive communities, and beautiful ocean views surrounded development of this home, which would degrade habitat for the Smith's blue butterfly.[330] Smith's blue butterflies live in coastal sage scrub and rely upon seacliff buckwheat as a host plant.[331] The

(on file with author). Note that the department is now named the California Department of Fish and Wildlife. *See* Press Release, *supra* note 296.

327. ITP for Desert Tortoises, *supra* note 326, at 3. Commenters objected that the exact location of the compensation lands was not disclosed.

328. The spot that I thought should have been the thirty-nine-acre flower preserve was fenced off with signs that said it was Mitsubishi's property. However, without detailed maps, deed restrictions, or conservation easement documents, I was unable to determine boundary lines.

329. Memorandum from Assistant Field Supervisor, Ventura Fish & Wildlife Office, U.S. Fish & Wildlife Serv. (Dec. 20, 2002) (on file with author).

330. Federal Fish & Wildlife Permit, No. TE040371-0 (recorded Sept. 12, 2012) (on file with author). The date recorded on the permit must be a typo, because the permit was issued in 2001 and expired in 2011.

331. *Id.* (special term and condition G); *see also* City of Monterey v. Del Monte Dunes at Monterey, Ltd., 526 U.S. 687, 695 (1999) (describing the butterfly's fragile existence and dependence

proposed development of an 11.5-acre property would have impacted about an acre of buckwheat plants.[332]

*1. Tracking the Documents*

As with the other HCPs in this study, the FWS's online database provided initial information, including the name of the appropriate FWS field office (Ventura, California) and the number of the permit. Officials at the Ventura office were able to provide the permit, the approval of a permit amendment regarding the boundaries of the mitigation area, and findings and recommendations regarding the transfer of the permit from the initial developer (Wildcat Line) to subsequent residents.[333] The Ventura office was not able to find the HCP, section 7 consultation documents, or any NEPA review documents (not even a low-effect HCP evaluation form).[334] The permit incorporates the HCP by reference, requiring compliance with the implementation provisions of the HCP.[335] Thus, with the permit in hand but not the HCP, one may not be able to fully understand mitigation requirements.[336]

*2. Tracking the Mitigation*

The permit requires the permittee to establish an "endowment for long-term management of the on-site conservation area" and an encumbrance of the conservation area with a "deed restriction limiting activities to long-term management and preservation of existing natural habitats."[337] While the permit does not explain what the long-term management should look like or what the deed restriction should say, it does require the permittee to submit the deed restriction to the Ventura FWS office "for review and approval."[338] This process does not enable a member of the public to review the deed restriction before issuance of the permit, but it does at least indicate that the FWS will be

on being within 200 feet of flowering buckwheat plants); Dennis D. Murphy, *Are We Studying Our Endangered Butterflies to Death?*, 26 J. RES. ON LEPIDOPTERA 236, 238 (1988).

332. Federal Fish & Wildlife Permit, No. TE040371-0, *supra* note 330.

333. Because this permit is held by private individuals, I was not able to track the permit holder easily. I could find no listing for the family in the Caramel Highlands phone book.

334. Over three years later, as this Article was going to press, a FWS employee at the Ventura field office sent me copies of the HCP and section 7 biological opinion, explaining that he "came across a box of old files today in the warehouse, and while sorting through it, found a folder labeled 'Wildcat HCP.' Inside the folder, [he] found the biological opinion for the HCP and what [he] believe[d] [was] the HCP itself." E-mail from Employee, Ventura Fish & Wildlife Office, U.S. Fish & Wildlife Serv., to Jessica Owley, Assoc. Professor of Law, SUNY Buffalo Law Sch. (Sept. 4, 2014) (on file with author).

335. Federal Fish & Wildlife Permit, No. TE040371-0, *supra* note 330 (special term and condition F).

336. Mark Thomas at the Sacramento FWS office stated that the most helpful document for understanding mitigation is likely the section 7 biological opinion that must be completed before issuing any permit. Telephone Interview with Mark Thomas, *supra* note 178. Unfortunately, the FWS did not find that document until September 2014. *See supra* note 334.

337. Federal Fish & Wildlife Permit, No. TE040371-0, *supra* note 330 (special term and condition H).

338. *Id.*

paying attention to the terms of the restrictions. Without the HCP or other documents, it is not possible to know the full record that was before the public during the public comment period for permit issuance.

The permit also indicates that a "Service-approved individual" would periodically monitor the site during construction to ensure compliance with minimization and mitigation requirements during grading and construction activities.[339] The permit does not detail what those requirements are, however. Additionally, site visits by a biologist to ensure compliance with re-vegetation and habitat enhancement were to continue "four times a year for 3 years, then biannually through the 5th year or until the success criteria are attained."[340] The permit does not delineate the success criteria or establish repercussions for when success criteria are not attained. The permit also requires annual reporting by the permittee and the permittee's Service-approved biologist until "the success criteria are attained."[341] The permit gives some details regarding what subjects the report should cover but does not indicate what the success criteria are or what will be done if they are not attained. Such questions may have been addressed in other documents, but if the Service does not have copies of these documents, there is no indication that it can properly understand the permit it is supposedly monitoring and enforcing. There is nothing in the permit indicating any obligations or activities by the FWS after the initial meeting of the success criteria.

In December 2002, a little after the original issuance of the permit, the FWS authorized transfer of the permit from the developer to the individual landowners.[342] The FWS completed findings and recommendations regarding the permit authority transfer. Attached to the findings and recommendations is a recordation of a deed restriction from March 28, 2002.[343] Recital B of the deed restriction states:

> Wildcat is required to preserve in perpetuity a 9.86-acre portion of the Property as depicted on Exhibit B as the "Encumbered Acreage" pursuant to the provisions of the Habitat Conservation Plan, dated February 12, 2001 (the "HCP"), and the Federal Endangered Species Act, Section 10(a) permit (the "Permit") issued to Wildcat by the United States Fish and Wildlife Service (the "Service"), as they may be amended from time to time.

Thus, the restriction on the land is perpetual—not just for the length of the permit term. Additionally, the deed restriction specifically names the HCP and the permit (which would be more meaningful if one could actually obtain a

339. *Id.* (special term and condition I).

340. *Id.*

341. *Id.* (special term and condition N).

342. Memorandum from Assistant Field Supervisor, *supra* note 329. The memorandum states that the permit was issued on September 12, 2002, but the permit was actually issued on September 12, 2001. Federal Fish & Wildlife Permit, No. TE040371-0, *supra* note 330.

343. Memorandum from Assistant Field Supervisor, *supra* note 329, attach. D.

copy of the HCP). The deed restriction goes on to explain that its purpose is to "assist in preserving in perpetuity and maintaining important open space and wildlife habitat" without anywhere naming the Smith's blue butterfly.[344] The deed restriction does limit activity on the proposed areas, specifically (inter alia) prohibiting development, removal of vegetation, planting of vegetation, use of vehicles, waste dumping, grazing, and mining.[345] Importantly, the deed restriction also notes that the United States has the right to enforce the terms of the restriction, which also includes a right to enter the property to do compliance inspections. Although I had received a deed restriction from the FWS, a later-dated document indicated that the deed restriction had been amended.[346] I asked the FWS employees if they had the updated deed restriction, but they were unable to find anything.

*3. Site Visits*

Obtaining deed restrictions for properties in Caramel Highlands involves a visit to the Monterey County recorder's office. To look up properties in Monterey County, one must have the landowner's name.[347] Searching for the landowners here yielded a deed restriction different from the one provided by the FWS. It appears to be the revised deed restriction required by the minor amendment to the HCP. Thus, the appropriate deed restriction is recorded in the County recorder's office, but it is not in the hands of the supposed enforcer and monitor of the restriction. The newer deed restriction changed some of the boundaries of the protected area but did not alter the restrictions on land use.

A site visit to the property was not possible because it was on a private road with no public access. You can see partial views of some of the houses in the area. The site appears heavily vegetated, but with steep, eroding slopes. This was a breathtakingly beautiful area with palatial homes overlooking the ocean. The landscape is lush and probably fed by the abundant fog. Without an ability to actually reach the project site, it is not possible for members of the public to investigate whether the landowners are complying with the permit terms regarding the long-term management and land uses permitted.

344. *Id.*

345. *Id.*

346. Letter to [Landowner's Name Redacted] from David M. Pereksta, Acting Div. Chief, Santa Cruz/San Benito/Monterey Fish & Wildlife Office, U.S. Fish & Wildlife Serv. (Nov. 28, 2003) (on file with author).

347. You cannot search properties by grantee or by parcel number.

## DISCUSSION & CONCLUSIONS

Many of our environmental and land use regulations facilitate environmental harm. ESA permits enable, as one commentator put it, legal killing of endangered species.[348] Section 404 Clean Water Act permits allow destruction of wetlands.[349] Numerous state and local laws facilitate development and reduction in environmental amenities. This environmental permitting structure often rests upon an assumption that permit holders can compensate for the environmental destruction they have wrought. Compensatory mitigation can work by creating, enhancing, or protecting ecosystem services and environmental amenities. Importantly, because of the long-term nature of environmental harms like habitat and wetland conversion, mitigation projects are usually designed to be perpetual even though the permits are not. Tracking these perpetual mitigation projects can help assess whether permit conditions are being complied with and perhaps improve mitigation decision making.

As a first step in assessing compensatory mitigation, this research project sought the permits and documentation that would detail what environmental resources were being lost and what permittees were doing to minimize and mitigate for that loss. When I began this project, I had assumed that this would be an easy first step in a longer and more complicated process regarding tracking conservation easements and deed restrictions within county recorders' offices. Yet, as the case studies demonstrate, I was stymied at what I had assumed would be a first *easy* step. It was shocking what agencies (both federal and local) did not know about their own permitting programs. Multiple field offices of the FWS with several employees over the span of up to ten years in some cases could not get their hands on the fundamental permitting documents. Sometimes, they had the permit but not the HCP. Other times, the Service could not tell me if the permit was currently in effect. Some offices do better than others, and the improved recordkeeping and work on the San Bruno Mountain HCP is notable.[350] Where agencies do not have access to basic permit documents, they will not be able to understand mitigation programs. It seems hard to believe that in such contexts they are adequately monitoring and enforcing mitigation. In some cases, the agencies appeared to ignore the fact that mitigation obligations are perpetual, putting aside documentation and responsibility once the permits expired.

Where information on mitigation was available, this project still revealed concerns related to tracking the mitigation over time. Service and county officials voiced frustration with the San Bruno Mountain HCP and incidental take permit, asserting that the mitigation requirements were hard to understand and left out a lot of information. Because preservation is the most questionable

348. Ruhl, *supra* note 76.

349. Owley, *supra* note 1, at 101.

350. Once again making San Bruno Mountain HCP an example for other HCPs to follow, but this time in terms of the involvement and organization of staff.

form of compensatory mitigation,[351] I also investigated the conservation easements and deed restrictions exacted under the case studies. Again, this created difficulties.

Even though the exacted conservation easements studied here are meeting mitigation requirements under the ESA, not all Service offices understood the importance of conservation easements or why the Service should maintain any role in structuring or enforcing them. This was not universally true, however, and some offices began working with conservation easement templates and creating third party enforcement rights for the Service. Because HCPs and incidental take permits are separately negotiated by different field offices, there is no universal practice or standard regarding structuring or monitoring exacted conservation easements or similar mitigation projects. As an agency chiefly composed of scientists and land managers, staff may find the legal complexities of property tools either too tedious or perhaps secondary to what they view, perhaps correctly, as the more important work of species recovery and habitat enhancement projects.

Not only were the exacted conservation easements sometimes hard to find, they revealed fundamental concerns. Not all of the unearthed conservation easements followed state property law, with the Cajon Creek conservation easement directly contradicting California law that prohibits temporary conservation easements. Such exacted conservation easements may be enforceable as exactions under state law or perhaps as ESA permit conditions under federal law, but neither of those routes of enforcement is clear. Failure to comply with state conservation easement statutes may create an unnecessary obstacle to enforcement. Additionally, many of the conservation easements neglected to reference the HCP, incidental take permit, or even the ESA. This omission could hamper efforts to enforce the exacted conservation easements as part of a federal scheme or as in compliance with an exaction. Moreover, without a clear understanding of what types of public benefits have been exchanged for the conservation easements, future courts, landowners, and conservation easement holders may make ill-informed decisions regarding amendment and termination of the restrictions. It is important to include (1) the name of the underlying law motivating the exaction and (2) the name or number associated with the permit in the text of the exacted conservation easement. This information will guide courts if enforcement actions or conservation easement challenges occur.

The public would receive further assurances regarding the long-term viability of conservation easements and deed restrictions where the Service

351. *See supra* note 126 and accompanying text. Indeed, these case studies illustrate why preservation can be even more questionable than it already is. While I challenge the use of preservation generally, as a method of mitigating for environmental harm that still involves a net loss of benefits, here we see that we should have serious trepidations regarding whether perpetual conservation projects are even being adhered to or enforced. Without clear ways to track compliance with all permit terms, it is impossible to assess the value of environmental mitigation, and the hardest projects to keep track of will be those purportedly lasting forever.

retains third-party enforcement rights. This was the case in some of the examples above and is now standard practice at the Sacramento field office. Including the Service as a third-party enforcer also increases both transparency and accountability issues. These changes will work to protect the public benefits associated with exacted conservation easements and help ensure their long-term viability.

Sadly, this project confirmed suspicions that government agencies are not keeping track of conservation. Who is following the mitigation programs? Who is enforcing them? Are the mitigation programs providing their promised conservation benefits? Such findings question the legitimacy and utility of the HCP program specifically and mitigation programs as a whole. This Article highlights three key needs from the federal government. First, the Government Accountability Office should launch an investigation into HCP permits, particularly studying the ability of permit holders to find and locate appropriate documents as well as examining what the Service is doing (or failing to do) to keep track of mitigation programs. Of course, assessing whether mitigation projects are actually helping endangered species is an important question, but as a threshold matter, the Government Accountability Office should ascertain whether the FWS is even keeping track of and monitoring mitigation requirements.

Second, the time has come for improved regulations and an updated HCP handbook. While FWS may need some flexibility in its ability to structure details of mitigation plans, that does not reduce the benefit that would be derived from a unified approach to using conservation easements that includes making sure that the conservation easements (or at least model conservation easements) are available during the public review phase, ensuring that permit numbers and details are included in the text of conservation easements and deed restrictions, and including the FWS and other appropriate government entities as either co-holders of the conservation easement or giving them a third-party right of enforcement.

Finally, there needs to be improved recording and tracking of HCPs and conservation easements. There is no central database of mitigation projects or conservation easements related to the ESA, and county clerks do not flag HCP-exacted conservation easements in the registry of deeds (where all conservation easements should be recorded). Neither the Department of Interior nor FWS maintain a list of exactions associated with incidental take permits. An organized recordation system at the county level and an improved tracking system at the federal level would enhance the ability of citizens to learn about mitigation projects and ensure compliance with the Act.

This Article is an initial investigation into what appears to be a widespread problem. Future research should expand the case studies, particularly to assess regional HCPs to see if mitigation requirements improve when more parties are involved in the permitting and more citizens are involved in the public review process. Additionally, these same questions can be extended to other permitting programs and other levels of government. The above suggestions will make

great strides for improving the section 10 permitting program. Beyond that though, the same guiding principles extend to other permitting and mitigation programs. If governments are going to rely upon compensatory mitigation schemes to facilitate development and conversion of important environmental resources, those mitigation programs should be substantive and meaningful. That assessment cannot even be made where we cannot determine the boundaries of the mitigation.