Life Science Research and Its Impact on Species' Conservation Regulation and Advocacy: The Role of Legal Information Professionals

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Abstract

When advocating for the protection of animal and plant species through the legal system, government agencies, attorneys, and environmental activists often have to research sources beyond the traditional legal ones. Agencies developing regulations must show the public the need and purpose of the regulations. Lawyers advocating for species' protection in court may also need to show evidence of the need to protect a particular species, e.g. it's endangered or threatened status, the role it plays in the ecosystem, the educational value of its existence to humans, etc. Likewise, environmental activists often need scientific research to effectively lobby for stronger species protection. This paper will focus on the types of scientific research used to support legal advocacy for species protection. Literature on this topic will be reviewed, and real-life case studies--some involving species in the San Diego area--will be discussed. The case studies will include my personal experience with assisting in the protection of a harbor seal colony in San Diego County. In this particular instance, a coalition of environmental and animal protection groups formed to advocate for the protection of this rookery on a local, state, and federal level. The coalition also produced literature citing both legal and scientific data to support the continued existence of the colony. Lastly, the paper will discuss how legal information professionals can assist their patrons with this research.

Introduction

Upon graduating from Temple University School of Law in 1992, I moved to the D.C. area and began working for the U.S. Coast Guard. My job responsibilities included researching and writing regulations under the newly-passed Oil Pollution Act of 1990, which was largely influenced by the damage from the Valdez disaster. Because the biological effects of oil spills were a large consideration of the regulations designed to prevent future oil spill damage, I soon had to relearn all that I had forgotten from high school and undergraduate biology classes. When I enrolled part-time in the library science program at Catholic University as I continued working for the Coast Guard, I took on the organization of the staff's library and providing reference assistance to staff members. Because there are various aspects of regulatory drafting, the staff included lawyers, economists, naval engineers, and environmental scientists. Accordingly, I often had to delve outside of my legal-research comfort zone to answer reference questions.

My past experience shows the use of biological information in the regulatory field. Biological information is often used in other areas of the legal arena, especially in the area of species protection and wildlife conservation. Statutes involving wildlife conservation provisions often include legislative history documents with testimony or reports from biological experts. Lobbyists may use biological documentation to petition Congress for stronger conservation laws. Attorneys dealing with cases involving species protection sometimes cite scientific data in their pleadings.

Literature Review

The relationship between law and science has not always been smooth. In his 1960 law review article, Clarence Morris asserted that philosopher John Dewey distinguished the study of law as a "world-of-ought" from science which focuses on the "world-of-is."[1] In more recent literature, Carden argued that most lawmakers know little about science, and that scientists are hesitant to become involved in the law-making arena.[2] Nonetheless, she adds that the 1982 amendment of the Endangered Species Act expressly requires the use of the best scientific data available regarding conservation of endangered species. She notes that this requirement was added mainly to discourage the use of economic data in the determination of the listing for a species.[3] Carden further asserts that law-makers concerned with species' protection need to look at the entire ecosystem where the species exist as well as the effect of that ecosystem's conditions upon the welfare of the given species.[4]

In her article, Rose focuses on the uncertainty faced by lawmakers. She notes that this is particularly true in environmental matters, since problems may take awhile to develop.[5] Rose traces the origins of environmental law and asserts that early environmental regulation in the 1970s was "behavior-based" in that the legislation and regulations addressed the behavior or actions of the resource-users to address the environmental problem at hand. An example of this type of law, she argues, is the Clean Air Act and the regulation of activities causing air pollution.[6] Rose writes that this behavior-based model is evident in the Endangered Species Act in that it placed restrictions on what humans could take or when humans could harm other species.[7] She contends that behavior-based regulation may be too inflexible and cause us to fail to see environmental quality holistically. Instead of rigid approaches to behaviors, Rose argues that regulation should aim to improve the overall environmental quality.[8] She writes that as time progressed, environmental regulation has become more quality-based, connecting the legislation and regulation with improvement in environmental quality. This approach, she contends, entails more measurement of factors such as the amount of the pollutant in the environment, how it interacts with other substances, and how these interactions might affect organisms in these ecosystems. For these reasons, she asserts that the input of scientists is essential for laws that will have the effect of improving environmental quality.[9]

Parenteau criticizes the Bush Administration's environmental record and disregard for scientific data. He writes that while the Secretary of Interior's responsibility is to protect endangered species, former Secretary of Interior and Bush-nominee, Gale Norton, attempted to have the Endangered Species Act declared unconstitutional earlier in her career.[10] He also cites example's of Norton's political maneuvering in one area of species' protection, the conservation of the Florida manatee. This animal is largely threatened by boat collisions. In January 2001, conservation groups and the Fish and Wildlife Service reached a settlement agreement to protect the manatees by designating 13 sanctuary areas with strict boat traffic control. Florida Governor Jeb Bush interceded on May 29, 2001, by requesting that Norton hold off on establishing the sanctuaries. By the following August, only 2 of the 13 sanctuaries were established. Conservation groups notified the Justice Department of the breach of the settlement agreement. Nothing happened until a show cause order was issued in July 2002. A new settlement agreement was reached in January 2003. During this political maneuvering, 85 manatees were killed.[11]

Parenteau also discussed the listing process of the Endangered Species Act, and how Norton caused delays in the listing of imperiled species. He explained that if a species is not listed, it does not get the legal protection of the Act. He writes that Norton repeatedly under-budgeted the Department of Interior, then claimed the Department could not comply with court orders due to budgetary constraints. While the Fish and Wildlife Service has estimated it needed about $20 million per year to address the listing backlog,

Norton's request for fiscal year 2004 was only $9 million.[12] Along with species' listing, the Act also requires that the agency designate the critical habitat for the species as well. Despite the findings by Congress in the legislative history of the Act regarding the importance of the critical habitat designation to the species' survival, Norton inserted a disclaimer in the Department's publications indicating that the designations provided "little additional protection of the species."[13] Norton suspended further critical habitat designations in May 2003, claiming budgetary constraints. However, Norton did not make a budgetary request to Congress despite its invitation to do so.[14] In 2004, a provision was added to the Defense Appropriations Act (Pub. L. 108-136, 117 Stat. 1392, §318 (2004)) which exempted the military from any critical habitat regulations. The Army then proceeded with its plan to expand a tank training center in the Mojave Desert. This area is the habitat of the Desert Tortoise. It is estimated that a third of the population in this area will perish due to this activity. Fish and Wildlife Service biologist, Ray Bransfield, claimed, "some of the tortoises will persist—maybe forever—in the hills where the tanks don't go, and as long as they stay up there, they'll be fine. But eventually, the rest will probably get smushed."[15]

Brennan, et al. write that when enacting environmental legislation, Congress has enlisted the input from scientists. Upon the enactment of the National Forest Management Act and Rangeland Renewable Resources Act of 1976, Congress established a scientific committee to help in the promulgation of regulations under this legislation.[16] With regard to the Endangered Species Act, Congress established the "best scientific data available" standard, which dictates that such data should be applied to federal agency actions regarding the Endangered Species Act. Unfortunately, the authors add, Congress did not provide a clear definition of this standard.[17] Section 7 of the Act (16 U.S.C. § 1536) dictates that federal agency action affecting endangered species or their habitats require consultation with either the Fish and Wildlife Service (FWS) or the Department of Interior or the National Marine Fisheries Service (NMFS) of the Department of Commerce, depending upon the species involved. Agency action could include the granting of permits or licenses to a third party. This consultation usually results in a biological opinion drafted by either the FWS or the NMFS.[18] Section 10 of the Act allows private parties to apply for a permit for an "incidental take." (16 U.S.C. §1539). Although section 9 prohibits "taking" of protected species (16 U.S.C. §1538), such "taking" may be permitted by the agency if it is "incidental to, and not the purpose of the carrying out of an otherwise lawful activity." (16 U.S. C. §1539(a)(1)(B)). To comply, an incidental-take-permit applicant is required to submit a Habitat Conservation Plan (HCP) to the agency, This plan must detail the predicted impact of the action on the species, measures that will be taken to mitigate the impact on the species, funding for mitigation, alternatives, and other information. The agency's determination regarding the HCP is also subject to the section 7 "best scientific and commercial data available" standard.[19]

Librarian-authors have also contributed to the literature on the relationship between environmental law and biological science, as well as commenting on the value of interdisciplinary research in general. David Hollander, a law librarian at Princeton University, an institution without a law school, has discussed his experience with providing reference service with an interdisciplinary approach. He theorizes that this experience might show what the future for law librarianship holds—a more interdisciplinary approach to addressing legal issues.[20] He asserts that law librarians need to network outside of the legal reference arena.[21]

Law Librarian, B. John Ovink, compiled a bibliographic article on the legal aspects of marine oil pollution—an issue which does have implications for species' preservation as will be discussed later in this paper. He writes that while the scope of his research guide is on the law, "it is practically impossible to litigate or research maritime oil pollution without at least studying at a minimum the biological, economical and

chemical aspects . . . "[22] He adds that "[i]n actual litigation, . . . the availability of top experts' from all three fields, as well as from many others, may well determine the outcome of the case."[23]

Judith Johnson, a biological reference librarian at Utah State University, authored a bibliographic article on the topic of endangered species, which included primarily scientific resources with some legal resources. I search for the 41 sources referenced in the Library of Congress and WorldCat catalogs. I found that only 4 of these sources were classified as legal materials [K or KF]. The majority of the works cited dealt with biological or related sciences [QL Zoology (19); QH Natural History—Biology (10); GE Environmental Sciences (3); GC Oceanography (1); GF Human Ecology (1); and SF Animal Culture (1).][24] One item was classified as dealing with anthropology [GN] and a bibliographic resource was classified as a library science item [Z].[25]

Legislative Example: The Natural Resource Damage Provisions of the Oil Pollution Act of 1990

On March 24, 1989, the *Exxon Valdez* ran aground on the coast of Alaska and spilled over 11 million gallons of crude oil into Prince William Sound. Many of us can remember the heartbreaking images of oiled wildlife suffering in the aftermath of this massive oil spill. Though I could not find scientific evidence of the effect these images had on public opinion, other writers have observed a sense of public outrage that followed the spill. In a 1995 article, Houston Chronicle reporter, Tony Freemantle wrote:

> [A]n outraged public watching pathetic oil-covered sea creatures pulled from the waters and hearing the corporation's executives dissemble about the effects of the spill on a fragile environment, howled its outrage. Exxon could never do enough to repair the damage, they said, and cut up their credit cards.[26]

Within 3 months of the spill, the costs to the area's wildlife was staggering: 26,000 sea birds, 81 bald eagles, 827 sea otters, and an unknown number of harbor seals were counted among the dead following the Valdez spill. Additionally the spill disrupted the population of the humpback and killer whales in the area.[27] More long-term studies indicate different accounts. In a 2006 article, Helm, et al. estimated the death of sea birds resulting from the spill to be over 350,000.[28] In a 1992 account, Estes noted that 878 sea otters were found dead after the spill, and 357 more were taken to a rehabilitation facility.[29]

Approximately three months prior to the Exxon Valdez spill on December 22, 1988, the tank barge *Nestucca* collided with its tow and spilled approximately 231,000 gallons of oil off the Washington State coast. The spill affected natural resources in both Washington and British Columbia including over 50,000 sea bird deaths, 1 known sea otter death, and effects on fisheries and other marine life within the flow of the oil spill.[30]

It is fair to say that the public outcry from the *Exxon Valdez* spill ,and perhaps to a lesser extent, the *Nestucca* spill, was largely the impetus for Congress' enactment of the Oil Pollution Act of 1990 (OPA 90).[31] In fact, the damage to wildlife was discussed in legislative history documents to OPA 90.[32] From my own personal experience, I know wildlife damage was a factor discussed numerous times in the process of promulgating regulations under OPA 90. OPA 90 contains provisions regarding damage to natural resources caused by oil pollution. One section provides that generally the party responsible for an oil discharge in navigable waters of the U.S., adjoining shorelines, or the exclusive economic zone[33] is "liable for the removal costs and damages specified" in the following subsection,[34] which includes damages to natural resources.[35] For natural resource damage, a responsible party may be liable to the U.S. government for resources under federal control, states or political subdivisions thereof for state-controlled

resources, an Indian tribe for resources controlled by the tribe, or a foreign country if the resources damaged are under foreign jurisdiction.[36]

Unfortunately, both the damage to wildlife[37] and the litigation[38] stemming from the *Exxon Valdez* spill continue in the present day. Recently, the U.S. Supreme Court heard oral arguments in Exxon's appeal of a damage award from the U.S. Court of Appeals for the 9th Circuit.[39] The brief of the respondents (fishermen and others who sought damages as a result of the *Valdez* spill) cites to a recent scientific study showing the lingering effects on the environment from this spill.[40]

Other scientists have also found lingering environmental effects on the wildlife long after the *Exxon Valdez* spill. Peterson, et al., in their recent study of the Alaska coastline, found evidence of oil exposure in animals that interact with sedimentary areas, such as sea otters (for prey foraging), sea ducks (for egg laying), and fish that dwell in these areas. These researchers also found that oil exposure impaired the reproductive health and growth of the pink salmon.[41] In 2001, researchers found that some sea otters were still showing signs of oil contamination. Because of this showing, the National Oceanic and Atmospheric Administration (NOAA) conducted further research and found *Exxon Valdez* oil still in 70 percent of the sites examined.[42]

Regulatory Example: Designation of the Critical Habitat for the Laguna Mountains Skipper

In late 2006, the Fish and Wildlife Service (FWS) issued a final rule to protect the habitat of a butterfly in San Diego County known as the Laguna Mountains Skipper (*Pyrgus ruralis lagunae*).[43] Critical habitat designation is a measure to preserve the habitat where endangered species live.[44] In this final rule, FWS criticizes the legal system's invasion in the designation of critical habitats by writing:

> [C]ritical habitat designations are driven by litigation and courts rather than biology, and made at a time and under a timeframe that limits our ability to obtain and evaluate the scientific and other information required to make the designation most meaningful.[45]

FWS further contends that the inundation of lawsuits regarding critical habitat designation delays the Service's listing of "critically imperiled species" and delays the process of its proposed regulations.[46] Consequently, this final rule was issued upon the settlement of a lawsuit against the agency by the Center for Biological Diversity. This lawsuit was filed on the premise that the agency failed to designate a critical habitat for the Laguna Mountains Skipper.[47]

Despite the agency's complaints about legal interference, the agency did benefit from scientific expertise in the promulgation of this final rule. The preamble to the rule indicates that opinions from 6 scientific experts were solicited and their comments were considered in the drafting of the final rule. Additionally, the references cited in the rule include several scientific studies on this species and its habitat.[48]

The agency and expert commenters acknowledged the importance of the existence of host plants and water sources to the existence of the Laguna Mountains Skipper.[49] One of the public commenters complained that the designation would impede on economic activity, such as cattle grazing and recreational camping. The agency countered that these activities could be carefully managed to avoid habitat destruction. The agency further contended that the economic impact would be insignificant according to the Draft Economic Analysis for the regulation.[50]

The regulatory text indicates the "primary constituent elements"—factors needed for the survival of the species, such as the existence of host plants (*Horkelia clevlandii* or *Potentilla glandulosa*); existence of nectar sources; wet soil or standing water sources; and the prohibition of additional manmade structures in the area. Maps and coordinates of the area are also included in the regulation.[51]

Case Law Example: Southwest Center for Biological Diversity v. Bartel[52]

This case involved a challenge to the issuance of an incidental take permit (ITP) under the Endangered Species Act from the U.S. Fish and Wildlife Service (FWS) to the City of San Diego. The court found that the ITP would permit the destruction to species living in vernal pools located in San Diego.[53] The species in question included the San Diego fairy shrimp and the Riverside fairy shrimp, as well as 5 plant species (Otay Mesa mint, California Orcutt grass, San Diego button celery, San Diego mesa mint, and spreading navarretia)[54]

The ITP was issued on a regional scale to the City of San Diego, which obtained an "umbrella permit" from the FWS. This process enabled developers to get permits from the City and bypass the FWS application process.[55] As part of its ITP application, the City of San Diego developed a Multiple Species Conservation Plan (MSCP). One of the mitigations it proposed was to develop a preserve in which the fairy shrimp could be relocated, leaving the other habitats to be used by developers. However, the Court opined that the fairy shrimp could not be relocated, arguing that "the [administrative agency's] record establishes that fairy shrimp cannot be successfully transplanted, and, even if successful, it risks hybridization with other species of fairy shrimp."[56]

The MSCP plan for the City of San Diego, which was at issue in this case, was approved in 1997 and touted as a model for future plans. However, it was criticized by scientists and conservationists because it failed to put limits on development and conserve these rare species and their habitats. The MSCP included a "no surprises" policy that would have benefited developers by locking in its plan for 50 years.[57]

The Court ultimately enjoined the City and developers from executing projects involving the vernal pool habitats, any and all pending applications regarding the development of the land in the area, any development approved by the City but not yet initiated, and any development which involves the destruction of the vernal pool habitat. Though injunctions may sometimes be stayed, or suspended, pending the outcome of an appeal, the Court in this case ruled:

> In view of the definitively irreparable injury that has already been sustained by at lease two animal species, if not all seven vernal pool species involved in this lawsuit, this Court will not stay this injunction.[58]

The Court also enjoined the ITP from the FWS to the City, and remanded the matter to the agency (FWS) for revision.[59] Because the case involved the FWS' issuance of a permit to except provisions of the Endangered Species Act, a biological opinion, or biological assessment, of the proposed action was required. [60] In this case, the Court rejected the FWS' biological opinion because it did not consider the entire agency action in that it did not analyze the direct and indirect effects of the City's plan on the species in the vernal pools. The FWS intended to defer this analysis until it applied for another permit under the Clean Water Act.[61]

Biological opinions, or biological assessments, under the Endangered Species Act are described at 16 U.S.C. § 1536 (c). Generally, if a federal agency action will somehow affect an endangered species or its critical habitat, the agency is supposed to request information on the species from the Secretary of Interior or the Secretary of Commerce (jurisdiction depends upon the species or the habitat involved). The statute further dictates that—

> If the Secretary advises, based on the best scientific and commercial data available, that such species may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which is likely to be affected by such action.[62]

Biological assessments are also recommended for exemptions sought under 16 U.S.C. § 1536(g).[63]

In the *Southwest Cen*ter case, Judge Rudi Brewster indicates his access to some scientific data in the Court's consideration of this case by writing:

> The fairy shrimp hatch, mature, reproduce, and inhabit the pools during their short life cycle. Fairy shrimp eggs lie dormant during the dry season, and may hatch in the next wet season. These fragile species are extremely sensitive to their environment (including a specific amount of water; a narrow range of water temperature; the water quality, chemistry, and salinity; the length of time the pool holds water before it percolates into the clay soil).[64]

Ongoing Case Study: The Conservation of a Harbor Seal Rookery in La Jolla, California

In 1931, Ellen Browning Scripps donated money for the construction of a sea wall at Casa Beach in La Jolla, California. The wall was intended to create a safe area for children to swim.[65] Contrary to the opinion of some, Scripps did not own the land. The land was deeded from the State of California to the City of San Diego by legislation in 1931. In Section 1, paragraph (a), that legislation states

> That said lands shall be devoted exclusively to public park, bathing pool for children, parkway, highway, playground and *recreational purposes, and to such other uses as may be incident to, or convenient for the full enjoyment of, such purposes.* [emphasis added.][66]

In the late 1990s, harbor seals began congregating at Casa Beach, a/k/a Children's Pool, and using it as a haul-out site. In 1999, the City ordered that a rope barrier be erected to protect the seals from humans. However, in 2004, the City ordered the removal of the rope barrier. That same year, Valerie O'Sullivan, a swimmer who wanted to reinstate the beach as a swimming area, filed a lawsuit against the City of San Diego. In 2005, the state court ruled in her favor, and the City was ordered to dredge the beach,[67] which would effectively drive the seals away. The intermediate appellate court and the California Supreme Court upheld the decision.[68]

In late 2007, the Animal Protection and Rescue League (APRL), a local animal protection organization, filed suit in federal district court, contending that the state's order to dredge and its interpretation on the 1931 legislation violated the Marine Mammal Protection Act of 1972. The case was dismissed by the federal court, but APRL's appeal was accepted by the U.S. Court of Appeals for the Ninth Circuit.[69] APRL filed an emergency motion to protect the seals during pupping season, and a motion to consider new evidence. The Ninth Circuit granted the motions, stayed the application of state law and any state court order, and

noted that "[a] guideline rope may be placed on the beach to protect the seals and their pups until May 30, 2008."[70] Consideration of this case is scheduled for June 4, 2008.[71]

I have been involved in the conservation of this harbor seal rookery since August 2004. There have been numerous city government proceedings, state court proceedings, and federal court proceedings involved the protection of this rookery. One of the earlier arguments from the anti-seal side was that there could be joint use of the beach by both humans and seals. During various advocacy venues, we presented scientific research on the behavior of harbor seals, and their tendency to disperse when confronted with human contact. Our coalition has also presented scientific information supporting the importance of the seal rookery to the ocean's ecosystem. While the issue is yet to be resolved, the importance of scientific information to the conservation of the seal rookery is evident and will continue to play a role in future advocacy.

What legal information professionals can do

Because the law has become entwined with other disciplines, it is important that law librarians maintain some competency in researching non-legal matters. Additionally, it is important that legal information professionals seek out access to multidisciplinary databases. Resources such as Google™ Scholar (http://scholar.google.com/) enable researchers to locate citations, abstracts, and sometimes the full-text of scholarly resources in a variety of disciplines. Additionally, preferences in Google™ Scholar can be established to search for resources at local libraries.

Law schools that are part of a larger university community have the benefit of access to various non-legal databases. Independent law schools, however, do not generally have that benefit. At California Western School of Law Library (an independent law school), we do subscribed to licensed databases dealing with non-legal issues and provide links to free internet sources on multidisciplinary topics.[72]

In San Diego, San Diego Public Library patrons also have remote access to various licensed databases, including EBSCO's *Academic Search Elite*.[73] I often encourage my legal research students and student patrons to obtain a library card so that they can expand their access to multi-disciplinary databases. We are also close to San Diego State University, University of California—San Diego, and University of San Diego. As such, we can use some of the licensed databases while onsite at the libraries for these institutions.

With the variety of databases, however, comes the responsibility to learn the various search interfaces. Participating in the Special Libraries Association and attending its annual conferences have helped me stay current on resources and search strategies for researching disciplines outside of the law.

Conclusion

As one can see from the examples presented above, biological information plays an important role in the legal advocacy for species' protection. Congress considers biological information in the drafting of legislation to protect species. Agencies use biological information to justify regulation regarding species' protection. Attorneys use biological evidence to support their cases in the courtroom. Law students research these processes as part of their legal education. These groups make up the patron base of law libraries. As such, legal information professionals need to be aware of the resources available in these disciplines so that we can effectively meet our patrons' information needs.

Notes

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4. Id. at 248.

5. Carol Rose, *Environmental Law Grows Up (More or Less), and What Science Can Do to Help*, 9 LEWIS & CLARK L. REV. 273, 274-275 (2005)

6. Id. at 277.

7. Id. at 278.

8. Id. at 281-282.

9. Id. at 282-286.

10.Patrick Parenteau, *Anything Industry Wants: Environmental Policy Under Bush II*, 14 DUKE ENVTL. L. & POL'Y F. 363, 382 (2003-2004).

11. Id. at 382-383.

12. Id. at 387-388,

13. Id. at 388.

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15. Id. at 390-391.

16. Michael J. Brennan, David E. Roth, Murray D. Feldman, and Andrew Robert Greene, *Square Pegs and Round Holes: Application of the "Best Scientific Data Available" Standard in the Endangered Species Act,* 16 TUL. ENVTL. L.J. 387, 389-390 (2002-2003).

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18. Id. at 394.

19. Id. at 399.

20. David A. Hollander, *Interdisciplinary Legal Scholarship: What Can We Learn from Princeton's Long-Standing Tradition*. 99 LAW LIB. J. 771, 772-773 (2007).

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22. B. John Ovink, *Maritime Oil Pollution: A Research Guide*, LEG. REF. SERV. Q., VOL. 14 (4) 1995, at 113, 115.

23. Id. at 115-116.

24. Judith R.J. Johnson, *Endangered Species: Selected Resources for Libraries*, 86 REF. LIB. 111-121 (2004).

25. Id. at 115 & 120.

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27. Sen. Rep. No. 101-99, at 1, 2 (1989), reprinted in 1990 U.S.C.C.A.N. 749, 750.

28. Roger C. Helm, R. Glenn Ford, and Harry R. Carter, *The Oil Pollution Act of 1990 and Natural Resource Damage Assessment,* 34 MARINE ORNITHOLOGY 99, 101 (2006)

29. James A. Estes, Catastrophes and Conservation: Lessons from Sea Otters and the Exxon Valdez, 7 IUCN OTTER SPEC. GROUP BULL. 33, 34 (1992), available at http://www.ottterspecialistgroup.org/Bulletin/Volume7?Estes_1992.htm.

30. Robert D. Rowe and W. Douglas Shaw, Chapter 20: *Nestucca Oil Spill*, in NATURAL RESOURCE DAMAGES: LAW AND ECONOMICS (1992), at 527, 527-528.

31. Oil Pollution Act of 1990, Pub. L. 101-380, 101st Cong., 2nd Sess., 104 STAT. 484 (Aug. 18, 1990)

32. See supra. note 27.

33. *See*, Proclamation 5030 by the President of the United States of America on the Exclusive Economic Zone of the United States of America, 10 March 1983, available at http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/USA_1983_Proclamation.pdf.

34 .33 U.S.C.S. § 2702(a) (LexisNexis 2005 & Supp. 2007)

35. 33 U.S.C.S. § 2702(b) (LexisNexis 2005 & Supp. 2007).

36. 33 U.S.C.S. § 2706(a) (LexisNexis 2005 & Supp. 2007).

37. See, Charles H. Peterson, et al., *Long-Term Ecosystem Response to the Exxon Valdez Oil Spill,* 302 SCIENCE 2082, 2082-2086 (2003); Sonya Sankowsky, *The Oil and the Otter: Sea Otters Clean Up After Exxon Valdez Spill—And Get Sick Doing So*, SCIENTIFIC AMERICAN, May 2004, at 30, 30-32.

38. Robert Barnes, *Exxon Oil Spill Case May Get Closure*, WASH. POST, Feb. 24, 2008, at A1. [NOTE: U.S. Supreme Court Docket Sheet available at http://www.supremecourtus.gov/docket/07-219.htm. Due to the pending nature of this case, a decision might be rendered between the time this paper is submitted and when it is published.]

39. Id.

40. Brief of Respondent-Appellees, *Exxon v. Baker*, No. 07-219 (U.S. Sup. Ct. Jan. 22, 2008), citing Jeffrey W. Short, et al., *Slightly Weathered Exxon Valdez Oil Persists in Gulf of Alaska Beach Sediments after 16 Years*, 41 ENVIRON. SCI. TECHNOL. 1245, 1245-1250 (2007). .

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42. Sonya Sankowsky, *The Oil and the Otter: Sea Otters Clean Up After Exxon Valdez Spill—And Get Sick Doing So,* SCIENTIFIC AMERICAN, May 2004, at 31.

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44. Id. at 74592

45. Id. at 74592.

46. Id. at 74592

47. Complaint for Declaratory and Injunctive Relief, Center for Biological Diversity v. U.S. Fish & Wildlife Service, No. 03-CV-0058 (S.D. Cal. Jan. 10, 2003).

48. 71 Fed. Reg. 74592, 74593; See also, References Cited: Final Designation of Critical Habitat for Laguna Mountains Skipper (Pyrgus ruralis lagunae), available at http://www.fws.gov/Carlsbad/Rules/LMS_Docs/LMS%20FCH_lit%20cited_12_12_06.pdf

49. 71 Fed. Reg. 74592, 74593-74595.

50. 71 Fed. Reg. 74592, 74596.

51. Id. at 74609-74615.

52. *Southwest Center for Biological Diversity v. Bartel,* 470 F. Supp. 2d 1118 (S.D. Cal. 2006)

53. Id. at 1122-1123.

54. Id. at 1123.

55. Id. at 1128.

56. Id. at 1140-1142.

57. Center for Biological Diversity, *Judge Finds Fault with Landmark Habitat Plan* (Oct. 16, 2006), available at http://www.biologicaldiversity.org/news/press_releases/san-diego-mscp-10-16-2006.html. [Visited 26 Feb. 2008].

58. *Southwest Center for Biological Diversity v. Bartel,* 470 F. Supp. 2d 1118, 1157 (S.D. Cal. 2006).

59. Id. at 1161-1162.

60. Id. at 1127.

61. Id. at 1163.

62. 16 U.S.C.A. § 1536(c)(1) (West 2000 & Supp. 2008).

63. 16 U.S.C.A. § 1536(c)(2) (West 2000 & Supp. 2008).

64. . *Southwest Center for Biological Diversity v. Bartel,* 470 F. Supp. 2d 1118, 1126-1127 (S.D. Cal. 2006).

65. John Wilkins, *Beach Brawls*, SAN DIEGO UNION-TRIBUNE, Oct. 11, 2006, available at http://www.signonsandiego.com/uniontrib/20061001/news_mz1c01seals.html.

66. 1931 Stat. 1943, ch. 937

67. Wilkins, *supra.*

68. Terry Rodgers, *Why Harbor Seals Prefer Children's Pool is a Mystery*, SAN DIEGO UNION-TRIBUNE, Dec. 16, 2007, available at http://www.signonsandiego.com/uniontrib/20071216/news_1m16seals.html

69. *Animal Protection and Rescue League, et al. v. State of California, et al* (U.S.C.A. 9th Cir., Civ. 08-55319), Docket Sheet, available on Westlaw and PACER.

70. APRL v. California (U.S.C.A. 9th Cir., Civ. 08-55319), Order filed March 10, 2008.

71. *Supra*., n. 69.

72. CWSL Library, *Alphabetical List of Links*, available at http://www.cwsl.edu/content/forms/library_links.asp (last visited 5/8/2008).

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