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THE AFTERMATH OF SWEET HOME CHAPTER: MODIFICATION OF WILDLIFE HABITAT AS A PROHIBITED TAKING IN VIOLATION OF THE ENDANGERED SPECIES ACT

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I. INTRODUCTION

Despite the United States Supreme Court's 1995 decision in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*¹, substantial uncertainty still exists as to when timber harvesting, clearing of other vegetation, leveling of land, or other modification or alteration of wildlife habitat (either on publicly or privately-owned land), will violate the "takings" prohibitions² of the Endangered Species Act ("ESA").³ In its *Sweet Home Chapter* decision, the Supreme Court held that a regulation⁴ promulgated by the United States Fish and Wildlife Service ("FWS"), providing that "harm" and a "taking" in violation of the ESA may occur when modification of habitat of an animal kills or "injures" the animal, is not facially invalid.

The *Sweet Home Chapter* decision, however, did not determine how this FWS regulation should be interpreted and applied in the myriad situations where the habitat of protected wildlife is modified. Consequently, courts and commentators continue to disagree on the issues of what kinds and types of adverse impacts on a member of a protected species caused by habitat modification can be considered to "harm" ("actually" kill or injure) and "take" an animal. Disagreement also exists on what kinds of evidence are required to prove that habitat modification has "harmed" a protected animal in violation of the ESA's takings prohibitions.

This Article analyzes the ESA's prohibitions on the taking of animals that are members of a protected species of fish or wildlife and the Supreme

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¹ 515 U.S. 687 (1995).

² 16 U.S.C. § 1538(a)(1)(B)-(C) (2000); 50 C.F.R. §§ 17.3, 17.31 (2002).

³ Endangered Species Act, 16 U.S.C. §§ 1531-1544 (2000).

⁴ 50 C.F.R. § 17.3 (2002).

Court's *Sweet Home Chapter* decision. The Article will then analyze contemporary judicial and scholarly positions on the types of adverse impacts on protected animals caused by habitat modification that will constitute an "injury" and a prohibited taking in violation of the ESA. The Article also examines the kinds of circumstantial and direct evidence that will be considered sufficient to prove that a taking in violation of the ESA has been proximately caused by modification of habitat of a protected animal.

This Article concludes that a protected animal should be considered to be "injured" and "taken" in violation of the ESA not only when modification of the habitat causes a serious and permanent physical injury, wound, or disease to a protected animal, but also when habitat modification otherwise significantly adversely affects a protected animal, even temporarily, by significantly impairing the animal's feeding, sheltering, breeding, or reproduction. Proof of harming a protected animal by modifying its habitat, in violation of the ESA's takings prohibitions, should be available through circumstantial evidence (including data garnered by monitoring of telemetry transmissions from a protected animal or proof of a reduction of the population of members of a protected species within a particular habitat after that habitat has been modified) as well as by different kinds of direct evidence (including field observations of a protected animal or videotape of the actions and behavior of a protected animal).

II. PROTECTION OF WILDLIFE HABITAT UNDER THE ESA

The ESA not only seeks to prevent the extinction of listed endangered⁵ and threatened species⁶ of fish, birds, other wildlife, and plants,⁷ but also seeks recovery of listed species by increasing the population of listed species so that the species no longer need to be listed under and protected by the ESA.⁸ In addition to seeking to protect members of listed species from

⁵ See 16 U.S.C. § 1532(6) (2000) (defining an "endangered species" as "any species [other than certain excluded insect pests] which is in danger of extinction throughout all or a significant portion of its range").

⁶ See *id.* § 1532(20) (defining "threatened species" as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range").

⁷ See *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 690 (1995).

⁸ 16 U.S.C. §§ 1531(b), 1532(3) (2000). See also *Sierra Club v. United States Fish & Wildlife Serv.*, 245 F.3d 434, 438 (5th Cir. 2001).

death or harm caused by direct application of force through the prohibition and punishment of the import, export, killing, possession, and sale of protected listed animals,⁹ the ESA also attempts to safeguard listed animals from indirect harm by protecting the habitat of endangered and threatened species of fish and wildlife from destruction or adverse alteration or modification.¹⁰

The protection of habitat of listed species of animals is accomplished not only by governmental acquisition and preservation of habitat,¹¹ but also by restrictions on both private and governmental actions that adversely modify or alter the habitat of protected species of fish and wildlife.¹² Under section 5¹³ of the ESA, the federal government is authorized to acquire land in order to protect wildlife habitat as part of conservation programs for endangered and threatened species, “before the seller’s activity has harmed any endangered animal.”¹⁴ Land also may be acquired under section 5 of the ESA to prevent “modification of land that is not yet but may in the future become habitat for an endangered or threatened species.”¹⁵

In addition to restrictions on the modification of wildlife habitat under the ESA’s takings prohibitions, section 7(a)(2)¹⁶ of the ESA prohibits actions carried out or assisted by the federal government that threaten either to extinguish a protected species or to modify adversely the designated habitat of a protected species.

A. *Section 7(a)(2) of the ESA*

Section 7(a)(2) of the ESA imposes a broad, affirmative duty¹⁷ upon each federal administrative agency and department to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species [of fish, wildlife, or plants] or result in the destruction or adverse

⁹ 16 U.S.C. § 1538(a)(1)(A)-(F) (2000).

¹⁰ *Id.* § 1531(b); *Sweet Home Chapter*, 515 U.S. at 698; *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 179 (1978).

¹¹ 16 U.S.C. § 1534 (2000).

¹² *Id.* §§ 1536(a)(2), 1538(a)(1)(B)-(C); 50 C.F.R. §§ 17.3, 17.31 (2002).

¹³ 16 U.S.C. § 1534 (2000).

¹⁴ *Sweet Home Chapter*, 515 U.S. at 702-03.

¹⁵ *Id.* at 703.

¹⁶ 16 U.S.C. § 1536(a)(2)(2000).

¹⁷ *Sweet Home Chapter*, 515 U.S. at 703.

modification of habitat of such species”¹⁸ which has been determined to be “critical,” under ESA sections 4(a)(3)¹⁹ and 4(b)(2),²⁰ by the Secretary of Commerce or Interior.²¹ Unlike the FWS regulation defining harm under the ESA’s takings prohibitions, section 7(a)(2)’s provisions are not limited to a habitat modification that actually kills or injures members of a protected species.²²

However, in order for section 7(a)(2) to apply to an action of a private individual, business, or state or local government, the action must be licensed, permitted, or funded by the federal government.²³ Furthermore, section 7(a)(2) applies only to “actions in which there is discretionary Federal involvement or control,”²⁴ and therefore does not apply to an action that an agency is required to perform “if certain statutory criteria are met.”²⁵ In addition, section 7(a)(2) does not apply to an action that is solely the action of a private person, business, or state or local government, with no involvement of any kind by the federal government.²⁶

The ESA’s takings prohibitions,²⁷ however, apply to “any person,”²⁸ without regard to whether the person’s action either is discretionary or is permitted, licensed, or funded by the federal government, with the ESA defining person to include “an individual, corporation, partnership, . . . or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State.”²⁹

¹⁸ 16 U.S.C. § 1536(a)(2) (2000).

¹⁹ *Id.* § 1533(a)(3).

²⁰ *Id.* § 1533(b)(2).

²¹ Cf. Federico Cheever, *Endangered Species Act: Critical Habitat*, in *ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* 47 (Donald C. Baur & William Robert Irvin eds., ABA Section of Environment, Energy and Resources 2002) [hereinafter *ENDANGERED SPECIES ACT*] (explaining that as of April 30, 2000, critical habitat had been designated under the ESA for only 124 of the 1231 domestic species of plants, fish, and wildlife that were listed under the ESA as endangered or threatened).

²² *Sweet Home Chapter*, 515 U.S. at 703.

²³ *Proffitt v. Dep’t of Interior ex rel. Lujan*, 825 F. Supp. 159, 164 (W.D. Ky. 1993).

²⁴ 50 C.F.R. § 402.03 (2002).

²⁵ *Strahan v. Linnon*, 1998 U.S. App. LEXIS 16314, at *10 (1st Cir. July 16, 1998).

²⁶ See Deborah L. Freeman, *Reinitiation of ESA § 7 Consultations Over Existing Projects*, 8 NAT. RESOURCES & ENV’T, Summer 1993, at 17, 17-18.

²⁷ 16 U.S.C. § 1538(a)(1)(B)-(C) (2000).

²⁸ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 703 (1995).

²⁹ 16 U.S.C. § 1532(13) (2002).

To violate the first clause of section 7(a)(2), an action must threaten to make a particular protected species extinct—in other words, the action must threaten to kill all existing members of the species (thus threatening the species' survival).³⁰ This first clause of section 7(a)(2) can be violated by a construction project, such as the building of a dam on a river, that threatens to extinguish the only known members of a protected species by destroying the species' habitat.³¹ On the other hand, the ESA's takings prohibitions can be violated by the killing, injury, or other taking of even one animal that is a member of a protected species,³² even if the taking does not threaten to extinguish the species.³³

In order to violate the second clause of section 7(a)(2) (protecting a species' designated critical habitat), the habitat has to be destroyed or adversely modified, and the habitat has to have been designated as "critical" by the Secretary of Interior or Commerce.³⁴ The habitat, however, does not have to be on land owned by the federal government; both clauses of section 7(a)(2) can apply to habitat and land that is owned by a private person, corporation, or state or local government.³⁵

Under the ESA, an ongoing or proposed action that is, or will be, in violation of section 7(a)(2)'s substantive prohibitions is required to be halted by a court by issuance of an injunction without the court balancing the competing equities.³⁶ Neither a federal agency or department that violates section 7(a)(2)'s substantive prohibitions is subject to civil or criminal penalties under section 11³⁷ of the ESA, nor is an employee or agent of a federal agency or department who is responsible for a violation of section 7(a)(2) subject to any civil or criminal penalties under section 11 of the ESA.

The ESA seeks to insure that federal agencies and departments comply with section 7(a)(2)'s substantive prohibitions by requiring federal agencies and departments to follow specified procedures prior to taking any action that might violate section 7(a)(2). In the case of certain major actions,

³⁰ See generally *Sierra Club v. United States Fish & Wildlife Serv.*, 245 F.3d 434 (5th Cir. 2001).

³¹ See generally *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978).

³² *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1180 (M.D. Fla. 1995).

³³ *Id.*

³⁴ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 703 (1995).

³⁵ Lawrence R. Liebesman and Steven G. Davison, *Takings of Wildlife Under the Endangered Species Act After Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 5 U. BAL. J. ENVTL. L. 137, 151 (1995).

³⁶ See *Tenn. Valley Auth.*, 437 U.S. at 153.

³⁷ 16 U.S.C. § 1540 (2000).

a federal agency or department first is required to find out, from either FWS or the National Marine Fisheries Service ("NMFS"), if any species of plants, fish, or wildlife may be present in the area where the proposed action will take place.³⁸ If any members of a listed species or a species proposed to be listed under the ESA may be present in the area, the federal agency or department is required to prepare a biological assessment that determines whether the proposed action will have any adverse effects on any members of listed or proposed-for-listing species.³⁹ If an agency or department determines, from a biological assessment or from informal consultation⁴⁰ with FWS or NMFS, that a listed endangered or threatened species is likely to be adversely affected by the proposed action, the agency or department must consult, formally or informally, with FWS or NMFS, and obtain a biological opinion from FWS or NMFS.⁴¹ The biological opinion is required to determine whether the proposed action will violate section 7(a)(2)'s substantive prohibitions and whether mitigation measures are required to minimize adverse impacts on protected species.⁴² If the biological opinion concludes that the proposed action would violate section 7(a)(2)'s substantive prohibitions, the action cannot go forward, and the agency or department must follow an alternative suggested by FWS or NMFS that FWS or NMFS believes would not violate section 7(a)(2) of the ESA.⁴³

B. *ESA's Takings Prohibitions*

Section 9(a)(1)(B)⁴⁴ of the ESA makes it unlawful for any person⁴⁵ subject to the jurisdiction of the United States to take a listed endangered species of fish or wildlife within the United States or the territorial seas of the United States, and section 9(a)(1)(C)⁴⁶ of the ESA makes it unlawful for any person subject to the jurisdiction of the United States to take any

³⁸ *Hawksbill Sea Turtle v. Fed. Emergency Mgmt. Agency*, 11 F. Supp. 2d 529, 543 (D. V.I. 1998).

³⁹ *Id.*

⁴⁰ *See id.* at 545 (finding that an agency is not required to prepare a biological assessment if it engages in informal consultation with FWS or NMFS to determine if the agency's proposed action will violate section 7(a)(2)'s substantive prohibitions).

⁴¹ *Id.* at 539.

⁴² *Id.* at 543.

⁴³ *Id.*

⁴⁴ 16 U.S.C. § 1538(a)(1)(B) (2000).

⁴⁵ *See supra* notes 27-29 and accompanying text.

⁴⁶ 16 U.S.C. § 1538(a)(1)(C) (2000).

endangered species of fish or wildlife upon the high seas, except as otherwise provided in two sections⁴⁷ of the ESA.⁴⁸ In addition, section 9(g)⁴⁹ of the ESA makes it “unlawful for any person subject to the jurisdiction of the United States to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in . . . section [9 of the ESA]”—which includes the two previously-mentioned takings prohibitions.

The ESA defines “take” to mean “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁵⁰ Acting under authority granted to it by the ESA to adopt “appropriate” regulations to enforce the ESA,⁵¹ the FWS, which has authority under the ESA to protect terrestrial endangered and threatened species of fish and wildlife,⁵² has adopted regulations⁵³ defining both “harass” and “harm” for purposes of the ESA’s taking prohibitions. FWS has defined “harm” in the ESA’s definition of “take” to mean “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife [that is a listed endangered or threatened species under the ESA] by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”⁵⁴ Under this FWS definition of “harm,” modification of the habitat of a protected species of fish or wildlife can be a prohibited “take” in violation of the ESA.⁵⁵ FWS,

⁴⁷ *Id.* §§ 1535(g), 1539.

⁴⁸ See generally Steven G. Davison, *Alteration of Wildlife Habitat as a Prohibited Taking Under the Endangered Species Act*, 10 J. LAND USE & ENVTL. L. 155, 164-70 (1995) (discussing the statutory and regulatory exemptions from the ESA’s general prohibitions on takings of listed endangered and threatened species of fish and wildlife). See also *infra* notes 78-91 and accompanying text (Exemptions from the ESA’s takings prohibitions can be granted in Incidental Take Permits issued under 16 U.S.C. § 1539(a)(1)(B) and Incidental Take Statements issued under 16 U.S.C. § 1536(b)(4).).

⁴⁹ 16 U.S.C. § 1538(g) (2000).

⁵⁰ *Id.* § 1532(19).

⁵¹ *Id.* § 1540(f).

⁵² *Id.* § 1532(15); 50 C.F.R. §§ 17.2(b), 17.11 (2002). The National Marine Fisheries Service (“NMFS”) has jurisdiction under the ESA over endangered and threatened species of marine fish and wildlife. *Id.* § 222.101.

⁵³ 50 C.F.R. § 17.3 (2002).

⁵⁴ *Id.* See also *id.* § 222.102 (“Harm” is defined similarly for purposes of regulation of prohibited takings of endangered and threatened species of marine fish and wildlife under the NMFS’s jurisdiction under the ESA. This Article analyzes only the FWS’s definition of “harm” under the ESA and the application of this definition to modification of the habitat of terrestrial fish and wildlife protected under the ESA.).

⁵⁵ See *infra* notes 137-222 and accompanying text (discussing the interpretation of the FWS

however, has stated that its definition of "harass"⁵⁶ should not be applied to modification or destruction of wildlife habitat since its definition of "harm" deals with habitat modification and destruction.⁵⁷

As a result of the ESA's broad definition of "person,"⁵⁸ these ESA prohibitions on taking or causing a taking apply to "an individual, corporation . . . ; any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State . . . ; any State, municipality, or political subdivision of a State; [and] . . . any other entity subject to the jurisdiction of the United States."⁵⁹ Because of this definition of "person" under the ESA, the ESA's takings prohibitions do not require, as does section 7(a)(2) of the ESA, a permit, license, or funds from the federal government in order to apply to a private individual, a corporation, or a state or local government.

Furthermore, while the second clause of section 7(a)(2) of the ESA only applies to wildlife habitat that has been designated as "critical" under the ESA, the ESA's takings prohibitions are applicable to wildlife habitat that has not been designated as "critical" under the ESA.⁶⁰ In addition, the application of the ESA's takings prohibitions is not dependent upon who owns the land where a taking occurs—the ESA's takings prohibitions are applicable on land owned by a private individual,⁶¹ a corporation, and a state or local government, as well as on land owned by the federal government, because the ESA's takings prohibitions only require that a prohibited "take" occur "within the United States or the territorial sea of the United States"⁶² or "upon the high seas."⁶³

The FWS's definition of "harm" under the ESA's takings prohibitions consequently is the only provision of the ESA that regulates the

regulation defining of "harm" and its application to modification of wildlife habitat).

⁵⁶ 50 C.F.R. § 17.3 (2002) (defining "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).

⁵⁷ Endangered and Threatened Wildlife and Plants, 40 Fed. Reg. 44,412-13 (Sept. 26, 1975).

⁵⁸ 16 U.S.C. § 1532(13) (2000).

⁵⁹ *Id.*

⁶⁰ *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1180 (M.D. Fla. 1995).

⁶¹ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.* 515 U.S. 687, 707 n.19 (1995).

⁶² 16 U.S.C. § 1538(a)(1)(B) (2000).

⁶³ *Id.* § 1538(a)(1)(C).

modification of habitat of a protected species of wildlife by a private individual or corporation or state or local government, when no federal permit, license, or funds is involved and when the action does not occur on land owned or administered by the federal government (so that section 7(a)(2) of the ESA is inapplicable).

Although these prohibitions on “takes” in section 9 of the ESA apply only to endangered species of fish and wildlife listed under the ESA, the FWS has promulgated a regulation⁶⁴ that generally makes it illegal for any person to take a threatened species of fish or wildlife within the United States, the territorial seas of the United States, or upon the high seas.⁶⁵

These ESA takings prohibitions do not make it illegal for a person to take a plant that is a member of a species listed as endangered or threatened under the ESA. However, in section 9(a)(2)(B)⁶⁶ the ESA makes it unlawful, except as provided in sections 6(g)(2)⁶⁷ and 10⁶⁸ of the ESA, “for any person subject to the jurisdiction of the United States . . . to remove and reduce to possession” any . . . [endangered] species [of plants listed under the ESA] from areas under Federal jurisdiction, maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law.⁶⁹

A person who violates the ESA’s prohibitions against taking a listed endangered or threatened species of wildlife is subject to civil penalties⁷⁰ and criminal penalties (which can include imprisonment).⁷¹ In addition, a court

⁶⁴ 50 C.F.R. § 17.31(a) (2002).

⁶⁵ This regulation was held to be within the FWS’s authority under section 4(d) of the ESA, 16 U.S.C. § 1533(d), in *Sweet Home Chapter of Communities for a Great Or. v. Babbitt*, 17 F.3d 1463 (D.C. Cir. 1994), *reh’g denied*, 30 F.3d 190 (D.C. Cir. 1994), *rev’d on other grounds*, 515 U.S. 687 (1995). FWS, however, has issued special rules, 50 C.F.R. §§ 17.40-.48 (2001), that permit some otherwise prohibited takings of certain threatened species of fish and wildlife, and also has adopted another rule, 50 C.F.R. § 17.32, which authorizes the issuance of permits allowing the taking of threatened species of fish and wildlife in certain circumstances.

⁶⁶ 16 U.S.C. § 1538(a)(2)(B) (2000).

⁶⁷ *Id.* § 1535(g)(2).

⁶⁸ *Id.* § 1539.

⁶⁹ See 50 C.F.R. § 17.61(a)-(c)(1) (2002). See also *id.* § 17.71(a) (prohibiting, subject to some exceptions, the removal and reduction to possession of listed threatened plant species from an area under federal jurisdiction).

⁷⁰ 16 U.S.C. § 1540(a)(1) (2000).

⁷¹ *Id.* § 1540(b)(1).

can issue an injunction to halt either an ongoing violation of the ESA's takings prohibitions or a probable (reasonably certain to occur) future violation of the ESA's takings prohibitions,⁷² without the traditional balancing of the respective equities,⁷³ in a suit brought in federal district court either by the United States Attorney General⁷⁴ or by a "person" with standing to sue who files a citizen suit under section 11(g)(1)(A)⁷⁵ of the ESA.

Although the ESA imposes complex procedural duties upon federal agencies and departments to ensure compliance with the affirmative obligations of section 7(a)(2) of the ESA,⁷⁶ neither the ESA nor FWS regulations under the ESA impose any procedural duties upon persons subject to the ESA's taking prohibitions to seek to prevent violations of these prohibitions. However, a person who is subject to the ESA's takings prohibitions, and who seeks to determine whether an ongoing or proposed future action by that person violates or will violate the ESA's takings prohibitions, can request that FWS issue a "no-take" opinion letter to the person. "No-take" letters state to the requesting person that FWS will not take enforcement action under the ESA's takings prohibitions and enforcement provisions against that person's ongoing or proposed action if the person engages in certain specified land uses and implements specified mitigation measures set forth in a land management plan submitted by the requestor to FWS.⁷⁷

If FWS, in an opinion letter or otherwise, determines that a person's ongoing or proposed future action violates or will violate the ESA's takings prohibitions, the person can seek an incidental take permit ("ITP") from FWS under section 10(a)(1)(B)⁷⁸ of the ESA, exempting the incidental take of a protected species from the ESA's takings prohibitions. An ITP can be issued for foreseeable, but not purposeful, takings⁷⁹ that are caused indirectly⁸⁰ by habitat modification and development projects.⁸¹ The FWS may issue an ITP

⁷² *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1066 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997).

⁷³ Davison, *supra* note 48, at 173-74.

⁷⁴ 16 U.S.C. § 1540(e)(6) (2000).

⁷⁵ *Id.* § 1540(g)(1)(A).

⁷⁶ These procedural duties are discussed *supra* notes 38-43 and accompanying text.

⁷⁷ Steven P. Quarles & Thomas R. Lundquist, *When Do Land Use Activities "Take" Listed Wildlife Under ESA Section 9 and the "Harm" Regulation?*, in *ENDANGERED SPECIES ACT*, *supra* note 21, at 207, 244.

⁷⁸ 16 U.S.C. § 1539(a)(1)(B) (2000).

⁷⁹ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 700 (1995).

⁸⁰ *Id.*

⁸¹ *Id.* at 707.

to a person authorizing the taking of an endangered or threatened species of wildlife that is otherwise prohibited under the ESA, if the taking “is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”⁸² An ITP cannot be issued “for direct, deliberate action against a member of an endangered or threatened species.”⁸³

In order to obtain an ITP for an incidental, non-purposeful taking, a person must implement a habitat conservation plan (“HCP”) approved by the FWS, minimizing and mitigating the impacts of the permitted incidental taking⁸⁴ and the FWS must find that the permitted incidental “taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild”⁸⁵

A person is not required to seek an ITP under section 10 of the ESA for an action that is violating or will violate the ESA’s takings prohibitions, but a person is subject to civil and criminal penalties under the ESA if the person takes a protected listed animal in violation of the ESA without an ITP or other permit or authorization for such taking.⁸⁶

When a proposed action is subject to section 7(a)(2)’s substantive requirements and attendant procedural obligations, a person may obtain an exemption from the ESA’s takings prohibitions by obtaining and complying with an incidental take statement (“ITS”) issued by the FWS under section 7(b)(4)⁸⁷ of the ESA. An ITS is issued by the FWS after formal consultation under section 7(a)(2) between the FWS and the federal agency or department, and after the FWS concludes that the agency action, or a reasonable and prudent alternative thereto, will not violate section 7(a)(2) and that the incidental taking of an endangered or threatened species authorized by the ITS will not violate section 7(a)(2).⁸⁸ An ITS is required to specify reasonable and prudent alternatives that the FWS considers necessary or appropriate to minimize the impact of the incidental taking.⁸⁹

⁸² 16 U.S.C. § 1539(a)(1)(B) (2000).

⁸³ *Sweet Home Chapter*, 515 U.S. at 701.

⁸⁴ 16 U.S.C. § 1539(a)(2)(B)(ii).

⁸⁵ *Id.* § 1539(a)(2)(B)(iv).

⁸⁶ *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 927 (9th Cir. 2000).

⁸⁷ 16 U.S.C. § 1536(b)(4) (2000).

⁸⁸ *Id.* Incidental Take Statements under this authority are discussed in Davison, *supra* note 48, at 166-67.

⁸⁹ 16 U.S.C. § 1536(b)(4)(C)(ii) (2000); *see also* *Ariz. Cattle Growers’ Ass’n v. United States Fish & Wildlife*, 273 F.3d 1229, 1242, 1237 (9th Cir. 2001) (declaring that, “absent rare circumstances such as those involving migratory species, it is arbitrary and capricious to issue an Incidental Take Statement when the Fish and Wildlife Service has no rational basis

In cases where there is a risk that a person's land development or land use may cause a taking of a listed threatened species of fish or wildlife, a person may seek to have the FWS issue a special rule under section 4(d)⁹⁰ of the ESA that exempts the land development or land use from the ESA's takings prohibitions.⁹¹

The United States Supreme Court, in its 1995 *Sweet Home Chapter* decision,⁹² held that the FWS acted within its authority under the ESA in including certain modifications of wildlife habitat in its definition of "harm" under the ESA's takings prohibitions. Because of this ruling, persons who are planning to harvest timber or to clear and level land inhabited by wildlife protected under the ESA, or otherwise to alter the habitat of wildlife protected under the ESA, must determine whether there is a possibility that their proposed land development or land use activity will violate the ESA's takings prohibitions. If there is a possibility that a proposed land use development or land use activity may violate the ESA's takings prohibitions, the person has several options. He or she may proceed as planned, or abandon or alter the plans in order to avoid violating the ESA takings prohibitions, or to seek an ITP, ITS, or other exemption from the ESA's takings prohibitions. To proceed according to the original plans risks civil and criminal penalties under the ESA if the proposed land development or use does in fact cause a violation of the ESA's takings prohibitions. In order to decide which of these alternatives to choose in a particular situation, the person needs to understand how the FWS regulation defining "harm" under the ESA's takings prohibitions has been interpreted by FWS, by the Supreme Court in its *Sweet Home Chapter* decision, and by other courts and scholarly commentators.

III. VALIDITY OF THE FWS REGULATION DEFINING HARM AND THE SUPREME COURT'S *SWEET HOME CHAPTER* DECISION

In 1993 and 1994, a three-judge panel of the United States Court of Appeals for the District of Columbia held that the FWS's regulation defining

to conclude that a take will occur incident to the otherwise lawful activity"). The standard used to determine if there is a "take" that requires an Incidental Take Statement under section 7 of the ESA is the same standard used to determine if there is a "take" in violation of section 9 of the ESA. *Id.* at 1237.

⁹⁰ 16 U.S.C. § 1533(d) (2000).

⁹¹ Quarles & Lundquist, *supra* note 77, at 243.

⁹² *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687 (1995).

harm was not facially void for vagueness,⁹³ but was invalid under the ESA because it was an unreasonable interpretation of the ESA.⁹⁴

In 1995, however, the United States Supreme Court reversed this latter holding in a 6-3 majority decision⁹⁵ authored by Justice Stevens. In this decision, the Supreme Court held that under the doctrine of *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*,⁹⁶ the FWS reasonably interpreted the ESA when it included significant habitat modification resulting in the actual killing or injuring protected wildlife⁹⁷ in its regulation defining “harm,” and therefore held that the regulation was not facially invalid in violation of the ESA.⁹⁸

Because the Supreme Court in the *Sweet Home Chapter* case only addressed a facial challenge to the FWS regulation defining “harm,”⁹⁹ Justice Stevens’ majority opinion for the Court in the case did not decide how the regulation should be interpreted in all of the various factual circumstances in which it might be applied. Justice Stevens explained that the validity of the application of the FWS regulation in a particular case will involve “difficult questions of proximity and degree . . . [that] must be addressed in the usual course of the law, through case-by-case resolution and adjudication.”¹⁰⁰

In his majority opinion for the Court in the *Sweet Home Chapter* case, Justice Stevens held, however, that the taking prohibition of section

⁹³ *Sweet Home Chapter of Communities for a Great Or. v. Babbitt*, 1 F.3d 1, 3-5 (D.C. Cir. 1993), *modified on reh’g on other grounds*, 17 F.3d 1463 (D.C. Cir. 1994), *reh’g denied*, 30 F.3d 190 (D.C. Cir. 1994), *rev’d on other grounds*, 515 U.S. 687 (1995).

⁹⁴ *Id.* at 17 F.3d 1463 (D.C. Cir. 1994), *reh’g denied*, 30 F.3d 190 (D.C. Cir. 1994), *rev’d*, 515 U.S. 687 (1995). This facial challenge was brought by “small landowners, logging companies, and families dependent on the forest products industries in the Pacific Northwest and in the Southeast, and organizations that represent their interests.” *Sweet Home Chapter*, 515 U.S. at 692.

⁹⁵ *Sweet Home Chapter*, 515 U.S. at 687. Justice O’Connor, who joined Justice Stevens’ majority opinion along with four other Justices, also filed a concurring opinion. *Id.* at 708-14 (O’Connor, J., concurring). Justice Scalia dissented in an opinion joined by Chief Justice Rehnquist and Justice Thomas. *Id.* at 714-36 (Scalia, J., dissenting).

⁹⁶ 467 U.S. 837 (1984).

⁹⁷ *Sweet Home Chapter*, 515 U.S. at 703, 708.

⁹⁸ See Liebesman & Davison, *supra* note 35, for an analysis of Justice Stevens’ majority opinion, Justice O’Connor’s concurring opinion, and Justice Scalia’s dissenting opinion in the *Sweet Home Chapter* case.

⁹⁹ 515 U.S. at 692, 699-700.

¹⁰⁰ *Id.* at 708.

9(a)(1)(B)¹⁰¹ of the ESA prohibits indirect¹⁰² and unintended¹⁰³ takings of protected wildlife as well as direct and willful,¹⁰⁴ deliberate,¹⁰⁵ and purposeful¹⁰⁶ takings of protected wildlife.

In addition, Justice Stevens held in his majority opinion in the *Sweet Home Chapter* case that the FWS regulation defining "harm" is subject to "ordinary requirements of proximate causation and foreseeability . . . [and] 'but for' causation"¹⁰⁷

Justice Stevens' *Sweet Home Chapter* opinion also indicates that the FWS regulation defining "harm" requires actual killing or injury¹⁰⁸ of "particular" animals,¹⁰⁹ but his opinion does not explain how "injures" and "particular" should be interpreted under the regulation and does not explain what type of evidence must be presented to satisfy this requirement that a "particular" animal must actually be killed or injured.¹¹⁰

In his majority opinion for the Court in the *Sweet Home Chapter* case, Justice Stevens also held that the taking prohibitions of section 9 of the ESA can apply to habitat modification by private landowners¹¹¹ and are not limited to modification of habitat that has been designated as "critical" under section 4¹¹² of the ESA¹¹³ (as is the case under the second clause of section 7(a)(2) of the ESA).

However, the Court in *Sweet Home Chapter* held that section 9's takings prohibitions do not impose (as does section 7 of the ESA) "a broad affirmative duty to avoid adverse habitat modifications"¹¹⁴ and do not

¹⁰¹ 16 U.S.C. § 1538(a)(1)(B) (2000).

¹⁰² *Sweet Home Chapter*, 515 U.S. at 697-98, 700, 702, 704.

¹⁰³ *Id.* at 701 ("activities not intended to harm an endangered species, such as habitat modification, may constitute unlawful takings under the ESA unless the Secretary permits them").

¹⁰⁴ *Id.* at 697.

¹⁰⁵ *Id.* at 705 ("the term 'take' in § 9 reached far more than the deliberate actions of hunters and trappers.").

¹⁰⁶ *Id.* at 704.

¹⁰⁷ *Id.* at 700 n.13.

¹⁰⁸ *Sweet Home Chapter*, 515 U.S. at 703.

¹⁰⁹ *Id.*

¹¹⁰ This requirement, that a "particular" animal be taken, is analyzed *infra* at notes 164-80 and accompanying text.

¹¹¹ *Sweet Home Chapter*, 515 U.S. at 706 n.19 ("Neither statement even suggested that . . . habitat modification by private landowners stood outside the ambit of § 9.").

¹¹² 16 U.S.C. § 1533 (2000).

¹¹³ *Sweet Home Chapter*, 515 U.S. at 703.

¹¹⁴ *Id.*

require (as does section 7(a)(2) of the ESA) an action that is “likely to jeopardize the continued existence of any endangered species or threatened species.”¹¹⁵ In her concurring opinion in the *Sweet Home Chapter* case, Justice O’Connor asserted that the FWS regulation defining “harm” “is limited to . . . habitat modification that causes actual, as opposed to hypothetical or speculative, death or injury to identifiable protected animals,”¹¹⁶ and that “the regulation’s application is limited by ordinary principles of proximate causation, which introduce notions of foreseeability.”¹¹⁷ Justice O’Connor stated in her concurring opinion that the FWS regulation requires that “individual animals” be actually killed or injured,¹¹⁸ while advocating a broad interpretation of “injures” in the FWS regulation. The FWS regulation includes physical injury to a particular animal within the definition of “injures” under the FWS regulation,¹¹⁹ but Justice O’Connor would not limit the term “injures” under the FWS regulation to physical injury to a particular animal. Rather, she believes that the term “injures” in the FWS regulation also includes significant impairment of an animal’s breeding that prevents the birth of new offspring of that animal.¹²⁰

Justice O’Connor asserted, however, that the FWS regulation should not be interpreted to include speculative harm or only “potential injury,”¹²¹ stating, “that a protected animal could have eaten the leaves of a fallen tree or could, perhaps, have fruitfully multiplied in its branches is not sufficient under the regulation. Instead, . . . the regulation requires demonstrable effect (*i.e.*, actual injury or death) on actual, individual members of the protected species.”¹²² She asserted that the United States Court of Appeals for the Ninth Circuit incorrectly interpreted the law in *Palila II*¹²³ by holding,

that a state agency committed a “taking” by permitting mouflon sheep to eat mamane-naio seedlings that, when full grown, might have fed and sheltered endangered palila . . .

¹¹⁵ *Id.* (quoting 16 U.S.C. § 1536(a)(2)).

¹¹⁶ *Sweet Home Chapter*, 515 U.S. at 708-09 (O’Connor, J., concurring).

¹¹⁷ *Id.* at 709.

¹¹⁸ *Id.* at 709, 711.

¹¹⁹ *Id.* at 710-11.

¹²⁰ *Id.* at 709-10.

¹²¹ *Id.* at 711.

¹²² *Sweet Home Chapter*, 515 U.S. at 711 (O’Connor, J., concurring).

¹²³ *Palila v. Haw. Dept. of Land & Natural Res.*, 852 F.2d 1106 (9th Cir. 1988).

[because][d]estruction of the seedlings did not proximately cause actual death or injury to identifiable birds; it merely prevented the regeneration of forest land not currently sustaining actual birds.¹²⁴

Justice Scalia, in a dissenting opinion in the *Sweet Home Chapter* case that was joined by Chief Justice Rehnquist and Justice Thomas, argued that the FWS regulation defining "harm" was an unreasonable interpretation of the ESA¹²⁵ and therefore was invalid under the ESA. Justice Scalia also argued in his dissenting opinion that the ESA's takings prohibitions require an affirmative act¹²⁶ that kills or causes physical harm to particular individual animals,¹²⁷ that is "done directly and intentionally (not indirectly and by accident) to particular animals (not populations of animals)."¹²⁸

Justice Scalia argued in his dissenting opinion that the FWS regulation defining "harm" violates the ESA because of "three features."¹²⁹ First, he argued that the regulation violated the ESA because it is not subject to ordinary principles of proximate causation and foreseeability, only requiring that an act be the cause-in-fact of death or injury to wildlife.¹³⁰ Second, he argued that the regulation also violated the ESA because it applies to omissions as well as to affirmative acts.¹³¹ Third, Justice Scalia argued that the regulation violated the ESA, because it applies to "injuries" inflicted upon populations of a protected species¹³² such as by impairment of breeding and reproduction that prevents an animal from bearing offspring.¹³³

Justice Scalia disagreed with Justice O'Connor's assertion that impairment of an animal's breeding is "harm" under the FWS regulation, arguing that "injures" under the FWS regulation requires physical harm to an individual, presently-living animal and does not include an injury to a population of animals.¹³⁴ Justice Scalia further argued in his dissenting opinion that when impairment of an animal's breeding occurs, the only

¹²⁴ *Sweet Home Chapter*, 515 U.S. at 713-14 (O'Connor, J., concurring).

¹²⁵ *Id.* at 723 (Scalia, J., dissenting).

¹²⁶ *Id.* at 715-16.

¹²⁷ *Id.* at 734 n. 5.

¹²⁸ *Id.* at 718.

¹²⁹ *Id.* at 715.

¹³⁰ *Sweet Home Chapter*, 515 U.S. at 715-16 (Scalia, J., dissenting).

¹³¹ *Id.* at 716.

¹³² *Id.* at 716.

¹³³ *Id.*

¹³⁴ *Id.* at 734 n.5.

“injury” that occurs is either harm to the unborn potential issue of the animal or “psychic harm,”— which he contends are not within the scope of the term “injures” in the FWS regulation defining “harm.”¹³⁵

Justice Scalia would interpret the FWS regulation defining “harm” as not making impairment of breeding, feeding, or sheltering of members of a protected species of wildlife by itself a form of injury; instead, he considers such impairment of an essential behavioral pattern as only “one of the *modes* of ‘kill[ing] or injur[ing] wildlife’.”¹³⁶

IV. INTERPRETATION OF THE FWS REGULATION DEFINING “HARM”

The requirement in the FWS regulation defining “harm,” that an act “actually kill or injure” protected wildlife, might be interpreted as applying only to an affirmative act that proximately and foreseeably causes death or injury to a member of a protected species, and as not applying to an omission or failure to act (even when the omission proximately and foreseeably causes death or injury to a protected animal). However, commentary issued by FWS, in conjunction with the promulgation of its regulation defining “harm,”¹³⁷ states that the word “act” in the regulation should be defined to include both commissions (affirmative acts) and omissions.¹³⁸ Alternatively, the United States, in the Brief for the Petitioner that it filed with the United States Supreme Court in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,¹³⁹ asserted that a person’s omission should be considered to be an “act” under the FWS regulation defining “harm” only when the person had a “legal duty to act” to prevent death or injury to members of protected species.¹⁴⁰

In addition, the word “actually” in the regulation might be interpreted to mean that the regulation only applies when a killing or injury of a protected animal actually has occurred in the past or is occurring at the present time, and as not applying to a proposed future action that will, or probably will, kill or injure a protected animal in the future.¹⁴¹ However, the

¹³⁵ *Id.*

¹³⁶ *Sweet Home Chapter*, 515 U.S. at 734 (footnote omitted) (Scalia, J., dissenting).

¹³⁷ Endangered and Threatened Wildlife and Plants, 46 Fed. Reg. 54,748, 54,750 (Nov. 4, 1981).

¹³⁸ *Sweet Home Chapter*, 515 U.S. at 716 (Scalia, J., dissenting).

¹³⁹ 515 U.S. 687 (1995).

¹⁴⁰ *Id.* at 716 (Scalia, J., dissenting) (citing Brief for Petitioner, at 47).

¹⁴¹ *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1063-66 (9th Cir. 1996), *cert. denied*, 519

regulation not only applies to acts that in the past killed or injured protected wildlife and to continuing acts that presently are killing or injuring wildlife, but, as discussed below, also applies to proposed future actions that probably (to a reasonable certainty) will kill or injure protected wildlife in the future.

When a person in the past committed, or currently commits, a violation of the ESA's takings prohibitions, the person is subject under the ESA both to civil penalties¹⁴² and to criminal penalties (that can include imprisonment).¹⁴³ In addition, the ESA authorizes a court to issue an injunction against a currently ongoing action that is violating the ESA's takings prohibitions, prohibiting the continuation of an ongoing action that is violating the ESA's takings prohibitions.¹⁴⁴

Courts also have interpreted the ESA and the FWS regulation defining "harm" to authorize federal district courts to issue an injunction to halt a proposed future action that is reasonably certain in the future to cause imminent "harm" and a prohibited taking in violation of the ESA.¹⁴⁵ A court, however, will not enjoin a proposed future action that allegedly will "harm" a protected animal in violation of the ESA's takings prohibitions unless there is a showing that the proposed future action sought to be enjoined actually will kill or injure members of a protected species in the future.¹⁴⁶ An injunction can be issued by a court to halt a proposed action that in the future probably will cause a prohibited taking in violation of the ESA, without any proof that the action caused a prohibited taking in the past or is causing a prohibited taking at the present time.¹⁴⁷ An injunction cannot be issued under the ESA to halt a proposed future action, however, when there is only a

U.S. 1108 (1997).

¹⁴² 16 U.S.C. § 1540(a)(1) (2000).

¹⁴³ *Id.* § 1540(b)(1).

¹⁴⁴ In both *United States v. Town of Plymouth, Mass.*, 6 F. Supp. 2d 81 (D. Mass. 1998), and *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170 (M.D. Fla. 1995), the court issued a preliminary injunction against a local governmental entity that prohibited a governmental entity from continuing to permit certain driving of privately-owned motor vehicles on public beaches, because such driving of motor vehicles was causing takings of animals in violation of the ESA's takings prohibitions.

¹⁴⁵ *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000); *Marbled Murrelet*, 83 F.3d at 1066; *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 784-85 (9th Cir. 1995); *Loggerhead Turtle v. County Council of Volusia County*, 92 F. Supp. 2d 1296, 1301-02 (M.D. Fla. 2000); *Hawksbill Sea Turtle v. Fed. Emergency Mgmt Agency*, 11 F. Supp. 2d 529, 552 (D. V.I. 1998); *Loggerhead Turtle*, 896 F. Supp. at 1180.

¹⁴⁶ *Defenders of Wildlife*, 204 F.3d at 925; *Strahan v. Linnon*, 1998 U.S. App. LEXIS 16314

*13 n.6 (1st Cir. July 16, 1998); *Hawksbill Sea Turtle*, 11 F. Supp. 2d at 552.

¹⁴⁷ *Marbled Murrelet*, 83 F.3d at 1064-65; *Forest Conservation Council*, 50 F.3d at 783-84.

speculative possibility that the action in the future may kill a member of a protected species by modifying habitat of the species.¹⁴⁸ In *American Bald Eagle v. Bhatti*,¹⁴⁹ the United States Court of Appeals for the First Circuit refused to issue an injunction that would in the future halt deer hunting that allegedly would result in bald eagles being harmed by eating deer shot by hunters and ingesting lead slugs (fired by hunters) in the deer carcasses, because the court held that there had been no showing that any bald eagles had been harmed by consumption of lead slugs when eating deer carcasses shot by hunters who fired the lead slugs. The court stated that “[c]ourts have granted injunctive *relief* [under the ESA’s takings prohibitions] only [if] the alleged activity has actually harmed the species or . . . will actually, as opposed to potentially, cause harm to the species.”¹⁵⁰ The court held in *Bhatti* that a one-in-a million risk of harm to bald eagles from deer hunting was insufficient to invoke the protection of the ESA’s takings prohibitions and to enjoin future hunting of deer.¹⁵¹ The First Circuit later explained in another case¹⁵² that under *Bhatti* “a risk of harm to endangered species—even a significant risk of harm—does not support an injunction under the ESA . . . Rather, we have required a showing that the activity, if continued, will actually, as opposed to potentially, cause harm to the species.”¹⁵³

Under the FWS regulation defining “harm,” the modification or degradation of the habitat of a protected species of wildlife, by itself, does not constitute a prohibited taking in violation of the ESA when the habitat modification or degradation does not actually kill or injure protected wildlife.¹⁵⁴ In order for habitat modification or degradation to constitute a violation of the ESA’s taking prohibitions under the FWS regulation defining “harm,” the habitat modification or degradation must actually kill or injure one or more existing animals that are members of a protected listed endangered or threatened species.¹⁵⁵

¹⁴⁸ *American Bald Eagle v. Bhatti*, 9 F.3d 163, 166-67 n.5 (1st Cir. 1993); *Strahan*, 1998 U.S. App. LEXIS 16314, at *13 n.6.

¹⁴⁹ 9 F.3d 163 (1st Cir. 1993).

¹⁵⁰ *Id.* at 166.

¹⁵¹ *Id.* at 167 n.5.

¹⁵² *Strahan*, 1998 U.S. App. LEXIS 16314, at *13.

¹⁵³ *Id.* at *13 n.6.

¹⁵⁴ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 691 n.2, 705-06 (1995); *Morrill v. Lujan*, 802 F. Supp. 424, 430 (S.D. Ala. 1992).

¹⁵⁵ *Sweet Home Chapter*, 515 U.S. at 691 n.2, 696 n.9, 706; *Ariz. Cattle Growers’ Ass’n v. United States Fish & Wildlife*, 273 F.3d 1229, 1238 (9th Cir. 2001); *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000); *Marbled Murrelet v. Babbitt*, 83 F.3d 1060,

FWS added the word "actually" before "kills or injures" in its regulation defining "harm" in order to emphasize that habitat modification alone, without consequent killing or injury of a protected animal, does not constitute "harm" and a prohibited taking in violation of the ESA.¹⁵⁶ The word "actually" in the FWS regulation defining harm does not require, however, that an injury or killing be established to one hundred percent certainty or to meet any other burden of proof higher than the traditional civil standard of preponderance of the evidence.¹⁵⁷

Although the ESA's takings prohibitions might be interpreted as being violated only when more than one protected animal is harmed, (because of the ESA's takings prohibitions requirement that there be a taking of "any . . . [endangered] species [of fish or wildlife]"¹⁵⁸ and the FWS "harm" regulation's requirement that "wildlife" be "actually killed or injured"), the courts have held that a person violates the ESA's takings prohibitions by committing an act that proximately and foreseeably causes the death or injury of even one member of a species of fish or wildlife that is listed as endangered or threatened under the ESA.¹⁵⁹

An act does not have to threaten a species with extinction in order to "harm" and "take" members of a protected species in violation of the ESA.¹⁶⁰ However, an act that in the future will cause the extinction of a listed species protected by the ESA's takings prohibitions "harms" members of the species and violates the ESA's takings prohibitions.¹⁶¹

1065 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997); *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 784 (9th Cir. 1995).

¹⁵⁶ Endangered and Threatened Wildlife and Plants, 46 Fed. Reg. 54,748 (Nov. 4, 1981).

¹⁵⁷ Sean C. Skaggs, *Judicial Interpretation of Section 9 of the Endangered Species Act Before and After Sweet Home: More of the Same*, in *ENDANGERED SPECIES ACT*, *supra* note 21, at 253, 277-78.

¹⁵⁸ 16 U.S.C. § 1538(a)(1)(B),(C) (2000).

¹⁵⁹ *Strahan v. Coxe*, 127 F.3d 155, 165 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998); *Nat'l Wildlife Fed'n v. Burlington N. R.R. Inc.*, 23 F.3d 1508 (9th Cir. 1994); *United States v. Town of Plymouth, Mass.*, 6 F. Supp. 2d 81 (D. Mass. 1998); *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1180 (M.D. Fla. 1995).

¹⁶⁰ *Nat'l Wildlife Fed'n*, 23 F.3d at 1508; *Loggerhead Turtle*, 896 F. Supp. at 1180; *Swan View Coalition, Inc. v. Turner*, 824 F. Supp. 923, 938 (D. Mont. 1992).

¹⁶¹ Justice Stevens, in his opinion for the Court in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995), implied in dicta that "harm" would occur under the FWS regulation defining "harm" when "an activity, such as draining a pond, would actually result in the extinction of a listed species by destroying its habitat." *Id.* at 699-700. Justice O'Connor, in her concurring opinion in that case, argued:

[t]o raze the last remaining ground on which the piping

Furthermore, in a decision issued prior to the Supreme Court's *Sweet Home Chapter* decision, one federal district court¹⁶² held that an act of habitat modification that prevents the recovery of a protected species is a prohibited taking in violation of the ESA.¹⁶³ This holding may no longer be valid under the *Sweet Home Chapter* decision, if the holding was based upon a theory that habitat modification that retards a species' recovery is "harm" and a prohibited "taking" because it injures the species' population, since the Court has now interpreted the FWS regulation defining "harm" to require "injury to particular animals. . . ."¹⁶⁴

In the *Sweet Home Chapter* case, Justice Stevens, in his majority opinion for the Court, held that in order for an act to be found to be a taking in violation of the ESA under the FWS regulation defining "harm," the death or injury of one or more "particular" animals must be found to have been

plover currently breeds, thereby making it impossible for any piping plovers to reproduce, would obviously injure the population (causing the species' extinction in a generation). But by completely preventing breeding, it would also injure the individual living bird, in the same way that sterilizing the creature injures the living bird.

Id. at 709-10 (O'Connor, J., concurring). In *Palila v. Hawaii Department of Land & Natural Resources*, 852 F.2d 1106 (9th Cir. 1988) (*Palila II*), the United States Court of Appeals for the Ninth Circuit held that habitat destruction that would result in the extinction of a protected species of wildlife causes "harm" within the meaning of the FWS regulation defining "harm." *Id.* at 1110. However, Justice O'Connor asserted in her concurring opinion in the *Sweet Home Chapter* case that this Ninth Circuit decision was wrongfully decided under the FWS regulation defining "harm" because no actual death or injury to "identifiable birds" was caused, only prevention of "the regeneration of forest land not currently sustaining actual birds." 515 U.S. at 714 (O'Connor, J., concurring). The Ninth Circuit has concluded, however, that in the *Sweet Home Chapter* case five Justices of the United States Supreme Court affirmed *Palila II* "in all respects." *Seattle Audubon Soc. v. Moseley*, 80 F.3d 1401, 1405 (9th Cir. 1996).

¹⁶² *Palila v. Haw. Dep't of Land & Natural Res.*, 649 F. Supp. 1070 (D. Haw. 1986), *aff'd on other grounds*, 852 F.2d 1106 (9th Cir. 1988).

¹⁶³ 649 F. Supp. at 1077. The Ninth Circuit affirmed the judgment on different grounds and did not address the issue of whether an act that prevents recovery of a species "harms" members of the species. 852 F.2d at 1110-11.

¹⁶⁴ *Sweet Home Chapter*, 515 U.S. at 700 n.13.

caused by the act.¹⁶⁵ Justice Stevens, however, did not explain how this "particular animal" requirement should be interpreted.

Although Justice Scalia asserted, in his dissenting opinion in the *Sweet Home Chapter* case,¹⁶⁶ that the FWS regulation defining "harm" violates the ESA by "encompass[ing] injury inflicted, not only upon individual animals, but upon populations of the protected species," Justice O'Connor, in her concurring opinion in the case, disagreed with Justice Scalia's reasoning that "the regulation *must* contemplate application to *a population* of animals which would otherwise have maintained or increased its numbers."¹⁶⁷ Justice O'Connor stated that in her view, "the regulation is limited by its terms to actions that actually kill or injure individual animals."¹⁶⁸ She stated that "[a]t one level, I could not reasonably quarrel with [Justice Scalia's] observation [that the regulation encompasses injury inflicted upon populations of a protected species]; death to an individual animal always reduces the size of the population in which it lives, and in that sense, 'injures' that population."¹⁶⁹ However, she the stated that "by its insight, the dissent means something else,"¹⁷⁰ explaining:

Building upon the regulation's use of the word "breeding," Justice Scalia suggests that the regulation facially bars significant habitat modification that actually kills or injures *hypothetical* animals (or, perhaps more aptly, causes potential additions to the population not to come into being). Because "[i]mpairment of breeding does not 'injure' living creatures,"

¹⁶⁵ *Id.* ("The dissent [of Justice Scalia] incorrectly asserts that the Secretary's ["harm"] regulation . . . 'fail[s] to require injury to particular animals,' *post*, at 731."). Justice O'Connor, who joined Justice Stevens' majority opinion in *Sweet Home Chapter*, stated in her concurring opinion in the *Sweet Home Chapter* case that "the challenged regulation is limited to significant habitat modification that causes actual, as opposed to hypothetical or speculative, death or injury to identifiable protected animals." *Id.* at 708-09 (O'Connor, J., concurring). *United States v. West Coast Forest Resources Ltd. Partnership*, 2000 WL 298707, *5 (D. Ore. March 13, 2000), held that in order for the United States to obtain a permanent injunction against a ninety-four acre timber harvest that allegedly would take two spotted owls protected under the ESA, there would have to be evidence of the imminent "death or actual injury of an identifiable species. 'Mere speculation' is not sufficient. . . ."

¹⁶⁶ 515 U.S. at 716 (Scalia, J., dissenting).

¹⁶⁷ *Id.* at 709 (O'Connor, J., concurring)(quoting Justice Scalia's dissent, *id.* at 716 (Scalia, J., dissenting)).

¹⁶⁸ *Id.* at 709 (O'Connor, J., concurring).

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

Justice Scalia reasons, the regulation *must* contemplate application to “a *population* of animals which would otherwise have maintained or increased its numbers.”¹⁷¹

Justice O'Connor stated that she disagreed with Justice Scalia¹⁷² because she did “not read the regulation’s ‘breeding’ reference . . . to suggest that the regulation contemplates extension to nonexistent animals.”¹⁷³ She also concluded that significant impairment of breeding of a living animal does injure that living animal.¹⁷⁴

Justice Stevens’ opinion for the Court in the *Sweet Home Chapter* case does not explicitly discuss this issue of whether the FWS regulation defining “harm” encompasses “injury to a population” of protected animals. However, Justice Stevens stated that he disagreed with Justice Scalia’s assertion that the FWS regulation defining “harm” does not require injury to “particular animals,”¹⁷⁵ implicitly rejecting Justice Scalia’s assertion that the regulation encompasses “injury” to a “population” of animals.

Justice Stevens’ opinion for the Court in the *Sweet Home Chapter* case also does not address explicitly two issues. The first unanswered question is whether the ESA’s takings prohibitions and the FWS regulation defining “harm” protect a presently-existing unborn fetus that is not born alive because of habitat modification. The other unaddressed issue is whether the same laws protect a so-called “hypothetical” animal that is not presently living (which was not conceived and born in the future because habitat modification impaired the breeding of living animals).

Neither the ESA’s takings prohibitions nor the FWS regulation defining “harm” indicate whether an animal fetus that has not been born alive and is not presently living can be “taken” in violation of the ESA. For instance, are the ESA’s takings prohibitions violated when habitat modification destroys an unhatched bird or mammal egg prior to the live birth of the fetus within the egg, or when a pregnant female animal suffers a miscarriage or gives birth to a stillborn fetus? In other words, is an unborn fetus a “species” and “wildlife” that is protected under the takings

¹⁷¹ *Id.*

¹⁷² *Sweet Home Chapter*, 515 U.S. at 709 (O'Connor, J., concurring).

¹⁷³ *Id.* at 710.

¹⁷⁴ *Id.* at 709-10. Justice O'Connor’s position, that significant impairment of breeding of a living animal “harms” that animal within the meaning of the FWS regulation defining “harm,” is discussed *infra* notes 198-202 and accompanying text.

¹⁷⁵ *Id.* at 700 n.13.

prohibitions of the ESA and the FWS regulation defining "harm"? This question presents an issue similar to that involved in litigation involving the constitutionality of state statutes prohibiting the abortion of an unborn human fetus. The United States Supreme Court held, in *Roe v. Wade*,¹⁷⁶ that an unborn human fetus is not a "person" protected by the Fourteenth Amendment of the United States Constitution. Because the Supreme Court is unlikely to interpret the ESA and the FWS regulation defining "harm" as affording animal fetuses greater protection than the United States Constitution affords to human fetuses, the FWS regulation defining "harm" should be interpreted as not protecting fetuses that are not born alive, and as protecting only "particular" or "individual" existing animals that have been born alive.

However, neither the ESA's takings prohibitions nor the FWS regulation defining "harm" indicate whether the ESA's takings prohibitions protect animals not presently living, that are not conceived and born because of habitat modification that impairs breeding by presently-living animals. Justice Scalia, in his dissenting opinion in the *Sweet Home Chapter* case, argued that the definition of "injures" under the FWS regulation defining "harm" protects animals that are not presently living but which are not conceived or not born as a result of impairment of breeding by living creatures.¹⁷⁷ Justice O'Connor, however, stated that "the regulation requires demonstrable effect (*i.e.*, actual injury or death) on actual, individual members of the protected species,"¹⁷⁸ and that she does "... not read the regulation's 'breeding' reference . . . to suggest that the regulation contemplates extension to nonexistent animals."¹⁷⁹ Justice O'Connor, therefore would not interpret the FWS regulation defining "harm" to encompass "injury" to "hypothetical" animals that might have been conceived and born in the future if habitat modification had not significantly impaired the breeding of particular presently-living animals. But the majority opinion in the *Sweet Home Chapter* case does not explicitly address this issue of whether the ESA's takings prohibitions protect so-called "hypothetical" animals who are not conceived or born because of the impairment of the breeding by presently living animals.

¹⁷⁶ 410 U.S. 113, 158 (1973).

¹⁷⁷ *Sweet Home Chapter*, 515 U.S. at 716 (Scalia, J., dissenting).

¹⁷⁸ *Id.* at 711 (O'Connor, J., concurring).

¹⁷⁹ *Id.* at 710.

Such “hypothetical” animals have not been born and cannot be identified, and therefore probably cannot be considered “particular” animals within the meaning of Justice Stevens’ majority opinion for the Court in the *Sweet Home Chapter* case. Consequently, the FWS regulation defining “harm” should not be interpreted as protecting such “hypothetical” unborn animals.

Another issue not addressed by any of the Justices of the Supreme Court in the *Sweet Home Chapter* case is what type of evidence is required to show that a “particular” or “identifiable” living animal(s) has been killed or injured and therefore taken in violation of the ESA. There are several different types of evidence that may be sufficient to establish that a “particular” or “identifiable” animal has been killed or injured and taken in violation of the ESA. In some cases, where a protected animal has already been killed by an act of a person, the prohibited taking may be proven by admission of the body of the dead animal (or of a film or video of the body) or by testimony of a witness who observed the animal’s dead body after it was illegally taken.

In a case involving allegations that a proposed future activity will modify wildlife “habitat” within a particular area of land and will “harm” and “take” one or more animals protected by the ESA, proof of a violation of the ESA’s takings prohibitions should be able to be established by the admission of evidence that establishes (1) that one or more members of a protected species of wildlife presently are using the particular area for essential behavioral purposes (*e.g.* breeding, feeding or sheltering, thus establishing that the area is “habitat” for one or more protected animals) and (2) that the proposed future modification of this habitat actually will kill or injure one or more of these animals who presently are using this area as habitat.

In such a case, a court should not require either evidence of the precise number of members of the species using the area as habitat, or evidence establishing the physical markings or characteristics of each member of the species using the area as habitat. Furthermore, a court in this situation should not require evidence that establishes the identity of the particular animal(s) that actually will be killed or injured in the future as a proximate result of the habitat modification. Instead, the requirement that there be actual death or injury of “particular” or “identifiable” living animals should be considered to be satisfied by evidence that shows that one or more protected animals presently are using a particular area as “habitat” and that future modification of that habitat is reasonably certain (more likely than not)

to cause the death or injury of one or more of these protected animals that presently are using the area as habitat.¹⁸⁰

The second sentence of the FWS regulation defining "harm," in addition to requiring that habitat modification or degradation "actually kill or injure wildlife," also requires that the habitat modification or degradation be "significant" and that the habitat modification or degradation kill or injure wildlife "by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."¹⁸¹ Yet the FWS regulation defining "harm" provides no definition of either "significant" or "significantly impairing" for the purposes of the FWS regulation defining "harm" and does not provide any criteria for determining if habitat modification or degradation is "significant" or if essential behavioral patterns have been "significantly" impaired.

By defining "harm" to include only "significant" habitat modification or degradation where it actually kills or injures protected wildlife, the FWS regulation defining "harm" implies that habitat modification or degradation that actually kills or injures protected wildlife nevertheless could be found not to be "significant" and therefore found not to be "harm" and a prohibited taking in violation of the ESA. The wording of the regulation also might be interpreted to require that the "significant" habitat modification or degradation both (1) proximately cause "significant" impairment of a species' essential behavioral patterns and (2) proximately cause the actual killing or injury of one or more animals that are members of a species of wildlife protected by the ESA by significantly impairing such essential

¹⁸⁰ See *Marbled Murrelet v. Babbitt*, 83 F.3d 1060 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997) (Evidence that endangered marbled murrelet birds had been detected approximately one hundred times in a particular ninety-four acre forested area over a recent three-year period throughout the birds' breeding periods, with many of the instances of detection indicating that marbled murrelet birds were nesting in the area, as well as witness testimony that proposed modification of this marbled murrelet habitat by future timber harvesting "would likely harm marbled murrelets by impairing their breeding and increasing the likelihood of attack by predators on the adult murrelets as well as the young," *id.* at 1067-68, resulted in the Ninth Circuit affirming the District Court's injunction against the future harvesting of timber in this marbled murrelet habitat because this activity was reasonably certain to cause "harm" in the future to protected marbled murrelet birds. Neither the district court nor the Ninth Circuit required specific physical identification of either the birds that presently used the area as habitat or the birds that probably would be killed or injured if the area was logged in the future.).

¹⁸¹ 50 C.F.R. § 17.3 (2002).

behavioral patterns.¹⁸² Under such an interpretation, the FWS regulation defining “harm” would not apply to “significant” habitat modification or degradation that does not “significantly” impair essential behavioral patterns, even if the significant habitat modification or degradation actually is the proximate cause of the killing or injury of an animal protected by the ESA’s takings prohibitions.

In order to further the purposes of the ESA, the FWS regulation defining “harm” should be interpreted to include, within the definition of “harm,” any act that actually kills or injures a protected endangered or threatened animal as a proximate result of any habitat modification or degradation that impairs any essential behavioral pattern of the protected animal. In other words, any habitat modification or degradation that proximately causes actual death or injury to a protected animal should be considered to be “significant” for purposes of the FWS regulation defining “harm,” and impairment of a protected animal’s breeding, feeding, sheltering or other essential behavioral pattern that actually kills or injures a protected animal should be considered to be “significant impairment” of an essential behavioral pattern of the animal. The FWS regulation should be interpreted in this manner because such an interpretation provides greater protection to listed endangered and threatened species of wildlife than other interpretations of the regulation and is the interpretation of the regulation that best furthers Congress’ intent “that ‘[t]ake’ [be] defined . . . in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.”¹⁸³

If habitat modification or degradation that “actually kills or injures wildlife” is not considered to be “harm” for purposes of the FWS regulation defining harm, (because it either is not considered to be “significant” or is considered not to have caused significant impairment of an essential behavioral pattern of a protected animal) the habitat modification or alteration might be considered to be “harm” under the first sentence of the

¹⁸² As discussed *infra* notes 198-219 and accompanying text, the FWS regulation defining “harm” should be interpreted to require significant habitat modification that both (1) significantly impairs an essential behavioral pattern of one or more protected animals and (2) actually kills or injures these animals. Under this interpretation, significant impairment of an animal’s breeding, feeding, or sheltering by itself does not constitute “injury” and “harm” to a protected animal under the regulation. *Infra* note 219 and accompanying text.

¹⁸³ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 704 (1995), quoting S. REP. 93-307, at 7 (1973).

FWS regulation, as “an act which actually kills or injures wildlife.”¹⁸⁴ In order for such an interpretation to be valid, the word “includes” in the second sentence of the regulation defining “harm” would have to be interpreted to mean that the inclusion of habitat modification and alteration in the second sentence of the regulation is not the exclusive means by which habitat modification or alteration can be found to be “harm” under the regulation. The explicit inclusion of habitat modification and alteration in the second sentence of the regulation defining “harm” should be interpreted, however, as implying the FWS’ intent to define habitat modification or alteration as “harm” only if the habitat modification or alteration satisfies the criteria of the second sentence of the regulation.

Under the wording of the second sentence of the FWS regulation defining “harm,” an act that significantly modifies or alters the habitat of members of a listed endangered or threatened species of wildlife does not have to take place within the “habitat” of the protected animal that is killed or injured by the habitat modification or alteration. The second sentence of the FWS regulation only requires that the act must significantly modify or degrade habitat of a protected animal and proximately and foreseeably cause the killing or injury of one or more of these protected animals¹⁸⁵ by significantly impairing essential behavioral patterns. The regulation does not require that the act take place within the geographical boundaries of the “habitat”¹⁸⁶ of the animal(s) allegedly taken in violation of the ESA. The second sentence of the FWS regulation defining “harm” is not worded in a manner that requires that significant habitat modification or degradation be caused by an act taking place within or on the “habitat” that is modified or degraded; the regulation only requires that an act significantly modify or degrade wildlife habitat and actually kill or injure protected wildlife by significantly impairing essential behavioral patterns. An act occurring outside the geographical boundaries of an animal’s “habitat” therefore can be a prohibited taking of a protected animal in violation of the ESA if the act proximately and foreseeably causes significant modification or degradation of the habitat of the animal, significant impairment of essential behavioral patterns of the animal and the killing or injury of the animal. An example of such an act would be detonation of explosives on land adjacent to habitat of

¹⁸⁴ 50 C.F.R. § 17.3 (2002).

¹⁸⁵ *Sweet Home Chapter*, 515 U.S. at 687, 700 n.13 (1995).

¹⁸⁶ The definition of “habitat” of a protected animal, for purposes of the FWS regulation defining “harm,” is discussed *infra* notes 188-95 and accompanying text.

a protected species that proximately and foreseeably causes the nest of a protected bird to fall to the ground, causing the death of recently hatched offspring of the bird. Another example would be the run-off of toxic pollutants from a development site into nearby waters that are the habitat of protected fish, causing the death of the fish.¹⁸⁷

A. *Definition of "Habitat"*

When a taking of a protected animal in violation of the ESA is alleged to have been caused by modification or degradation of the animal's habitat, the "habitat" of the animal has to be defined geographically, and the act that allegedly is a prohibited taking in violation of the ESA must be proven to be the proximate and foreseeable cause of significant modification or degradation of that habitat.¹⁸⁸

"Habitat" has to be established individually for each animal that allegedly has been taken in violation of the ESA by significant habitat modification or degradation. However, the FWS regulation defining "harm" does not define a protected animal's "habitat," and the courts have not adopted a general definition of "habitat" for purposes of the regulation.

Should a person commit an act that proximately and foreseeably causes the death or injury of a protected animal by modifying or degrading land or an ecosystem that is not shown to have actually been the "habitat" of the animal at the time of the animal's death or injury, the act of the person nevertheless could be found to be "harm" under the first sentence of the FWS regulation defining "harm" because the person did an act that actually killed

¹⁸⁷ See generally *Morrill v. Lujan*, 802 F. Supp. 424 (S.D. Ala. 1992), and *Hawksbill Sea Turtle v. Fed. Emergency Mgmt. Agency*, 11 F. Supp. 2d 529 (D. V.I. 1998) (addressing claims that alleged that takings of protected animals in violation of the ESA would be proximately caused by modification of habitat of wildlife protected by the ESA, both by acts that would take place within the geographical boundaries of the animals' habitat and by acts that would take place outside the geographical boundaries of the habitat). In these two cases, the courts rejected all of the takings claims on the grounds that there had been no showing that any of the acts (either those occurring within the "habitat" or those outside the "habitat") would proximately cause any killing or injury to any protected wildlife. Neither of these two decisions, however, explicitly addressed the issue of whether "harm" under the regulation can be caused by an act that occurs outside an animal's "habitat."

¹⁸⁸ See generally *Sweet Home Chapter*, 515 U.S. at 687, 697 n.9, 700 n.13; *Morrill v. Lujan*, 802 F. Supp. 424 (S.D. Ala. 1992); *United States v. West Coast Forest Res. Ltd. P'ship*, 2000 WL 298707 (D. Ore. 2000).

or injured a protected animal. Although the person would not have committed an act that significantly modified or degraded "habitat" of the animal that was killed or injured (within the meaning of the second sentence of the FWS regulation defining "harm"), the person's act of modifying land or an ecosystem would constitute "harm" under the first sentence of the regulation if the act was the proximate and foreseeable cause of the killing or injury of a protected animal—and the person therefore would be liable for a prohibited taking of the animal in violation of the ESA.

Under the FWS regulation defining "harm," the "habitat" of a particular animal should be defined as the geographical area where the animal engages in "essential behavioral patterns, including breeding, feeding, or sheltering."¹⁸⁹ In other words, a particular animal's "habitat" for purposes of the FWS regulation defining "harm" is the animal's range¹⁹⁰—the geographical area where the animal presently goes and probably will go in the future to obtain food (either for itself or its mate or offspring), to conceive, bear or raise its young, or to obtain shelter for sleep, rest or protection from predators or natural forces (weather) for itself or for its mate or offspring — on a regular or frequent basis, rather than on a one-time basis.

Under this approach, modification or degradation of land that presently is not being used by a protected animal for essential behavioral patterns (breeding, feeding or sheltering) and that probably (more likely than not) will not be used in the future by the animal for such purposes, is not "habitat" for the animal for purposes of the FWS regulation defining "harm." Modification or degradation of land that is not inhabited by a protected animal cannot be "harm" and a prohibited taking in violation of the ESA, even if the land is suitable for breeding, feeding or sheltering by the animal or members of its species.¹⁹¹

The habitat of a particular animal protected by the ESA, that is a member of a specific pack, flock or family of those animals, may be different from the habitat of other animals that are members of the same species who are members of a different pack, flock or family, because the particular range of that animal may differ from the range of other members of its species.

¹⁸⁹ 50 C.F.R. § 17.3 (2002).

¹⁹⁰ Robert J. Taylor, *Biological Uncertainty in the Endangered Species Act*, 8 NAT. RESOURCES & ENV'T 6, 8-9 (1993) (discussing the range and habitat of a number of different migratory species of wildlife).

¹⁹¹ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 713-14 (1995) (O'Connor, J., concurring).

Animals in different packs, flocks or families may well use different geographical areas to obtain food or prey or shelter for themselves, their mates, or their offspring, and thus may have different “habitats” for purposes of the FWS regulation defining “harm.”

Of course, when particular land or an ecosystem that serves as the habitat for a number of animals of the same protected species is modified or degraded by a particular act, each and every one of these protected animals may be the victim of a taking prohibited by the ESA if each animal is actually either killed or injured by the act within the meaning of the FWS regulation defining “harm.” Where the habitat of a number of animals in a pack, flock, or family is significantly modified or degraded, each member of the pack, flock, or family must be actually killed or injured by the habitat modification or degradation in order for each member of the pack, flock, or family to be the victim of a prohibited taking in violation of the ESA.

A court should permit both direct and circumstantial evidence to be introduced to be used to establish that particular land or a particular ecosystem is the “habitat” of a particular animal, for purposes of the FWS regulation defining “harm” and the ESA’s takings prohibitions. The best direct evidence in support of a claim that a particular geographical area is the habitat of a particular animal would be the testimony of a person (especially a trained biologist) who firsthand visually observed, heard or otherwise detected that animal engaged in conduct or behavior in that area that is associated with breeding, feeding, sheltering or other essential behavioral patterns. Examples of such firsthand observations of essential behavior in a particular area would be observation (firsthand or by means of a camera, film or video) of a particular animal engaged in obtaining food in the area, sheltering in a nest, den or burrow in the area, acts of reproduction, or bearing or caring for offspring in that area.¹⁹² Of course, one time observation of a particular animal in a particular geographical area probably is not sufficient to establish that the area is the “habitat” of the animal, because the animal’s presence in the area that one time may be the result of many different things. For instance, that animal may only be fleeing through that area to escape a predator or natural forces (such as a wildfire) or traveling through that area while seeking new habitat to use for breeding, feeding or

¹⁹² See generally *Marbled Murrelet v. Pacific Lumber Co.*, 880 F. Supp. 1343, 1351 (N.D. Cal. 1995), *aff’d*, 83 F.3d 1060 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997) (determining that protected birds were using a particular area for shelter, based on a trained observer hearing distinctive bird calls and sounds associated with sheltering).

sheltering. On the other hand, if a particular animal is observed physically present in a particular area a number of times over a substantial period of time, the repeated presence of the animal in that area over a substantial period of time should be circumstantial evidence that the animal is using that area for feeding, breeding, or sheltering and that the area is part of the "habitat" of that animal.

A particular geographical area also should be found to be the habitat of one or more members of a specific protected species if one or more members of the protected species are observed visually or by hearing engaged in conduct associated with use of the area for breeding, feeding or sheltering, without the need to physically identify, by distinctive markings or features, the specific animals who are using the area for breeding, feeding, or sheltering.¹⁹³

In some cases, the movements of a particular protected animal, that allegedly is the victim of a taking in violation of the ESA, can be tracked by radiotelemetry because the animal already has a transmitting device attached to it. In such a case, the radiotelemetry data, along with physical inspection of the areas where the radiotelemetry data indicate the animal has been (to look for evidence of feeding, breeding or sheltering by that animal), can provide data establishing that the animal is using a particular area for essential behavioral purposes and establish that the area is "habitat" for the particular animal.¹⁹⁴ Of course, caution should be exercised before attaching a radiotelemetry device to a particular protected animal solely for the purposes of determining the animal's "habitat" and whether the animal is the victim of a prohibited taking in violation of the ESA.

Circumstantial evidence that should be sufficient to establish that a particular geographical area is the habitat of one or more animals that are members of a protected species would include evidence that prey of that species was recently killed or devoured in that area by a member of the protected species. The recent killing of prey in that area by a member of the

¹⁹³ See generally *id.* As discussed *supra* notes 164-80 and *infra* notes 220-22 and accompanying text, one or more animals should be able to be found to be the victim of a prohibited taking in violation of the ESA without the animal being identified by specific distinctive markings or features.

¹⁹⁴ See *United States v. West Coast Forest Res. Ltd. P'ship*, 2000 WL 298707 (D. Ore. 2000) (requiring the United States to provide radio telemetry data from two protected owls, and data establishing actual use of a particular area by the two owls, in support of the federal government's request for a permanent injunction against planned harvesting of timber on the ninety-four acre area, that allegedly would "take" the two owls in violation of the ESA).

species would establish that the area presently is used by some members of the species for feeding and therefore is “habitat” for some members of the species. Alternatively, the discovery in the area of a presently-used burrow, den, or nest of the type used by members of the protected species also should be sufficient circumstantial evidence that the area presently is used for sheltering by some members of the protected species and therefore is “habitat” of some members of that species. Such circumstantial evidence would be even stronger if members of the protected species were detected (possibly by recent stool from a member of the species) either within the area or in the vicinity of the area where feeding or sheltering by members of the species appears to be occurring at the present time, particularly if some members of the species recently were observed coming from the direction of that area.

Even when a presently-used shelter or nest of members of a particular protected species is not found within a particular area, circumstantial evidence that members of the species are sheltering (nesting) in that area exists when that area contains the type of flora that is used by members of that species for shelter (nests) and there also is visual or auditory detection of the presence in that area of members of the species engaged in behavior that biologists associate with use of the area by members of the species for sheltering (nesting).¹⁹⁵

Of course, in order for “harm” and a prohibited taking in violation of the ESA to occur, there also has to be an act significantly modifying or degrading the “habitat” which actually “kills” or “injures” a member of the protected species by significantly impairing an essential behavioral pattern of a member of the species.

B. *Interpretation of “Kills” and “Injures”*

Under the FWS regulation defining “harm,” a taking of a protected animal in violation of the ESA can occur if an act “actually” injures a protected animal, without the animal being killed. The regulation, however,

¹⁹⁵ See *Marbled Murrelet v. Pacific Lumber Co.*, 880 F. Supp. 1343, 1352-1360 (N.D. Cal. 1995), *aff’d sub nom.* *Marbled Murrelet v. Babbitt*, 83 F.3d 1060 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997) (holding that visual and auditory detection, coupled with actual observations of “occupied behavior,” of protected marbled murrelets in certain parts of a forested area, which biologists associated with marbled murrelets using the area for nesting (sheltering), was sufficient evidence to support a finding by the court that members of the protected marbled murrelet species were using the forested area for nesting (sheltering).).

neither defines "injures" nor provides any criteria for defining "injures." Furthermore, Justice Stevens, in his opinion for the Court in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,¹⁹⁶ did not discuss how "injures" should be defined for purposes of the FWS regulation defining "harm."

"Injures" under the regulation should be defined broadly and should not be limited only to a serious or permanent physical injury, wound, or disease. "Injures" certainly should not be limited to a physical injury, wound, or disease to a particular animal that makes the death of the animal imminent and probable (reasonably certain to occur, under the more likely than not preponderance of evidence civil burden of proof) in the near future, because an act that is reasonably certain to cause the imminent death of a protected animal in the future would be considered to "actually kill" the protected animal within the meaning of the FWS regulation defining "harm."¹⁹⁷

At the present time, however, two opposing interpretations of "injures" under the FWS regulation defining "harm" have been asserted by some of the Justices of the United States Supreme Court. Justice O'Connor, in her concurring opinion in *Sweet Home Chapter*,¹⁹⁸ indicates that in her view a presently-living animal is "injured" not only when it is physically harmed or injured,¹⁹⁹ but also when its breeding is significantly impaired by destruction of its habitat.²⁰⁰ She also reasoned that habitat degradation which,

... completely prevent[s] breeding ... would ... injure the individual living bird in the same way that sterilizing the creature injures the individual living bird. To "injure" is, among other things, "to impair" ... [O]ne need not subscribe to theories of 'psychic harm,' cf. *post* [Justice Scalia's dissent], at 734-735, n. 5, to recognize that to make it impossible for an animal to reproduce is to impair its most essential physical functions and to render that animal, and its

¹⁹⁶ 515 U.S. 687 (1995).

¹⁹⁷ *Marbled Murrelet*, 83 F.3d 1060, 1066 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997).

¹⁹⁸ *Sweet Home Chapter*, 515 U.S. at 709-10 (O'Connor, J., concurring).

¹⁹⁹ *Id.* at 710 ("The regulation has clear application...to significant habitat modification that kills or physically injures animals ...").

²⁰⁰ *Id.* ("In any event, even if impairing an animal's ability to breed were not, *in and of itself*, an injury to that animal, interference with breeding can cause an animal to suffer other, perhaps more obvious, kinds of injury.").

genetic material, biologically obsolete. This, in my view, is actual injury.²⁰¹

Under this interpretation of Justice O'Connor's concurring opinion in the *Sweet Home Chapter* case, a protected animal is "injured" and "harmed" when a modification of its habitat significantly impairs the animal's essential behavioral patterns (such as breeding, feeding, or sheltering),²⁰² without the need for any attendant physical injury, wound or disease also to be caused by the habitat modification.

The opposing theory, espoused by Justice Scalia in his dissenting opinion in the *Sweet Home Chapter* case, would interpret "injures" in the FWS regulation to mean only physical injury²⁰³ or physical harm.²⁰⁴ Justice Scalia, however, did not explain whether he would define "physical injury or harm" to include a disease as well as a physical injury (such as a wound or broken limb), or whether he would require a "physical injury or harm" to be "serious or significant" or permanent, or both. However, under Justice Scalia's definition of "injures," impairment of breeding, feeding or sheltering is only "...one of the *modes* of 'kill[ing] or injur[ing] wildlife,'"²⁰⁵ but such impairment of an essential behavioral pattern is not itself an "injury."²⁰⁶

Judges of the United States Courts of Appeals and district courts also have divided on the issue of how "injures" should be defined for purposes of the FWS regulation defining "harm," with some judges²⁰⁷ following the theory that "injures" includes significant impairment of an animal's breeding, feeding, or sheltering (as well as physical harm or injury), and other judges²⁰⁸

²⁰¹ *Id.* This discussion, and her later statement that she does not "read the regulation's 'breeding' reference to vitiate or somehow to qualify the clear actual death or injury requirement . . .," *id.*, might be interpreted to mean that Justice O'Connor requires habitat modification not only to significantly impair an animal's breeding, but also to "injure" the animal, such as by completely and permanently preventing breeding by the animal. Under this interpretation, significant impairment of an animal's breeding by itself would not "injure" the animal.

²⁰² *Marbled Murrelet*, 83 F.3d at 1067; *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 788 (9th Cir. 1995).

²⁰³ *Sweet Home Chapter*, 515 U.S. at 716 (Scalia, J., dissenting).

²⁰⁴ *Id.* at 734 n.5.

²⁰⁵ *Id.* at 734.

²⁰⁶ *Id.* at 734 n.5.

²⁰⁷ *Marbled Murrelet*, 83 F.3d at 1067; *Forest Conservation Council*, 50 F.3d at 788.

²⁰⁸ *Hawksbill Sea Turtle v. Fed. Emergency Mgmt. Agency*, 11 F. Supp. 2d 529, 553, 554 (D. V.I. 1998); *Swan View Coalition v. Turner*, 824 F. Supp. 923, 939 (D. Mont. 1992).

following Justice Scalia's position that significant impairment of an essential behavioral pattern by itself is not sufficient to constitute "injury" to an animal under the regulation.

Different portions of the FWS commentary accompanying its regulation defining "harm" support both of these two opposing interpretations of "injures." One portion of the commentary, which states that "[h]abitat modification as injury would only be covered by the new definition if it significantly impaired essential behavioral patterns of a listed species,"²⁰⁹ could be interpreted to mean that significant impairment of an essential behavioral pattern by itself is an "injury." However, another portion of the FWS commentary indicates that significant impairment of an essential behavioral pattern by itself is not an "injury," stating that under the FWS regulation defining "harm," habitat modification "must be *significant*, must *significantly impair essential* behavioral patterns, and must result in *actual* injury to a protected wildlife species."²¹⁰ Another portion of the FWS commentary also implies that significant impairment of an essential behavioral pattern by itself is not an "injury," by stating that "[t]he word 'impair' was substituted for 'disrupt' to limit harm to situations where a behavioral pattern was adversely affected and not simply disturbed on a temporary basis with no consequent injury to the protected species."²¹¹ The following commentary, that accompanied the FWS's 1981 proposal to amend its 1975 regulation defining "harm," also indicates that "injures" should not be interpreted to include significant impairment of an essential behavioral pattern by itself:

This [1975] definition [of "harm"] contains a significant ambiguity. If the words "such effects" are read to refer to the phrase "significantly disrupt essential behavioral patterns," then any significant environmental modification or degradation that disrupts essential behavioral patterns will fall under the definition of harm, regardless of whether an actual killing or injuring of a listed species of wildlife is demonstrated In an opinion dated April 17, 1981, the Solicitor's Office concluded that such a result is inconsistent with the intent of Congress.²¹²

²⁰⁹ Endangered and Threatened Wildlife and Plants, 46 Fed. Reg. 54,748 (Nov. 4, 1981).

²¹⁰ *Id.* at 750.

²¹¹ *Id.*

²¹² Endangered and Threatened Wildlife and Plants, 46 Fed. Reg. 29,490 (June 2, 1981).

While the FWS's commentary accompanying its promulgation of its regulation defining "harm" indicates that significant impairment of an essential behavioral pattern by itself should not be considered an "injury," neither the FWS regulation defining "harm" nor its commentary accompanying the regulation indicate how "injures" should be defined under the regulation.

A broad definition of "injures," that is not limited to physical injuries or harm and expansively protects wildlife from other adverse effects proximately caused by modifications of habitat, should be adopted for purposes of the FWS regulation defining "harm," because Congress intended that the ESA's takings prohibitions should be defined in "the broadest possible manner,"²¹³ and because a broad definition of "injures" is consistent with dictionary definitions of "injures" quoted by several Supreme Court Justices in the *Sweet Home Chapter* case.²¹⁴

The word "injures" should *not* be interpreted, for purposes of the FWS regulation defining "harm," to mean only a serious and permanent physical wound, injury or disease to an identifiable, particular animal. Rather, a protected animal should be considered to be "injured," "harmed," and "taken" in violation of the ESA if it suffers a permanent and serious (but non-life threatening)²¹⁵ physical wound, injury or disease as a result of habitat modification that significantly impairs the animal's breeding, feeding, or sheltering.

In addition, even a temporary physical wound, injury or disease should be considered to be an "injury" under the regulation, because in unfortunate circumstances such a physical wound, injury or disease may lead to the premature death of the harmed animal because the wound, injury, or

²¹³ *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 704 (1995) (quoting S. REP. NO. 93-307 at 7).

²¹⁴ Justice O'Connor, in her concurring opinion in the case, states that "[t]o 'injure' is, among other things, 'to impair.'" 515 U.S. at 710 (O'Connor, J., concurring), citing WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 623 (1983). Justice Scalia, in his dissenting opinion in the case, quoted the following broad dictionary commentary with respect to the word "injures": "*Injure* has the widest range . . . *Harm* and *hurt* refer principally to what causes physical or mental distress to living things." *Id.* at 719 (Scalia, J., dissenting), quoting from AMERICAN HERITAGE DICTIONARY 662 (1985).

²¹⁵ As discussed *supra* notes 141-53 and accompanying text, an act that probably will result in the imminent death of an animal in the near future would be an act that "actually kills" the animal (rather than just an act that only "actually injures" the animal), within the meaning of the FWS regulation defining harm.

disease makes the animal more susceptible to further injury or to death from the natural elements, predators, or other animals with which the harmed animal may compete for food, mates, or shelter. An example of such an injury would be a new-born bird suffering a broken leg or wing when a tree in which its nest (shelter) is located is felled during timber harvesting. This is true even if the broken leg or wing eventually heals completely so that the animal does not die as a result. In addition, temporary loss of an animal's body weight, caused by habitat modification which adversely affects the animal's food supply and behavioral feeding patterns, should be considered to be an "injury" under the FWS regulation defining "harm." Even such a temporary loss of body weight may make the animal more vulnerable to predators and disease by reducing the animal's strength and stamina. The animal should be considered to be "injured" in such a situation even though the animal later finds an alternate, adequate food supply and regains its normal body weight.²¹⁶ Furthermore, an animal should be considered to be "injured" if modification of its habitat causes the animal to fail to conceive or bear offspring during a particular breeding season by impairing the animal's normal breeding behavior, thus preventing a female animal from conceiving new offspring²¹⁷ or causing a pregnant female animal to miscarry or to have a stillborn birth. An "injury" and "harm" should be considered to have occurred under the ESA in these cases, even though the animal may be able to successfully breed and reproduce offspring in future breeding seasons, because the animal's lack of successful breeding and reproduction in even one breeding season is contrary to the ESA's goal of achieving recovery of listed species of wildlife.²¹⁸

On the other hand, a protected animal should not be considered to be "injured" simply because its breeding, feeding or sheltering is significantly

²¹⁶ See *Hawksbill Sea Turtle v. Fed. Emergency Mgmt. Agency*, 11 F. Supp. 2d 529, 554 (D. V.I. 1998) (Mere destruction of animals that are a food source of a protected animal by itself is not an "injury" and "harm" to the protected animal, because the animal may have other sources of that type of food or may have access to other types of food.).

²¹⁷ See *Sierra Club v. Lyng*, 694 F. Supp. 1260, 1271-72 (E.D. Tex. 1988), *aff'd in part and vacated in part on other grounds sub nom.*, *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991) (holding that endangered red-cockaded woodpeckers were harmed by timber management practices that isolated colonies of the birds within national forests in Texas, preventing the birds from locating breeding partners).

²¹⁸ In her concurring opinion in the *Sweet Home Chapter* case, Justice O'Connor stated that an animal is "injured" when environmental pollutants degrade the animal's habitat and cause the animal "to suffer physical complications during gestation." 515 U.S. at 710 (O'Connor, J., concurring).

impaired. In such a situation, the animal may be able to adapt to this impairment of its essential behavioral patterns without being killed and without suffering any significant adverse effects. For example, when a protected animal's food supply within a habitat is destroyed or reduced, the animal may be able to find sufficient adequate food for its own needs (thus maintaining its health and normal body weight) and the needs of its offspring and mate. In such a situation, the animal should not be considered to be injured even though one of its essential behavioral patterns (its feeding) has been significantly impaired.²¹⁹ Another example of significant impairment of an essential behavioral pattern that does not "injure" a protected animal would be where habitat modification temporarily prevents a protected animal's attempt to mate and conceive new offspring at a particular time (such as by causing the animal's prospective mate temporarily to leave a particular area before mating occurs), when the animal and its prospective mate successfully mate later during the same breeding season and conceive and bear new offspring after the unsuccessful initial attempt. Yet another example of significant impairment of an essential behavioral pattern that does not "injure" a protected animal would be a situation where a protected animal's shelter (nest) is destroyed by habitat modification but the animal is able to establish a new adequate shelter without suffering any adverse effects (even if the new shelter has to be located outside the animal's present habitat and range).

As these examples illustrate, for the purposes of the FWS regulation defining "harm," a particular animal should not be considered to be "injured" simply because the animal's breeding, feeding, or sheltering has been significantly impaired by modification of the animal's habitat. Rather, in order for a particular animal to be considered to be "injured" by habitat modification, the habitat modification must adversely affect the animal in some significant way by significantly impairing the animal's breeding, feeding or sheltering. A significant adverse affect that should be considered to be an "injury" to a protected animal, however, should include prevention of conception or birth of new offspring by a particular animal during a particular breeding season, as well as any adverse impact upon a particular

²¹⁹ See *Hawksbill Sea Turtle*, 11 F. Supp. 2d at 554 (implying that protected animals are not "injured" (for purposes of the FWS regulation defining "harm") when the animals' food supply in a particular habitat is destroyed, and the destroyed food supply has not been shown to be the animals' only available food supply, because the protected animals "might be able to seek food somewhere else . . .").

animal's feeding, or sheltering that makes the animal more susceptible to death or to a physical injury, wound, or disease from other animals (including predators) or natural forces. An "injury" under the FWS regulation defining "harm" should not have to be a life-threatening or permanent physical injury, wound or disease.

In addition to deciding what types of adverse impacts should be included within the definition of "injures" for purposes of the FWS regulation defining "harm," courts also will have to decide what kinds of evidence will be considered sufficient to establish that habitat modification has killed or injured particular protected animals. Obviously, the purposes of the ESA probably will not be served by an evidentiary rule requiring that a particular protected animal be physically examined (possibly after the animal is temporarily captured) to determine whether the animal has suffered a physical wound, injury or disease as a result of significant impairment of an essential behavioral pattern of the animal that was caused by modification of the animal's habitat. Even a rule requiring evidence of direct physical observations by a trained scientist, or by videotape, film or photographs, of an "injury" to a protected animal (such as observations of the animal's behavior after the "injury"), may be difficult to satisfy, because many types of protected wildlife may be difficult to observe visually in their habitat.²²⁰

Consequently, courts should permit the killing or the "injury" of a protected animal, by modification of the animal's habitat, to be established by the testimony of an expert scientist giving a learned, expert opinion that the modification of the habitat of one or more protected animals significantly is impairing or probably will impair the animals' breeding, feeding or sheltering and also is causing or probably will cause death or physical injury, disease or other significant adverse impacts to one or more of the protected animals that use the habitat.²²¹

²²⁰ See generally *Marbled Murrelet v. Pacific Lumber Co.*, 880 F. Supp. 1343, 1354 (N.D. Cal. 1995), *affid sub nom.*, *Marbled Murrelet v. Babbitt*, 83 F.3d 1060 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997) ("Nearly 75 to 95 percent of all marbled murrelet detections in California are audible detections.").

²²¹ See *Marbled Murrelet*, 83 F.3d at 1067-68 (This case held that 1) there was sufficient expert scientific evidence, collected by trained observers who engaged in detections of marbled murrelet birds in the wild according to an accepted scientific protocol, establishing that marbled murrelets were using a particular forested area for sheltering and habitat (These trained observers made approximately one-hundred visual and auditory detections of marbled murrelets in that area "throughout the birds' breeding season, for a period of three consecutive years".); and 2) there was sufficient testimony by several expert scientific witnesses as "to the probability of the murrelets' nesting in [the area] and that

In addition, a court should hold that there is sufficient evidence that modification of the habitat of a protected species of wildlife in the past has killed one or members of the protected species, when there is evidence that the population of that species in that habitat declined after the modification of that habitat, without the need to identify specifically the particular animals killed by the habitat modification. In these cases there should be an absence of any evidence that the decline of the species' population in that modified habitat was caused by members of the species being killed by some other act(s) or by members of the species migrating to a new habitat.²²²

V. PROXIMATE CAUSATION STANDARDS

In *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,²²³ a majority of the Justices of the United States Supreme Court held that a prohibited "take" in violation of the ESA can be caused by an indirect act as well as by a direct act,²²⁴ and that the FWS regulation defining "harm" is subject to "ordinary requirements of proximate causation and foreseeability . . . [and] 'but for' causation."²²⁵

Because under the general common law of torts there can be two or more proximate causes of a particular injury or harm,²²⁶ two or more persons therefore each can be held to be the proximate, foreseeable and "but for" cause of a "take" of a particular animal protected under the takings prohibitions of the ESA. Each of these persons can be liable under the ESA for the prohibited taking of one particular animal. An example of such a situation would be when one person modifies the habitat of a protected animal, causing that animal to flee its habitat and to go to another area where

implementation of [the] harvesting plan would likely harm marbled murrelets by impairing their breeding and increasing the likelihood of attack by predators on the adult murrelets as well as the young;" and 3) significantly impairing the breeding and sheltering of the protected birds by itself amounted to "harm" under the ESA.).

²²² *Sierra Club v. Lyng*, 694 F. Supp. 1260 (E.D. Tex. 1988), *aff'd in part and vacated in part on other grounds sub nom.* *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991). The facts and holdings of this case are discussed *infra* note 231 and in Davison, *supra* note 48, at 192-95.

²²³ 515 U.S. 687 (1995).

²²⁴ *Id.* at 697-98.

²²⁵ *Id.* at 700 n.13.

²²⁶ Bert Black & David H. Hollander, Jr., *Unraveling Causation: Back to the Basics*, 3 U. BALT. J. ENVTL. L. 1, 9-10 (1993).

the animal is shot and killed by a hunter. In such a case, both the hunter (the direct cause of the animal's death) and the person who modified the animal's habitat (the indirect cause of the animal's death) commit a taking in violation of the ESA, because each of these two persons were the proximate, foreseeable, and "but for" cause of the particular animal's death.²²⁷ Another situation, where two different persons each could be liable under the ESA for the prohibited taking of one particular animal, is when a private individual or corporation engages in an act that requires a permit or license issued by the federal, state or local government and that act foreseeably and proximately causes the death or injury of a particular protected animal in violation of the ESA's takings prohibitions. In such a case, both the private individual or corporation (as the direct cause of the taking) and the government that issued the permit or license (as the indirect cause of the taking) are liable for the prohibited taking of the one particular animal.²²⁸

Habitat modification may constitute a prohibited taking in violation of the ESA either when the habitat modification directly kills or injures a particular protected animal or when the habitat modification indirectly kills or injures a protected animal. An example of habitat modification directly and proximately killing a protected animal would be when a lumberjack or bulldozer fells a tree containing a nest with recently hatched protected birds, who are killed when their nest crashes to the ground after the felling of the tree. An example of habitat modification indirectly killing members of a protected species of wildlife would be when habitat modification destroys the species' only available food supplies, resulting in the death of all members of the species in that habitat due to starvation.²²⁹

However, killings or injury of protected wildlife in violation of the ESA's takings prohibitions have not necessarily been proximately caused by modification of the animals' habitat simply because the population of the particular species in that particular habitat is found to have decreased after the modification of that habitat has occurred. Some of the decline of the species' population within the habitat may be due to deaths of some members of the species due to natural causes (such as age, disease or non-human

²²⁷ This example is discussed in Davison, *supra* note 48, at 190-91.

²²⁸ The liability of the federal, state or local government under the ESA's takings prohibitions, for authorizing or permitting a taking by another person by issuance of a permit or license or by inadequately regulating the actions of that other person, is discussed *infra* notes 236-52 and accompanying text.

²²⁹ This type of situation is discussed in Davison, *supra* note 48, at 191-92.

predators). On the other hand, such natural deaths of members of the species may be offset in whole or in part by the birth of new offspring within the habitat, or by the migration of members of the species into the habitat. However, modification of the habitat of the species may reduce the animals' shelter and food supply, making them more susceptible to being killed by predators.²³⁰ Habitat modification also may adversely affect the species' breeding and reproduction, proximately causing a decline of the species' population because the birth rate fell below the rate of death within the habitat.²³¹

Because the ESA seeks to increase the population of listed endangered and threatened species of fish and wildlife to levels of recovery that permit a listed species to be de-listed, the courts should adopt a rule permitting a finding that habitat modification or degradation has proximately caused the killings of one or more members of a listed protected species, when the species' population within the habitat has declined after the modification or degradation of the habitat and there is no other reasonable explanation for the decline in the species' population (such as the species' migration or abnormally high death rates or low birth rates due to natural forces, disease, or predators).²³² This rule would not apply, and harm or taking in violation of the ESA would not be found, when a species' population within a particular habitat either increases or remains the same despite the modification or degradation of that habitat.²³³ However, if there is evidence that a specific, identifiable animal was killed or injured by an act

²³⁰ See generally *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1067-68 (9th Cir. 1996), *cert. denied*, 519 U.S. 1108 (1997) (finding that there was sufficient evidence to establish that destruction of marbled murrelet bird habitat by timber harvesting would make both adult and young murrelets more susceptible to attack by predators).

²³¹ See *Sierra Club v. Lyng*, 694 F. Supp. 1260 (E.D. Tex. 1988), *aff'd in part and vacated in part on other grounds sub nom.* *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991) (The court held that a decline in population of the endangered red-cockaded woodpeckers in the national forests in eastern Texas was proximately caused in part by the decline in the birth rate of the birds within the national forests that was proximately caused by modification of the birds' habitat by timber management actions that interfered with the birds' breeding. The court in *Lyng* also found that the reduction in woodpecker population within the national forests was partially caused by a reduction in the birds' food supply and shelter within their habitat. These findings were made in the absence of any evidence that part or all of the decline in the woodpecker population in the national forests in eastern Texas was due to the migration of any woodpeckers to new habitat elsewhere or due to any cause other than the habitat modification.). See also Davison, *supra* note 48, at 192-95.

²³² This proposed rule is discussed in Davison, *supra* note 48, at 195-97.

²³³ Quarles & Lundquist, *supra* note 77, at 227-29.

that modified or degraded the animal's habitat, that act would violate the ESA's takings prohibitions even though the population of the species increased after the act occurred.²³⁴

VI. TAKINGS BY A GOVERNMENTAL ENTITY AUTHORIZING OR INEFFECTIVELY REGULATING A TAKING BY ANOTHER PERSON

A federal, state, or local governmental entity commits a taking in violation of the ESA when it issues a permit, license, or other authorization, that allows or authorizes a person to engage in a particular act that directly causes, or will directly cause in the future, a prohibited taking of a protected animal, when that particular act legally could not take place but for the governmental permit, license or authorization.²³⁵ In such cases, a prohibited taking of a particular animal in violation of the ESA is considered to have been proximately caused and committed both by the permittee or licensee (the person whose governmentally-authorized act directly caused the prohibited taking) and by the governmental entity that issued the permit, license or authorization.²³⁶ Such dual liability is consistent with the holding in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*²³⁷ that the FWS definition of harm requires compliance with "ordinary requirements of proximate causation and foreseeability . . . [and] 'but for' causation" because under the traditional common law of torts there can be two or more "but for" and proximate causes of one particular harm²³⁸ and because it is foreseeable that harm may occur to a protected animal when a

²³⁴ See *United States v. Town of Plymouth, Mass.*, 6 F. Supp. 2d 81 (D. Mass. 1998) (holding that prohibited takings in violation of the ESA of threatened piper plover birds had been proximately caused by the driving of off-road vehicles on public beaches, based upon the discovery of the dead bodies of several members of the protected species in tire tracks of off-road vehicles, even though the population of the species in the area had increased during the preceding eight years).

²³⁵ *Strahan v. Coxe*, 127 F.3d 155, 163-64 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998); *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170 (M.D. Fla. 1995); *United States v. Town of Plymouth, Mass.*, 6 F. Supp. 2d 81, 90 (D. Mass. 1998).

²³⁶ *Strahan*, 127 F.3d at 163. Alternatively, the governmental entity in such a situation may be considered to have violated section 9(g), 16 U.S.C. § 1538(g) (2002), of the ESA, by causing the commission of a section 9 violation takings prohibitions by issuing the permit, license or authorization. *Strahan v. Coxe*, 939 F. Supp. 963 (D. Mass. 1996), *aff'd in part and vacated in part on other grounds*, 127 F.3d 155 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998).

²³⁷ 515 U.S. 687, 700 n.13 (1995).

²³⁸ Black & Hollander, *supra* note 226, at 9-10.

governmental entity authorizes or permits another person to engage in an act that is reasonably certain to harm a protected animal.

Under this principle of governmental liability under the ESA's takings prohibitions for authorizing an act by another person that takes a protected animal, the United States Court of Appeals for the First Circuit held the Commonwealth of Massachusetts liable under the ESA's takings prohibitions for illegal "takings" of protected whales by private persons engaged in gillnet and lobster pot fishing in Massachusetts coastal waters, when such specific acts of fishing were authorized by permits issued by the Commonwealth and would be illegal under Massachusetts law without such state permits.²³⁹ In support of this holding, the First Circuit reasoned that,

[t]he causation . . . while indirect, is not so removed that it extends outside the realm of causation as it is understood in the common law. . . . [I]n this instance the state has licensed commercial fishing operations to use gillnets and lobster pots in specifically the manner that is likely to result in a violation of federal law. . . it is not possible for a licensed commercial fishing operation to use its gillnets or lobster pots in the manner permitted by the Commonwealth without the risk of violating the ESA by exacting a taking. Thus, the state's licensure of gillnet and lobster pot fishing does not involve the intervening independent actor.²⁴⁰

Several courts have applied this principle, imposing liability on a governmental body that authorizes a taking by another person. For example, local governmental bodies were liable for takings of protected animals committed directly by privately-owned motor vehicles operating on coastal beaches with the permission of the local governmental body, when the local government has authority to regulate the operation of privately-owned motor vehicles on coastal beaches within its jurisdiction.²⁴¹

Another court has implicitly applied this principle to hold the United States Environmental Protection Agency ("EPA") liable for a prohibited taking in violation of the ESA caused by protected animals eating strychnine-

²³⁹ *Strahan*, 127 F.3d 155 (1st Cir. 1997), *cert. denied*, 528 U.S. 978 (1998).

²⁴⁰ *Id.* at 164.

²⁴¹ *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1181-83 (M.D. Fla. 1995); *United States v. Town of Plymouth, Mass.*, 6 F. Supp. 2d 81 (D. Mass. 1998).

laced rodent bait (that could only be distributed and used because EPA registered the bait under federal law).²⁴² Another holding found the Department of Interior liable for takings of bald eagles in violation of the ESA caused by eagles ingesting lead shot when eating prey that had been killed by hunters shooting lead shot (which the Department authorized hunters to use in hunting the eagles' prey).²⁴³

A governmental entity is not liable, however, for an ESA-prohibited taking committed by a person operating a vessel or vehicle, where the governmental entity merely has permitted or authorized that person to operate the vessel or vehicle by licensing or registering the vessel or vehicle and licensed its operator or driver to operate the vessel or vehicle. In such situations the vessel or vehicle "owner or operator is an independent actor who is, himself, responsible for complying with environmental and other laws."²⁴⁴

In *dictum*, in a case involving the issue of whether a county council is liable under the ESA for takings of protected sea turtles caused by county-regulated, privately-owned artificial beachfront lighting sources that disorient and harm turtles on nearby beaches, the United States Court of Appeals for the Eleventh Circuit has stated that a local governmental body can be liable under the ESA for a prohibited taking of a protected animal, which was

²⁴² *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1301 (8th Cir. 1989).

²⁴³ *Nat'l Wildlife Fed'n v. Hodel*, 23 Env't Rep. (BNA) 1089 (E.D. Cal. 1985). In addition, the United States Forest Service has been held liable for takings of protected birds in violation of the ESA that were caused by private timber companies harvesting timber in national forests with the authorization of the Forest Service. *Sierra Club v. Lyng*, 694 F. Supp. 1260 (E.D. Tex. 1988), *aff'd in part and vacated in part sub nom. Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991).

²⁴⁴ *Strahan v. Linnon*, 1998 U.S. App. LEXIS 16314, *14 (1st Cir. July 16, 1998) (Coast Guard held not liable for takings of whales by non-Coast Guard vessels that the Coast Guard permits to operate in navigable waters by issuance of Certificates of Documentation and Inspection). *See also* *Strahan v. Cox*, 127 F.3d 155, 163-64 (1st Cir. 1997), *cert. denied*, 528 U.S. 978 (1998), stating in dictum that a state is not liable for takings committed by automobiles and their drivers licensed by the state, since

it is possible for a person licensed by [the state] to use a car in a manner that does not risk. . . violations of federal law. . . . Where the state has licensed an automobile driver to use that automobile and her license in a manner consistent with both state and federal law, the violation of federal law is caused only by the actor's conscious and independent decision to disregard or go beyond the licensed purposes of her automobile use and instead to violate federal . . . law. (*dicta*)

directly caused by the actions of a private person, when that person's actions are the proximate result of the governmental body's "'harmfully' inadequate regulation" of that person's conduct.²⁴⁵ Although the Eleventh Circuit did not define "harmfully inadequate regulation" in this case, the court suggested that "harmfully inadequate regulation" would be established if a statute or ordinance were "(insufficient on [its] face to prevent 'harm') to [the protected animals]. . . ."²⁴⁶ The Eleventh Circuit also referred to the issue of whether a governmental body engaged in "full and complete enforcement" of an ordinance that was sufficient on its face to prevent "harm" and takings in violation of the ESA.²⁴⁷

"Harmfully inadequate regulation" should be found to exist either when a governmental body's statute, ordinance or regulation is insufficient on its face to prevent "harm" and "takings" by regulated persons, or when a facially sufficient statute, ordinance or regulation is not fully and completely enforced by the governmental body (resulting in prohibited takings in violation of the ESA by the persons regulated by the statute, ordinance, or regulation).

A governmental regulatory program that explicitly prohibits regulated individuals and corporations from engaging in acts that proximately cause prohibited takings of protected animals in violation of the ESA, nevertheless should be considered to be "harmfully inadequate" and the proximate cause of any prohibited takings that are directly caused by a regulated individual or corporation in one of two ways: first, if there is a finding that the regulatory program on its face has substantive inadequacies (such as exemptions or defenses that nullify substantive prohibitions) that are proximate (foreseeable and "but for") causes of the prohibited takings; second, if the governmental body's implementation and enforcement of the program has inadequacies that are foreseeable and "but for" causes of the prohibited takings. Governmental enforcement measures should not be found to be inadequate if the governmental body is implementing reasonable enforcement measures in view of the financial resources available to the governmental body and other obligations and duties of the governmental body, even if some takings are being caused by acts of regulated persons in violation of the regulatory program.

²⁴⁵ *Loggerhead Turtle v. County Council of Volusia County*, 148 F.3d 1231, 1249 (11th Cir. 1998).

²⁴⁶ *Id.* at 1250.

²⁴⁷ *Id.*

This theory does not seek to hold a governmental entity liable for a taking in violation of the ESA on the basis of a failure by the governmental entity to adequately regulate the actions of the private person that directly caused the taking. Rather, under the theory, a governmental entity is liable only for a prohibited taking directly caused by another person when the taking is the proximate result of the governmental body's affirmative, but "harmfully inadequate," regulation of those actions of the private person. In order for a governmental body to avoid liability under this theory, the governmental body must amend its existing "harmfully inadequate" regulations that are permitting private persons to engage in actions that cause prohibited takings of protected animals, so that the governmental body's amended regulations, on their face and as enforced, prohibit the actions by private persons that cause the takings of protected animals in violation of the ESA. Of course, a governmental body can avoid such liability for "harmfully inadequate regulation" in two ways. Liability may be avoided by not affirmatively enacting that type of regulatory program or by abrogating an existing regulatory program that has been found to be "harmfully inadequate," unless the governmental body has an affirmative obligation under federal, state, or local law to enact and enforce an adequate regulatory program of the type, so that the governmental body might be liable under the FWS regulation defining "harm" for its omission (its failure to enact and enforce an adequate regulatory program that prevents the takings in violation of the ESA).²⁴⁸

After the remand of the artificial beachfront lighting and sea turtle case from the Eleventh Circuit to the District Court, the District Court held that the takings of protected sea turtles in violation of the ESA were being caused by privately-owned artificial beachfront lighting sources and that the county council was not liable for these takings under the theory of "harmfully inadequate" regulation.²⁴⁹ The basis for this holding was that the county's affirmative acts of adopting and enforcing an ordinance to protect sea turtles from privately owned artificial beachfront lighting sources did not proximately cause the prohibited takings of sea turtles. The District Court reasoned that although the county's ordinance banned on its beaches light from artificial lighting sources, protected sea turtles were being harmed by light on the county beaches from artificial lighting sources because the

²⁴⁸ A person's liability for an omission or failure to act under the FWS regulation defining "harm" is discussed *supra* notes 137-40 and accompanying text.

²⁴⁹ *Loggerhead Turtle v. County Council of Volusia County*, 92 F. Supp. 2d 1296 (M.D. Fla. 2000).

county's "beach residents are not turning off their lights in compliance with the ordinance."²⁵⁰ The District Court did not consider whether "harmfully inadequate" enforcement of this ordinance by the county council was the proximate cause of private persons not turning off their artificial lighting sources in compliance with the ordinance, because the Court held that "Plaintiffs' case is not based upon the County's failure to enforce the sea turtle protection ordinance, nor do Plaintiffs contend that an alleged failure to enforce the ordinance would violate the ESA."²⁵¹

Professor J.B. Ruhl has argued that the principle that holds a governmental body liable for a taking caused by another person acting with governmental authorization or with inadequate governmental regulation imposes vicarious liability without sound legal basis under the ESA.²⁵² This kind of governmental liability, however, is not vicarious liability, but rather liability based either upon a governmental body's affirmative act of authorizing or permitting an action by another person that proximately takes an animal protected by the ESA or upon a governmental body's affirmative act of regulating the acts of other persons in a harmfully inadequate manner that causes prohibited takings in violation of the ESA. Furthermore, imposition of liability upon a governmental body in such situations is a reasonable interpretation and application of the FWS regulation defining "harm," because such governmental liability is based upon traditional and ordinary common law tort principles of foreseeability, proximate causation, and "but for" causation.

Under the Eleventh Amendment of the United States Constitution,²⁵³ a private person cannot bring a suit in federal district court, under the ESA's citizen suit provision²⁵⁴ or otherwise, against a state or an "arm" of a state, seeking an injunction to enforce the ESA's takings prohibitions. The Eleventh Amendment generally prohibits a private person from bringing a suit in federal court against a nonconsenting state²⁵⁵ or "arm" of a state.²⁵⁶

²⁵⁰ *Id.* at 1307.

²⁵¹ *Id.*

²⁵² J.B. Ruhl, *State and Local Government Vicarious Liability Under the ESA*, 16 NAT. RESOURCES & ENV'T., Fall 2001, at 70.

²⁵³ U.S. CONST. amend. XI, ("The Judicial power of the United states shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or subjects of any Foreign State.").

²⁵⁴ 16 U.S.C. § 1540(g) (2000).

²⁵⁵ *Seminole Tribe of Fla. v. Florida*, 517 U.S. 44, 54, 72 (1996).

²⁵⁶ *Mancuso v. N.Y. State Thruway Auth.*, 86 F.3d 289, 292 (2d Cir. 1996). This case names a number of factors to be considered by a court in determining whether a suit by a private

The Eleventh Amendment, however, does not bar a private person's suit in federal court against a county, municipality, or other political subdivision of a state.²⁵⁷ It also does not immunize a state or an "arm" of a state from being sued in federal court by either the United States²⁵⁸ or by another state.²⁵⁹ Either the federal government (in a suit under section 11(e)(6)²⁶⁰ of the ESA) or another state (in a suit under the ESA's citizen suit provision) could enforce the ESA's takings prohibitions against a state or an "arm" of a state in a suit filed in federal district court.²⁶¹

A state or local governmental body's liability in a federal court for violation of the ESA's takings prohibitions also may be limited by the Tenth Amendment of the United States Constitution or by separation of powers rules.²⁶² A federal court may exceed its powers if it issues an injunction requiring a state or local governmental body to enact and enforce "a particular regulatory regime that enforces and furthers a federal policy,"²⁶³

party against a governmental entity is a prohibited suit against an "arm" of a state, including:

- (1) how the entity is referred to in the documents that created it; (2) how the governing members of the entity are appointed; (3) how the entity is funded; (4) whether the entity's function is traditionally one of local or state government; (5) whether the state has a veto power over the entity's actions; and (6) whether the entity's obligations are binding upon the state.

Id. at 293.

²⁵⁷ *Lincoln County v. Luning*, 133 U.S. 529, 530 (1890); *Mount Healthy Sch. Dist. Bd. of Educ. v. Doyle*, 429 U.S. 274, 280 (1977).

²⁵⁸ *United States v. Mississippi*, 380 U.S. 128, 140-41 (1965); *United States v. Texas*, 143 U.S. 621, 644-45 (1892).

²⁵⁹ *Hawaii v. Standard Oil Co.*, 405 U.S. 251, 258-59 n.12 (1972). The Eleventh Amendment, however, does bar a suit by a plaintiff state against another state when the plaintiff state actually is suing as a trustee on behalf of its individual citizens to obtain damages for them for their individual claims. *North Dakota v. Minnesota*, 263 U.S. 365, 375-76 (1923); *New Hampshire v. Louisiana*, 108 U.S. 76, 90-91 (1883).

²⁶⁰ 16 U.S.C. § 1540(e)(6).

²⁶¹ Pursuant to section 6(f), 16 U.S.C. § 1535(f), of the ESA (providing that the ESA shall not be construed to void state laws or regulations intended to conserve fish or wildlife and permits state laws or regulations respecting the taking of a protected species to be more restrictive than the ESA or regulations under the ESA), a state has the authority to enact legislation authorizing its state courts to exercise jurisdiction over suits against the state or an "arm" of the state to enforce the ESA's takings prohibitions.

²⁶² See generally *Loggerhead Turtle v. County Council of Volusia County*, 148 F.3d 1231, 1253-55 (11th Cir. 1998), *cert. denied*, 526 U.S. 1081 (1999); *Strahan v. Coxe*, 127 F.3d 155, 169 (1st Cir. 1997), *cert. denied*, 528 U.S. 978 (1998); *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1298 (8th Cir. 1989).

²⁶³ *Strahan*, 127 F.3d at 169.

although a federal court in an appropriate case can issue an injunction prohibiting a state or local governmental body from continuing to enforce a particular existing regulatory program until it can do so without violating the ESA's takings prohibitions²⁶⁴ or an injunction requiring state or local governmental officials to find a means of bringing a governmental body's regulatory program into compliance with federal law.²⁶⁵

VII. CONCLUSION

The word "injures" in the FWS regulation defining "harm" should be interpreted to include significant adverse impacts upon a protected animal's breeding, feeding, or sheltering, as well as a physical injury, wound or disease. However, in order for habitat modification to constitute "harm" under the FWS regulation, the habitat modification must not only significantly impair an animal's breeding, feeding or sheltering but also must otherwise kill or injure the animal. Significant impairment of an animal's breeding, feeding, or sheltering by habitat modification by itself should not be sufficient to constitute an injury under the FWS regulation defining "harm." Courts should, permit, however, an animal's habitat and injury to an animal from habitat modification or degradation to be established either by the opinions of expert scientific witnesses or by circumstantial evidence.

²⁶⁴ *Defenders of Wildlife*, 882 F.2d at 1298.

²⁶⁵ *Strahan*, 127 F.3d at 170.