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EPA "OVERSIGHT"? HOW THE ENVIRONMENTAL PROTECTION AGENCY HAS FAILED TO PROTECT PACIFIC SALMON FROM DANGEROUS TOXINS

Nick Allen*

I. INTRODUCTION

The plight of the Pacific Salmon has been fervidly researched over the latter half of the twentieth century by scientists and environmentalists searching for an explanation behind the declining populations of these once vibrant species. While this sustained research has yet to reveal one specific causative factor, advancing technologies and intensive studies have supported the emergence of a new consensus, one that accepts the proposition that an aggregation of man made factors has inflicted the most damage upon Pacific Salmon and their habitats. While some biological and environmental factors have no doubt helped perpetuate the decline of Pacific Salmon populations, a growing body of science now pinpoints man-made pressures as the major source of salmon habitat degradation.1

The Pacific Northwest historically supported one of the densest populations in pre-industrial North America, due in large part to once plentiful Pacific Salmon populations.2 As recently as the early twentieth century, salmon populations remained plenteous, serving as a critical food staple for struggling families during the Great Depression.3 However, a multitude of factors—including overfishing, dam building, extensive logging, urbanization, and increases in hatchery-born salmon populations4—have contributed

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1. For example, the National Marine Fisheries Service has concluded that declining salmon populations are mainly attributable to human activities. See National Marine Fisheries Service, Salmon in Decline, A Citizen's Guide to the 4(d) Rule for Threatened Salmon and Steelhead on the West Coast, available at http://www.nwr.noaa.gov/lsalmon/salmona/4ddocs/citguide.htm#Salmon%20in%20Decline (last visited Sept. 6, 2004).
2. John C. Ryan, Feedlots of the Sea; Atlantic Salmon Fish Farming and Environmental Consequences, 16 WORLD WATCH 22 (Sept./Oct., 2003).
3. Id.
to the recent declines in Pacific Salmon populations.\(^5\) Scientists and environmentalists have now uncovered another deadly man-made influence contributing to this population decline—pesticides. While the political quagmire surrounding Pacific Salmon has dominated local and state politics for years, pesticide use issues and the related dangers of pesticide contamination have only recently taken center stage—both locally and nationally.

Salmon and politics are intertwined, especially in the Pacific Northwest, where the maintenance of healthy, functional salmon habitats has sparked ardent political debate at every level of government. The emerging national debate mirrors the competing factions on the local level—pitting pro-private land use and agriculture interest groups touting economic land use benefits over environmental protection, while environmentalist and conservationist groups voice growing concerns over the current administration’s commitment to environmental protection. President George W. Bush has been assailed with accusations of attempting to further undermine the already tenuous safeguards intended to protect endangered species, like the Pacific Salmon, by justifying policy decisions based on “rigged science,” and by defying court orders to sidestep the Endangered Species Act (ESA) and its pro-environment protective measures.\(^6\) Furthermore, the Bush Administration has been accused of acquiescing to the pesticide industry by proposing and supporting pro-pesticide administrative rules.\(^7\)

At the state level, Washington has enacted proactive executive and legislative measures to ameliorate the problem of salmon habitat degradation, including the establishment of the Governor’s Statewide Strategy to Recover Salmon,\(^8\) and the enactment of the Watershed Management Act.\(^9\) The salmon debate has also spurred local grass roots support, such as a

\(^5\) Id.


\(^9\) 90 WASH. REV. CODE § 90.82 (2004). More precisely, the watershed plan is to be implemented “to protect or enhance fish habitat.” See *Id.* at § 90.82.100. Furthermore, this act establishes a framework for addressing Washington State’s water resource and water-quality issues, as well as establishing instream flows and addressing salmon habitat concerns. See Green Screens, *The Watershed Management Act; 2514: Understanding the Regulatory Framework*, available at http://www.olywa.net/speech/jul-aug99/2514.html (last visited Feb. 18, 2005).
2001 referendum-driven Seattle ordinance that sought to protect salmon watersheds. The ordinance required implementation of more effective water conservation techniques, such as retrofitting low income housing with efficient water conservation devices, and required the city to increase water conservation by twelve million gallons per day by 2010.10

Most of the aforementioned political debate and resulting legislation emanates from the deep cultural significance and iconic status of the Pacific Salmon, and thus the value of the sustained existence of these species cannot be easily quantified, either economically or culturally. This "concurrent" value is a main instigator for the diligent conservation efforts that have been waged by both local and federal environmental groups, as well as fishing industry lobbyists.11 Conversely, the Northwest relies heavily on the manipulation of water, an obvious and critical component of salmon habitats, to support the region's rapidly expanding population. For example, hydroelectric power dams provide nearly ninety percent of the region's electricity.12 Additionally, the logging industry, agriculture, and private land-users all rely on water to varying degrees for economic sustenance and have contributed excessive resources to fight state and federal regulations aimed at protecting salmon and their habitats.

The competing interests at stake in the salmon conservation movement depict the all too familiar dilemma of the economic interests of the private landowner/business owner versus environmental and conservation interests. Part II of this Comment will briefly outline the historical, cultural and economic significance of Pacific Salmon and the multitude of values inherent in a healthy maintenance of the species. Part III will focus on the current federal pesticide regulatory framework, as well as federal efforts to protect salmon and their habitats under the ESA. More precisely, attention will be given to the ESA procedural guidelines for safeguarding salmon and their habitats and the problematic position of the United States Environmental Protection Agency (EPA) in balancing ESA responsibilities with the duty to regulate domestic pesticide use under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). After analyzing the procedural

11. For example, the Pacific Coast Federation of Fishermen's Association has been actively involved in lobbying efforts and lawsuits designed to protect vital fisheries habitats. See Pacific Coast Federation of Fishermen's Associations, available at http://www.pcffa.org (last visited Sept. 6, 2004); Earthjustice, Urgent Cases: Pesticide Impacts on Salmon and Steelhead, available at http://www.earthjustice.org/urgent/display.html?ID=46 (last visited Sept. 6, 2004).
mechanisms available to guide interagency cooperation to protect endangered species and their habitats, Part IV will explore the Pacific Salmon as an endangered species, the protections that the ESA should afford to salmon with an ESA listing, and the level and effects of pesticides in vital salmon habitats across the Northwest.

Furthermore, the discussion in Part V will examine potential remedies to the procedural deficiencies and ineffective regime as implemented to regulate domestic pesticide use. A center point of this discussion will include analysis of recent federal court orders imposing restrictions on certain pesticide use in close proximity to salmon harboring watersheds. In the matter of Washington Toxics Coalition v. EPA, environmental groups and fishing industry activists challenged EPA’s ineffectiveness and failure to implement ESA mandated safety measures to prevent harmful pesticides from polluting critical salmon habitats.13 Pesticide industry intervenors joined EPA in an attempt to impede the implementation of more rigid pesticide regulations, but round one of the litigation was a victory for environmentalists. Lastly, Part VI of this Comment will examine the possible future of domestic pesticide regulation and the likely effects of such regulation on business, private landowners, and the environment.

II. PACIFIC SALMON

A. Lightning Following One Another

Indigenous Pacific Salmon populations are considered a critical component to the development of Northwest culture. For some Pacific Northwest tribes, salmon were akin to a god. Fabled stories depicted the salmon’s migratory journeys, which culminated in the shedding of their silvery skin and transformation into the human form upon completion of their long journey deep below the surface of the sea or beyond the horizon.14 As a sign of this respect, salmon were ceremonially addressed as “Noble Chief,” “Chief Spring Salmon,” or “Lightning Following One Another.”15 Unfortunately, the symbolic magnitude of Pacific Salmon has been severely tarnished because of the decades of degradation of critical salmon habitats and spawning grounds. Over the last century, Pacific

15. Id.
Salmon populations have disappeared from approximately forty percent of their natural habitats, a range that includes coastal and inland waters located in Washington, Oregon, Idaho, and California. While global and climate changes have been targeted as a potential source for fluctuating salmon populations, most experts agree that humans have inflicted the most damage. Because of the complex five-stage life cycle of salmon, healthy habitats are vital to population sustainability. Unfortunately, Pacific Salmon habitats face persistent threats from urban sprawl and contemporaneous socio-economic pressures. Precious salmon waterways are being polluted from urban runoff and adversely affected by dam barricades, eroded riverbanks, and increasing pressures on watersheds from exuberant human consumption. Because of these disruptions to salmon habitats, the risk that drastic salmon population declines will tarnish the cultural vision and significance of this crucial Northwest species is becoming all too apparent.

B. Salmon and the Northwest Economy

Pacific Salmon have not only represented the Northwest's cultural epicenter, but have been central to the economic pulse of the region as well. Since the early nineteenth century, coastal communities and numerous Native American communities have relied on salmon for a major source of employment and income. Unfortunately, salmon over-fishing and habitat loss has subsequently affected the commercial fishing industry, which relies heavily upon adequate stocks of catch. A 1994 study of Pacific Salmon sales valued the industry at $6.6 million, down from $98 million in

17. Id.
18. NOAA Fisheries, Northwest Regional Office, Life Cycle of the Salmon, available at http://www.nwr.noaa.gov/salmon/salmonesabrochure.html (last visited Feb. 24, 2004). The five stages require a range of vibrant habitats, including clean lake or stream gravels for incubation, shelter pools for egg hatching, estuaries for feeding and adjusting to salt water, the ocean for maturation, and home streams or lakes for spawning.
1979. Additional studies have shown that salmon and steelhead fishing in the Northwest contributed $1.25 billion to the regional economy and supported an estimated 62,750 jobs as recently as 1988.

Nonetheless, the fishing industry, which includes commercial, recreational and treaty fishing, has survived decades of declining salmon populations. Because experts now suggest that salmon mortality is more directly linked to non-fishing human activities, such as pollution and water diversion, the fishing industry has joined environmentalists in efforts to protect the natural habitats and ecosystems of Pacific Salmon. The recent *Washington Toxics Coalition v. EPA* suit (discussed in detail in Part V) represents a prime example of this new unity, as environmentalists and the fishing industry have combined resources to fight for salmon habitat protective measures, while attacking the agriculture industry and private landowner interests.

**III. FEDERAL REGULATION OF PESTICIDES**

Domestic pesticide use in the United States is governed generally by three federal agencies: the EPA, the Food and Drug Administration, and the Department of Agriculture. For the purpose of this paper, analysis will focus on the role and duty of the EPA to oversee the registration and use of pesticides as promulgated under FIFRA. The EPA, created in 1970 to protect human health and welfare and the environment, has spearheaded various federal government programs to protect vital natural resources through promulgation of land, air, and water regulations. The EPA plays a dynamic function in federal policy, attempting to protect environmental interests while counter-balancing demands of economic growth, energy consumption, transportation, agriculture, and industry. As the lead federal agency overseeing pesticide registration, the EPA also must operate within

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22. Id.


24. See supra, note 11.

25. Frank P. Grad, 4-8 TREATISE ON ENVIRONMENTAL LAW § 8.03 (2002).


27. Id.
the scope of the ESA. Thus, procedures for pesticide registration and use, if in conflict with the ESA, must be resolved through interagency cooperation with the appropriate federal agency charged with listing a species as endangered or threatened. 28 This cooperation is vital to a successful regime of federal government oversight of pesticide registration and use. Unfortunately, to date, interagency cooperation has failed to adequately protect Pacific Salmon and their vital habitats from dangerous pesticide toxins. The following sections will examine the ESA and FIFRA and the role and impact of each upon federal agency action concerning pesticide use.

A. Endangered Species Act

The ESA was enacted in 1973 to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve” the purposes of the ESA. 29 Congress enacted the ESA in recognition of the increasing and alarming rate of the extinction of certain animal species. In promulgating the ESA, Congress aimed to implement a system of “listing” endangered or threatened species, prohibiting private and public activities considered a “taking” of such species, and most importantly for the purpose of this Comment, implementing a system of federal agency cooperation for consultation over potentially environmentally threatening federal government activity. 30

More precisely, the ESA aims to protect animal species statutorily defined as “threatened” or “endangered,” 31 and grants the Secretary of the Interior, or an agency designated by the Secretary of the Interior (collectively, Secretary), the power to designate as “critical” any habitat in which a threatened or endangered species inhabits. 32 A determination of “critical habitat” is made on the basis of the best available scientific data, taking into consideration the “economic impact, the impact on national security, and any other relevant impact . . . .” 33 Furthermore, the Secretary is granted the

31. 16 U.S.C. § 1531(b). Endangered species “means any species which is in danger of extinction throughout all or a significant portion of its range . . . .” 16 U.S.C. § 1532(6) (2003); threatened species “means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532(20).
33. Id. at (b)(2).
discretion to exclude certain habitats as critical if "he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of critical habitat . . . ." 34

Section 7 of the ESA 35 is designed to regulate federal agencies, such as EPA, to ensure that any authorized or funded federal actions do not jeopardize or adversely affect threatened or endangered species or critical habitat.36 The Secretary may consult with a federal agency regarding prospective agency action (herein referred to as "Agency Action") if the agency or appropriate permit applicant reasonably believes implementation of Agency Action could affect endangered or threatened species or critical habitat.37 Shortly after consultation, the Secretary shall convey to the federal agency any findings and recommendations concerning potential affects of Agency Action on threatened or endangered species.38 In the event the consultation process yields evidence suggesting "jeopardy or adverse modification" to protected species and/or their critical habitat, the Secretary will discuss reasonable alternative processes with that agency in an effort to supplant the proposed Agency Action.39

Section 7 thus explicitly sets forth two standards designed to guide federal agencies in decision making affecting ESA protected species: jeopardy and adverse habitat modification. By its express terms, the phrase "jeopardize the continued existence" places a burden on federal agencies to prevent future harms to listed species. This proposition is supported by statutory language—for example, section 7 mandates that "a federal agency shall consult with the Secretary on any prospective agency action . . . ." 40 While proposed Agency Action may have a direct impact upon an actual species, the "adverse habitat modification" requirement also protects the critical habitats of such species. Again, this requirement has the prospective implication of requiring an agency to consult, or at a minimum undertake risk analysis, prior to formal Agency Action.

34. Id.
35. "Section 7" is the commonly known term used to identify the ESA clause promulgated under 16 U.S.C. § 1536 (2003).
36. 16 U.S.C. § 1536(a)(2). Again, a determination that an action may jeopardize critical habitat must be based on "best scientific and commercial data available." Id.
37. Id. at (a)(3). If a federal agency determines that Agency Action may affect a listed species, they may also enter into an "informal consultation" with the agency that has been delegated authority by the Secretary. 50 C.F.R. § 402.13 (2003).
38. Id. at (b)(3).
39. Id.
40. Id. at (a)(3).
An additional federal agency requirement under section 7 is a biological assessment, implemented to ensure each federal agency complies with the jeopardy and adverse habitat modification standards. If the "best available scientific data" reveals the possible presence of listed species in habitats likely to be affected by Agency Action, that federal agency shall undertake a biological assessment to determine the exact species likely affected.

Conversely, section 9 of the ESA (which applies liability to "any person" for the unlawful "take" of a listed species) takes a more remedial approach to ESA liability. Unlike the language that protects future harms from federal agency action, liability under section 9 attaches to current and past harms that amount to a "taking." For example, a person can be found civilly liable, and assessed a fine of up to $25,000, for violating section 9. The language used in this section supports this remedial approach, as liability may be assessed to any person who "knowingly violates" or "engage[s] in" activities that violate section 9.

The Department of the Interior has delegated authority for ESA oversight and regulation to the Fish and Wildlife Service and the National Marine Fisheries Service, also known as NOAA Fisheries (NMFS). Accordingly, these federal agencies are responsible for listing certain species as endangered or threatened within the parameters of the ESA. Thus, any EPA pesticide regulation or proposed EPA agency action that may jeopardize or adversely affect any species listed by NMFS as threatened or endangered shall be implemented under the protective guise of the ESA, with consultation on potentially adverse agency action between NMFS and EPA.

41. 16 U.S.C. § 1536(c)(1). A biological assessment shall ordinarily be completed within 180 days after the initiation date. Id.
42. Id.
44. Id. at (a)(1)(B). Note that a federal agency is not explicitly excluded from the definition of "person." 16 U.S.C. § 1532(13).
47. Id.
48. 50 C.F.R. § 402.01(b).
49. 16 U.S.C. § 1533(a)(1). The factors to be considered for listing a species as endangered or threatened include the "present or threatened destruction, modification or curtailment of [a species'] habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting its continued existence." Id.
At its inception in 1970, EPA inherited from the United States Drug Administration all functions related to the registration and use of pesticides. The antiquated pesticide registration process in place at the time emphasized effective uses of pesticides over any discernable health or environmental risks. Today, EPA’s duty to regulate domestic pesticide use is promulgated under FIFRA, which Congress enacted to control the registration, use, and distribution of pesticides. Under FIFRA, “no person in any State may distribute or sell to any person any pesticide that is not registered under [FIFRA]. To the extent necessary to prevent unreasonable adverse effects on the environment, the [EPA] Administrator may by regulation limit the distribution, sale, or use . . . of any pesticide that is not registered under [FIFRA] . . . ." FIFRA defines “unreasonable adverse effects on the environment” as “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide . . . .”

Thus, FIFRA demands that EPA take pesticide use and the effects of such use on humans and the environment into consideration during the formal registration process. While the registration process satisfies certain procedural technicalities for approving pesticide use, EPA may also consider the interest of consumers and farmers prior to any final decisions regarding approval for pesticide registration and use. Furthermore, FIFRA grants EPA ample authority to shape the procedures for federal pesticide registration, although a system which adequately protects protected salmon populations has remained elusive.

A major critique of FIFRA is rooted in the United States Supreme Court’s holding that FIFRA’s scope is limited, and does not fully preempt

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52. Id. at (bb).
53. 7 U.S.C. § 136a(c). This requires, inter alia, the filing of a statement including the name of the pesticide, the complete formula of the pesticide, a copy of the labeling used in conjunction with the pesticide, and upon request by EPA, any available test data relating to the pesticide. Id.
54. For example, while EPA may consider potential adverse affects on man and the environment, potential benefits of the pesticide are also considered, as are other “economic factors.” Id. at (c)(2)(A).
local government pesticide regulation.\textsuperscript{55} This interpretation of FIFRA was passed down by the Court in \textit{Wisconsin Public Intervenor v. Mortier}, reversing the Supreme Court of Wisconsin. The Court failed to find the necessary statutory language or congressional intent to infer that FIFRA’s scope extended to local governments as well as state governments.\textsuperscript{56} At issue in \textit{Mortier} were FIFRA sections 136v(a) and (b), which provided that a state may “regulate the sale or use of any federally registered pesticide,” but only to the extent allowed under FIFRA, and required that any pesticide labeling requirements be in conformity with FIFRA.\textsuperscript{57} In holding that a local government was not preempted from pesticide regulation, as long as such regulation did not conflict with those imposed under FIFRA, the Supreme Court advocated a potentially unsteady and \textit{ad hoc} regime of pesticide registration and use.

IV. PESTICIDES AND PACIFIC SALMON

\textbf{A. Pacific Salmon as Threatened or Endangered Under the Endangered Species Act}

Seven distinct species of salmon exist in Pacific Northwest waters: the Chinook, Coho, Chum, Sockeye, and Pink (Steelhead and Cutthroat Trout are included in this seven). In 1994, a NMFS review of Pacific Salmon populations ultimately revealed a serious depletion of Pacific Salmon stocks.\textsuperscript{58} The dramatic findings resulted in endangered and threatened ESA listings for each of the seven salmon species (included within the seven distinct species were twenty-six ESUs\textsuperscript{59} of salmon deemed endangered or threatened under the ESA) and critical habitat designations for numerous salmon runs throughout the Northwest.\textsuperscript{60} Because of the ubiquitous nature of salmon habitats, numerous regulatory problems arose immediately upon ESA listing. Most, if not all, Northwest land use controls, either state or federal, have potential adverse impacts on streams and rivers traversed by salmon for spawning and migration. Additionally, the NMFS listing of

\begin{itemize}
\item \textsuperscript{56} Id.
\item \textsuperscript{57} 7 U.S.C. § 136v(a) and (b) (2003).
\item \textsuperscript{59} ESU is defined as an “evolutionary significant unit.”
\item \textsuperscript{60} \textit{Citizen’s Guide}, supra note 58. The survey studied salmon populations located in California, Oregon, Washington and Idaho.
\end{itemize}
certain salmon populations represented the first instance in which major, growing metropolitan areas, such as Seattle, Washington and Portland, Oregon, would be directly affected by critical habitat designations.

Because salmon habitats extend across such a vast area, developing a pesticide regulation regime extending to all potential uses would seem to be a daunting task. Judicial proceedings exploring pesticide uses and effects on salmon habitats have only begun to appear in federal court, nearly ten years after listing under the ESA. However, other challenges to the ESA regulatory scheme arose immediately upon the listing of salmon as endangered or threatened. In the well-known case of Alsea Valley v. Evans, Plaintiff fishing groups sued NMFS for considering only natural-born Oregon Coho Salmon in its population count, while excluding hatchery-born salmon. In a victory for the fishing industry, the United States District Court for the District of Oregon held that the NMFS decision to exclude hatchery-born Coho salmon was arbitrary, calling into question the listing of that specific species as endangered. In Pacific Northwest Generating Coop. v. Brown, Plaintiff energy consumers sued the Department of Commerce and NMFS in a showdown between salmon and water-power interests. The Ninth Circuit upheld the district court’s grant of summary judgment in favor of NMFS, holding that Defendant’s water flow restrictions did not violate the ESA.

Additionally, in a case with striking similarity to Washington Toxics Coalition, Plaintiff environmental groups sued the United States National Forest Service (Forest Service) for failing to fulfill their ESA section 7 consultation requirements with NMFS. In Pacific Rivers Council v. Thomas, the Ninth Circuit held that Defendant Forest Service failed to consult with NMFS regarding proposed land use plans in two national forests which had the potential to impact newly designated critical salmon habitats. In sustaining Plaintiffs’ injunction to place all proposed actions in abeyance, the Ninth Circuit also held that previously commenced Agency Action was subject to injunction. The Forest Service argued vehe-

62. Id. at 1159.
63. Id. at 1161. The Ninth Circuit Court of Appeals dismissed an appeal of this case, finding that the district court’s decision was not a “final judgment.” Alsea Valley Alliance v. Dep’t of Commerce, 358 F.3d 1181, 1187 (9th Cir. 2004).
64. 38 F. 3d 1058 (9th Cir. 1994).
65. Id.
66. 30 F.3d 1050 (9th Cir. 1994).
67. Id.
mently that the ESA did not apply to agency activities commenced prior to ESA listing, but the court found no precedent to support this position. As these cases demonstrate, the endangered listing of Pacific Salmon immediately resulted in a trickle-down effect that drastically altered the way individuals, businesses, and even the federal government conducted business or manipulated their privately owned land. However, environmental proponents steadfastly note that such land use impacts would not have been necessary if not for increased urbanization and the concurrent heightened pressures on our surrounding environment brought about primarily by those complaining about the restrictions. The position, stated more tersely, is that these species would not require extensive federal government protection if not for persistent and aggregate actions of an expanding population, increasing resource consumption, changing economic demands and technologies, and changing societal values. As these disparate viewpoints reveal, the ESA is viewed as one of the more controversial federal environmental regulatory programs, and ESA proponents will no doubt continue to tout more stringent application of ESA protections. Ten years after Pacific Rivers Council, questions surrounding the ESA Pacific Salmon listing have again reached the federal courts. As will be discussed in greater detail in Part V, this round of litigation featured an attack on EPA for failing to undertake ESA section 7 consultation with NMFS regarding pesticide use registrations. The allegations brought by environmentalists and fishing lobbyists charged that EPA’s inability to regulate pesticide use in conformity with ESA mandates demanded an injunction to prevent the continued pollution of salmon spawning habitats.

B. Endangered Species Act Protections

The ESA directs that species listed as threatened or endangered are protected from unlawful “taking.” In accord with ESA parameters, the Secretary shall issue regulations as deemed necessary to conserve threatened or endangered species. In 2000, NMFS, along with the Department of Commerce, released its “Final Rule Governing Take of 14 Threatened Salmon and Steelhead Evolutionary Significant Units” (Final Rule). While the Final Rule outlines certain acceptable activities that

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68. Id. at 1054.
70. 16 U.S.C. § 1533(d).
would not rise to the level of a "taking," it is mainly intended to curb state, local and private individuals subject to United States jurisdiction, whose actions are deemed unauthorized by NMFS. Conversely, when a federal permit holder lawfully carries out an activity that affects critical salmon habitat, NMFS likely would focus enforcement efforts on the inadequacy of the federal program rather than the individual permit holder. NMFS admits such an approach:

Many activities that may kill or injure salmonids are regulated by state and/or federal processes, such as... pesticide use, and the like. For those types of activities, NMFS would not intend to concentrate enforcement efforts on those who operate in conformity with current permits... [but rather] NMFS intends to work with the responsible agency to make necessary changes in the program. In issuing the Final Rule, NMFS explicitly identified pesticides as a pollutant that could adversely affect salmon and threaten reproductive success of a particular species (in support of this conclusion, a United States Geological Survey found pesticide concentrations in Pacific Northwest rivers and streams at levels which could adversely impact growth, development, behavior and reproduction of salmon). Although NMFS did not expressly list pesticides on its list of prohibited activities, NMFS recognized the potential negative impacts unregulated pesticides focuses on an expansive list of potentially adverse activities, including the discharge of pollutants, altering streamflow, operating or constructing water diversion structures without adequate fish passage facilities, and illegal fishing. 

72. Id. Included in those activities that do not amount to an ESA "taking" are; ongoing scientific research, fisheries management programs, state, local and private habitat restoration programs, and certain forest management activities. The final list included thirteen "protected" activities. Id.

could have on critical salmon habitats and ecosystems. Accordingly, noting that pesticide use is an activity requiring EPA oversight, the Final Rule notes “NMFS anticipates addressing [any pesticide] concern through a section 7 consultation with EPA . . . as appropriate, or corresponding discussions with responsible state authorities. NMFS prefers this approach rather than use of its enforcement authorities against an individual applicator for the otherwise-lawful use of the pesticide.” Additionally, NMFS recognized the possibility of future pesticide restrictions for the conservation of salmon populations, possibly accomplished through amendment of the Final Rule. By implementing a “programmatic approach, NMFS believes that it will be able to achieve an orderly and comprehensive analysis of the use of pesticides and their effects on listed salmonids.”

C. Pesticides in Northwest Waters

Pesticide pollutants have been widely detected in streams and rivers across the Northwest. 2002 EPA findings revealed that at least thirty-six pesticides found in waters in Idaho, Washington, Oregon and California, were expected to have negative impacts on salmon. Because salmon rely so heavily on diversified and healthy ecosystems, pesticide contamination can alter salmon behavior and reproductive success, and in some situations, be fatal. The non-deadly pesticide effects on salmon include the impairment of salmon swimming abilities, a decrease in sense of smell, potential harm to the immune system, and a disruption of the hormonal system. Furthermore, pesticides do not rapidly decompose, and can transform into equally toxic compounds. While studies are beginning to reveal the true dangers of pesticides to salmon, EPA records show that

76. 50 C.F.R. § 223 (2000).
77. Id.
78. Id.
79. Unfortunately, the federal government and most state governments do not systematically track pesticide use, and information is not readily available to the public. California is the only state with ESA protected salmon runs which requires a pesticide-use tracking system. See Poisoned Waters, Pesticide Contamination of Waters and Solutions to Protect Pacific Salmon at 4, available at http://www.watoxics.org/content/pdf/PoisonedWaters.pdf (last visited Feb. 26, 2004) [hereinafter Poisoned Waters]. Accordingly, most pesticide study information presented in this paper has been diligently prepared by various governmental agencies or special interest groups.
80. Id. at 10.
81. Swimming is vital to avoid predators and travel from habitat to habitat. Id.
82. A decrease in the ability of a salmon’s sense of smell could affect the ability to detect predators. Id. at 11.
83. Id.
thousands of dangerous pesticides are legally (with procurement of EPA permits in accordance with FIFRA) and continually used within close proximity of salmon habitats.

As previously mentioned, the ESA listing of Pacific Salmon exposed major metropolitan areas to ESA habitat control measures. USGS surveys support this assertion and have revealed that disturbing pesticide levels are not linked solely to industrial and farming uses; rather, the surveys showed that a major source of pollution in urban waterways comes from storm-drainage systems carrying pesticide laden runoff, especially in urban areas such as Seattle, where rainfall is plentiful. This conclusion was reinforced by a 2002 King County, Washington study, which confirmed the presence of extreme pesticide levels after storm runoff in urban and suburban streams around Seattle. These studies have led experts to conclude that "chemicals applied to lawns and landscapes are consistently making their way into the aquatic environment through non-point runoff."

While homeowner fertilizer is no doubt a main culprit, especially in high-density population areas, many types of pesticide use and users contribute to the pollution problem. For example, diuron and trifluralin, two herbicides commonly used by municipal works departments to maintain public property and roadways, have been detected in salmon habitats, as well as azinphos-methyl, an agricultural pesticide used to control insects in fruit orchards.

The studies undertaken to determine the extent of pesticide levels in streams and rivers frequented by protected Pacific Salmon have revealed alarming results. The difficulty in enforcing a regime of pesticide regulation lies in the diverse, extreme and widespread use of pesticides for varying purposes and in varying degrees, from private businesses, homeowners, landowners, farmers, and local governments. Thus, the implications of the Pacific Salmon's endangered species listing, when combined with such an extensive reliance on pesticides, creates regulatory problems at the local, state, and federal level of government.

84. Including Seattle and Tacoma, Washington, Portland, Oregon, and Sacramento, California.
85. See USGS Survey, supra note 75, at 50. One USGS study of a creek in Palo Alto, California suggested that storm water runoff containing less than a tablespoon of the pesticide diazinon in one day's worth of creek flow would result in harmful contamination of the creek. Poison Waters, supra note 79, at 19.
87. Id. at 19.
V. POTENTIAL REMEDIES

A. Statutory Conflict

As discussed in Part III, EPA is mandated by FIFRA to implement a registration procedure for all domestic pesticide use. EPA is also bound by section 7 of the ESA to ensure that EPA actions will not adversely affect listed species such as Pacific Salmon. Thus, EPA is statutorily bound to issue and reissue pesticide registrations only if such registration does not adversely affect listed species. In short, EPA's pesticide registration function cannot run afoul of ESA protections.

The ESA was amended in 1988 and contained explicit direction for EPA pesticide activity, requiring EPA to consult with the United States Department of Agriculture and United States Fish and Wildlife Service (FWS) of the Department of Interior to implement changes in FIFRA pesticide labeling requirements to protect listed species. At that time, Pacific Salmon had not been listed as endangered or threatened. The amendments required, among other things, EPA to identify alternatives to prohibitions on pesticide use.

Statutory construction reveals that EPA is vested with ample discretion to determine the criteria for evaluating the effects of pesticide use. If EPA follows ESA section 7 requirements and determines that a specific pesticide may be dangerous to a species of salmon, then EPA should notify NMFS of such a finding and develop a biological assessment. NMFS may then suggest alternative methods for EPA to follow for Agency Action. Although it would appear that EPA's technical and scientific expertise make EPA the more appropriate party for determining potential dangers of pesticides, the EPA has historically received criticism for its antiquated system of analyzing pesticide affects and subsequent registration of pesticides. This persistent criticism was partially responsible for EPA's

89. Id.
90. If EPA makes a determination that pesticide use "may affect" (emphasis added) a listed species, EPA shall initiate formal consultation with NMFS under section 7 of the ESA. Id.
91. Id. "[T]he approach that EPA had been using to comply with the ESA had been criticized as inadequate. The EPA's consultations were conducted only on individual registration actions that were submitted to EPA, which resulted in a case-by-case approach. This approach was slow and generally did not consider older and often more toxic pesticides. Since newer pesticides were being reviewed routinely as part of the registration process, newer pesticides were more likely to be referred to FWS than older pesticides. This resulted in inadequate protection for listed species." Id.
formation of the Endangered Species Protection Program in 1982,\textsuperscript{92} and the adoption of more stringent regulations affecting threatened and endangered species.\textsuperscript{93}

Despite amendments to both the ESA and FIFRA, and EPA's own attempts to better safeguard ESA protected species, EPA remains stuck between two federal statutes grounded in competing policy concerns. Created to balance interests of human health and safety with that of the environment, EPA nonetheless gives great deference to pesticide industry demands during agency rule making. While FIFRA amendments have recognized increasing needs for environmental safeguards, EPA has historically been lax in bringing pesticide regulation and use policy in line with ESA standards. For example, EPA studies list over thirty salmon-threatening pesticides currently in use under FIFRA.\textsuperscript{94} This finding should have prompted EPA to consult with NMFS regarding adverse Agency Action (continued federal permit registration for certain pesticides), but EPA has continually overlooked its section 7 responsibilities and allowed federal permit holders to use dangerous pesticides near salmon-harboring waters.\textsuperscript{95} On the other hand, the ESA was designed first and foremost to protect endangered and threatened species. Thus, EPA's regulation of pesticide use comes squarely under the umbrella of both statutes; FIFRA expressly directs EPA to regulate pesticide use and regulation, and the ESA demands the EPA avoid the adverse environmental consequences of pesticide use near habitats of protected species.

The current consultation procedures between EPA and NMFS for section 7 decision-making are set forth in the Code of Federal Regulations.\textsuperscript{96} This process, if undertaken as mandated, should involve consultation between EPA and NMFS regarding potential impacts to salmon habitats from pesticide use, and alternative methods for carrying out Agency Action to avoid adverse affects. However, the consultation process has proven to be ineffective, as EPA has yet to implement a working plan which would fulfill ESA requirements and protect Pacific Salmon. In issuing its Final Rule, NMFS noted that "concentrations of pesticides may affect salmonid behavior and reproductive success [and that] current EPA

\begin{enumerate}
\item \textsuperscript{92} \textit{Id.} at 27,985.
\item \textsuperscript{93} 54 Fed. Reg. 27,984, 28,004. EPA has recognized that "listed species may not be able to withstand even the loss of a few individuals in the population." \textit{Id.}
\item \textsuperscript{94} \textit{See Poisoned Waters, supra} note 79, at 18.
\item \textsuperscript{95} \textit{Id.} at 20.
\item \textsuperscript{96} 50 C.F.R. §§ 402.01 - .16 (2004).
\end{enumerate}
label requirements were developed in the absence of information about some of these subtle but real impacts on . . . salmonids."

The ESA was established to save species such as the Pacific Salmon from manmade threats to their continued existence. However, some of the blame must also fall on NMFS for failing to diligently press EPA to promulgate a resolution to the pesticide problem. As noted above, NMFS has explicitly acknowledged the dangers of pesticides to Pacific Salmon. However, NMFS has continued to assert that insufficient pesticide information has prevented them from explicitly listing certain pesticide use in the Final Rule prohibited activities list. As some commentators suggest, the establishment of an effective pesticide regulation regime relies on the availability of information and a system through which researchers and scientists can determine what types of pesticides are being used, where they are being used, and how often they are being used. Because pesticide regulation is not purely a federal government function, some states have begun to track and record pesticide use. However, EPA has not yet created such a system for public viewing. In its Final Rule, NMFS acknowledged the potential importance of pesticide use for “successful commercial crop production on agricultural lands, certain types of habitat restoration projects, and dealing with invasive exotic species.” This recognition evidences the clear competing interests at stake, and while NMFS has preached the need for more information to solidify a position banning certain pesticides, it has failed to use aggressive diligence while working with EPA to attain such information.

Furthermore, in its Final Rule, NMFS continued to approach the problem by demanding improved cooperation between EPA and NMFS for following ESA section 7 guidelines. However, past cooperation has yielded unsatisfactory results, and little reason exists to suggest that the relationship will yield a more positive outcome anytime soon. In January 2003, EPA and NMFS solicited public comment on proposed rulemaking for ongoing and future ESA section 7 consultation. While amending the policy for interagency cooperation is admirable, such action is not likely to remedy the problem. In fact, EPA has advocated section 7 cooperation with NMFS only in those instances where a “likely” impact on wildlife is

98. Id.
101. This proposed rulemaking was to amend the interagency cooperation procedure set forth in 50 C.F.R. § 402.01 (2004).
found, as opposed to a finding of "possible" impacts.\textsuperscript{102} ESA section 7 vests far too much discretion with federal agencies seeking to undertake Agency Action, and NMFS's continued insistence on improving this relationship through section 7 cooperation with EPA is unfortunate, considering the past track record of EPA.

While maintaining a functional working relationship with EPA is no doubt necessary, NMFS should not be so hesitant to use ESA section 9 enforcement measures against individual violators of the ESA, even if they hold a valid federal permit for pesticide use. NMFS can and should invoke this power to apply pressure to EPA to implement better pesticide registration and use oversight; by penalizing individual violators, even those holding valid EPA-issued permits, EPA would face mounting pressures from both pesticide users and NMFS, and hopefully force a thorough overhaul of EPA section 7 cooperation practices. And while ESA civil penalties allow for a $25,000 per violation penalty for an unauthorized section 9 take, such a stiff punishment is discretionary,\textsuperscript{103} and need not be applied in full force to every violation. This discretionary delegation would allow NMFS to impose appropriate penalties against section 9 violators, considering the scope and context of the violation.

B. Congressional Remedies

In light of EPA's general failure to take the necessary steps through interagency cooperation to begin remedial efforts to curb pesticide pollution, consideration should be given to possible congressional amendment to both the ESA and FIFRA. Legislative action could force EPA to shore up loopholes which have allowed dangerous pesticide use.

1. ESA: While the ESA contains strict penalties and rigid enforcement for individual violators who have committed past violations of the ESA (under section 9), ESA section 7 favors the prevention of future harms by federal agencies over a duty to remediate past harm.\textsuperscript{104} While the Supreme Court has read section 7 broadly when defining the scope of Agency Action,\textsuperscript{105} Congress could further clarify the duties imposed on federal agencies by amending section 7. First, the parameters of interagency cooperation are too indefinite and grant excessive discretion to the body

\textsuperscript{102} Monahan, \textit{supra} note 7.
\textsuperscript{103} The exact language of section 9 states that a violator "may be assessed a civil penalty by the Secretary of not more than $25,000." 16 U.S.C. § 1540(a)(1) (2003).
\textsuperscript{104} The United States Supreme Court has held that an ongoing project can be in violation of the ESA. \textit{See} Hill v. Tenn. Valley Auth., 437 U.S. 153 (1978).
\textsuperscript{105} \textit{See} Pac. Rivers Council v. Thomas, 30 F.3d 1050, 1054 (1994).
seeking to implement Agency Action. For example, section 7 appears to vest broad power to implement the consultation process with the federal agency seeking to undertake a project or program. While this logistically makes sense, it nonetheless leaves the door open for potentially harmful federal government activity. By leaving the "prospective permit or license applicant" the power to initiate consultation if the "applicant has reason to believe" such action will affect protected species, the ESA fails to safeguard against differing views of reasonableness. An amendment granting a concurrent power to the ESA regulating body would, at a minimum, create a "watchdog" figure which may help avoid situations such as EPA failing to act on scientific data revealing dangerous pesticide levels in protected salmon habitats. While this concurrent power may or may not require additional funding for ESA-regulating agencies, the long-term financial and environmental benefits would likely make up for short-term cost increases.

Additionally, the parameters for conducting and mandating compliance with a biological assessment are not pervasive enough. While the purpose of the biological assessment is to facilitate compliance with the jeopardy and adverse modification parameters of section 7, insufficient guidance is given to the federal agency seeking to implement a project or program. First, the biological assessment is only available with respect to Agency Action for which "no contract for construction has been entered into." The term "contract" is not explicitly defined in the ESA, thus it is unclear to what extent proposed Agency Action has begun to render a biological assessment inoperative. For example, under FIFRA and the pesticide registration procedures implemented by EPA, is each application and subsequent registration considered to be a contract? If pesticide use is already ongoing, and an application is deemed an existing contract, does that mitigate the responsibility of EPA to undertake a biological assessment for that particular area of pesticide use? This section, as currently constituted, leaves open the possibility of excessive administrative interpretation and abuse. To ameliorate any competing interpretation and interagency dispute, Congress should consider amending the biological assessment requirement so as not to limit such a survey to only those situations in which a contract has not been entered into. Second, government agencies responsible for ESA oversight should have the concurrent power to implement a biological assessment. As presently

107. See 16 U.S.C. § 1536(c)(1), in which the federal agency, not NMFS, shall conduct a biological assessment, and only if prior to commencement of any work.
108. Id.
constructed, the language gives that right solely to the federal agency implementing Agency Action. If these two simple amendments are made, a biological assessment could be undertaken without hesitation by either of the involved federal agencies, even if Agency Action had commenced prior to a potential finding of a critical habitat or threatened species in the area where Agency Action is underway.

2: FIFRA: Because pesticide use and registration remains partially regulated by state and local governments, an expansive amendment of FIFRA would likely be difficult to achieve. Nonetheless, it is apparent that ad hoc implementation and varying penalties for improper pesticide use make widespread pesticide use difficult to systematically track. The Supreme Court’s decision in Mortier (holding that FIFRA does not preempt local pesticide regulation) reinforced this premise. However, some commentators suggest that a reasonable interpretation of FIFRA leads to the conclusion that state or local labeling and packaging requirements should be preempted by FIFRA.109 However, a loophole in FIFRA allows state and local governments to regulate pesticide use in instances of "special local needs."110 As the Supreme Court noted in Mortier, FIFRA is riddled with textual inadequacies which could lead to improper administration.111 While local and state regulation clearly cannot be less stringent than FIFRA requirements, permissible state and local regulation presents problems of tracking of use, violation accountability, and lack of even standards.

As currently constructed, FIFRA creates a problem of dual statutory authority. On the one hand, EPA is directed to regulate pesticide regulation and use on the federal level. On the other hand, certain exceptions exist which allow pesticide regulation at the state and local level.112 In order to attain a manageable pesticide regulation regime, Congress should move to alleviate FIFRA’s textual inadequacies. As precedent, Congress amended FIFRA in 1975 to avoid problems of dual statutory authority by redefining "pesticide” to exclude certain chemicals falling under the regulation of the Food and Drug Administration.113 While the current pesticide problem is

110. 7 U.S.C. § 136v (c)(1) (2004). However, the EPA has the discretion to disapprove of the local need and render the registration invalid. Id.
112. This practice is common with federal environmental legislation. For example, the Clean Air Act explicitly grants to states certain regulatory powers regarding air quality standards, while reserving certain powers to the Federal Government. See 42 U.S.C. §§ 7401(3), (4) (2003).
113. Grad, supra, note 25 at 42.
distinguishable because of the federal versus state dichotomy, Congress should nonetheless move to vest EPA with oversight powers which the Supreme Court found lacking in the legislative history and current text; that is, the power to control pesticide use and regulation at all levels of government.

As many experts have stated, a major contributor to the pesticide problem is the lack of precise uniform standards, and lack of a pesticide use tracking system available for public information. This stems, in part, from the current regime of multi-level pesticide regulation. Congressional action, through an amendment to FIFRA, would help streamline the regulation of pesticides and overcome the problems noted by the Supreme Court in Mortier.

C. Judicial Remedies

The judiciary is the proper branch of government to deliver conclusive authority on questions of statutory construction, and has the power to reject administrative agency interpretation if such interpretation is contrary to congressional intent. As was evidenced in Pacific Rivers Council v. Thomas, federal courts have already grappled with the interpretation of ESA section 7. The scope of section 7 has again come before the federal courts in Washington Toxics Coalition v. EPA. As in Pacific Rivers Council, Washington Toxics Coalition resulted in a federal court order to undertake section 7 consultation; however, in this matter, consultation was ordered between the EPA and NMFS to remediate the continuous and problematic pesticide use near critical salmon habitats.

Since issuing its Final Rule in 2000, NMFS has publicly voiced concerns about pesticide contamination and adverse effects on salmon habitats. Northwest environmental groups responded by commencing a civil action against the EPA¹¹⁴ for failing to fulfill their ESA section 7 consultation requirements.¹¹⁵ Led by the Washington Toxics Coalition and Northwest Coalition for Alternatives to Pesticides, and joined by fishing industry lobbyists such as the Pacific Coast Federation of Fishermen's

¹¹⁴. The suit was brought under the ESA Citizen Suit Provision, which provides that “any person may commence a civil suit on his own behalf... to enjoin any person, including the United States and any other governmental... agency... who is alleged to be in violation” of this Act. 16 U.S.C. § 1540(g)(1)(4) (2003).

¹¹⁵. See Wash. Toxics Coalition v. EPA, Case No. C01-0132 C (W.D. Wash. Jan. 22, 2004) (order granting injunctive relief). Pesticide industry lobbyists, such as CropLife America, and farmers reliant on pesticide use for economic livelihood, intervened on behalf of Defendant EPA. Id.
Associations (collectively, Plaintiffs), Plaintiffs sought to: 1) compel EPA to commence formal consultation procedures with NMFS, and 2) take immediate protective actions to reduce pesticide use near critical waters. More specifically, Plaintiffs alleged that EPA was "(1) procedurally violating ESA [Section] 7(a)(2) . . . by failing to consult with the [NMFS] regarding the possible effects of 48 pesticides on populations of salmon . . . which are currently listed as threatened or endangered . . . and (2) has failed to consult with NMFS under ESA [Section] 7(a)(1) on how it could use its FIFRA . . . programs to provide 'conservation benefits' for listed salmon."\(^{116}\)

EPA originally responded to these allegations by charging that consultation processes were "underway" with NMFS, and denying that it had not undertaken review of its FIFRA pesticide registration programs in accordance with the ESA. *Washington Toxics Coalition* was argued in the Federal District Court for the Western District of Washington, and has resulted in numerous court orders granting injunctive relief to Plaintiffs and ordering that EPA take remedial action. Among the court's findings were: 1) As a matter of law, EPA was violating Section 7(a)(2) of the ESA with respect to "ongoing approval of 54 pesticide active ingredients and registration of pesticides containing those active ingredients," 2) Plaintiffs have demonstrated that ongoing use of these pesticides present a serious potential harm to salmon populations, and thus Plaintiffs are entitled to injunctive relief "to avoid jeopardy to threatened and endangered salmonids," and 3) such injunctive relief for Plaintiffs should include no pesticide-use buffer zones around sensitive habitats "to avoid jeopardy pending complete section 7(a)(2) consultations."\(^{117}\)

Thereafter, Plaintiffs brought additional motions for further injunctive relief, seeking among other things, a definitive time frame for implementation of the buffer zones, and buffer zone coverage for aerial and ground spraying. After multiple hearings, the court released its final order on January 22, 2004. In granting injunctive relief, the court found that implementing buffer zones would be "simple and effective" to avoid jeopardy to threatened or endangered salmon. To accomplish this result, the court concluded that twenty-yard buffer zones for ground use and one hundred-yard buffer zones for aerial use would "substantially contribute to the prevention of jeopardy."\(^{118}\) These buffer zones were to be implemented around any "Salmon Supporting Waters" as identified by NMFS in its

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118. *Id.*
critical habitat designations. Additionally, the court implemented restricted pesticide use on private and public property located near sensitive salmon waters, which could potentially impact homeowners, golf courses, and municipal parks.

The injunction was a critical victory for ESA proponents, forcing EPA and pesticide users to radically alter common use practices. The injunction issued by the court remains in effect until the occurrence of one of the following:

1. Completion by EPA of its ESA Section 7(a)(2) consultation obligation; or
2. The issuance by NMFS of a biological opinion; or
3. A finding by EPA made for Section 7 compliance purposes that the Pesticide is "not likely to adversely affect" the particular Salmon ESU, provided that the [NMFS] has not rejected or affirmatively failed to concur in that "not likely to adversely affect" determination; or
4. A finding by EPA made for ESA Section 7 compliance purposes that the Pesticide will have "no effect" on the particular Salmon ESU.

The reaction to the decision was immediate and passionate. While environmental and fishing groups celebrated, the pesticide industry voiced concern that such drastic pesticide restrictions would imperil small businesses and farmers and have far reaching negative impacts on industry. CropLife America released a statement calling the potential effects of the ruling "devastating to agriculture and pest control in the Pacific Northwest." Furthermore, the "severe restrictions on agriculture, small-business and consumer use of pest control products hurt farmers, foresters, homeowners and retailers in Washington, Oregon and Northern California."

The injunction issued by the district court represents a reasonable short-term solution to a problem which has invariably plagued Northwest waters for more than a decade. However, this mandate for improved federal agency cooperation between NMFS and EPA, while appropriate,

119. Id.
122. Id.
VI. CONCLUSION: SALMON FIRST, PEOPLE SECOND?
POTENTIAL IMPACTS FROM A MORE STRINGENT PESTICIDE REGIME

Pesticide proponents have protested that concern for salmon should not come before concern for people. Arguably, the ESA goal of protecting endangered and threatened species, and the ecosystems within which they live, presents an overwhelming clash with capitalist demands to protect economic interests. Pesticide proponents argue that the new buffer zones not only affect large industry, but severely limit the resources available to homeowners and small farmers to control weeds and destroy crop-infesting pests and insects.

In response to the Washington Toxics Coalition case, the National Center for Food & Agricultural Policy (NCFAP), released results from an herbicide study undertaken in Washington State. Among its findings, NCFAP posits that Washington farmers could experience decreases of approximately fifty-five percent of their potato and asparagus crops, eight percent of their apple crop, and twenty-three percent of their wheat crop. However, the Washington Toxics Coalition injunction does not prohibit pesticide and herbicide use altogether; rather, the order mandates certain restricted uses near critical salmon habitats. The view that the ESA is protective of wildlife over matters of human concern are shortsighted; while the court order in Washington Toxics Coalition will undoubtedly force farmers and private landowners to adjust certain pesticide usage, the benefits of healthy salmon populations extend far beyond simple species preservation. As discussed, Pacific Salmon in the Northwest have immeasurable value for a multitude of cultural, environmental and economic reasons.

A. Agriculture and Private Land-Use Impacts

A United States Department of Agriculture study, submitted to the court in support of EPA in Washington Toxics Coalition, estimated that twenty-yard buffer zones could trigger crop losses in Washington and Oregon of more than $100 million annually. Washington farmers would

124. Hal Bernton, Judge Favors Pesticide-Free Zones on Some West Coast Salmon...
likely bear the brunt of the loss, as the region supports hundreds of vegetable and fruit farms (most located on the arid eastern side of the Cascade Mountains). In southwest Washington, a region known for excessive precipitation, cranberry farmers rely heavily on pesticides to control pests and diseases that can potentially consume cranberry bogs. The economic impact of these pesticide restrictions could be devastating. However, federal agricultural officials have admitted that these estimated economic losses represent a "worst-case scenario." At first glance, an ESA regulatory scheme including no-pesticide buffer zones, if implemented in light of the Washington Toxics Coalition decision, would arguably deprive private landowners of some economic use of their property. However, the buffers implemented by the court are temporary, as consultation between NMFS and EPA has yet to yield definitive policy. Hypothetically, if such buffers remained in place after section 7 consultation, and were promulgated in EPA policy, the burden on a challenging party to establish a regulatory taking would still be immense, especially considering that the challenged law would be the ESA, a federal regulation. History has shown that plaintiffs have had limited success bringing federal takings claims against ESA imposed regulations. While it is not unprecedented for the federal claims court to find such a taking, the regulatory taking jurisprudence of the United States Supreme Court suggests that a very significant diminution in economic value would be required to establish a regulatory taking. However, since the final ESA regulations concerning pesticide restrictions have yet to be promulgated, potential economic impacts cannot clearly be quantified in a manner to sustain a regulatory taking claim. Furthermore, considering the limited scope of the no-pesticide buffer-zones, it seems unlikely that complete economic deprivation could be proved by a challenging party. The present no-pesticide buffer zones are court imposed, thus inconvenienced farmers

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126. Bernton, supra note 124.
128. For instance, the Federal Claims Court has held that a Plaintiff (water users) held superior water rights to Defendant (United States Government), and while Defendant had legitimate authority to protect endangered fish, the costs of avoiding harm to such fish could not be borne solely by Plaintiffs. Thus Defendant's water-use restrictions imposed by the ESA amounted to a physical taking of private property under the Fifth Amendment. See Tulare Lake Basin v. United States, 49 Fed. Cl. 313, 324 (2001).
and private landowners will have to endure the appeals process of Washington Toxics Coalition in hopes of a suitable judicial remedy.

B. Environmental Impacts

More stringent regulation of pesticides would obviously reap some level of environmental benefits and begin the cleansing process of polluted salmon habitats. But realistically, how soon will any tangible effects be felt? The buffer zones implemented by the district court in Washington Toxics Coalition evidence a positive first step to ensuring long-term salmon habitat sustainability. However, the court order does not guarantee any speedy protection for Pacific Salmon. First, pesticide pollution is a widespread phenomenon, and thus, even upon implementation of a rigid regulatory scheme, the problem will not disappear overnight. Additionally, the process that NMFS must undertake to review the potential impacts of certain pesticides on salmon could be immensely time consuming. After NMFS review and findings are made, EPA must then implement NMFS findings into policy and practice.

Considering this potentially lengthy process, coupled with EPA’s historically inadequate record of protecting endangered or threatened salmon from pesticides, serious doubt exists as to when meaningful protective measures will actually be implemented. Furthermore, the current administration has been unsupportive of pro-environment policy and rulemaking. The Bush Administration is the first administration that has not proactively listed new species as threatened or endangered. As a sign of the times, much of the ESA enforcement is now promulgated through court orders and lawsuits. Accordingly, absent additional action from Congress to strengthen FIFRA and the ESA, the recent court action and NMFS and EPA cooperative efforts may be woefully inadequate for long-term protection of Pacific Salmon and their diverse habitats.

C. The Future of Pesticides

The ESA celebrated its thirtieth birthday in 2003, yet remains one of the most controversial statutes of its time. As evidenced by EPA’s failure

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130. Craig Welch, Feds Losing Grip on Species Act; Many Protection Decisions Now Flow from Group Lawsuits, THE SEATTLE TIMES, Dec. 28, 2003, at B1. For comparison, the Clinton Administration added an average of sixty-five species per year; the Bush Administration has added a total of twenty-five, all under court order. Blumenthal, supra note 6.

to follow ESA guidelines to protect endangered Pacific Salmon, the ESA grants federal agencies the power to implement rules and regulations tainted by excessive anti-environment influences. For example, the Fish and Wildlife Service, in conducting a status review of the ESA protected spotted owl, outsourced ESA mandated reviews to two private companies rather than undertaking the project itself. One of the companies chosen was cited as having major links to the timber industry. Furthermore, the Bush Administration has been highly criticized for its efforts to ensure that federal agencies retain their current autonomy under the ESA. In fact, the administration has been accused of flat-out ignoring certain ESA requirements. Since President Bush has taken office, federal courts have ruled the administration has violated or ignored the ESA at least sixty-eight times.

Pesticides serve a vital need for certain agriculture and pest control measures. However, research has positively identified hundreds of pesticides, being used legally under federal permit, which cause serious harm to endangered and threatened Pacific Salmon. Unfortunately, the current pesticide regulation regime allows an unacceptable level of special interest influence over federal agency rulemaking, while denying to the ESA regulating body sufficient input and oversight of interagency cooperation. While the ESA and FIFRA provide a general framework and procedural structure for regulating pesticide use, Pacific Salmon populations will continue to face mounting human threats in the absence of a stronger pesticide regulatory framework.

Environmental interest groups are optimistic that Washington Toxics Coalition signals the beginning of a reformation of the institutional approach to dealing with private land use and agriculture interests and their impacts on the environment. However, due to the complex nature and widespread and varying use of pesticides, the amelioration of pesticide pollution will continue to challenge environmentalists. While future NMFS and EPA consultation may yield concrete short-term solutions to federal oversight of pesticide use and regulation, Congressional action, institutional reform, and additional NMFS regulatory power are imperative to the formation of a long-term solution to the pesticide pollution that has afflicted critical salmon habitats across the Pacific Northwest.

132. Id.
133. Id.