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VIA FEDERAL EXPRESS

March 12, 2009

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Re: Notice of Intent

To Whom It May Concern:

On behalf of the Coalition for a Sustainable Delta ("Coalition") and its members and the Kern County Water Agency ("KCWA"), I write to provide you notice pursuant to section 11(g) of the Endangered Species Act ("ESA"), 16 U.S.C. § 1540(g), that the Federal Emergency Management Agency ("FEMA"), the U.S. Environmental Protection Agency ("EPA"), the Maritime Administration ("MARAD"), the U.S. Fish and Wildlife Service ("FWS"), and the U.S. Army Corps of Engineers ("ACOE") (collectively, "Federal Agencies") have violated and continue to violate section 7 of the ESA and the regulations implementing section 7. In addition, FWS has violated section 706 of the Administrative Procedure Act. The Coalition and KCWA are concerned about harm caused to the threatened delta smelt, the endangered Sacramento winter-run chinook salmon, the threatened Central Valley spring-run chinook salmon, and the threatened Central Valley steelhead (collectively, the "Listed Species") due to numerous actions authorized, funded, or carried out by the above-named agencies. The Federal Agencies took actions that are harming or are likely to harm the Listed Species and their designated critical habitat without having engaged in formal consultation in violation of section 7(a)(2) of the ESA. The Federal Agencies have also failed to exercise their authorities to carry out programs for the conservation of the Listed Species in violation of section 7(a)(1) of the ESA. The continuing commitment of resources by the Federal Agencies to the actions and programs described herein is a violation of section 7(d) of the ESA. The Coalition and KCWA are prepared to initiate litigation if these violations are not adequately addressed.

I. Introduction

The Sacramento-San Joaquin Delta ("the Delta") is the largest estuary on the West Coast, comprising more than 738,000 acres. The Delta's major source of fresh water comes from the Sacramento and San Joaquin Rivers; saltwater comes from the Pacific Ocean through San Francisco Bay. The Delta is an economically and ecologically important region. Economically, the Delta supplies drinking water to two-thirds of California's residents, an estimated 23 million people. In addition, the Delta is the center of California's two largest water distribution systems – both the State Water Project ("SWP") and the Central Valley Project ("CVP") draw water from the Delta. These projects deliver water to urban, agricultural, and industrial water users throughout the State and provide water to more than 4 million acres of irrigated farmland in California that in turn sustains billions of dollars in agriculture. Ecologically, the Delta supports more than 750 plant and animal species, including 130 species of fish. Moreover, the Delta provides habitat for a number of species that are protected by the ESA, including the Listed Species.

A. The Listed Species

The delta smelt is a small translucent fish with a narrow geographic range limited to low salinity and freshwater habitats of the Delta.[1] The delta smelt is "the only true native estuarine species found in the Delta."[2] The delta smelt is one of a number of pelagic organisms that are on the decline in the Delta.[3] FWS listed the delta smelt as a threatened species on March 5, 1993.[4] FWS designated critical habitat for the delta smelt on December 19, 1994.[5] Survey data from fall 2008 indicate that the delta smelt population is at the lowest abundance on record.[6]

The Sacramento River winter-run chinook salmon is an anadromous fish that migrates through the Delta to the upper Sacramento River from December to May. Anadromous fish spend most of their life in the ocean but must enter fresh water rivers and streams to spawn. The National Marine Fisheries Service ("NOAA Fisheries") listed the Sacramento River winter-run chinook salmon as an endangered species on January 4, 1994.[7] NOAA Fisheries designated critical habitat for the Sacramento River winter-run chinook salmon on June 16, 1993.[8]

The Central Valley spring-run chinook salmon is an anadromous fish that migrates through the Delta to the upper Sacramento River from March to July. NOAA Fisheries listed the Central Valley spring-run chinook salmon as a threatened species on September 16, 1999.[9] NOAA Fisheries designated critical habitat for the Central Valley spring-run chinook salmon on September 2, 2005.[10]

The Central Valley steelhead is a coastal steelhead that occupies the Sacramento and San Joaquin Rivers and their tributaries. Steelhead and rainbow trout are the same species; the distinguishing characteristic between these fish is that steelhead are anadromous whereas rainbow trout permanently reside in freshwater. NOAA Fisheries listed the Central Valley steelhead as a threatened species on March 19, 1998.[11] NOAA Fisheries designated critical habitat for the Central Valley steelhead on September 2, 2005.[12]

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1 58 Fed. Reg. 12,854 (March 5, 1993) (final rule listing the delta smelt as threatened).
2 *Id.*
3 "Pelagic organisms live in the ocean or estuaries like the Delta." Resources Agency et al., *Pelagic Fish Action Plan* at 4 (March 2007).
4 58 Fed. Reg. at 12,854.
5 59 Fed. Reg. 65,256 (Dec. 19, 1994).
6 *See* Summary of DAT Conference Call (Jan. 6, 2009) (available at http://wwwoco.water.ca.gov/calfedops/dat/2009/01_06_2009.pdf).
7 59 Fed. Reg. 440 (Jan. 4, 1994).
8 58 Fed. Reg. 33,212 (June 16, 1993).
9 64 Fed. Reg. 50,394 (Sept. 16, 1999).
10 70 Fed. Reg. 52,488 (Sept. 2, 2005).
11 63 Fed. Reg. 13,347 (March 19, 1998).
12 70 Fed. Reg. 52,488 (Sept. 2, 2005).

B. The Status of the Delta

"The Delta is in an ecological tailspin. Invasive species, water pumping facilities, urban growth, and urban and agricultural pollution are degrading water quality and threatening multiple fish species with extinction."[13] The existence of numerous factors or stressors contributing to the present circumstance is well documented. For example, the Public Policy Institute of California ("PPIC") concluded the following:

> Pumping in the Delta is . . . only one of several causes of fish declines. Entrainment of fish at the power plants is potentially a major source of mortality. Changes in ocean conditions (El Niño events, Pacific Decadal Oscillation, ocean fishing, etc.) have major effects on the Delta. Hatcheries harm wild salmon and steelhead. Chronic toxicants continue to be a problem, and episodic toxic events from urban and agricultural applications are also a major problem.[14]

The Interagency Ecological Program formed a Pelagic Organism Decline ("POD") work team to assess the parallel decline of four pelagic fishes in the Delta including the delta smelt. The POD work team also has identified numerous stressors on the pelagic fishes including water diversions, predation, contaminants, disease, toxic algae, and climate change.[15] Furthermore, in its Biological Assessment of the Continued Long-Term Operation of the CVP and SWP, the Bureau of Reclamation identified a number of non-project effects on delta smelt as follows: "predation by non-native recreational fisheries; contaminants; water diversions; reduced habitat; and aquatic invasive species."[16]

As discussed below, the factors that are contributing to the decline of the Listed Species include: agriculture in the Delta that both diverts water from the Delta and directs agricultural return flows to the Delta, runoff from agricultural operations that contain pesticides and other agricultural products, development in the Delta that harms or destroys habitat and results in wastewater effluent and stormwater runoff containing harmful substances, leaching of contaminants into the Delta and into waterways that run into the Delta, and predation of the Listed Species by non-native species.

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[13] California Resources Agency, *Delta Vision Strategic Plan* at v (October 2008).

[14] Public Policy Institute of California, *Envisioning Futures for the Sacramento-San Joaquin Delta* 65 (2007) ("2007 PPIC Report").

[15] Randall Baxter et al., *Pelagic Organism Decline Progress Report: 2007 Synthesis of Results* (Jan. 15, 2008).

[16] U.S. Bureau of Reclamation, *Central Valley Project and State Water Project Operations and Criteria Plan Biological Assessment* V-1 (2008) ("USBR BA").

II. Factual Background

A. Agriculture in the Delta

The modification of the Delta ecosystem began in the 19th Century with the filling of tens of thousands of acres of tidal and non-tidal wetlands and the conversion of much of the Delta to agricultural land.[17] Agriculture is now one of the main land uses in the Delta. In 1991, 538,000 acres of the Delta was used for agriculture.[18] The main crops grown in the Delta are corn, grain and hay, sugar beets, alfalfa, pasture, tomatoes, asparagus, fruit and safflower.[19] Agricultural effects on the Delta include the effects of in-Delta diversions of water, including fish entrainment and reduced outflow, and the effects of agricultural return flows, including introduction of pesticides.

1. Pesticide use and agricultural runoff

The Delta serves as a vast drainage area for agricultural return flows (or runoff).[20] According to the PPIC, this runoff contains a variety of surplus and residual pesticides and nutrients, in addition to contaminants leached from the soils of specific regions.[21] In 2006, the California Department of Pesticide Regulation Pesticide Use Reporting database reported approximately 20 million and 42 million pounds of pesticides used in the Sacramento and San Joaquin River watersheds respectively. These numbers do not include residential consumer use. Pesticide loading in water bodies is generally highest after rain events and frequently exceeds water quality criteria established by the California Department of Fish and Game ("DFG") to protect aquatic life.[22] During a three-year study, the U.S. Geological Service ("USGS") reported that of 28 dissolved pesticides subject to testing, 23 were detected in water samples from the Delta.[23] Metolachlor was the most frequently detected pesticide, followed by rice pesticides molinate and thiobencarb. These pesticides overlapped both temporally and spatially with the period of peak densities of larval and juvenile delta smelt.[24] Monitoring data from May 2004 to October 2006 for the Irrigated Lands Regulatory Program from the Coalition Group Monitoring, University of California and Surface Water Ambient Monitoring Program exceeded the Central Valley Regional Water Quality Control Board's triggers for pesticides for

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17 2007 PPIC Report, *supra* note 14 at 17, 44.

18 California Water Project Delta website http://www.water.ca.gov/swp/delta.cfm.

19 *Id.*

20 2007 PPIC Report, *supra* note 14 at 7.

21 *Id.*

22 *E.g.*, M. Menconi & C. Cox, *Hazard Assessment of the Insecticide Diazinon to Aquatic Organisms in the Sacramento-San Joaquin River System* (California Department of Fish and Game, Environmental Services Division 1994); M. Menconi & S. Gray, *Hazard Assessment of the Insecticide Carbofuran to Aquatic Organisms in the Sacramento-San Joaquin River System* (California Department of Fish and Game, Environmental Services Division 1992).

23 USBR BA, *supra* note 16 at V-6.

24 *Id.*

57 percent of the sites tested on at least one occasion.[25] Pesticides in runoff are of particular concern to delta smelt since their spawning season corresponds with the rainy season in the Central Valley and with peak pesticide application to orchards, alfalfa, and rice.[26] Pesticides have also been found to have a direct or indirect adverse effect on salmonid populations.[27]

Another recent study monitored the Sacramento River and its tributaries for 26 pesticides following a storm event in January 2005. This study detected five pesticides and one pesticide metabolite. Diazinon, diuron, and simazine were found in every stream sampled. Moreover, the diazinon concentrations in the Feather River and Colusa Basin Drain exceeded the water quality criterion of 0.17 ug/L.[28] Another study also detected 13 currently used pesticides in both sediment and water samples from the Yolo Bypass and its tributaries in 2004 and 2005.[29]

Research has shown that diazinon, the use of which coincides with periods of high-energy demand when adult delta smelt migrate upstream and spawn in freshwater, accumulates in and is toxic to aquatic life. In a 1993 USGS study, all concentrations of diazinon that were measured in the Sacramento and San Joaquin Rivers were above the maximum surface water concentration guideline recommended by the National Academy of Sciences.[30]

In addition to agricultural use of pesticides, residential, nonagricultural use of pesticides, such as pyrethroids for pest control, has also steadily risen. Based on the intensity of urban use, it is likely that such use may occur at concentrations greater than those specified on EPA-approved labels.[31] Pyrethoroids are the most common active ingredient in commercial and residential ant and insect repellents. According to the California Department of Pesticide Regulation, urban professional application accounts for the largest nonagricultural use of pyrethroids and most of these applications are for structural pest control. The most common outdoor use is for ant control around buildings, which is more likely to involve application to impervious surfaces and higher runoff, compared with application to pervious surfaces. "The toxicity of pyrethroids is relatively low in birds and mammals, but is extremely high in fish

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[25] Central Valley Regional Water Quality Control Board, *Revised Draft 2007 Review of Monitoring Data Irrigated Lands Conditional Waiver Program* (July 13, 2007).
[26] USBR BA, *supra* note 16 at V-6.
[27] *Washington Toxics Coal. v. Envt'l Protection Agency*, 413 F.3d 1024, 1029 (9th Cir. 2005).
[28] Lei Guo et al., *Evaluation of sources and loading of pesticides to the Sacramento River, California, USA, during a storm event of winter 2005*, 26(11) ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY 2274-2281 (2007)
[29] Kelly L. Smalling, et al., *Occurrence of pesticides in water, sediment, and soil from the Yolo Bypass, California*, 5(1) SAN FRANCISCO ESTUARY AND WATERSHED SCIENCE, Article 2 (2007).
[30] USBR BA, *supra* note 16 at V-7.
[31] Ted Daum & Rainer Hoenicke, *RMP Watershed Pilot Study: An Information Review with Emphasis on Contaminant Loading, Sources, and Effects* 14 (Jan. 1998).

and other aquatic species . . ."[32] Therefore, the increase in pyrethroid use may harm the Listed Species in the Delta.

2. In-Delta water diversions

Though often overlooked, in-Delta agricultural water diversions also contribute to the decline of the Listed Species by entraining the fish. A DFG survey counted 2,294 diversions, only nine percent of which were screened.[33] Only 0.6 percent of the diversions were screened for delta smelt.[34] Another survey reported 2,209 water diversions within the Delta between 1991 and 1997, only 17 of which were screened. Ninety percent of those diversion intakes measured between 12 and 24 inches, easily allowing the delta smelt to pass through and become entrained.[35] As of 1997, 98.5 percent of the 3,356 diversions were either unscreened or screened insufficiently to prevent fish entrainment.[36] "[U]nscreened diversions entrain and kill many life stages of aquatic species, including juvenile salmonids."[37]

In addition, the location and timing of most agricultural diversions may contribute to effects on the Listed Species. For example, the agricultural diversions are mostly active from late March through September, collectively diverting an estimated mean rate of over 4,000 cubic feet per second. Delta smelt spawning is believed to occur in shallow and shoreline waters from February through June. Therefore, diversions overlaps with the spring spawning cycle of the delta smelt and the appearance of yolk-sac larvae and larval delta smelt. Studies on entrainment by in-Delta diversions have found that there could be a significant impact on the delta smelt population in the western and southern Delta from in-delta diversions.[38]

B. Development in the Delta

Historically, flooding results from the natural hydrograph in the Sacramento and San Joaquin Rivers as well as the Delta.[39] The State and the Federal governments both adopted a flood control plan for the Sacramento River in the early 1900s. Today, the Delta contains nearly 400 miles of publicly owned levees and over 700 miles of private agricultural levees.[40] These levees were built piecemeal, as needed, to protect human structures and activities as the Delta

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[32] USBR BA, *supra* note 16 at V-8.
[33] *Id.* at V-11.
[34] *Id.*
[35] Janna R. Herren & Spencer S. Kawasaki, *Inventory of Water Diversions in Four Geographic Areas in California's Central Valley*, *in* CONTRIBUTIONS TO THE BIOLOGY OF CENTRAL VALLEY SALMONIDS 343-355 (2001).
[36] National Marine Fisheries Service, *Draft Biological Opinion on the Long-Term Central Valley Project and State Water Project Operations Criteria and Plan* 43 (2008).);
[37] *Id.*; *see also* Herren & Kawasaki, *supra* note 35 at 348.
[38] USBR BA, *supra* note 16 at V-12 – V-13.
[39] 2007 PPIC Report, *supra* note 14 at 22.
[40] *Id.* at 25.

was developed.[41] The majority of the current levees were already in place by 1930, and they allowed agriculture, cities, and infrastructure to be built on the islands behind the levees. These islands were originally close to sea level, but due to erosion and agricultural activity, much of the Delta is now well below sea level.[42]

The levees are largely constructed of mud and peat and are vulnerable to failure due to a number of external forces, including seismic activity, sea-level rise, subsidence, and flooding and storm surges. Recent studies have estimated that "[i]ncreased storm surge, mean sea-level rise, and island subsidence, combined with the potential for higher river flows in the future, raise the possibility that levee failures and island flooding will become much more common. This would greatly increase the cost of levee repair and response to flooding."[43] In the last hundred years, 166 Delta islands have flooded as a result of levee breaks.[44]

Because of the ever-present risk of flooding, development in the Delta is inextricably tied to participation in the National Flood Insurance Program ("NFIP"). While participation in the NFIP is technically voluntary, as a practical matter, nearly all communities that have floodplains within their boundaries participate in the NFIP because failure to enroll can significantly affect current and future property owners and the availability of federal financial assistance in the floodplain areas of a community. The National Flood Insurance Act prohibits federal agencies such as the Federal Housing Administration and the Small Business Administration from making or guaranteeing a loan secured by a building in a floodplain unless there is flood insurance.[45]

Construction of levees and development in the Delta has eliminated much of the historical habitat of native Delta fishes and harmed the remaining habitat, and development continues to pose a threat to native Delta fishes and their habitat.[46] In 2008, a Blue Ribbon Task Force appointed by Governor Schwarzenegger concluded that "urban development is reducing wildlife habitat today and foreclosing future opportunities to improve the ecosystem."[47] In 2007, the PPIC stated that over 130,000 new homes are in the planning stages in the Delta.[48] Such urban development could have deleterious effects on the Listed Species. "Urban stormwater and agricultural runoff may be contaminated with pesticides, oil, grease, heavy metals, polcyclic aromatic hydrocarbons, and other organics and nutrients that can destroy aquatic life necessary for salmonid survival."[49] Moreover, urbanization leads to increased sedimentation, which can "adversely affect salmonids during all freshwater life stages by clogging or abrading gill surfaces, adhering to eggs, hampering fry emergence, burying eggs or

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[41] CALFED, *Levee System Fragility*, THE STATE OF BAY-DELTA SCIENCE 103 (2008).
[42] *Id.* at 103.
[43] *Id.* at 116.
[44] *Id.* at 114.
[45] 42 U.S.C. § 4012a.
[46] California Resources Agency, *supra* note 13 at v.
[47] *Id.*
[48] 2007 PPIC Report, *supra* note 14 at 58.
[49] NMFS, *supra* note 36 at 48.

alevins, scouring and filling in pools and riffles, reducing primary productivity and photosynthesis activity, and affecting intergravel permeability and [dissolved oxygen] levels."[50]

C. Contaminants

The acute and chronic effects of contaminants on aquatic organisms and the presence of contaminants in the Delta are well documented.[51] A number of classes of contaminants of concern are present in the Delta including, among others, metals, pesticides (discussed above), and ammonia. These contaminants are introduced into the Delta via a number of pathways, including discharges of wastewater effluent, municipal stormwater discharges and runoff, and agricultural return flows. Portions of the Delta are listed as impaired under section 303(d) of the Clean Water Act for a variety of pollutants including chlorpyrifos, DDT, diazinon, exotic species, low dissolved oxygen, mercury, pathogens, and PCBs.[52] Furthermore, numerous contaminants have been detected in areas inhabited by the delta smelt at concentrations that are known to be lethal or sublethal to delta smelt and to the organisms on which they feed.[53]

A wide array of metals, including aluminum, arsenic, cadmium, copper, chromium, lead, mercury, nickel, silver, vanadium, and zinc, have been detected in the Delta. Exposure to metals, even at low concentrations, can exert toxic effects on aquatic organisms, impacting their feeding, growth, and swimming behavior.[54] "Behavioral changes in fishes, such as decreased ability to detect prey and avoid predation, is associated with exposure to very low concentrations of contaminants."[55] Moreover, when conditions in which available sources of food are declining and nonnative predators are increasing, these behavioral changes could be critical to survival.[56]

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[50] NMFS, *supra* note 36 at 46.

[51] USBR BA, *supra* note 16 at V-1.

[52] Central Valley Regional Water Quality Control Board, *Draft 2008 Clean Water Act Section 305(b) and 303(d) Integrated Report for the Central Valley Region January 2009 Public Review Draft*, App. A (2009).

[53] USBR BA, *supra* note 16 at V-1.

[54] For example, copper is highly toxic to all elements of the food web that support the delta smelt, the microbes, algae, invertebrates, and the fish themselves, especially in the early life stages. And concentrations of copper in delta smelt in the Sacramento River have been measured at 6.5 mg/kg (wet weight), which is over 32 times higher than normal background concentrations. USBR BA, *supra* note 16 at V-3. Mercury is another metal that exists in high concentrations in the Delta. "Mercury toxicity in fish is well documents and includes decreased appetite, ability to catch food, visual activity, and growth; lethargy; loss of equilibrium, gill hyperplasia and reduced respiration; neurotoxicity; nephrotoxicity; and teratogenic and reproductive effects." USBR BA, *supra* note 16 at V-3. The accumulation of mercury tends to be higher in smaller fish such as the delta smelt that have high metabolic rates. *Id.*

[55] USBR BA, *supra* note 16 at V-2.

[56] *Id.*

Ammonia occurs naturally in the environment and is a by-product of human activity. While there are many sources of ammonia in the Delta, it is found in high concentrations in wastewater effluent that is not subjected to tertiary treatment. Two forms of ammonia are found in water: NH3 (un-ionized) and NH4+ (ionized). The un-ionized form (NH3) is toxic to fish and other aquatic life, while the ionized form (NH4+) is not. The effects of chronic exposure to lower concentrations of NH3 include decreased egg production, decreased egg viability, decreased growth, delayed spawning, gill hyperplasia (causing increased ventilation), and increased susceptibility to disease.[57]

D. Predation

The Delta also suffers from invasion of non-native species and is considered the most invaded estuary in the world.[58] The striped bass and the largemouth bass are both non-native species that are predators of the delta smelt. The striped bass was introduced into the Delta in the late 19th century, and the striped bass is now the most broadly distributed and abundant large, piscivorous fish in the Delta.[59] Typically, adult striped bass move from freshwater in the fall, spend winter in the Delta, and migrate up Central Valley tributaries in the spring. However, recent studies indicate that instead of migrating to salt water bays, adult striped bass may congregate year-round in areas of higher prey densities.[60] Striped bass are typically found in turbid, open-water habitats and these same habitats support native, listed fishes, such as chinook salmon and delta smelt.[61] The striped bass is a voracious feeder and is the most significant predator of chinook salmon and delta smelt.[62] Striped bass also prey upon steelhead.[63] Foraging striped bass typically move in groups, which aids them in locating and capturing prey.[64] DFG estimates that at a population of 765,000 adults, striped bass consume three percent of the Central Valley spring-run chinook salmon population annually, six percent

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57 J.A. Camargoa & Á. Alonso, *Ecological and toxicological effects of inorganic nitrogen pollution in aquatic ecosystems: A global assessment*, 32 ENVIRONMENT INTERNATIONAL 831 (2006).

58 Robert F. Service, *Environmental Restoration: Delta Blues, California Style*, 317 SCIENCE 442 (2007).

59 Matthew L. Nobriga & Frederick Feyrer, *Shallow-Water Piscivore-Prey Dynamics in California's Sacramento-San Joaquin Delta*, 5(2) SAN FRANCISCO ESTUARY & WATERSHED SCIENCE 1, 4 (2007).

60 USBR BA, *supra* note 16 at V-24 – V-25.

61 *Id.* at V-25.

62 Daniel Merriman, *Notes on the Life History of the Striped Bass (Roccus lineatus)*, COPEIA 15 (1937); Peter B. Moyle, *Conservation of Native Freshwater Fishes in the Mediterranean-type Climate of California, USA: A review*, 72(2) BIOLOGICAL CONSERVATION 271, 272 (1995); Nobriga & Feyrer, *supra* note 59 at 9.

63 *E.g.*, National Marine Fisheries Service, *Draft Biological Opinion on the Long-term Central Valley Project and State Water Project Operations Criteria and Plan* 136 (2008).

64 USBR BA, *supra* note 16 at V-25.

of the Sacramento River winter-run chinook salmon population annually, and 5.3 percent of the delta smelt population annually.[65] As of 2007, DFG estimated the bass population to be approximately 806,000. FWS has acknowledged that the striped bass and other predators may limit the potential for recovery of delta smelt.[66]

The largemouth bass is also a significant predator of delta smelt.[67] It also preys upon juvenile salmon and steelhead. The abundance of adult largemouth bass in the Delta has increased in the last decade. Evidence suggests that rapid increases in habitat have facilitated population growth of the largemouth bass. "Given largemouth bass abundance and wide distribution, even infrequent predation events could have dramatic demographic effects where largemouth bass consume locally concentrated spawning delta smelt."[68]

III. Violations of the Endangered Species Act

Section 7(a)(2) of the ESA requires each federal agency (referred to as the "action agency") to consult with FWS or NOAA Fisheries, as applicable, to insure that any action "authorized, funded, or carried out" by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.[69] The regulations implementing section 7 broadly define the scope of agency actions that are subject to consultation. An "action" means "all activities or program of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies."[70] This includes activities undertaken directly by federal agencies, federally-funded activities, the promulgation of regulations, the granting of licenses and permits, and any other discretionary actions that directly or indirectly cause modifications to the land, water, or air.[71]

The U.S. Court of Appeals for the Ninth Circuit has broadly construed the definition of an "agency action." Agency actions subject to the ESA consultation requirement go beyond the implementation, adoption, or revision of an action, and include ongoing, continuing agency actions so that the duty to consult both accompanies discrete agency actions and actions that are ongoing. In *Pacific Rivers Council v. Thomas*, the court found that the Forest Service's land resource management plans ("LRMPs"), which were adopted before the species at-issue was listed, constituted continuing agency action requiring consultation.[72] Because the LRMPs were "important programmatic documents that set out guidelines for resource management in the

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[65] California Department of Fish and Game, *Conservation Plan for the Striped Bass Management Program* at 32, App. E (Nov. 12, 1999).
[66] USBR BA, *supra* note 16 at V-29.
[67] *Id.* at V-27.
[68] *Id.*
[69] 16 U.S.C. § 1536(a).
[70] 50 C.F.R. § 402.02.
[71] *Id.*
[72] 30 F.3d 1050 (9th Cir. 1994).

forests," the court found that the LRMPs had "ongoing effects extending beyond their mere approval" and "can be actions even after their implementation."[73]

The ESA regulations impose an obligation on federal agencies to consult with FWS or NOAA Fisheries on any federal agency action that "may affect" a threatened or endangered species or its designated critical habitat.[74] The threshold for consultation is low:

> [Federal agencies] must initiate formal consultation if the proposed action 'may affect' a listed species or critical habitat. Any possible effect, whether beneficial, or benign, adverse, or of an undetermined character, triggers the formal consultation requirement. . . .[75]

There are two types of consultation, informal and formal. An informal consultation is an optional process between FWS or NOAA Fisheries and the action agency that is designed to assist the action agency in determining whether formal consultation is required. If during the informal consultation, the action agency determines, and FWS or NOAA Fisheries issues a written concurrence, that the action is not likely to adversely affect listed species or critical habitat, then the consultation process is terminated and no further action is necessary.[76]

The formal consultation process is initiated when the action agency sends a written request to FWS or NOAA Fisheries. As part of the formal consultation, FWS or NOAA Fisheries prepares a biological opinion to determine whether the action is likely to jeopardize the continued existence of a listed species.[77] If FWS or NOAA Fisheries makes a jeopardy finding, then it will set forth a reasonable and prudent alternative for the action agency to take to avoid the likelihood of jeopardy. The issuance of the biological opinion is the termination of the formal consultation process.[78]

Section 7(a)(1) of the ESA imposes an obligation on the Secretary of the Interior and on the Secretary of Commerce to utilize programs under the jurisdiction of the Department of the Interior and the Department of Commerce in furtherance of the purposes of the ESA.[79] Section 7(a)(1) mandates that all other federal agencies consult with the FWS or NOAA Fisheries, as applicable, and "utilize their authorities in furtherance of the purposes of" the ESA by "carrying out programs for the conservation of endangered species and threatened species."[80] The section 7(a)(1) requirements for federal agencies are in addition to those imposed by section 7(a)(2). Congress intended section 7(a)(1) to complement the requirements of section 7(a)(2) by

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[73] 30 F.3d at 1055.
[74] 50 C.F.R. § 402.14.
[75] 51 Fed. Reg. 19,926, 19,949 (June 3, 1986).
[76] 50 C.F.R. § 402.13.
[77] 50 C.F.R. § 402.14(g)(4), (h)(3).
[78] 50 C.F.R. § 402.14(l)(1).
[79] 16 U.S.C. § 1536(a)(1).
[80] *Id.*

requiring federal agencies to utilize their authorities for the conservation of endangered species and threatened species whether or not the agencies were undertaking agency actions subject to section 7(a)(2). Indeed, the U.S. Supreme Court founded its seminal decision in *Tennessee Valley Authority v. Hill,* in part, on the policy and legislative history of section 7(a)(1).[81] Federal courts have consistency recognized that section 7(a)(1) of the ESA imposes obligations on federal agencies that are independent of, and in addition to, the requirements of section 7(a)(2).[82] As one authority has observed:

> FWS and NMFS [NOAA Fisheries] need not wait until a federal agency proposes funding, approval or implementation of an action before they may develop conservation measures under section 7(a)(1), as they must . . . under section 7(a)(2). Section 7(a)(1) allows FWS and NMFS to work continuously with a federal agency to develop a program of species conservation that uses all the agency's authorities, is at the agency's disposal at all times and does not depend on the presence of a particular project for implementation.[83]

The authority provided by section 7(a)(1) is particularly appropriate to address the conservation requirements of the Listed Species and their critical habitat. As discussed above and below, the conservation status of the Listed Species is the product of a variety of activities and programs implemented over many decades by a variety of local, state, and federal interests. No single agency activity or program is solely responsible for the depleted status of the Listed Species. But all of the activities and programs described herein are contributing to the decline of the Listed Species and the Delta ecosystem. The conservation of the Listed Species cannot be achieved in the absence of a coordinated effort by all local, state, and federal entities to address the serious conservation challenges in the Delta. It is clear that, collectively, the Federal Agencies with jurisdiction over programs in the Delta have the authority to address many, if not all, of the stressors that have contributed to the decline of the Delta ecosystem in general and the Listed Species in particular. But the Federal Agencies have failed to exercise their authorities and to carry out programs for the conservation of the Listed Species as described further below.

During any consultation process initiated under section 7(a)(2), the ESA imposes specific limitations on the actions that may be undertaken by the action agency and by any permit applicant:

> After initiation of consultation required under subsection (a)(2) of this section, the Federal agency and the permit or license applicant shall not make any irreversible

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81 *Tennessee Valley Auth. v. Hill,* 437 U.S. 153, 174-188 (1978).

82 *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy*, 898 F.3d 1410, 1416-17 (9th Cir. 1990); *Florida Key Deer v. Paulison*, 522 F.3d 1133, 1146 (11th Cir. 2008); *Sierra Club. v. Glickman,* 156 F.3d 606, 616 (5th Cir. 1998).

83 J.B. Ruhl, *Section 7(a)(1) of the "New" Endangered Species Act: Rediscovery and Redefining the Untapped Power of Federal Agencies' Duty to Conserve Species*, 25 ENVTL. L. 1107, 1122 (1995).

> or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section.[84]

The prohibition of section 7(d) of the ESA applies once formal or informal consultation has been initiated by the action agency.[85] Thus, to the extent that any of the Federal Agencies have initiated formal or informal consultation with FWS or with NOAA Fisheries, the Federal Agencies and the applicable permit or license applicants are subject to the prohibitions of section 7(d). The requirements of section 7(d) also apply where an action agency should have initiated consultation, but failed to do so. Indeed, Congress enacted section 7(d) of the ESA in reaction to the behavior of the Tennessee Valley Authority in the Tellico Dam case to prevent federal agencies from making commitments of resources without complying the procedural and substantive requirements of section 7(a)(2).

A. Federal Emergency Management Agency Violations of the ESA in Implementing the National Flood Insurance Program

Congress established the NFIP with the passage of the National Flood Insurance Act of 1968.[86] The purpose of the NFIP is to provide affordable flood insurance to the nation while encouraging land use that would minimize the exposure of a property to flood damage.[87] Under the NFIP, which is administered by FEMA, local communities become eligible for federal flood insurance once they have adopted "adequate land use and control measures" that are consistent with criteria developed by FEMA.[88] If a community has not adopted land use control measures that are consistent with FEMA's eligibility criteria, then it is foreclosed from receiving flood insurance from FEMA.

There are three basic components to the NFIP: (1) identification and mapping of flood-prone communities, (2) a requirement that communities adopt and enforce regulations that meet FEMA's eligibility criteria in order to qualify for flood insurance, and (3) the provision of flood insurance. FEMA conducts a Flood Insurance Study within each flood-prone community and presents the results of the flood study on a map known as a Flood Insurance Rate Map ("Flood Map") and in a narrative report. The Flood Map and the report are the technical basis for the administration of the NFIP. FEMA is required to review the flood maps at least once every five years to assess the need to update all floodplain areas and flood risk zones.[89] Before FEMA provides flood insurance, the community must have evidenced an interest in securing flood

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[84] 16 U.S.C. § 1536(d).

[85] *Envt'l Protection Information Ctr. v. Pacific Lumber Co.*, 67 F. Supp. 2d 1090 (N.D. Cal. 1999).

[86] 42 U.S.C. § 4012 *et seq.*

[87] 42 U.S.C. § 4001(d)-(f); *Florida Key Deer v. Paulison*, 522 F.3d at 1136.

[88] 42 U.S.C. § 4012(c)(2); 44 C.F.R. § 59.22.

[89] 42 U.S.C. § 4101(e), (f)(1).

insurance coverage under the NFIP and have adopted adequate land use and control measures consistent with criteria developed by FEMA.[90] These "comprehensive criteria" are intended to encourage the adoption of land use measures that reduce development in areas exposed to flood damage, assist in reducing damage caused by floods and improve the long-range land management and use of flood-prone areas.[91] The criteria are designed to reduce threats to lives and to minimize damages to structures and water systems, and are not designed to protect aquatic habitat, threatened or endangered species or other environmental values.[92] Finally, FEMA provides flood insurance to communities through arrangements with private sector property insurance companies or through state-licensed insurance agents and brokers.[93]

In addition, FEMA also implements a Community Rating System ("CRS") that provides discounts on flood insurance premiums to those communities already in the NFIP that go beyond the NFIP's minimum eligibility criteria. The CRS provides incentives to protect areas designated as critical habitat for endangered species . . . [h]owever, because fish enhancement goals and flood risk reduction goals are sometimes conflicting, the CRS also rewards activities that are detrimental to floodplains and aquatic species."[94]

FEMA continually monitors communities to ensure that they have adopted an ordinance that meets or exceeds the NFIP's minimum eligibility criteria and that they are enforcing the ordinance.[95] FEMA has the authority to place a community on probation or suspend a community from the NFIP if the community is not adequately enforcing its floodplain management regulations.[96]

FEMA's implementation of the NFIP constitutes an agency action and the exercise of agency authority subject to the procedural and substantive obligations of sections 7(a)(1) and 7(a)(2). First, the NFIP involves the promulgation of regulations (e.g. the minimum eligibility criteria), thereby falling within the definition of an "agency action." Furthermore, courts have held that FEMA's administration of the NFIP is a discretionary agency action subject to the consultation requirements of section 7 because "the NFIP influences the management of an entire ecosystem (i.e., floodplains) on an ongoing basis . . . . [and] FEMA's passage of the minimum eligibility criteria, the mapping of floodplains, and the implementation of the CRS have ongoing effects extending beyond their mere approval."[97]

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[90] 42 U.S.C. §§ 4012(c), 4022(a).
[91] 42 U.S.C. § 4102(c). FEMA's current comprehensive criteria scheme is set forth in 44 C.F.R. § 60.1-26.
[92] *Nat'l Wildlife Fed'n v. Fed. Emergency Mgmt. Agency*, 345 F. Supp. 2d 1151, 1156, (W.D. Wash. 2004).
[93] 44 C.F.R. §§ 62.23, 62.24, 62.3, 62.4.
[94] *Nat'l Wildlife Fed'n*, 345 F. Supp. 2d at 1157.
[95] *Id.*
[96] 44 C.F.R. § 59.24(b), (c).
[97] *Nat'l Wildlife Fed'n*, 345 F. Supp. 2d at 1171.

Courts have consistently held that FEMA has discretion in its administration of the NFIP and as such is subject to the requirements of sections 7(a)(1) and (2).[98] In *Florida Key Deer v. Paulison*, the United States Court of Appeals for the Eleventh Circuit explained that "Congress set out several purposes for FEMA to consider in FEMA's development of the criteria relevant to its assessment of whether a requesting locality has adequate land use and control measures in place."[99] Thus, while FEMA is required to issue flood insurance to those communities that satisfy FEMA's criteria, FEMA "is charged with developing those criteria and enjoys broad discretion in so doing."[100] Moreover, FEMA also exercises broad discretion in its implementation of the CRS in which FEMA has the discretion to reward certain communities with discounted insurance premiums for adopting floodplain management regulations that exceed the minimum eligibility criteria.[101]

Implementation of the NFIP in the Delta is a federal agency action that "may affect" the Listed Species. FEMA's actions under the NFIP are resulting in numerous adverse impacts on the Listed Species by leading to more development, which in turn destroys habitat of the Listed Species by converting tidal wetlands to upland development and increases wastewater and urban runoff from lawns, sidewalks, and roads. As discussed above, such runoff contains pesticides and other contaminants that are harmful to the Listed Species. Since loans and other financing for communities in floodplain areas is dependent upon the existence of flood insurance, FEMA's implementation of the NFIP encourages development and other activities in flood-prone areas. A 1984 Department of the Interior Solicitor's Opinion noted that "'but for' the pervasive activities of FEMA, development in flood plains would probably not take place."[102] Moreover, "Congress has recognized that the availability of federal financial assistance, including federal flood insurance, is often the 'determining factor' in the use, location, acquisition and development in floodprone areas . . . ."[103] The areas of the Delta that participate in the NFIP are critical to the survival and recovery of the Listed Species. In light of the foregoing, FEMA has violated and continues to violate sections 7(a)(1), 7(a)(2), and 7(d) of the ESA.

B. Environmental Protection Agency ESA Violations Regarding Registering or Reregistering pesticides Under FIFRA

Congress enacted the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") to regulate the sale and use of insecticides, fungicides, and rodenticides (collectively "pesticides") within the United States. EPA is charged with registering, reviewing, and reregistering chemicals and chemical formulations for use as pesticides.[104] Under FIFRA, a pesticide generally may not be sold or used in the United States unless EPA has registered it for

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98 *Florida Key Deer*, 522 F.3d 1133; *Nat'l Wildlife Fed'n.*, 345 F. Supp. 2d 1151.
99 522 F.3d at 1142.
100 *Id.*
101 *Id.*
102 U.S. Department of the Interior, *Memo of the Associate Solicitor* at 6-7 (Aug. 21, 1984).
103 *Florida Key Deer v. Stickney*, 864 F. Supp. 1222, 1237 (S.D. Fla. 1994).

that particular use.[105] Before EPA may register a pesticide and other products subject to FIFRA, it must make the following determinations: (1) the composition claims are warranted; (2) the labeling conforms to the requirements of FIFRA; (3) the product will perform its intended function without unreasonable adverse effects on the environment; and (4) when used in accordance with widespread and commonly recognized practice, it will not cause unreasonable adverse effects on the environment.[106] The culmination of EPA's registration process is approval of the label for that particular pesticide or other product.

Once EPA approves a pesticide registration, EPA retains discretionary involvement and control over that registration. FIFRA mandates that EPA periodically review pesticide registrations, with a goal of reviewing each pesticide registration every fifteen years.[107] EPA has the authority to require the submission of data for reregistration review.[108] EPA also has the authority to cancel a registration if the pesticide or its labeling does not comply with FIFRA or "when used in accordance with widespread and commonly recognized practices, generally causes unreasonable adverse effects on the environment."[109] If EPA determines that action is necessary to prevent an imminent hazard, EPA may suspend the registration of the pesticide immediately.[110]

Congress amended FIFRA in 1988, establishing a comprehensive scheme for reregistration of pesticides. The reregistration process consists of five phases: (1) EPA must list the active ingredients of the pesticides; (2) registrants must submit notices of their intent to seek reregistration and identify any missing or inadequate data and commit to replace such data; (3) registrants must submit summaries of studies that were previously submitted concerning the active ingredient in the pesticide and reformat data regarding adverse effects, re-commit to satisfying all applicable data requirements and pay the final registration fee; (4) EPA conducts an independent, initial review of submissions under Phases 2 and 3, identifies outstanding data requirements, and issues any necessary requests for additional data; and (5) EPA reviews data submitted for reregistration and determines whether or not pesticide products containing the active ingredients are eligible for reregistration.[111] In order for EPA to reregister a pesticide, EPA must determine that the pesticide satisfies each of the four requirements for registration, including whether the pesticide will cause unreasonable adverse effects on the environment.[112]

Thus EPA retains ongoing discretionary authority with respect to all pesticide and other registrations subject to FIFRA. For example, EPA may change the use classification of any

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104 7 U.S.C. §§ 136-136y.
105 7 U.S.C. § 136a(a).
106 7 U.S.C. § 136a(c)(5).
107 7 U.S.C. § 136a(g)(1).
108 7 U.S.C. § 136a(g)(2).
109 7 U.S.C. § 136d(b).
110 7 U.S.C. § 136d(c).
111 7 U.S.C. § 136a-1.
112 7 U.S.C. § 136a-1(g)(1)(C), 136a(c)(5).

pesticide or other product to prevent unreasonable adverse effects on the environment.[113] EPA may determine additional data is required to maintain a current pesticide or other registration, and EPA has the authority to restrict or immediately suspend registered pesticides and other products subject to FIFRA.[114] Therefore each pesticide registration constitutes an ongoing agency action for purposes of section 7(a)(2).[115] Under Section 7(a)(2), EPA has the duty to consult with FWS or NOAA Fisheries on new registrations, reregistration determinations, other authorizations of pesticide and other product use, and current registrations and to insure that EPA's actions are not likely to appreciably diminish the likelihood of the survival and recovery of the Listed Species in the wild and to insure that the actions are not likely to adversely modify or destroy the Listed Species' critical habitat. Because a pesticide generally may not be sold or used in the United States unless it has an EPA registration for specified uses of that particular pesticide, EPA's actions are the first step in allowing the use of pesticides. Use of many pesticides in accordance with their EPA registrations "may affect" the Listed Species, as described above. EPA has violated and continues to violate the requirements of sections 7(a)(1) and (2) and section 7(d) of the ESA by failing to comply with the procedural and substantive requirements of the ESA.

As discussed above, the Listed Species' habitat receives flushes of high concentrations of agricultural pesticides and other products subject to FIFRA. Additionally, portions of the Delta are listed as "impaired" under section 303(d) of the Clean Water Act for a number of pesticides including chlorpyrifos, DDT, and diazinon.[116] And the Central Valley Regional Water Quality Control Board presently proposes to list portions of the Delta as impaired for additional pesticides including chlordane and dieldrin.[117] Research has shown that diazinon, whose use coincides with periods of high-energy demand when adult delta smelt migrate upstream and spawn in freshwater, accumulates in and is toxic to aquatic life. In a 1993 USGS study, all concentrations of diazinon that were measured in the Sacramento and San Joaquin Rivers were above the maximum surface water concentration guideline recommended by the National Academy of Sciences.[118] Therefore, EPA is required to comply with section 7(a)(1) and (2) of the ESA regarding use and registrations and pesticides and other products subject to FIFRA.

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113 7 U.S.C. § 136a(d)(2).

114 7 U.S.C. § 136d; *see also Washington Toxics Coal. v. Envt'l Protection Agency*, 2002 U.S. Dist. LEXIS 27654, *23-24 (W.D. Wash. 2002), *aff'd* 413 F.3d 1024 (9th Cir. 2005).

115 *Washington Toxics*, 2002 U.S. Dist. LEXIS at *25.

116 Central Valley Regional Water Quality Control Board, *Draft 2008 Clean Water Act Section 305(b) and 303(d) Integrated Report for the Central Valley Region January 2009 Public Review Draft*, App. A (2009).

117 *Id.*

118 USBR BA, *supra* note 16 at V-7.

C. The Maritime Administration ESA Violations Regarding the National Defense Reserve Fleet Comprehensive Management Plan

MARAD is charged with disposing of obsolete National Defense Reserve Fleet ("NDRF") vessels under the Federal Property and Administrative Service Act of 1949. The NDRF is divided into two vessel categories: retention vessels and non-retention vessels. Non-retention vessels, which are also referred to as obsolete vessels, include MARAD and former Navy ships that cannot be activated within a reasonable amount of time and have no further military use or value to MARAD. Non-retention vessels are intended to be disposed of and receive minimal maintenance.[119] MARAD keeps most of the NDRF vessels in three separate fleets: the James River Reserve Fleet at the James River near Fort Eustis, Virginia, the Beaumont Reserve Fleet at Beaumont, Texas, and the Suisun Bay Reserve Fleet ("SBRF") at Suisun Bay, part of the San Francisco Bay-Delta Estuary in California. The SBRF contains approximately 78 ships, 56 of which are considered to be obsolete non-retention vessels intended for eventual disposal.[120]

Since 1994, Congress has mandated that MARAD remove and dispose of the NRDF vessels. Congress initially directed MARAD to dispose of all obsolete ships in the NDRF by September 30, 1999.[121] In 1997 Congress extended the deadline to September 30, 2001.[122] In October 2000, Congress again extended the deadline to September 30, 2006.[123] The National Defense Authorization Act for FY 2001 also mandated that the Secretary of Transportation "prepare, publish and submit to Congress . . . a comprehensive plan for management of the vessel disposal program of the Maritime Administration. . . ."[124] The purpose of the program is to establish a program to mitigate the environmental threat posed by deteriorated ships.[125]

In 2006, MARAD prepared, finalized and provided to Congress the *Comprehensive Management Plan for the Disposal of Maritime Administration (MARAD) Non-Retention Vessels FY 2006* ("CMP"). The CMP is a "feasible short and long-term strategy for the disposal of MARAD's obsolete ships."[126] Certain elements of the plan are updated and presented to the MARAD Administrator as a quarterly executive summary of the program's progress and status

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[119] Maritime Administration, *Removal of Non-Retention Vessels from the Suisun Bay Reserve Fleet Draft Environmental Assessment* 1-6 (May 2006) ("MARAD 2006 EA").

[120] *Id.* at 1-3.

[121] National Maritime Heritage Act of 1994, Pub. L. No. 103-451, § 6, 108 Stat. 4769, 4777.

[122] National Defense Authorization Act for Fiscal Year 1998, Pub. L. No. 105-85, § 1026, 111 Stat. 1629, 1878 (1997).

[123] Floyd D. Spence National Defense Authorization Act for FY 2001, Pub. L. No. 106-398, § 3502, 114 Stat. 1654, 1654A-490-492 (2000).

[124] National Defense Authorization Act for Fiscal Year 2006, Pub. L. No. 109-163, 119 Stat. 3136, 3551.

[125] Maritime Administration, *Comprehensive Management Plan for the Disposal of Maritime Administration (MARAD) Non-Retention Vessels FY 2006* 2 (2006) ("MARAD CMP").

[126] *Id.* at 1.

as related to the CMP.[127] MARAD will "develop an annual installment to the [CMP] which will reassess MARAD's progress and all factors affecting the program and revise, if necessary, the short and long-term strategy and implementation plan for disposal of its obsolete ships."[128]

The obsolete vessels in the SBRF are highly deteriorated.[129] A 2007 draft *Vessel Environmental Review* of the SBRF analyzed the hulls of forty of the SBRF vessels and concluded that they contained elevated concentrations of zinc, copper, mercury, lead, hexavalent chromium, tributyltin and other heavy metals and pollutants.[130] The *Vessel Environmental Review* also found that the hulls exceed toxicity criteria for hazardous waste with respect to zinc, lead, copper, hexavalent chromium, mercury, cadmium, and barium.[131] The paint and other materials that contain heavy metals and other pollutants have fallen and are continuing to fall off of the ships' corroded hulls into Suisun Bay. According to the report, the 40 ships have lost over 20 tons of hexavalent chromium, copper, lead, zinc and other heavy metals from their hulls.[132] In addition, a draft environmental assessment conducted in 2008 identified two of the SBRF vessels as having known holes in their hulls "which can be a possible pathway for potentially hazardous materials to leach into the environment."[133] Other vessels have "potential" for holes.[134]

MARAD retains discretionary involvement and control over the management of the NDRF and the SBRF. MARAD has an ongoing obligation to make decisions regarding which vessels should be disposed of and which vessels continue to sit in Suisun Bay. MARAD also determines how a vessel will be disposed, and whether and the extent to which the vessel will be cleaned prior to removal from Suisun Bay. These ongoing actions qualify as discretionary agency actions under sections 7(a)(1) and (a)(2) of the ESA. As discussed above, contaminants may have both lethal and sublethal effects on the Listed Species. Furthermore, they reduce the quality of available habitat for the Listed Species.[135] Even exposure to low concentrations of

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[127] *Id.* at 1.

[128] MARAD CMP, *supra* note 125 at 1.

[129] MARAD 2006 EA, *supra* note 119 at 4-7.

[130] Maritime Administration, *Vessel Environmental Review* 27-34 (February 15, 2007) ("MARAD Vessel Review").

[131] *Id.* at ES-1, ES-2, 28-30.

[132] *Id.* at 32-34.

[133] Maritime Administration, *Removal of Non-Retention Vessels from National Defense Reserve Fleet Sites for Disposal, Draft Programmatic Environmental Assessment* 3-9, 4-7 (June 2008) ("MARAD 2008 EA").

[134] *Id.* at 3-9, 4-8.

[135] Because MARAD is managing the SBRF pursuant to the CMP and the SBRF is located entirely with designated critical habitat for the Listed Species, MARAD is undoubtedly taking action that may have adverse effects on critical habitat (thereby triggering formal consultation under section 7(a)(2) of the ESA) as a result of the deterioration of the fleet and associated introduction of numerous contaminants into the water column and sediment of Suisun Bay.

contaminants may lead to behavioral changes in fishes, such as decreased ability to detect prey and avoid predation.[136] Moreover, when conditions in which available sources of food are declining and nonnative predators are increasing, these behavioral changes could be critical to survival. Such are the conditions for the delta smelt.[137] Therefore, MARAD's implementation of the CMP is a discretionary agency action that "may affect" the Listed Species. MARAD has thus violated sections 7(a)(1), (2), and (d) of the ESA.

D. Fish and Wildlife Service ESA Violations under the Sport Fish Restoration Act

The Federal Aid in Sport Fish Restoration Act, also known as the Dingell-Johnson Act, authorizes the Secretary of the Interior to provide federal aid to the states for the management and restoration of fish having "material value in connection with sport or recreation in the marine and/or fresh waters of the United States."[138] Funds distributed to states are collected in an account known as the Sport Fish Restoration Account. Unless otherwise specified in the Act, funds are permanently appropriated.[139]

In order to receive funds under the Act, states are required to pass laws for the conservation of fish which include a prohibition against the diversion of license fees for any other purpose than the administration of the state fish department.[140] In addition, before a state may receive funds, the state must submit programs or projects for fish restoration in one of two ways: (1) prepare and submit a comprehensive fish and wildlife resource management plan that will insure the perpetuation of the resources for the economic, scientific, and recreational enrichment of the people; or (2) submit full and detailed statements of any fish restoration and management project proposed for that state.[141]

For the funding period 2002-2006, California received approximately $18,000,000 in funds under the Sport Fish Restoration Act for the Inland and Anadromous Sport Fish Management & Research program alone. DFG funds numerous projects with this grant money. Many of these projects are aimed at ultimately increasing the population of sport fish, such as the striped bass and largemouth bass through research, monitoring, and habitat enhancement. For example, one project that is part of DFG's Five Year Plan for 2003-2008 is the Bay-Delta Sport Fish Resource Assessment Project for Striped Bass, which identifies management

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136 USBR BA, *supra* note 16 at V-2.
137 *Id.*
138 16 U.S.C. § 777a; 16 U.S.C. §§ 777 – 7771.
139 Interior Department Appropriation Act 1952, 82 Pub. Law. No. 136, August 31, 1951, 65 Stat. 248, 262 (1951).
140 16 U.S.C. § 777.
141 16 U.S.C. § 777e.

strategies to prevent the population decline of striped bass.[142] According to the project statement, sport fish, such as the striped bass and largemouth bass "are subjected to both intense fishing effort, and highly variable natural and anthropogenic environmental factors that can affect population abundance and viability. This project specifically addresses the task (problem) of managing these resources . . . ."[143] The striped bass population between the early 1970s and mid-1990s experienced a "severe decline, from 1.7 million legal-sized fish in the early 1970s to a low of 600,000 in 1994. The population rebounded to 1 million in 1996, 1.3 million in 1998, and about 1.5 million in 2000 (preliminary estimate)."[144] This project is just one of the various projects funded by FWS that contributes to the prevalence in the Delta of sport fish that prey on the Listed Species. As the federal agencies have recognized, striped bass management in the Delta can trigger section 7(a)(2) of the ESA.[145]

The provision of funds is an agency action subject to section 7 of the ESA. FWS violated sections 7(a)(1), (a)(2), and (d) of the ESA by failing to consult with itself and NOAA Fisheries regarding the affect of funding programs that ultimately contribute to the growth of striped bass in the Delta. As discussed above, the striped bass and largemouth bass prey on the Listed Species, contributing to their decline and negatively impacting their chances for recovery.

E. FWS and ACOE Violations Regarding Port of Stockton

"Dredging of river channels to enhance inland maritime trade and to provide raw material for levee construction has significantly and detrimentally altered the natural hydrology and function of the river systems in the Central Valley."[146] The expansion of shipping channels within the Delta began in the early 20th century, and ACOE has been maintaining and deepening channels since then.[147] "These deepwater shipping channels have altered water flows within the Delta. Water moves much more slowly through the lower Sacramento River than it does in the shallower parts of the Delta, thereby providing a different environment for fish and other aquatic life."[148] The creation of levees and deep shipping channels reduced the natural tendency of the San Joaquin and Sacramento Rivers to create the floodplains that provided the necessary habitat

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142 *See* California Department of Fish & Game, Inland & Anadromous Sport Fish Management & Research – Project #71: Bay-Delta Sport Fish Resource Assessment Project – Striped Bass, July 1, 2003 – June 30, 2008.

143 *Id.*

144 *Id.*

145 CALFED Bay-Delta Program, *Ecosystem Restoration Program Plan Volume I: Ecological Attributes of the San Francisco Bay-Delta Watershed, Final Programmatic EIS/EIR Technical Appendix* 409 (July 2000).

146 National Marine Fisheries Service, *Draft Biological Opinion on the Long-Term Central Valley Project and State Water Project Operations Criteria and Plan* 47 (2008).

147 2007 PPIC Report, *supra* note 14 at 26-27.

148 *Id.* at 27.

for rearing and foraging of juvenile native fish.[149] Thus, dredging also disrupts or eliminates spawning substrate availability.[150]

The Port of Stockton ("Port") owns and operates a diversified and major transportation center that encompasses a 200-acre operating area. The Port is located within San Joaquin County along a portion of the San Joaquin River referred to as the Stockton Deepwater Channel. In 2004, the Port commenced a project to increase commerce through the Port ("Development Project"). The Development Project involves significant dredging of the San Joaquin River ("Dredging Activities"), which is a "water of the United States" as defined in the Clean Water Act.[151] The Dredging Activities are aimed at increasing the depth of the Stockton Deepwater Channel from a depth of 30 feet to 35 feet below mean lower low water. The dredging will encompass docks 6, 9, and 14-20. The Dredging Activities will involve the dredging of 584,000 cubic yards of sediment and another 550,000 cubic yards over the next five to ten years.

As required, the Port submitted applications for a permit from ACOE pursuant to section 404 of the Clean Water Act to conduct the Dredging Activities. The Port divided the Dredging Activities into three separate projects and submitted three applications to ACOE:

- Application for dredging 326,000 cubic yards of sediment in front of docks 14-20, with 250,000 additional cubic yards of sediment over the next five years;
- Application for dredging 250,000 cubic yards of sediment in front of dock 20;
- Application for dredging 8,000 cubic yards of sediment in front of docks 6 and 9, and an additional 300,000 cubic yards of sediment over the next ten years.

In connection with these applications, ACOE initiated informal consultation with FWS and NOAA Fisheries regarding the effects of the Dredging Activities on listed species. Pursuant to 50 C.F.R. § 402.12, the ACOE submitted biological assessments ("BAs") to FWS and NOAA Fisheries. The BAs concluded that the Dredging Activities were "not likely to adversely affect" the delta smelt or its critical habitat. FWS concurred in these determinations ("FWS Concurrence"). FWS concluded that "the proposed dredging activities are not likely to adversely affect the delta smelt and their critical habitat because the dredging will occur out of shallow water habitat and the project will take place when this species is not likely to be present in the project area."[152]

The Section 7 Consultation Handbook, jointly authored by FWS and NOAA Fisheries, states that a "not likely to adversely affect" determination is appropriate only "when effects on

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[149] NMFS, *supra* note 146 at 47.

[150] U.S. Fish and Wildlife Service, *Biological Opinion on the Effects to the Delta Smelt of the Continued Operations of the Central Valley Water Project and State Water Project* 196 (2008).

[151] 33 U.S.C. § 1362(7); 40 C.F.R. § 122.2.

[152] U.S. Fish and Wildlife Service Letter to U.S. Army Corps of Engineers, Jan. 9, 2004.

listed species are expected to be discountable, insignificant, or completely beneficial."[153] The FWS Concurrence was arbitrary and capricious in violation of the Administrative Procedure Act. An agency action is arbitrary or capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[154] In addition, ACOE violated section 7(a)(2) of the ESA by failing to initiate formal consultation with FWS.

First, FWS's own documents demonstrate that the FWS Concurrence violates the ESA. For example, FWS's Recovery Plan for delta smelt states that, to provide for larval and juvenile transport, the San Joaquin River must be protected from physical disturbance such as dredging,[155] yet the proposed Dredging Activities are entirely within the area designated as critical habitat for delta smelt.[156]

Second, the BAs contain insufficient analysis. The BAs inadequately define the action area and include insufficient analysis of the effects of the Dredging Activities on the delta smelt. To determine where there is a need for formal consultation, it is necessary to define the action area and the effects of the action within that area. The BAs do not clearly define the action area. The BAs state that the definition of an action area includes "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action,"[157] but the BAs incorrectly define the action area as the areas in which the Dredging Activities would occur.[158] ACOE violated the applicable requirements of the ESA because the action area extends beyond the limits of the Dredging Activities since the direct and indirect effects of the action will extend far beyond the immediate area where the dredging will occur.[159]

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153 Final Consultation Handbook: Procedures for Conducting Consultation Under Section 7 of the Endangered Species Act (March 1998).

154 *Motor Vehicles Mfrs. Ass'n v. State Farm Mutual Auto Ins. Co.*, 463 U.S. 29, 43 (1983).

155 U.S. Fish and Wildlife Service, *Recovery Plan for the Sacramento/San Joaquin Delta Native Fishes* 27-28 (1996).

156 *See* U.S. Fish and Wildlife Service, *Final Critical Habitat (June 16, 2003)* (map of delta smelt critical habitat).

157 U.S. Army Corps of Engineers, *Biological Assessment Dredging Activities at the Port of Stockton's West Complex* 8 (April 2003) ("ACOE BA I"); U.S. Army Corps of Engineers, *Biological Assessment Maintenance Dredging Activities at the Port of Stockton's East and West Complexes* 8 (Sept. 2003) ("ACOE BA II").

158 ACOE BA I, *supra* note 157 at 8-9; ACOE BA II, *supra* note 157 at 8-10.

159 16 U.S.C. § 1536(c); 50 C.F.R. § 402.12; *Cf. The Wilderness Society v. Wisely*, 524 F. Supp. 2d at 1305 (holding that a not likely to adversely affect determination was improper because FWS had failed to analyze effects of the action adjacent to those locations where the species and its habitat were found).

The BAs also include inadequate analysis of the effects of the actions. According to a table of information included in both BAs, there is the potential for delta smelt to occur in the "project area" – that is, within the limits of Dredging Activities – from December 1 through June 30.[160] Yet inexplicably, both BAs advocate for a "not likely to adversely affect" determination based on the fact that dredging would be limited to June 1 through December 30.[161] This period includes both December and June, months when the BAs indicate there is the potential for delta smelt to occur in the project area. ACOE also admits that the Dredging Activities will overlap with occurrences of the delta smelt by stating that the dredging time frame "would avoid the *majority* of adult and juvenile migration of anadromous species, *delta smelt*, and splittail."[162]

Analysis of the effects of the action is deficient in other ways as well. Both BAs fail to identify increased maritime activity as an indirect effect, thereby failing to analyze the consequences for the species of such activity.[163] Potential indirect effects associated with increased maritime activity are increased propeller entrainment, reduced dissolved oxygen, and increased ballast water discharges, which result in the introduction of invasive species to the habitat. The BAs also fail to adequately address the issue of direct effects. As one example, the effects of a reduction in dissolved oxygen, increased contaminants in the water column, and increased sediment in the water column have not been properly analyzed. Furthermore, FWS and ACOE failed to consider the cumulative effects of the new Dredging Activities combined with the effects that past dredging has had on the environment. NOAA Fisheries did conduct such analysis and concluded that with respect to dissolved oxygen in particular, the proposed action "should exacerbate the [dissolved oxygen] problem over current conditions."[164] To the extent that the proposed action exacerbates existing conditions that harm the delta smelt or its critical habitat, formal consultation is required.[165]

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160 ACOE BA I, *supra* note 157 at 16; ACOE BA II, *supra* note 157 at 17.

161 ACOE BA I, *supra* note 157 at 28; ACOE BA II, *supra* note 157 at 25.

162 ACOE BA I, *supra* note 157 at 28 (emphasis added); ACOE BA II, *supra* note 157 at 24 (emphasis added).

163 ACOE BA I, *supra* note 157 at 27; ACOE BA II, *supra* note 157 at 23. In contrast with FWS, NOAA Fisheries requested analysis of this indirect effect at the outset of its consultation for the salmonids. Letter from R. McInnis to N. Haley (Oct. 10, 2003); *see also* Letter from R. McInnis to M. Charlton (April 29, 2004). NOAA Fisheries considered a wide array of effects attributable to increased maritime activity in the course of its consultation with the ACOE. NOAA Fisheries, *Biological Opinion* at 62-71.

164 Letter from R. McInnis to N. Haley (Oct. 10, 2003).

165 At times, ACOE's position is internally inconsistent. For example, the permit applications acknowledge an array of adverse consequences on fish species. *E.g.*, *Individual Department of the Army Permit Application for Dredging Activities at the Port of Stockton's West Complex – Docks 14-20* at 11 ("Implementation of the proposed project would effect [sic] listed fish species in the project area. Aquatic environmental conditions that could effect [sic] special-status fish species include increased channel depth, diversion of flow, mobilization of contaminants, and mobilization of sediments. Fish habitat attributes potentially affected by the

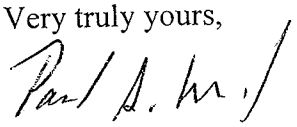
Finally, a "not likely to adversely affect" determination must address effects on both the listed species and critical habitat.[166] But the BAs do not directly address effects of the proposed action on designated delta smelt critical habitat. ACOE acknowledged that delta smelt may be present in the project area. And FWS previously identified the area as critical habitat, noting that delta smelt "presently occur throughout the range designated as critical habitat."[167] Furthermore, degradation of the habitat is attributable to past actions associated with the operation of the Port, and as such is part of the environmental baseline, as that term is defined in the Joint Consultation Regulations.[168]

Therefore, FWS's Concurrence is arbitrary and capricious and not in accordance with law. The Dredging Activities "may affect" the delta smelt, and thus FWS violated the Administrative Procedure Act by concurring with ACOE's not likely to affect determination, which was clearly based on inadequate analysis. ACOE violated the ESA by failing to enter into formal consultation with FWS regarding the effect of the Dredging Activities on the delta smelt. ACOE was aware that the Dredging Activities "may affect" the delta smelt through its consultation with NOAA Fisheries. The continuing commitment of resources by ACOE and by the Port of Stockton is in violation of section 7(d) of the ESA.

IV. Conclusion

The Federal Agencies have violated and continue to violate the ESA and APA. Their illegal actions have contributed to the decline of the Listed Species.

Very truly yours,



Paul S. Weiland
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PSW/amh
Enclosure

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proposed project include spawning and rearing habitat, migration and movement habitat conditions, water quality conditions, and entrainment loss.").

166 50 C.F.R. § 402.14(b)(1).

167 59 Fed. Reg. at 65,270.

168 50 C.F.R. § 402.02.