

Salmon Refuge: The Endangered Species Act and FEMA's National Flood Insurance Program
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Even in the face of a nearly six-fold increase in flood damages over the past century despite billions of dollars in investments in flood control measures, floodplain development continues to rapidly grow throughout the United States.¹ Besides providing important contributions to general ecosystem health, healthy floodplains provide refuge for juvenile salmon to avoid high flow volume and velocities, allowing them to rear as long as necessary and conserve energy for their entry to the ocean.² They also inundate and create access to spawning and rearing habitat during high flow seasons, and the groundwater storage and recharge process reduces the likelihood of high-energy flood events that can scour away salmon nests during the winter months.³ Decisions made regarding floodplain development impact salmon populations significantly, and the interaction between these decisions and ecological health cannot be understated.

The Endangered Species Act (ESA) has wide-ranging impacts across the spectrum of policy decisions that the original authors undoubtedly could not have foreseen. One program that is impacted is the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP). As a direct result of claims brought by environmental organizations in the Pacific Northwest, a program focused on the anthropocentric impacts of flooding has to consider the impacts to species that rely heavily on floodplain habitat for survival and proliferation. This paper will briefly explore this intersection between floodplain development and the protection of endangered species using *Nat'l Wildlife Fed'n v. Fed. Emergency Mgmt. Agency*, 345 F.Supp.2d 1151 (W.D. Wash. 2004) as an illustration.

In this case, the most pertinent section of the ESA is section 7(a)(2).⁴ The Secretary of the Interior is required to determine whether any species is "endangered" or "threatened" and to designate critical

¹ *No Adverse Impact Floodplain Management*, Association of State Floodplain Managers, <http://www.floods.org/index.asp?menuID=349&firstlevelmenuID=187&siteID=1> (last visited Feb. 27, 2015).

² National Oceanic Atmospheric Administration, *The Importance of Healthy Floodplains to Puget Sound Salmon*, (2011) https://www.fema.gov/pdf/about/regions/regionx/importance_of_healthy_floodplains_by_NMFS.pdf.

³ *Id.*

⁴ 7(a)(2) states that "[e]ach Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species." Section 7(a)(2) imposes a procedural duty on the "action agency"

habitat for such species.⁵ In this specific case, the species at issue is the Puget Sound chinook salmon.⁶ The reasons for listing and the habitat requirements for this particular species are relevant to many anadromous fish species, and thus are important to assess for future applicability to other cases involving endangered anadromous fish species and floodplain development.⁷

Functional floodplains moderate high flows by substantially increasing the area available for water storage, by allowing water to seep into the “groundwater table during floods, recharging wetlands, off-channel areas, shallow aquifers, and the hyphorheic zone.”⁸ Wetlands, aquifers, and the hyphorheic zone then give back to the aquatic system by releasing water to the stream during the summer months through a process called hydraulic continuity.⁹ This process is crucial because it ensures adequate flows for salmonids during the summer months, and reduces the possibility of high-energy flood events that can destroy salmonid nests during the winter months.¹⁰ Floodplains generally contain side-channels and other features that provide important “spawning habitat, rearing habitat, and refugia during high flows, and may be used by rearing salmonids for long periods of time depending upon the species.”¹¹ Off-channel areas provide habitat for juvenile salmonids to hide from predators and conserve energy and contain an abundance of food with fewer predators than would typically be found in the river.¹² Poor floodplain

to consult with the “consultation agency” if the agency's action “may affect” a listed species. However, no formal consultation is required if, as a result of the preparation of a biological assessment or as a result of informal consultation with the National Marine Fisheries Service (NMFS), the action agency determines, with the confirmation of the NMFS, that the proposed action may affect but “is not likely to adversely affect” the listed species.

⁵ *Bennett v. Spear*, 520 U.S. 154, 157 (1997).

⁶ *Nat'l Wildlife Fed'n v. Fed. Emergency Mgmt. Agency*, 345 F.Supp.2d 1151, 1153–54 (W.D. Wash. 2004).

⁷ *Nat'l Marine Fisheries Serv., U.S. Dep't of Commerce, NMFS Tracking No. 2006/00472, Endangered Species Act--Section 7 Consultation: Final Biological Opinion And Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation Puget Sound Region* (2008), available at http://online.nwf.org/site/DocServer/NMFS_Puget_Sound_nfip-final-bo.pdf?docID=10561 [hereinafter *Final Bi-Op*].

⁸ *Id.* at 55.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* at 103.

¹² *Final Bio-Op*, *supra* note 7 at 103.

management has led to a decline in quality freshwater habitat, which is the primary reason for the ESA listing of the chinook salmon.¹³

FEMA is the federal agency charged with administering the National Flood Insurance Program (NFIP), a federal flood insurance program that was created by Congress in 1968 by the National Flood Insurance Act (NFIA).¹⁴ The NFIP is a voluntary program, but participation is heavily encouraged using incentivizing measures.¹⁵ These incentives include ensuring that “[m]ortgages that are federally insured or from regulated banks are unavailable for properties in the Special Flood Hazard Area (SFHA) in non-participating communities”, a “[p]rohibition of federal loans and grants for construction in the SFHA in non-participating communities”, and “[l]imitations on disaster assistance for non-participating communities”.¹⁶

FEMA argued that its mapping of a floodplain was based solely on a technical evaluation of the base flood elevation.¹⁷ The Court disagrees with this self-assessment, and claims that “FEMA has used its discretion to map the floodplain in a way that allows persons to artificially fill the floodplain to actually remove it from its floodplain status, and thus from regulatory burdens.”¹⁸ The increased development from the FEMA decisions in flood risk areas provides a short-term economic benefit with potentially long-term adverse consequences to the floodplain and providing channel function for salmonid habitat.¹⁹

FEMA acknowledged that fill placed in the floodplain removes the property from a mapped flood area through a “Letter of Map Revision Based on Fill”, thus incentivizing property owners to place sufficient fill to elevate their buildings above the base flood elevation because property within the floodplain

¹³ *Id.* at 53.

¹⁴ 42 U.S.C. § 4001 (2014). The purposes of the flood insurance program are to make flood insurance “available on a nationwide basis through the cooperative efforts of the Federal Government and the private insurance industry” and to base flood insurance “on workable methods of pooling risks, minimizing costs, and distributing burdens equitably among those who will be protected by flood insurance and the general public.” The three basic components of the NFIP are: (1) the identification and mapping of flood-prone communities, (2) the requirement that communities adopt and enforce floodplain management regulations that meet certain minimum eligibility criteria in order to qualify for flood insurance, and (3) the provision of flood insurance.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Final Bi-Op, *supra* note 7 at 84.

can be “mapped out” of the floodplain and thereby removed from the jurisdiction of the NFIP’s insurance requirements.²⁰ This mapping process is done almost entirely based on topography, meaning that virtually any increase in elevation using fill can lead to an exclusion of certain areas from being considered within the floodplain.²¹ Through this process, FEMA rarely considers the dynamic nature of the area or the effect of development, which can be deeply detrimental to the ecosystem.²² As was discussed above, placing fill to elevate properties and building levees to trigger floodplain map revisions are “detrimental to floodplain and channel function, as lands that are periodically flooded provide safe off-channel refugia for rearing juvenile salmonids during periods of high flow when mainstem channels cannot be occupied, functions essential to decrease mortality in juvenile salmonids.”²³ FEMA’s mapping program also does not “identify and protect the channel migration zone which provides important functions for salmonids.”²⁴ According to the reasons outlined, the Court determines that nothing in the NFIA authorizes FEMA to allow filling activities to change the contours of the natural floodplain, and with the process of mapping that is strictly based on topography with no distinctions for artificially created topography, the process actually incentivizes the filling of floodplain habitat.²⁵

According to the Court, in developing the minimum eligibility criteria, the NFIA authorizes FEMA to guide development of proposed construction away from locations threatened by flood hazards and to “otherwise improve the long-range land management and use of flood-prone areas.”²⁶ In order to participate in the NFIP, a community must adopt minimum floodplain management criteria established by FEMA.²⁷ Some minimum criteria encourages activities that are ecologically harmful, and result in

²⁰ *Id.*

²¹ See generally Ashley Williams, *Floodplain Delineation Methodology Utilizing LiDAR Data with Attention to Urban Effects, Climate Change, and Habitat Connectivity in Lapwai Creek, Idaho*, (2011), http://wrp.nkn.uidaho.edu/lapwaicwis/pdf/Williams_Thesis.pdf.

²² Larry Larson & Doug Plasencia, *No Adverse Impact: A New Direction in Floodplain Management Policy*, *Natural Hazards Review*, 2(4), 167-181 (2001).

²³ Final Bi-Op, *supra* note 7 at 84.

²⁴ *Id.*

²⁵ Nat’l Wildlife Fed’n v. Fed. Emergency Mgmt. Agency, 345 F.Supp.2d at 1173.

²⁶ 42 U.S.C. § 4102(c)(2).

²⁷ Nat’l Wildlife Fed’n v. Fed. Emergency Mgmt. Agency, 345 F.Supp.2d at 1156.

conditions that adversely affect salmon and their habitat.²⁸ For example, the NFIP allows unlimited development across the floodplain, except in the floodway, as long as the developed areas are either at or above the level of the 100-year flood or protected by levees with at least 100-year protection.²⁹ As a result, the Court determined that FEMA must consult on its minimum eligibility criteria because FEMA has discretion to amend its regulations and those regulations have an ongoing impact on the use of floodplains in the area.³⁰

The opinion by the Court that determined that this was “discretionary agency action” that “may affect” the affected species was correct, and a quick assessment of pertinent Ninth Circuit case law will help to confirm this decision. The first case to be analyzed will be *Turtle Island Restoration Network*.³¹ This case held that the agency had discretion to act for the benefit of protected sea turtles based on the enabling statute's purpose to increase the effectiveness of “international conservation and management measures,” expressly defined by the statute as “measures to conserve or manage one or more species of living marine resources.”³² The Ninth Circuit clarified its holding by stating “[w]hether the Fisheries Service must condition permits to benefit listed species is not the question before this court, rather, the question before us is whether the statutory language of the [statute] confers sufficient discretion to the Fisheries Service so that the agency could condition permits to benefit listed species.”³³ This holding is confirmed in another Ninth Circuit case, which involved a discussion regarding a statute that did not directly have a stated purpose of protecting the environment, wildlife, or endangered species, but gave the Bureau of Reclamation discretion to reduce the total amount of water available to water rights holders, which, in turn, could allow more water to be available for listed salmon.³⁴ The Ninth Circuit determined that it would not require the statute to have as one of its stated purposes the protection of the environment, wildlife or

²⁸ Final Bi-Op, *supra* note 7 at 88.

²⁹ *Id.*

³⁰ Nat'l Wildlife Fed'n v. Fed. Emergency Mgmt. Agency, 345 F.Supp.2d at 1174.

³¹ *See generally* Turtle Island Restoration Network v. Nat'l Marine Fisheries Serv., 340 F.3d at 969.

³² *Id.* at 976.

³³ *Id.* at 977.

³⁴ Natural Resources Defense Council v. Houston, 146 F.3d at 1124.

endangered species, but simply whether the agency had discretion to act in a way that benefited an endangered species.³⁵ In that case it did because it could adjust the amount of water available to water rights holders to accommodate increased flows for salmon.³⁶ The Court correctly determined that the statute at issue, the NFIA, gave enough discretion to FEMA to protect endangered fish, and the above case law from the Ninth Circuit confirms that this is enough to qualify as “discretionary”.

In contrast to the above opinions, the Ninth Circuit has also come to the opposite conclusion, with one opinion coming from a case that was cited in the *National Wildlife Federation v. FEMA* case prior to its appeal to and reversal by the Ninth Circuit.³⁷ The *Western Watersheds v. Matejko* case involved an action against the Bureau of Land Management and the United States Forest Service, seeking declaratory and injunctive relief regarding hundreds of river and stream “diversions” on public lands in the Upper Salmon River basin of central Idaho.³⁸ The plaintiff, an environmental group, challenged the federal agencies’ “acquiescence in selected diversions for agricultural and other irrigation uses by private parties holding vested rights-of-way to divert water . . .”, and these diversions could jeopardize a species of fish listed under the ESA.³⁹ The Court determined that the agencies’ failure to act did not qualify as an “agency action” for ESA purposes.⁴⁰ The Court focuses particularly significance on the nature of the words “authorized, funded, carried” and the absence of a “failure to act” from the list in the ESA qualifying “agency action”, and states that “[t]his stands in marked contrast to other sections of the ESA, which explicitly refer to an agency’s failure to act.”⁴¹ This continues to emphasize that the definition of “action” is broad, assuming that an “affirmative” action occurred, and not simply a failure to act. In the current case, the decision by FEMA to manage the NFIP in a manner that promoted floodplain development was certainly an “affirmative” action,

³⁵ *Id.* at 1125–26.

³⁶ *Id.*

³⁷ *Nat’l Wildlife Fed’n v. Fed. Emergency Mgmt. Agency*, 345 F.Supp.2d at 1174.

³⁸ *Western Watersheds Project v. Matejko*, 468 F.3d 1099, 1103 (9th Cir. 2006).

³⁹ *Id.*

⁴⁰ *Id.* at 1107–08.

⁴¹ *Id.* at 1108.

and not simply a failure to act. Thus, the Court's determination that an "agency action" had occurred by FEMA was correct.

In addition to a statute not requiring specific language regarding the protection of the environment, and the "agency action" simply needing to be an "affirmative" action, the harmful action need not be directly performed by the agency, but simply must be relatively directly as a result of the "agency action". This has been continuously confirmed by the Ninth Circuit, with a case in 2012 involving the Karuk Tribe of California and a relatively similar fact pattern to the *National Wildlife Federation v. FEMA* case.⁴² In that case, an Indian tribe sued the U.S. Forest Service, and received declaratory and injunctive relief from alleged violation of the ESA by approval of four notices of intent to conduct mining activities in threatened coho salmon critical habitat within national forest without ESA consultation.⁴³ The facts are similar because direct action by the federal agency would not cause the injury to the endangered fish, but activity by private actors as a direct result of agency decisions will possibly lead to detrimental impacts to a listed species.⁴⁴

The court decision in Washington will undoubtedly have impacts throughout the region and the country. In particular, areas that rely heavily on floodplain management and contain species that are listed under the ESA will need to be well-aware of the far-reaching impacts of these decisions. The state of Idaho has more river miles than any state in the country, with over 3,100. While many of these miles have pristine beauty for miles surrounding the flowing water, the presence of humans in any area undoubtedly leads to riparian and floodplain development. With no cases brought regarding this particular issue in Idaho, it will be used as an example of how this decision will impact states in a similar situation across the country. The specific example that will be used to illustrate the importance of this case in Idaho will be the Lapwai watershed in the north-central region of the state.

Lapwai Creek, like most streams in the region, is surrounded by agriculture and small communities. Also, similar to most streams in the area, it contains critical habitat for anadromous fish species that are

⁴² See generally *Karuk Tribe of California v. U.S. Forest Service*, 681 F.3d 1006 (9th Cir. 2012).

⁴³ *Id.*

⁴⁴ *Id.*

listed under the ESA. The land-use decisions in the area have led to channelization and development in the Lapwai Creek floodplain, which in turn negatively impacts smolt growth which is deeply important for the survival of anadromous fish species. In the Lapwai Watershed, FEMA has been present and active in implementing the NFIP, contributing to the development that has occurred in areas that sometimes flood in high rain events. If a suit were to be brought against FEMA in Idaho District Court claiming that consultation regarding the ESA should have been performed by FEMA during the implementation of the NFIP, it is highly likely that this would impact development that currently exists in addition to any future development that could occur in the Lapwai Watershed. The likely process would look similar to that of the events that occurred in Washington. Snake River chinook salmon, Snake River sockeye salmon, Snake River Steelhead, White Sturgeon, and Bull Trout are all fish species that are present in Idaho and listed as endangered or threatened under the ESA. While not all of these species rely on floodplain habitat as critical to survival, the opportunity for a similar suit does exist in Idaho. Additionally terrestrial species that are listed can also be impacted, so all other listed species should be assessed as well.

The interaction between the Federal Emergency Management Agency's National Flood Insurance Program as created by the National Flood Insurance Act and the Endangered Species Act, which is managed by National Marine Fisheries Service and United States Fish and Wildlife Service, is complex but important, as the survival of species that rely on a healthy, functioning floodplain ecosystem depend on an appropriate balance between economic development and floodplain protection. The 2004 *NWF v. FEMA* case helped to refine future claims regarding the NFIP in areas that contain ESA listed species.

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