

WHEN THE RUBBER MET THE ROAD . . . THEN THE WATER, FISH,
AND WHALES: USING THE ENDANGERED SPECIES ACT TO
OVERCOME THE DILUTION OF THE CLEAN WATER ACT

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Just as populations of whales and salmon are declining, so too are the ways to protect them. The United States Supreme Court has continuously narrowed the Environmental Protection Agency's authority to protect waterways under the Clean Water Act (CWA). If the CWA is not protecting the water, then perhaps other acts, such as the Endangered Species Act (ESA), can be used to protect the Southern Resident killer whales.

6PPD is a preservative used in tires that, when mixed with the gas ozone, turns into the toxic compound 6PPD-quinone. When tires hit the road, the 6PPD-quinone particles are released and washed into the groundwater and streams. As a result, 6PPD-quinone often kills salmon before they can spawn, which has a devastating effect on the Coho salmon population. A reduction in salmon has a severe effect on the population of Southern Resident killer whales, an endangered species that feeds on Coho salmon during the fall and winter.

The article proposes and analyzes using the citizen suit provision of the ESA to prevent tire manufacturers from using 6PPD in tires. The first proposal is to sue the tire manufacturers directly. The second proposal is to hold the Environmental Protection Agency accountable through vicarious liability. The third proposal is to hold the Department of Transportation liable for allowing the import of tires that contain 6PPD.

INTRODUCTION

The turquoise waves ripple out from the shore, only disrupted by the lush greenery of Douglas fir trees that populate the distant islands. The scene turns from idyllic to exuberant as an immense black tail clears the water's surface. High-pitched clicks and squeaks the Southern Resident killer whales use to chase salmon fill the air, a display that can be viewed in Washington State for as long as anyone can remember. People travel the world to see this scene.

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Little do these whale enthusiasts know that when their tires hit the road to travel, they release toxins that contribute to the decline of the species. These whales, once endemic in the waters of the Northwest, are now critically endangered. The whales are starving to death from the decimation of the salmon population due to a tire preservative called 6PPD.¹ The chemical is ubiquitously used in the tire industry and is in the tires of most vehicles driven today.

Just as the whale and salmon populations are declining, so too are the ways to protect them. The United States Supreme Court has continuously narrowed the Environmental Protection Agency's (EPA) authority to protect waterways under the Clean Water Act (CWA).² If the CWA is not protecting the water, then perhaps other acts, such as the Endangered Species Act (ESA), can be used to protect the Southern Resident killer whales.

The ESA might be used to prevent 6PPD from entering our waterways. 6PPD is a preservative used in tires that, when mixed with the gas ozone, turns into the toxic compound 6PPD-quinone.³ When tires hit the road, the 6PPD-quinone particles are released and washed into the groundwater and streams.⁴ As a result, 6PPD-quinone often kills salmon before they can spawn, which has a devastating effect on the Coho salmon population.⁵ A reduction in salmon has a severe effect on the population of Southern Resident killer whales, an endangered species that feeds on Coho salmon during the fall and winter.⁶ According to the Marine Mammal Commission, "[t]he ongoing decline of the Southern Resident killer whale population over the last 20 years is most likely due to three distinct threats: the decreased quantity and quality of prey, the presence of persistent organic

¹ See Sarah McQuate, *Tire-related Chemicals are Largely Responsible for Adult Coho Salmon Deaths in Urban Streams*, UNIV. OF WASH. NEWS (Dec. 3, 2020), <https://www.washington.edu/news/2020/12/03/tire-related-chemical-largely-responsible-for-adult-coho-salmon-deaths-in-urban-streams/> [<https://perma.cc/DWG3-VQAA>]; *Southern Resident Killer Whale Health Assessment*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/science-data/southern-resident-killer-whale-health-assessments> (last visited on Mar. 7, 2022) [<https://perma.cc/7SMV-FJAP>].

² *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978); *U.S. v. Riverside Bayview Homes, Inc.*, 447 U.S. 121 (1985); *Rapanos v. U.S.*, 547 U.S. 715 (2006); *Sackett v. E.P.A.*, 566 U.S. 120, 127 (2012) [hereinafter *Sackett I*]; *Sackett v. E.P.A.*, 598 U.S. 651 (2023) [hereinafter *Sackett II*].

³ McQuate, *supra* note 1.

⁴ *Id.*

⁵ *See Id.*

⁶ *See Southern Resident Killer Whale*, MARINE MAMMAL COMM'N, <https://www.mmc.gov/priority-topics/species-of-concern/southern-resident-killer-whale/> (last visited Mar. 7, 2024) [<https://perma.cc/5EME-LNLW>].

pollutants, and disturbance from vessel presence and noise.”⁷ Washington State and Seattle’s local government are addressing the disturbance from vessel noises, leaving pollutants and the killer whales’ food source still to be addressed.⁸

Under the ESA, it is unlawful for any person “to take” a listed endangered or threatened species of fish or wildlife.⁹ The Act defines “to take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” wildlife on the endangered or threatened species list.¹⁰ While the ESA did not originally define the terms harm and harass, they were later defined in the Code of Federal Regulations.¹¹ Harm is defined as “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or shelter.”¹² Harass is defined as “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering”¹³

Here, the chemical 6PPD-quinone modifies the environment, resulting in the disruption of the killer whales’ feeding habits by depleting their food source.¹⁴ As a practical matter, in environmental cases, the most common legal relief given is injunctive relief.¹⁵ However, securing injunctive relief for polluters is harder under the “harm” provision than the “take” provision because death or injury must be intentional or the result of negligence under the traditional take mechanism.¹⁶ Most successful injunctions under the ESA are accomplished through civil action.¹⁷ Injunctive relief to prevent the harm caused by 6PPD could be achieved in one of two ways. The first way is to file a civil suit against the United States government

⁷ *Id.*

⁸ S. Resident Orca Recovery, *Vessels*, WASH. STATE RECREATION AND CONSERVATION OFF., <https://orca.wa.gov/recommendation-category/vessels-disturb-orcas/> (last visited Jan. 16, 2023) [<https://perma.cc/DLB2-2AHJ>].

⁹ Endangered Species Act, 16 U.S.C. § 1538(a)(1)(B).

¹⁰ *Id.* § 1532.

¹¹ See 50 CFR § 17.3.

¹² *Id.* § 17.3.

¹³ *Id.* § 17.3.

¹⁴ See *Southern Resident Killer Whale*, *supra* note 6.

¹⁵ Eric J. Murdock and Andrew J. Turner, *How “Extraordinary” is Injunctive Relief in Environmental Litigation? A Practitioner’s Perspective*, 42 ENV’T LAW REP. 10464 (2012).

¹⁶ AM. BAR ASS’N, *ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* 162 (Donald C. Baur & Ya-Wei Le, 3rd ed. 2021).

¹⁷ See *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978); Matthew Osnowitz, *The Value of an Endangered Species: The ESA, Injunctions, and Human Welfare*, 47 COLUMBIA UNIVERSITY 102, 105 (2022).

requiring the regulation of 6PPD's use in tires. The second option would be to file a civil suit against the tire manufacturers, requiring them to use a different chemical to preserve their tires.

This article is about using the ESA to overcome the shortfalls of the CWA to protect waterways and the animals in them. Section I provides background by describing the erosion of the CWA through case law, the history of the ESA, and the cases that helped define it. Section II looks specifically at the Coho salmon in Washington state, the Southern Resident killer whales, and the chemical 6PPD-quinone. Section III covers the legal analysis of both the CWA and the ESA. Section IV will focus on how to utilize the ESA to bring civil suits to hold agencies accountable for regulating the pollutant, 6PPD-quinone, and to hold companies accountable through dumping regulations. Finally, section V will tie everything together and show how the ESA can be used to protect the environment and waterways as the scope of the CWA has been reduced.

I. BACKGROUND

Before delving into a new litigation strategy, each element must first be observed. This first section will provide background by way of examining the relevant history of the CWA, the ESA, and the case law relating to that history.

A. *History of the Clean Water Act*

The CWA was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”¹⁸ After the CWA’s enactment, the EPA was given the power to regulate some of the nation’s waters under certain conditions.¹⁹ Specifically, the EPA was given authority to address “navigable waters,” a term which is defined in the statute as “the waters of the United States, including territorial seas.”²⁰ This subsection will discuss three major cases related to the interpretation of the CWA. First, in 1985, the U.S. Supreme Court decided, *United States v. Riverside Bayview Homes, Inc.*²¹ In *Riverside Bayview Homes, Inc.*, the Court determined that the CWA applied to wetlands adjacent to navigable waters.²² Second, in 2006, the Supreme Court decided *Rapanos v. United States*, which redefined “waters of the United States” and narrowed the EPA’s ability to regulate dumping.²³ The third case is *Sackett v. EPA*, which has been heard by the

¹⁸ Clean Water Act, 33 U.S.C. § 1251(a) (1972).

¹⁹ *Id.* § 1251(d).

²⁰ *Id.* § 1362(7).

²¹ *U.S. v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 124 (1985).

²² *Id.*

²³ *Rapanos v. U.S.*, 547 U.S. 715 (2006).

Supreme Court twice, first in 2012 and again in 2023, each hearing addressing different questions.²⁴ After laying out those three major cases, there will be a brief discussion of decisions made outside of the CWA that do not protect wildlife, and extrajudicial decisions such as EPA rulings, Presidential Executive Orders, and the current state of enforceability of the CWA.

Before the CWA was enacted, a patchwork of acts covered the nation's waterways, each act specific to a certain waterway.²⁵ The United States first began protecting water resources with the Rivers and Harbor Appropriation Act of 1899.²⁶ The Act regulated the dumping of refuse material and prohibited the construction of bridges and other structures without the approval of the Army Corps of Engineers (Corps).²⁷ The Act did not, however, cover discharges unless they affected ship navigation.²⁸ In 1948, the Federal Water Pollution Control Act was enacted, allowing the courts to grant relief for water pollution in the water of the United States.²⁹ Subsequently, in 1965, the Water Quality Act protected interstate waters.³⁰

In 1972, prompted by the Cuyahoga River fire in Cleveland, the CWA was passed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”³¹ In addition to other protections the CWA provides, specifically relevant to this article, the CWA is “the principal law governing pollution control and water quality of the Nation's waterways.”³² Further, the CWA gives the EPA the authority to control pollution such as “setting wastewater standards for industry and water quality standards for all

²⁴ Sackett I, 566 U.S. 120, 125-26 (2012) (determine whether the court has subject-matter jurisdiction to review final agency action under the Administrative Procedure Act); Sackett II, 598 U.S. 651, 663 (2023) (“granting certiorari to decide the proper test for determining whether wetlands are ‘waters of the United States.’”).

²⁵ AM. BAR ASS’N, THE CLEAN WATER ACT HANDBOOK 1 (Mark A. Ryan, 4th ed. 2018).

²⁶ See The Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 401 *et seq.*

²⁷ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES *supra* note 16, at 1.

²⁸ *Id.*

²⁹ The Federal Water Pollution Control Act of 1948, 33 U.S.C. § 1251 (1948).

³⁰ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 1.

³¹ *Id.* at 2; *Introduction to the Clean Water Act*, EPA: Watershed Academy 2-3 https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent_object_id=2574 (last visited Jan. 30, 2024) [<https://perma.cc/J268-FVR6>];

Clean Water Act (CWA), U.S. DEP’T. OF THE INTERIOR: BUREAU OF OCEAN ENERGY MGMT., <https://www.boem.gov/environment/environmental-assessment/clean-water-act-cwa#:~:text=The%20CWA%20is%20the%20principle> (last visited Feb. 17, 2024) [<https://perma.cc/ZJ89-7QCA>]; see also The Clean Water Act, 33 U.S.C. § 1251 *et seq.* (1972).

³² *Clean Water Act (CWA)*, *supra* note 31; see also *id.* § 1251 *et seq.*

contaminants in surface waters.”³³ Under the CWA, “it is unlawful for any person to discharge any pollutant from a point source into waters of the United States, unless a [National Pollutant Discharge Elimination System] permit was obtained under its provisions.”³⁴

Congress has amended the CWA many times to address new toxic pollutants and other issues.³⁵ Moreover, the Court’s interpretation of the CWA has changed over time. The U.S. Supreme Court handed down the first decision interpreting the CWA in 1985 with *U.S. v. Riverside Bayview Homes Inc.*³⁶ In *Riverside*, a home builder filled in wetlands without receiving a permit from the Corps.³⁷ The CWA prohibits actors from discharging dredged or fill materials into “navigable waters” without a permit.³⁸ The Corps interpreted “navigable waters” to be “all ‘freshwater wetlands’ that were adjacent to other covered waters.”³⁹ The Corps filed suit against Riverside Bayview Homes, Inc. for not obtaining a permit prior to placing “fill materials on its property.”⁴⁰ The Federal Appeals Court of the Sixth Circuit found that the Corps’ permit requirement violated the Fifth Amendment and constituted a “take” because the regulation was too “narrowly construed.”⁴¹ Additionally, the Sixth Circuit ruled that Riverside’s property was not within the Corps’ jurisdiction “because its semiaquatic characteristics were not the result of frequent flooding by the nearby navigable waters.”⁴²

The Supreme Court overruled the Sixth Circuit’s finding that the Corps’ regulation constituted a “take” because a “take” only occurs “if the ordinance does not substantially advance legitimate state interests . . . or denies an owner economically viable use of his land.”⁴³ The Supreme Court found that because the existence of a permit system means that permission can be granted, the system does not automatically mean that a “take” occurs.⁴⁴

³³ *Id.*

³⁴ *Id.*

³⁵ *Introduction to the Clean Water Act*, supra note 31, at 3.

³⁶ STEPHEN MULLIGAN, CONG. RSCH. SERV., R44585, EVOLUTION OF THE MEANING OF “WATERS OF THE UNITED STATES” IN THE CLEAN WATER ACT 13 (2019).

³⁷ *U.S. v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 124 (1985).

³⁸ Clean Water Act, 33 U.S.C. § 1251 (1972); *see also Riverside*, 474 U.S. at 123.

³⁹ *Riverside*, 474 U.S. at 124.

⁴⁰ *Id.* at 124.

⁴¹ *Id.* at 127.

⁴² *Id.* at 125.

⁴³ *Id.* at 126 (quoting *Agins v. Tiburon*, 447 U.S. 255, 260 (1980)).

⁴⁴ *Id.* at 126-27.

Further, the Court found that the landowners could still use their land for other purposes even if the Corps denied the permit.⁴⁵

The Supreme Court held that “navigable waters” defined as “waters of the United States,” (WOTUS) included adjacent freshwater wetlands.⁴⁶ A “‘Freshwater wetland’ was defined as an area that is ‘periodically inundated’ and is ‘normally characterized by the prevalence of vegetation that requires saturated soil conditions for growth and reproduction.’”⁴⁷ The Court reversed the lower court and ruled that the Corps could require a permit for land that did not flood regularly because a wetland is defined by the vegetation and soil quality present on the land.⁴⁸ The land in *Riverside* was categorized as a freshwater wetland that is adjacent to navigable waters because the area was periodically flooded and the vegetation and soil quality was that of a wetland.⁴⁹

However, in 2006 the Supreme Court decided *Rapanos v. U.S.*, narrowing the definition of “navigable waters” to only cover adjacent wetlands if they were continuously connected with water.⁵⁰ The Petitioner in *Rapanos*, John A. Rapanos, backfilled the wetlands on a parcel of land he owned in Michigan so he could develop the property.⁵¹ A series of drains and ditches connected the wetland to the main body of water.⁵² The Court remanded the case to determine “whether the nearby drains and ditches contain continuous or merely occasional flows of water.”⁵³ If the drainage ditches were not continuously providing water flow, then *Rapanos* would not require a permit to fill the wetlands through the CWA.⁵⁴

Rapanos was a plurality opinion that resulted in two distinct tests, splitting the lower courts and causing inconsistent rulings.⁵⁵ In some rulings, a toxin could be covered while in others it would not be, depending on how the court defined WOTUS or which test they chose to apply.⁵⁶ The vote was 4-1-4, with Justice Roberts writing a concurrence that predicted the lower

⁴⁵ *Id.*

⁴⁶ *Id.* at 139.

⁴⁷ *Id.* (quoting 33 CFR § 209.120(d)(2) (1976)).

⁴⁸ *Id.* at 130.

⁴⁹ *Id.* at 131.

⁵⁰ *Rapanos v. U.S.*, 547 U.S. 715, 742 (2006).

⁵¹ *Id.* at 719-20.

⁵² *Id.*

⁵³ *Id.* at 729.

⁵⁴ *Id.*

⁵⁵ KATE BOWERS, CONG. RSCH. SERV., LSB10707 SUPREME COURT REVISITS SCOPE OF “WATERS OF THE UNITED STATES” (WOTUS) UNDER THE CLEAN WATER ACT (Mar. 11, 2022).

⁵⁶ *Id.*

courts' struggle.⁵⁷ Justice Scalia, writing a four-justice plurality decision, found that WOTUS only includes “those relatively permanent, standing, or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance” and “does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.”⁵⁸ Justice Kennedy wrote the critical 5th vote concurrence where he found that a wetland is ‘navigable water’ protected under the CWA if the wetland has a ‘significant nexus’ with a ‘relatively permanent body of water.’⁵⁹

Defining WOTUS as defined by Justice Scalia’s definition in *Rapanos* could legalize the dumping of chemicals in bodies of water that were not encompassed under this definition of the CWA.⁶⁰ “‘The discharge of a pollutant’ is defined broadly to include ‘any addition of any pollutant to navigable waters from any point source,’ and ‘pollutant’ is defined broadly to include not only traditional contaminants but also solids such as ‘dredged soil, . . . rock, sand, [and] cellar dirt.’”⁶¹ Therefore, if a body of water does not fit under the current definition of “navigable waters,” then the EPA cannot regulate the dumping of contaminants therein under the CWA.⁶² Some polluters have taken advantage of the ambiguity caused by *Rapanos* to justify open dumping.⁶³

Finally, the *Sackett v. EPA* case has moved up and down the court system since 2012. The first case determined if the case could be brought to court and the second case resolved the merits of the case in 2023.⁶⁴ The first case, *Sackett v. EPA (Sackett I)* began when the Sacketts filled in part of their land before applying for a permit from the Corps.⁶⁵ The EPA determined that

⁵⁷ *Rapanos v. U.S.*, 547 U.S. 715, 742 (2006).

⁵⁸ *Id.* at 739.

⁵⁹ *Id.* at 767.

⁶⁰ See *Clean Water Act (CWA) and Federal Facilities*, ENV’T PROT. AGENCY, <https://www.epa.gov/enforcement/clean-water-act-cwa-and-federal-facilities> (last updated Dec. 14, 2023) [<https://perma.cc/N738-6G6F>].

⁶¹ *Rapanos*, 547 U.S. at 723 (quoting 33 U.S.C. 1362(6), (12)).

⁶² *Id.*

⁶³ *Clean Water Act (CWA) and Federal Facilities*, *supra* note 60.

See Charles Duhigg & Janet Roberts, *Rulings Restrict Clean Water Act, Foiling E.P.A.*, N.Y. TIMES (Feb. 28, 2010), <https://www.nytimes.com/2010/03/01/us/01water.html#:~:text=Thousands%20of%20the%20nation's%20largest,according%20to%20interviews%20with%20regulators> [<https://perma.cc/LJ2X-B26Q>].

⁶⁴ *Sackett v. Environmental Protection Agency Coverage*, SCOTUSBLOG, <https://www.scotusblog.com/case-files/cases/sackett-v-environmental-protection-agency/> (last visited Oct. 29, 2022) [<https://perma.cc/5BZE-LDCM>].

⁶⁵ *Sackett I*, 566 U.S. 120, 127 (2012).

the Sacketts violated the CWA because they altered their land without a permit.⁶⁶ The CWA allows the EPA to correct a violation by issuing a compliance order, initiating a civil enforcement action, or both.⁶⁷ In *Sackett I*, the EPA first issued a compliance order to return the land to its original state.⁶⁸ After the Sacketts failed to do so, the EPA initiated a civil enforcement action.⁶⁹ After the Sacketts' case went through the EPA's channels of appeal, it went through the federal court system all the way to the Supreme Court.⁷⁰ Justice Antonin Scalia framed the presenting issue as "whether Michael and Chantell Sackett may bring a civil action under the Administrative Procedure Act, 5 U.S.C. § 500 et seq., to challenge the issuance by the Environmental Protection Agency (EPA) of an administrative compliance order under § 309 of the Clean Water Act, 33 U. S. C. § 1319."⁷¹ The Court found that there was no adequate remedy for the EPA's decisions beyond the Administrative Procedure Act review, and the CWA permitted that review.⁷² The Court reversed and remanded the Ninth Circuit Court of Appeals' judgment.⁷³

The Sacketts' case then found its way back through the district and circuit courts and went to the Supreme Court again.⁷⁴ The 2023 case, also entitled *Sackett v. EPA (Sackett II)*, determined that the CWA failed to protect the Sacketts' land, causing the Sacketts not to be held liable for their actions.⁷⁵ The Biden administration argued that the "restrictive version of the 'continuous surface connection' test articulated by the plurality in *Rapanos v. United States*. . . has no grounding in the CWA's text, structure, or history."⁷⁶ The administration argued that abandoning the significant nexus test would leave many adjacent wetlands not covered under the act.⁷⁷ The question in *Sackett II* is over the application of *Rapanos* and the proper test that should be used to determine the status of a wetland as WOTUS.⁷⁸ The Supreme Court ruled that federally protected wetlands only encompassed

⁶⁶ *Id.* at 123.

⁶⁷ *Id.* at 120-21; 33 U.S.C. § 1319(a)(3).

⁶⁸ *Sackett I*, 566 U.S. at 124

⁶⁹ *Id.* at 125.

⁷⁰ *Id.* at 131.

⁷¹ *Sackett I*, 566 U.S. at 122; 33 U.S.C. § 1319.

⁷² *Sackett I*, 566 U.S. at 129.

⁷³ *Id.*

⁷⁴ *Sackett v. Environmental Protection Agency Coverage*, *supra* note 64.

⁷⁵ *See Sackett II*, 598 U.S. 651 (2023).

⁷⁶ Brief for the Respondents at 17, *Sackett v. Env'tl Prot. Agency*, 598 U.S. 651 (2023) (No. 21-454), 2022 WL 2119244.

⁷⁷ *Id.*

⁷⁸ *Sackett II*, 598 U.S. at 663.

directly adjoining rivers, lakes, and other bodies of water.⁷⁹ This is a much narrower interpretation of the CWA, which opens up many wetlands across the United States to being developed.⁸⁰ Despite the holding, alternate protection of waterways and the broader environment should be investigated.

The Corps' ability to deny permits has also been defined by the courts.⁸¹ In *Solid Waste Agency v. Army Corps of Engineers*, the Supreme Court determined that the Corps' denial of a permit for disposal was improper because it lacked jurisdiction to deny the permit.⁸² In *Solid Waste Agency*, a group of municipalities in Illinois came together to build a disposal site on an abandoned gravel pit.⁸³ The Corps denied the municipalities' petition because migratory birds were using the pit.⁸⁴ The Migratory Bird Rule prohibits the 'take' of a protected migratory birds' habitat unless authorized by Fish and Wildlife.⁸⁵ The Court found that the Corps could not regulate the quarry because, as a seasonal pond, it was outside of the CWA's scope of navigable waters.⁸⁶ Further, the Court found that protecting wildlife was also outside of the scope of the CWA and therefore not within the Corps' authority to regulate.⁸⁷ Effectively, the *Solid Waste Agency* decision means that the EPA and the Corps cannot prevent dumping in wildlife habitats purely to protect them.⁸⁸

Several published EPA and Corps guidelines, multiple signed Executive Orders, and exceptions also complicate the CWA's application. In 2005, the EPA and Corps went through a rule-making process and issued the New Agency Guideline defining the CWA's jurisdiction.⁸⁹ These guidelines

⁷⁹ *Id.* at 684.

⁸⁰ Albert C. Lin, *The Supreme Court just narrowed protection for wetlands, leaving many valuable ecosystems at risk*, PBS NEWS HOUR (May 27, 2023, 8:58 AM), <https://www.pbs.org/newshour/science/the-supreme-court-just-narrowed-protection-for-wetlands-leaving-many-valuable-ecosystems-at-risk> [https://perma.cc/WVQ3-4Q89].

⁸¹ *See Solid Waste Agency v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 169 (2001).

⁸² *Id.*

⁸³ *Id.* at 162-63.

⁸⁴ *Id.* at 164.

⁸⁵ Migratory Bird Rule, 51 Fed. Reg. 41217 (Nov. 13, 1986). The Migratory Bird Rule is based upon the protections provided for in the Migratory Bird Treaty Act of 1918, 16 U.S.C. 703-712 (2020).

⁸⁶ *Solid Waste*, 531 U.S. at 163.

⁸⁷ *Id.* at 193.

⁸⁸ Rebecca Eisenberg, *Killing the Birds in One Fell Swoop: Solid Waste Agency of Northern Cook County vs. United States Army Corps of Engineers*, 253 FORDHAM ENVIRONMENTAL LAW REVIEW 254-55 (2004).

⁸⁹ Env't Prot. Agency, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (July 29, 2005).

lessened the CWA's control of some waterways, but most of its jurisdiction was unaltered.⁹⁰ In 2015, the EPA and Corps under the Obama administration issued the Clean Water Rule in response to the above court cases.⁹¹ The Clean Water Rule expanded the jurisdiction of the CWA. However, in 2017, President Trump signed an executive order aimed at undoing the Clean Water Rule, which rolled back the expansion of the CWA.⁹²

In 2020, another Executive Order from President Trump called the "Navigable Waters Protection Rule," greatly reduced the number of waterways and wetlands that the CWA protected.⁹³ Further, the Executive Order allowed the Corps to make regulatory determinations called jurisdictional determinations instead of getting a permit.⁹⁴ This resulted in the Corps' timeline for decision making moving to less than twenty-four hours instead of months. In 2021, an Executive Order from President Biden and *Pasqua Yaqui Tribe v. U.S. Environmental Protection Agency* invalidated Trump's 2017 executive order.⁹⁵ The EPA then issued a ruling for the current implementation of WOTUS narrowing what waterways were covered.⁹⁶ The executive order used the definition of WOTUS from the "Clean Water Rule: Definition of 'Waters of the United States,' 80 Fed. Reg. 37054."⁹⁷ The ruling defined WOTUS through the Critical Nexus Test.⁹⁸

The CWA is the main act that protects waterways and the environment. Though the CWA used to have a broad definition of what

⁹⁰ *See id.*

⁹¹ Clean Water Rule: Definition of "Waters of the United States", 80 Fed. Reg. 37054 (July 13, 2015) (to be codified at 40 C.F.R. pt. 23).

⁹² Lisa Friedman & Coral Davenport, *Trump Administration Rolls Back Clean Water Protections*, N.Y. TIMES (Sep. 19, 2019), <https://www.nytimes.com/2019/09/12/climate/trump-administration-rolls-back-clean-water-protections.html> [<https://perma.cc/N8EW-CC87>].

⁹³ Current Implementation of Waters of the United States, Env't Prot. Agency, <https://www.epa.gov/wotus/current-implementation-waters-united-states#Rapanos> (last updated February 21, 2024) [<https://perma.cc/9HYT-MA7E>].

⁹⁴ Amena Saiyid, *Companies Eager to 'lock in' Trump Era-Water Rule Exemptions*, BLOOMBERG LAW (Sep. 10, 2020, 5:00 AM), <https://news.bloomberglaw.com/environment-and-energy/companies-eager-to-lock-in-trump-era-water-rule-exemptions> [<https://perma.cc/ZH3J-WKKP>].

⁹⁵ *Pasqua Yaqui Tribe v. EPA*, 557 F. Supp. 3d 949, 957 (D. Ariz. 2021); Executive Order 13778—Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the "Waters of the United States" (Feb. 28, 2017), <https://www.presidency.ucsb.edu/documents/executive-order-13778-restoring-the-rule-law-federalism-and-economic-growth-reviewing-the> [<https://perma.cc/SQ5G-4FHD>].

⁹⁶ *Id.*

⁹⁷ 80 Fed. Reg. 37054 (June 29, 2015).

⁹⁸ *Id.* at Executive Summary.

WOTUS were protected, it was narrowed in *Riverside*, and then further narrowed in *Rapanos*. The decision over what bodies of water are covered by the CWA rested on the *Sackett II* decision, which was decided by the United States Supreme Court in 2023. The CWA cannot be directly used to protect wildlife because of the Court's decision in *Solid Waste Agency*.⁹⁹ All of the decisions and executive orders placed the application of the CWA back to where it stood after *Rapanos* until the Supreme Court published its decision on *Sackett II* in 2023. The *Sackett II* Court left the definition of WOTUS narrower than *Rapanos*.¹⁰⁰

B. *The History of Protecting Endangered Species*

The ESA was enacted to provide a framework to meet the obligations of international treaties in order to protect endangered species.¹⁰¹ A series of legislative actions were made in response to the loss of some of the United States' most iconic species.¹⁰² Since the ESA was enacted, the Court's application of the ESA has changed concerning its ability to protect endangered species. The cases discussed below illustrate where the protection of endangered species currently stands, though it took passing a series of legislation to get there.

Several species becoming extinct in the United States prompted the government to start passing laws to protect endangered species. At the turn of the 20th century, there were virtually no protections for endangered species. For example, carrier pigeons were once so numerous that they blackened the sky.¹⁰³ The bird's disappearance from North America was so abrupt and striking that it caused the first significant federal wildlife regulation, the Lacey Act, to pass in 1900.¹⁰⁴ The Lacey Act's stated purpose was "to utilize [the Department of Agriculture] for the reintroduction of birds that have become locally extinct or are becoming so" and the Act specifically outlawed the shipment of wildlife in interstate commerce.¹⁰⁵ The passage of

⁹⁹ Eisenberg, *supra* note 88.

¹⁰⁰ *Id.*

¹⁰¹ Endangered Species Act, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/national/endangered-species-conservation/endangered-species-act#section-2.-findings,-purposes,-and-policy> (last updated June 6, 2023) [<https://perma.cc/PJ9C-PCSV>].

¹⁰² *Endangered Species Act Milestones: Pre 1973*, U.S. FISH AND WILDLIFE SERV., <https://www.fws.gov/node/266462> (last visited Mar 10, 2024) [<https://perma.cc/36KZ-QHSE>].

¹⁰³ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16.

¹⁰⁴ *Id.*

¹⁰⁵ 33 Cong. Rec. 4871 (1900) (statement of Sen. John F. Lacey); *see also* The Lacey Act, 16 U.S.C. §§ 3371-3378.

the Lacey Act was a catalyst for further legislation with the similar objective of protecting endangered birds and wildlife.

The Department of the Interior's Bureau of Sport Fisheries and Wildlife (Bureau) was created in 1939 to research and perform conservation projects.¹⁰⁶ In 1940, the United States signed the Convention on Natural Protection and Wildlife Preservation in the Western Hemisphere, an agreement with over twenty-one countries to "protect and reserve in their natural habitat representatives of all species and genera . . . to assure them from becoming extinct."¹⁰⁷ In the early 1960s, the Department of the Interior established the Committee on Rare and Endangered Wildlife Species.¹⁰⁸ The Committee made the first list of endangered species.¹⁰⁹

In 1969, the United States passed the Endangered Species Conservation Act (ESCA), the first endangered species law with international implications.¹¹⁰ It called for the compilation of an official list of endangered species and also prohibited the importation of endangered species.¹¹¹ The ESCA had no prohibition on the hunting or selling of domestic animals and avoided protecting wildlife habitats.¹¹² The Endangered Species Act (ESA) was enacted in 1973 to correct these issues.¹¹³ The class of endangered species was divided into two categories.¹¹⁴ The first category is threatened species, a classification that results in flexible protections.¹¹⁵ The second is endangered species, which are afforded automatic strict protections.¹¹⁶ The ESA allows for the designation of 'critical habitat' for both threatened and endangered species.¹¹⁷ The ESA also holds federal agencies accountable for adversely modifying critical habitats or "taking" listed species.¹¹⁸ A 1982 amendment required that the Secretary use the best scientific and commercial

¹⁰⁶ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 14.

¹⁰⁷ Convention between the United States of America and other American Republics respecting Nature Protection and Wildlife Preservation in the Western Hemisphere, Apr. 30, 1942, 56 Stat. 1354.

¹⁰⁸ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES *supra* note 16, at 14-15.

¹⁰⁹ *Id.*

¹¹⁰ Endangered Species Conservation Act, Pub. L. No. 89-669, §§ 1-3, 80 Stat. 926 (1969) (repealed 1973).

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ 50 C.F.R. § 17.1; 16 U.S.C. §1531 (1973).

¹¹⁴ 16 U.S.C. § 1533.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

data available and designate critical habitats.¹¹⁹ The updated ESA is the main governing legislation for protecting endangered species.

The interpretation of “take” has been modified over time through case law. The first major case that dealt with the interpretation of “take” under the ESA was *TVA v. Hill*, where the Court halted the construction of a dam because it would modify the critical habitat of an endangered species.¹²⁰ The second major case to discuss “take” was *Babbitt v. Sweet Home Chapter of Cmty. for a Great Oregon (Sweet Home)*, wherein the Sweet Home Chapter of Cmty. for a Great Oregon (Sweet Home Chapter) fought the definition of “harm” under the ESA.¹²¹ The Secretary of the Interior of Fish and Wildlife stated that a “take” included “significant habitat modification or degradation where it actually kills or injures wildlife.”¹²² Sweet Home Chapter argued that “harm” did not include habitat modification and degradation and that it was beyond the authority of the ESA to regulate.¹²³ The Court found in favor of the Secretary’s decision and concluded that “harm” includes habitat degradation.¹²⁴

Justice O’Connor wrote a concurrence in *Sweet Home* where she stated that “regulation is limited by its terms to actions that actually kill or injure individual animals.”¹²⁵ She also commented on causation, stating that “even setting aside difficult questions of science, the regulation’s application is limited by ordinary principles of proximate causation.”¹²⁶ This was the beginning of the use of proximate cause for the ESA, shifting the rulings away from the use of science and narrowing the controlling agencies’ regulatory powers. *Sweet Home* “requires the wildlife agencies to prove that a person’s habitat modifying activity, such as diverting water, is the proximate cause of harm to an endangered or threatened animal.”¹²⁷ It also implemented “foreseeability,” meaning that a reasonable person would likely foresee the

¹¹⁹ 16 U.S.C. § 1533(b)(2) (amending 16 U.S.C. § 1533 (1973)).

¹²⁰ *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 162 (1978).

¹²¹ *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687, 690 (1995).

¹²² *Id.*

¹²³ *Id.* at 693.

¹²⁴ *Id.* at 708.

¹²⁵ *Id.* at 709.

¹²⁶ *Id.* at 708.

¹²⁷ James Rasband, *Priority, Probability, and Proximate Cause: Lessons from Tort Law* *Priority, Probability, and Proximate Cause: Lessons from Tort Law About Imposing ESA Responsibility for Wildlife Harm on Water About Imposing ESA Responsibility for Wildlife Harm on Water Users and Other Joint Habitat Modifiers Users and Other Joint Habitat Modifiers*, 33 ENV’T L 598 (2003).

outcome being the result of the action.¹²⁸ The reasonable person refers to a person who is “of average caution, care and consideration.”¹²⁹

The next case, *Animal Welfare Institute v. Beech Ridge Energy LLC*, narrowed the definition of harm.¹³⁰ *Animal Welfare Institute* was a District Court case for the District of Maryland making the decision non-binding, except in Maryland. In the 2009 case, Beech Ridge Energy, LLC failed to apply for an Incidental Take Permit (ITP), and their wind turbines were killing endangered bats.¹³¹ The ESA defines “harm” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” against an endangered species.¹³² Further, the Fish and Wildlife Service has defined “harass” as “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.”¹³³ The court enjoined Beech Ridge Energy, LLC from operating its turbines during certain times and required the company to apply for an ITP.¹³⁴

The final case, *Aransas Project v. Shaw*, was about the “take” of Whooping Cranes and the proximate cause of their declining numbers.¹³⁵ *Aransas Project* was a Fifth Circuit case, and the Supreme Court did not grant certiorari.¹³⁶ The following is the causation breakdown of the case:

- (1) private parties withdrawing water from rivers, which led to
- (2) a significant reduction in freshwater inflow into the estuarine ecosystem, which, in combination with drought effects, led to
- (3) increased salinity in the bay, causing
- (4) a reduction in the abundance of blue crabs and wolfberries upon which the cranes rely, resulting in

¹²⁸ Cochran v. Securitas Sec. Servs. USA, Inc., 59 N.E.3d 234, 249 (4th Cir. 2016).

¹²⁹ Jeffrey Johnson, *Reasonable Person Standard: Legal Definition & Examples*, FORBES (Sep. 19, 2022, 9:19 AM). <https://www.forbes.com/advisor/legal/personal-injury/reasonable-person-standard/> [<https://perma.cc/45Q5-TLDY>].

¹³⁰ *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540, 541 (D. Md. 2009).

¹³¹ *Id.*

¹³² Endangered Species Act, 16 U.S.C. § 1532(19) (1973).

¹³³ 50 C.F.R. § 17.3 (2023).

¹³⁴ *Animal Welfare Inst.*, 675 F. Supp. at 583.

¹³⁵ *Aransas Project v. Shaw*, 775 F.3d 641, 645 (5th Cir. 2014).

¹³⁶ *The Aransas Project v. Shaw*, 576 U.S. 1035 (2015).

- (5) emaciation of the cranes,
- (6) engagement in stress behavior, and ultimately
- (7) the death of 23 cranes in the 2008–2009 wintering season.¹³⁷

The Court found that “[a]pplying a proximate cause limit to the ESA must . . . mean that liability may be based neither on the ‘butterfly effect’ nor on remote actors in a vast and complex ecosystem.”¹³⁸ The 5th Circuit found that the connection between Shaw’s actions and the birds’ deaths was too remote to hold the company accountable.¹³⁹

II. COHO SALMON, SOUTHERN RESIDENT KILLER WHALES, AND THE CHEMICAL 6PPD-QUINONE

In order to apply the discussed history of the law to a new litigation technique for the case of 6PPD-Quinone and its harm to Southern Resident Killer Whales and Coho Salmon, the environmental and scientific background of the situation needs to be explained. The first subsection herein will examine the Southern Resident killer whales, discussing their designation under the ESA, and listing the reasons that caused them to make the list. The second section will look at one of the whales’ food sources, the Coho salmon, and their decline in numbers. The final section will look at the chemical that is causing the Coho salmon’s decline and in consequence, the killer whales’ decline. Together these sections will paint a picture of why this new litigation technique is needed to help prevent the extinction of the Southern Resident killer whale.

A. *Southern Resident Killer Whales*

The Southern Resident killer whale populations are declining, and they have been declared a critically endangered subspecies under the ESA.¹⁴⁰ Southern Resident killer whales were added to the endangered species list in 2005.¹⁴¹ The National Marine Fisheries Service is the regulatory agency responsible for the protection of the killer whales.¹⁴² Southern Resident killer whales are a subspecies of killer whales found in the eastern North Pacific,

¹³⁷ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 160-61.

¹³⁸ *Id.*

¹³⁹ *Id.* at 664.

¹⁴⁰ *Id.*

¹⁴¹ *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

¹⁴² *Southern Resident Killer Whales*, *supra* note 6.

mainly in Washington, Oregon, and British Columbia.¹⁴³ The whales' status as an endangered species is due to four major factors.

The four major factors that are causing the extinction of the killer whales are being addressed, except for their depleted food source. The first reason that the Southern Resident killer whales are facing extinction is because in the 1960s and 1970s, juvenile whales were taken from their pods and placed in sea parks; however, this practice has stopped.¹⁴⁴ The second is the focus of this note, which is the reduction of the whale's food quality and quantity.¹⁴⁵ The third reason is the presence of "persistent organic pollutants that could cause immune or reproductive system dysfunction."¹⁴⁶ The Stockholm Convention is a global treaty that requires countries to limit and reduce the use of Persistent Organic Pollutants (POP), which went into effect in 2004.¹⁴⁷ The final factor is the noise produced by vessels that disturbs the whales' ability to echolocate their prey.¹⁴⁸ In response, the Northwest has launched a program called Quiet Sound to reduce the noise for killer whales.¹⁴⁹ The program states that "[w]hen large vessels slow their speed they reduce the amount of underwater noise they create and less underwater noise means better habitat for the endangered Southern Resident killer whales."¹⁵⁰ The slow rate of cleanup of POPs, as well as action already taking place to reduce noise, make protecting the killer whales' food source a high priority.¹⁵¹

¹⁴³ *Id.*

¹⁴⁴ *Killer Whale*, NAT'L OCEANIC AND ATMOSPHERE ADMIN., <https://www.fisheries.noaa.gov/species/killer-whale> (last visit on Mar. 11th, 2024) [<https://perma.cc/VE5M-HUZS>].

¹⁴⁵ *Id.*

¹⁴⁶ West Coast Regional Office, *Southern Resident Killer Whale (Orcinus Orca)*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/southern-resident-killer-whale-orcinus-orca> (last updated Feb. 5, 2024) [<https://perma.cc/5G8L-3EEP>].

¹⁴⁷ Karissa Kovner, *Persistent Organic Pollutants: A Global Issue, A Global Response*, ENV'T PROT. AGENCY, <https://www.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response> (last updated Jan. 23, 2024) [<https://perma.cc/M7NS-6QHS>].

¹⁴⁸ Danielle Hall, *When Killer Whales Hunt the King of Salmon*, SMITHSONIAN INST. (July 2021) <https://ocean.si.edu/ocean-life/marine-mammals/when-killer-whales-hunt-king-salmon> [<https://perma.cc/3KSG-TYX6>].

¹⁴⁹ Tom Banse, *Big ships transiting North Puget Sound asked to slow down, quiet down for orcas*, KUOW NEWSROOM (Oct. 17, 2022, 8:54AM) <https://www.kuow.org/stories/big-ships-transiting-north-puget-sound-asked-to-slow-down-quiet-down-for-orcas> [<https://perma.cc/3F7H-AU2X>].

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

Killer whales are found in every ocean but have distinct populations and species.¹⁵² Killer whales are not whales at all, but rather a kind of dolphin.¹⁵³ Southern Resident killer whales differ from other populations of killer whales because they only eat fish, have unique calls, and are not migratory.¹⁵⁴ While the entire population of killer whales is not endangered, the ESA allows the protection of species, subspecies, or distinct populations.¹⁵⁵ This results in the protection of the subspecies Southern Resident killer whales.¹⁵⁶ The Southern Resident killer whale population consists of three designated pods: J, K, and L.¹⁵⁷ Most Southern Resident killer whales spend their whole lives in their pod, a quality unique to this subpopulation.¹⁵⁸ However, the Southern Resident killer whale population used to consist of about 140 whales, and now it has fallen to around seventy-five.¹⁵⁹ Female and male killer whales have different life expectancies; female killer whales live from fifty to ninety years and male killer whales live from about thirty years to sixty years.¹⁶⁰ Female killer whales reach sexual maturity in their teenage years, but offspring have a higher survival rate when the female is in her twenties.¹⁶¹ A female's reproductive period ends between thirty and forty.¹⁶² Their gestation period is around fifteen to eighteen months, and they typically only have one calf per pregnancy.¹⁶³ Southern Residents have an estimated fifty percent infant mortality rate, contributing to their decline.¹⁶⁴

Chinook salmon constitute the main food in the Southern Resident killer whales' diet,¹⁶⁵ though the primary food source for the whales changes throughout the year. For example, the main food source for the killer whales

¹⁵² *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

¹⁵³ *Killer Whale*, *supra* note 144.

¹⁵⁴ *Id.*

¹⁵⁵ Off. of Protected Res., *Glossary Endangered Species Act*, NAT'L OCEANIC ATMOSPHERIC ADMINISTRATION, <https://www.fisheries.noaa.gov/laws-and-policies/glossary-endangered-species-act#distinct-population-segment> (last updated Nov. 15, 2022). [<https://perma.cc/9Z3V-FPUJ>].

¹⁵⁶ See Endangered Species Act, 16 U.S.C. §§ 1531-1544.

¹⁵⁷ *Southern Resident Killer Whale*, *supra* note 6.

¹⁵⁸ *Killer Whale*, *supra* note 144.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

¹⁶² Robin Mckie, *Killer whales explain the mystery of the menopause*, THE GUARDIAN (Jan. 15, 2017) <https://www.theguardian.com/science/2017/jan/15/killer-whales-explain-meaning-of-the-menopause> [<https://perma.cc/YST4-PW9A>].

¹⁶³ *Id.*

¹⁶⁴ *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

¹⁶⁵ Danielle Hall, *supra* note 148.

in October is Coho salmon, representing 53.8% of their diet.¹⁶⁶ Any depletion of Coho salmon could hurt the killer whale's chance of survival, and is of great concern, especially since Chinook salmon are already considered endangered.¹⁶⁷ Although most of the issues affecting the killer whales are being addressed, their numbers continue to decline. Thus, it has become essential for their survival to stop the decimation of salmon populations.

B. Coho Salmon

The Southern Resident killer whales primarily eat Coho salmon in October. Coho salmon is indigenous to Washington State¹⁶⁸ and is so ubiquitous within the local area that the Lummi Nation, a local indigenous tribe, identifies as “salmon people.”¹⁶⁹ The life of a salmon is complex and filled with different stages that correlate with different locations, from streams to the ocean.¹⁷⁰ While Coho Salmon are not currently endangered in Washington, outside of the Columbia River, they may soon join the endangered species list due to pollutants from tires, pushing the salmon further toward the brink of extinction.¹⁷¹

Salmon are also sacred to local indigenous people, including the Lummi Nation.¹⁷² “In the Point Elliott Treaty of 1855, the Lummi, not yet devastated by smallpox and fur trappers and sawmills, gave up their lands in exchange for political sovereignty, reservations, and fishing and hunting rights in their ‘usual and accustomed’ places—the latter, an expansive promise of the treaty.”¹⁷³ The Treaty shows how important fishing is to the

¹⁶⁶ M. Bradley Hanson et al., *Endangered predators and endangered prey: Seasonal diet of Southern Resident killer whales*, PLOS ONE, March 3, 2021, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7928517/> [https://perma.cc/88PF-C7BL].

¹⁶⁷ *Id.*

¹⁶⁸ *Coho Salmon (Oncorhynchus kisutch)*, WASH. DEP'T OF FISH AND WILDLIFE <https://wdfw.wa.gov/species-habitats/species/oncorhynchus-kisutch>. (last visited Mar. 7, 2024) [https://perma.cc/D572-DB4K].

¹⁶⁹ E. Tammy Kim, *Can This Tribe of ‘Salmon People’ Pull off one more win?*, N.Y. TIMES (Oct. 24, 2021), <https://www.nytimes.com/2021/10/22/opinion/lummi-climate-change-port-terminal.html> [https://perma.cc/375T-PPE3].

¹⁷⁰ West Coast Regional Office, Salmon Life Cycle and Seasonal Fishery Planning, NAT'L OCEAN ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/west-coast/sustainable-fisheries/salmon-life-cycle-and-seasonal-fishery-planning>. (last updated Oct. 6, 2022) [https://perma.cc/2SZR-UZQ4].

¹⁷¹ *Salmon Status*, WASH. GOV'T: STATE OF SALMON IN WATERSHEDS, <https://stateofsalmon.wa.gov/executive-summary/salmon-status/> (last visited on Mar. 7, 2024) [https://perma.cc/W6GF-9D3A].

¹⁷² Pamela T. Amoss, *The Fish God Gave Us: The First Salmon Ceremony Revived*. 24 ARCTIC ANTHROPOLOGY, no. 1 56, 57-66. (1987).

¹⁷³ E. Tammy Kim, *supra* note 169.

Lummi Nation, who perform celebratory salmon ceremonies.¹⁷⁴ Now that the number of salmon has dwindled, the tribe catches crabs and crustaceans instead.¹⁷⁵ “Julius, the elected leader of the 6,500-member tribe” stated that “[t]he bottom line is the Salish Sea and the whales and the tribes need more salmon,’ . . . ‘We’re at the point now where we don’t have much time. We are possibly the last generation that can do anything about it.’”¹⁷⁶ This demonstrates the strong connection that the local indigenous communities have, not only to the Southern Resident killer whales but also to the salmon.

Coho salmon’s reproductive behaviors leave them open to becoming endangered because they only reproduce once. Coho salmon hatch from eggs laid on stream beds as alevins and soon become fry.¹⁷⁷ Coho fry normally spend a year in freshwater before going to the open ocean, where they turn into parr.¹⁷⁸ Coho salmon spend about 18 months at sea before returning to the river to spawn.¹⁷⁹ To reproduce, Coho salmon return to the rivers where they were born.¹⁸⁰ A single female can have between 2,500 and 7,000 eggs during this time.¹⁸¹ The adult salmon die soon after they reproduce.¹⁸²

It can be devastating for the salmon population when a female salmon is unable to reach her spawning grounds, given the number of eggs she lays. Further, at most only 0.1% of salmon eggs laid return to their stream to spawn, so every fish killed before spawning can be disastrous to the population.¹⁸³ The Coho salmon population is affected by several factors, including global warming, habitat loss, dam construction, and degraded water

¹⁷⁴ Amoss, *supra* note 172.

¹⁷⁵ E. Tammy Kim, *supra* note 169.

¹⁷⁶ Levi Pulkkinen, *A pod of orcas is starving to death. A tribe has a radical plan to feed them*, THE GUARDIAN (Apr. 25, 2019, 6:00AM), <https://www.theguardian.com/environment/2019/apr/25/orca-starving-washington-feed-salmon-lummi-native-american>. [https://perma.cc/FY9P-DYN3].

¹⁷⁷ *The Salmon Lifecycle*, Nat’l Park Services, <https://www.nps.gov/olym/learn/nature/the-salmon-life-cycle.htm> [https://perma.cc/35HC-K82S] (last updated July 22, 2019).

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Salmon Fact Sheet*, PBS: NATURE BLOG, (Dec. 10, 2021), <https://www.pbs.org/wnet/nature/blog/salmon-fact-sheet/> [https://perma.cc/SEL6-X28V]

¹⁸² *The Salmon Lifecycle*, *supra* note 177.

¹⁸³ McQuate, *supra* note 1; *see also* Western Fisheries Research Center, *Questions and Answers About Salmon*, U.S. GEOLOGICAL SURV.: SCIENCE FOR A CHANGING WORLD, <https://www.usgs.gov/centers/western-fisheries-research-center/questions-and-answers-about-salmon> (last visited Mar 7, 2024) [https://perma.cc/ZBC6-69HD].

quality.¹⁸⁴ Beyond this, scientists have noticed that the fish are dying in large numbers before spawning.¹⁸⁵ Scientists set out to figure out why and found that a chemical called 6PPD-quinone was the reason.¹⁸⁶

C. 6PPD-quinone

Coho salmon are not currently considered endangered or threatened in Washington state, except in the Columbia River;¹⁸⁷ however, the risk posed by 6PPD-quinone could change this. Returning Coho often gather at the mouths of streams and wait for the water flow to rise before heading upstream.¹⁸⁸ 6PPD-quinone levels are the highest after rainstorms and floods.¹⁸⁹ Stopping this chemical from entering our waterways could stop the extinction of the salmon, and subsequently halt the endangerment of Southern Resident killer whales, whose diet relies on Coho. The chemical has also recently been shown to negatively affect Chinook Salmon, which is the Southern Resident killer whales' main food source during different parts of the year.¹⁹⁰

Local universities, including Washington State University Puyallup and the University of Washington, started noticing that the salmon were dying off when they returned to the rivers before they could spawn.¹⁹¹ “When poisoned [6PPD-quinone] causes the fish to turn on their sides and turn in circles; it makes it look like they are desperately gasping for air.”¹⁹² These universities examined more than 3,000 chemicals and identified 6PPD-

¹⁸⁴ Coho Salmon, Nat’l Oceanic and Atmospheric Admin. <https://www.fisheries.noaa.gov/species/coho-salmon> (last updated Oct. 12, 2023). [<https://perma.cc/995E-8M86>].

¹⁸⁵ Univ. of Wash. News, *Worn Tires Contribute to Chemical that Kills Coho Salmon*, YOUTUBE (Dec. 3, 2020), https://www.youtube.com/watch?v=vxmojuC_dJE [<https://perma.cc/RUY2-DFWD>].

¹⁸⁶ McQuate, *supra* note 1.

¹⁸⁷ *Coho Salmon*, *supra* note 184.

¹⁸⁸ *Coho Salmon (Oncorhynchus kisutch)*, *supra* note 168.

¹⁸⁹ McQuate, *supra* note 1.

¹⁹⁰ *Scientists Discover Silent Threats to Pacific Coast Salmon Populations*, Nat’l Park Servs. <https://www.nps.gov/articles/000/scientists-discover-silent-threats-to-pacific-coast-salmon-populations.htm> (last updated Feb. 5, 2021). [<https://perma.cc/P2WJ-GR78>]; Nat’l Oceanic and Atmospheric Admin, *Roadway Runoff Known to Kill Coho Salmon also Affects Steelhead, Chinook Salmon*, NOAA FISHERIES: NEWS (Aug. 24, 2022) <https://www.fisheries.noaa.gov/feature-story/roadway-runoff-known-kill-coho-salmon-also-affects-steelhead-chinook-salmon> [<https://perma.cc/F7L9-VYTA>].

¹⁹¹ DTSCgreen, *Safer Consumer Products - 6PPD in Tires*, YOUTUBE (May 23, 2022), <https://www.youtube.com/watch?v=aTe-qlh-xQY> [<https://perma.cc/H8DK-97CX>].

¹⁹² *Id.*

quinone as the primary chemical that was killing the fish.¹⁹³ The reaction matched what was happening in the lab when they exposed the fish to the same chemical.¹⁹⁴

California and Washington have started to take action to ban the use of 6PPD in tires.¹⁹⁵ 6PPD is used as a tire preservative that prevents tires from cracking and extends their use.¹⁹⁶ The chemical is in tires all over the world.¹⁹⁷ When cars are driving on roads, pieces of the tires that contain this preservative break off onto the road.¹⁹⁸ These particles then get washed into waterways when it rains.¹⁹⁹ When 6PPD is mixed with the gas ozone it creates 6PPD-quinone.²⁰⁰ Heavy rain sweeps this chemical into rivers and streams, coinciding with salmon's return to the rivers to spawn.²⁰¹ The fish coming into contact with this chemical causes them to die before they are able to spawn, depleting the population.²⁰² The State of Washington has started some clean-up projects, including cleaning up thousands of tires that were dropped into the ocean as fish housing.²⁰³

The chemical is used throughout the process of making tires, and more research is needed to find workable alternatives.²⁰⁴ The University of California Berkeley published a report about alternatives to using 6PPD in tires.²⁰⁵ The four alternatives they suggest include (1) the modification of

¹⁹³ Zhenyu Tian et al., *A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon*, 371 SCIENCE 185, 185-89 (2021) <https://www.science.org/doi/10.1126/science.abd6951>. [<https://perma.cc/849Q-J34L>].

¹⁹⁴ DTSCgreen, *supra* note 191.

¹⁹⁵ News Release, Meredith Williams, Director, Cal. Dep't. of Toxic Substances Control, California Proposes Requiring Tiremakers to Consider Safer Alternative to Chemical that Kills Coho Salmon (May 23, 2022), https://dtsc.ca.gov/2022/05/23/news-release_t-07-22/. [<https://perma.cc/7V53-B69R>];

Dep't of Ecology State of Wash., *Tire anti-degradant (6PPD) and 6PPD-quinone*, DEP'T OF ECOLOGY: WASTE & TOXICS, <https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/addressing-priority-toxic-chemicals/6ppd> (last visited on Mar. 7, 2024) [<https://perma.cc/8SB9-GCS6>].

¹⁹⁶ Meredith Williams, *supra* note 195.

¹⁹⁷ Univ. of Wash. News, *supra* note 185.

¹⁹⁸ *See id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² McQuate, *supra* note 1.

²⁰³ Faith Wimberley & Scarlet Tang, *Partnerships fuel removal of toxic tires from Washington's waters*, STATE OF WASH. DEP'T OF ECOLOGY (June 23, 2022), <https://ecology.wa.gov/Blog/Posts/June-2022/Tackling-tire-debris-in-Washington-s-waters>. [<https://perma.cc/8HT8-U8KZ>].

²⁰⁴ Elizabeth Boxer et al., *Saving Coho Salmon: Alternatives for 6PPD In Tire Manufacturing*, UC BERKELEY CENTER FOR GREEN CHEMISTRY (Dec. 18, 2021).

²⁰⁵ *Id.*

6PPD; (2) using food preservatives called gallates; (3) using a plant-based polymer called Lignin; and (4) developing an alternative rubber formulation.²⁰⁶ The report found that “[o]f the four alternative schemes discussed in this report, no single solution can be deemed optimal due to the vast amount of safety and performance testing required following tire reformulation.”²⁰⁷ The report goes on to state that “among the four options we have considered herein, modification of 6PPD will likely result in the easiest industry replacement option.”²⁰⁸ The U.S. Tire Manufacturers Association admits that it is likely that 6PPD’s byproduct is hurting the Coho salmon, but has not worked to find an alternative to the chemical.²⁰⁹ Given the harm from the chemical in tires and the Association’s knowledge, steps should be taken to require the tire companies to actively test alternatives.

As the application of the CWA becomes more unpredictable, other means must be found to save the environment, the waterways, and all the species that live within them. This is where the application of the ESA can be used to stop the dumping of chemicals into streams. Here, the goal is to save the Southern Resident killer whales from extinction by stopping them from starving to death. One of their main food sources for part of the year is Coho Salmon, which are being killed by the dumping of a tire preservative every time people drive. The chemical 6PPD becomes toxic when combined with ozone, and results in the decimation of the killer whales’ food source. A new litigation technique is needed to hasten the removal of 6PPD from tires.

III. LEGAL ANALYSIS OF THE CWA AND ESA

With the uncertainty over the CWA’s ability to protect waterways and the environment, new protective mechanisms should be pursued. A solution to protect waterways, fish, and the Southern Resident killer whales might be found by turning to the ESA to fill the ever-growing gap in enforcement created by the courts. The analysis in each of the following cases, which were also discussed earlier, will be applied to the chemical dumping of 6PPD. The first case is *Babbitt v. Sweet Home Chapter of Cmty.*²¹⁰ The second, *Aransas Project v. Shaw*, helps refine *Sweet Home*.²¹¹ The third, *Animal Welfare Institute v. Beech Ridge Energy*, further defines harm. This section will also look at the “harass” provision within the ESA.

²⁰⁶ *Id.* at 5.

²⁰⁷ *Id.* at 38.

²⁰⁸ *Id.*

²⁰⁹ See *6PPD and Tire Manufacturing*, U.S. TIRE MFR. ASS’N <https://www.ustires.org/6ppd-and-tire-manufacturing> (last visited Mar. 7, 2024). [<https://perma.cc/EX2X-VFD2>].

²¹⁰ *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687, 691 (1995).

²¹¹ *Aransas Project v. Shaw*, 775 F.3d 641 (5th Cir. 2014).

The ESA states it is “unlawful for any person to take an endangered species of fish or wildlife.” For this discussion, the “take” refers to the endangered Southern Resident killer whales. They are a listed endangered species because of the population loss from starvation and the resulting high infant mortality rate.²¹² This causes the “harm and harass” provision to be applicable. The harm provision is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”²¹³ “Harass” is defined as, “significant environmental modification that has had the effect of actually injuring or killing wildlife, including acts which annoy it to such an extent as to significantly disrupt essential behavioral patterns, which include, but are not limited to, breeding, feeding or shelter.”²¹⁴

The first case, *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, addresses the harm provision, specifically whether an actual killing or harm to a species constitutes a “take,” if habitat modification is included, and if a “take” requires intentionality.²¹⁵ The Court found that “[h]arm in the definition of 'take' in the Act means an act which actually kills or injures wildlife.”²¹⁶ This ruling settled if a “likely take” could be a “take,” but there has to be an “actual harm” to the animals for the action to be defined as a “take.”²¹⁷ Concerning the harm provision, the Court found that habitat modification was part of Congress’s original intent when drafting the bill.²¹⁸ Defining “take” under the harm provision, the Court stated, “Congress intended 'take' to apply broadly to cover indirect as well as purposeful actions.”²¹⁹ Injunctive relief is easier to achieve under the harm provision because the death or injury does not require intentionality.²²⁰ In the Southern Resident case, the chemical 6PPD-quinone is introduced as a pollutant into the environment from tires. 6PPD-quinone modifies the environment by killing the Coho salmon and disrupting the killer whales’ feeding habits by depleting their food source. The dumping is not intentional, but a “take” still occurs.

²¹² *Southern Resident Killer Whales Health Assessment*, *supra* note 1.

²¹³ H.R. Rep. No. 412, 93d Cong. 1st Sess. 11 (1973), reprinted in 1973 U.S.C.C.A.N. 2989.

²¹⁴ *Id.*

²¹⁵ *Sweet Home*, 515 U.S. at 691.

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ *Id.* at 693.

²¹⁹ *Id.* at 704.

²²⁰ *Id.* at 692-93.

In the Southern Resident killer whale situation, the court would likely apply a proximate cause analysis to the new litigation technique. One of the first major cases in which the proximate cause standard was used was *Aransas Project v. Shaw*.²²¹ The United States Supreme Court stated that proximate cause “requires the causal factors and the result to be reasonably foreseeable.”²²² In other words, it must be foreseeable that a “take” will occur.²²³ In *Aransas*, the federal trial court found that there was proximate causation as proven by the scientific data.²²⁴ The trial court’s finding was overturned by the Fifth Circuit Court which stated, “every link of this chain depends on modeling and estimation. At best, the court found but-for causation.”²²⁵ This case was a Fifth Circuit Court of Appeals case meaning that it is only binding to the Fifth Circuit, though a total of eight courts have also cited this case for its use of causation.²²⁶ There were no cases countering the ruling.²²⁷ In the Southern Resident case, the evidence of causation is overwhelming to show the “take” of the Southern Resident killer whale from 6PPD in tires.²²⁸ The University of Washington and a group of other local universities tested over 3,000 chemicals to see which was killing the salmon and they narrowed it down to one.²²⁹ However, Justice O’Connor’s proximate cause standard from the *Sweet Home* standard for proximate cause could be harder to prove.²³⁰ In the Southern Resident case, the causation can be broken down into the following chain:

²²¹ *Aransas Project v. Shaw*, 775 F.3d 641, 645 (5th Cir. 2014). Despite *Aransas Project v. Shaw* being the first case to apply the proximate cause standard in ESA litigation, Justice O’Connor first suggested using proximate cause principles in *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. at 709 (O’Connor, J., Concurring) (stating that liability under the “harm” provision should be limited to “ordinary principles of proximate causation”).

²²² *Aransas Project*, 775 F.3d at 660.

²²³ *Id.*

²²⁴ *Aransas Project*, 775 F.3d at 660.

²²⁵ *Id.*

²²⁶ Shep: *Aransas Project v. Shaw*, 775 F.3d 641 (2014), LEXIS PLUS, <https://plus.lexis.com/shepards/shepardspreviewpod/?pdmfid=1530671&crd=b0ad328a-11fa-40cb-ac95-3f6caae52e8a&pdshepid=urn%3AcontentItem%3A5G2V-FXC1-DXC8-71HW-00000-00&pdshepcat=initial&pdoctabclick=false&prid=74367d57-0001-46ef-b465-6f62fce6f061&ecomp=2gntk#/citingref> (last visited Mar. 7, 2024).

²²⁷ *Id.*

²²⁸ McQuate, *supra* note 1.

²²⁹ *Id.*

²³⁰ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162-63.

- (1) The tire preservative comes off of the tires onto roads and 6PPD is released.²³¹
- (2) The chemical is then combined with rainwater where it turns into toxic chemical 6PPD-quinone and washes into streams.²³²
- (3) The tire preservative kills Coho salmon.²³³
- (4) There are not enough salmon for the endangered species to eat, causing the Southern Resident killer whale to die from starvation.²³⁴

The first step occurs when tires hit the road and particles are released.²³⁵ Tire companies readily admit putting 6PPD in their tires.²³⁶ Second, the production of the chemical 6PPD-quinone is a recognized chemical reaction.²³⁷ The third step could perhaps be a stretch for someone such as Justice O'Connor due to her heightened concern with foreseeability.²³⁸ However, step three backed by the reasonable person standard, as relates to foreseeability, given that encountering 6PPD-quinone produces a visible reaction in the fish that is identical during laboratory testing and when the fish encounter the chemical in the streams.²³⁹ This reaction involves the fish swimming on their sides in circles, seeming to gasp for air.²⁴⁰ The evidence is clear enough that some states have already moved to ban the substance.²⁴¹ No one has contested that the chemical caused the salmon's death, including the tire manufacturers.²⁴² Although other factors

²³¹ McQuate, *supra* note 1.

²³² *Id.*

²³³ *Id.*

²³⁴ *Southern Resident Killer Whales*, *supra* note 6.

²³⁵ McQuate, *supra* note 1.

²³⁶ *6PPD and Tire Manufacturing*, *supra* note 209.

²³⁷ *Id.*

²³⁸ *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687, 697 (1995).

²³⁹ *Id.*

²⁴⁰ McQuate, *supra* note 1.

²⁴¹ See Dep't of Toxic Substance Control: Safer Consumer Products, *Adopted Priority Product: Motor Vehicles Tires Containing 6PPD*, GOV. OF CAL. https://dtsc.ca.gov/scp/motor_vehicle_tires_containing_6ppd/ (last visited Mar. 24, 2024) [<https://perma.cc/A66F-CJPC>]; MATT SHEPARD-KONINGSOR, AN ACT RELATING TO EXPEDITING THE SAFER PRODUCTS FOR WASHINGTON PROCESS REGARDING MOTORIZED VEHICLE TIRES CONTAINING 6PPD, S.B. REP. 5931 (Wash. 2024).

²⁴² 45-Day Public Notice from Dep't of Toxic Substances Control, Meredith Williams, Ph.D., Director (May 31, 2022) (on file with Cal. Dep't of Toxic Substances Control) https://dtsc.ca.gov/wp-content/uploads/sites/31/2022/05/6PPD-in-Tires-_NOPA-wo-hearing-1.pdf. [<https://perma.cc/9U5A-35YE>].

contribute to the decline of the Coho salmon, nothing else has such a clear connection to the death of the fish as this chemical.²⁴³

The final step of the causation analysis involves how food loss affects the endangered killer whales. The main reason that the Southern Resident killer whales are going extinct is because there is not a large enough food supply for them to have a full, adequate, healthy diet.²⁴⁴ This results in a high infant mortality rate because the mothers are not gaining the critical mass they need to produce a healthy calf that will survive into adulthood.²⁴⁵ This is worsened by the loss of food in critical months such as in October when the Coho salmon become the endangered whales' most important food source.²⁴⁶ Simply put, if the chemical was not released into the environment, the Southern Resident killer whales would have more food, be healthier, and have a higher survival rate.²⁴⁷ This case differs from *Shaw* because there was a long chain of causation and complex scientific data used to prove that the action of the government resulted in a take of the Whooping Cranes.²⁴⁸ Here, the chain is simple, straightforward, and enough to make any reasonable person concerned about the consequences of the continual release of 6PPD into the environment.

The last case is *Animal Welfare Institute v. Beech Ridge Energy*, which further defined harm and refined the degree of certainty required to constitute a preponderance of the evidence.²⁴⁹ The commentary in this regulation explains that harm cannot be speculative.²⁵⁰ When explaining their application of injury “[t]he [Fish and Wildlife Service] stated that it inserted the term ‘actually’ before ‘kills or injures’ because ‘existing language could be construed as prohibiting the modification of habitat even where there was no injury.’”²⁵¹ In this case, it means that fish must be actually dying and that these fish are the food source of the endangered killer whales. There is actual harm to their feeding habits because there is such a high death rate of the Coho salmon from 6PPD-quinone.²⁵²

²⁴³ McQuate, *supra* note 1.

²⁴⁴ *Southern Resident Killer Whale*, *supra* note 6.

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

²⁴⁸ *Aransas Project v. Shaw*, 775 F.3d 641, 659 (5th Cir. 2014).

²⁴⁹ *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540, 541 (D. Md. 2009).

²⁵⁰ *Id.* at 562.

²⁵¹ *Id.*

²⁵² McQuate, *supra* note 1.

The preponderance of the evidence is the standard used to prove a "take."²⁵³ *Animal Welfare* used the Ninth Circuit court case *Marbled Murrelet v. Pacific Lumber Co.*'s definition of the preponderance of the evidence as a "reasonable certainty of imminent harm."²⁵⁴ The court also stated that absolute certainty was not required to prove a "take,"²⁵⁵ finding that "to require absolute certainty, as proposed by Defendants, would frustrate the purpose of the ESA to protect endangered species before they are injured and would effectively raise the evidentiary standard above a preponderance of the evidence."²⁵⁶ In *Animal Welfare*, the court found that there was "virtual certainty" that the wind turbines were taking the endangered Indiana bats.²⁵⁷ The *Animal Welfare* case is a Federal District of Maryland court case, meaning that it is not binding, but it was still cited by eight courts.²⁵⁸ Only one case, *Nextera Energy Re., LLC*, countered the *Animal Welfare* ruling and it was overturned.²⁵⁹ A court would likely find the same in this case because over 3,000 chemicals were tested, and it was determined that 6PPD was the chemical causing harm to the salmon, and consequently the killer whales.²⁶⁰

Another provision that could be used to stop the dumping of 6PPD is the harassment provision in the ESA. The U.S. Fish and Wildlife Service defines "harass" as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include but are not limited to, breeding, feeding, or sheltering."²⁶¹ This provision could be used to address 6PPD in tires because the dumping hinders the breeding of the Coho salmon by killing them before they can spawn. Further, the death of the salmon disrupts the feeding of the Southern Resident killer whales by depleting their food source.²⁶² Though these claims are often dropped because of the stricter requirements that "harass" has compared to "harm," in

²⁵³ *Marbled Murrelet v. Pacific Lumber Co.*, 83 F.3d 1060, 1066 (9th Cir. 1996).

²⁵⁴ *Id.* at 1068.

²⁵⁵ *Animal Welfare*, 675 F. Supp. 2d at 564.

²⁵⁶ *Id.*

²⁵⁷ *Id.* at 575.

²⁵⁸ *Id.*

²⁵⁹ *Friends of Merrymeeting Bay v. Nextera Energy Res., LLC*, No. 2:11-cv-38-GZS, 2013 U.S. Dist. LEXIS 5063 (D. Me. Jan. 14, 2013); *Friends of Merrymeeting Bay v. Hydro Kennebec, LLC*, 759 F.3d 30 (July 14, 2014).

²⁶⁰ McQuate, *supra* note 1.

²⁶¹ 50 C.F.R. § 17.3, accord. § 222.102; Nat'l Marine Fisheries Serv., Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Section 7(a)(2) "Not Likely to Adversely Affect" Determination: Continuing Operation of the Pacific Coast Groundfish Fishery, NWR2012876, 120 n.7 (Dec. 7, 2012) (defining harass "consistent with the [FWS's] interpretation of the term").

²⁶² M. Bradley Hanson et al., *supra* note 166.

the Southern Resident case, they should still be used.²⁶³ This is because “to harass” does not specifically address habitat modification, where harm does. In this case, it is not necessary to show that there is habitat modification because the chemical is having a direct impact on the Coho salmon and consequently the Southern Resident killer whales.²⁶⁴

The ESA is a tool that can be used to protect the food sources and environment of endangered species. In this case, the death of the salmon falls under *Sweet Home*’s definition of “harm” to the killer whales because they are included in the destruction of their habitat.²⁶⁵ Under the proximate cause standard in *Aransas*, the dumping of the chemical should be stopped because it causes the extinction of the Southern Resident killer whales.²⁶⁶ The preponderance of the evidence standard from *Animal Welfare* is passed because there is actual harm caused by the death of the salmon, and subsequently the endangered dolphins. The harassment provision could also be used to stop the dumping of 6PPD. This case could result in the ESA being used to stop the dumping of 6PPD.

IV. RECOMMENDATION OF FILING CIVIL SUITS THROUGH VICARIOUS LIABILITY AND DIRECT ACTION

Under section 11 of the ESA, “any person’ may bring a citizen suit in federal district court to enjoin anyone who is alleged to be in violation of the ESA or its implementing regulations.”²⁶⁷ The goal of initiating this litigation strategy is to seek injunctive relief from the tire manufacturers that are putting 6PPD into their tires through a civil suit. In *Animal Welfare*, the court found “that the citizen-suit provision includes within its scope wholly-future violations of the statute.”²⁶⁸ Here, the goal is to stop the chemicals from getting into the environment and killing the Coho salmon. This may be accomplished through the use of vicarious liability.²⁶⁹ That is when the agency should prevent a take and it fails to, then the agency may be held liable for that take.²⁷⁰ The EPA should restrict the use of 6PPD in tires, and because it has not, it can be held accountable for the results of the chemical’s use. Tire companies could also be directly sued for injunctive relief for

²⁶³ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 158.

²⁶⁴ McQuate, *supra* note 1.

²⁶⁵ *Babbitt v. Sweet Home Chapter of Comtys. for a Great Or.*, 515 U.S. 687, 691 (1995).

²⁶⁶ *Aransas Project v. Shaw*, 775 F.3d 641, 656 (5th Cir. 2014).

²⁶⁷ 16 U.S.C. § 1540(g).

²⁶⁸ *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540, 560 (D. Md. 2009).

²⁶⁹ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162-63.

²⁷⁰ *Id.*

putting the preservative in their tires. Further, the Department of Transportation should restrict the import of tires with this chemical to avoid being liable for the take that the chemicals cause. The outcome of a civil suit against the EPA, Department of Transportation, or the tire companies for a take of the Southern Resident killer whales could end in injunctive relief, with tire manufacturers not being able to use this chemical in their tires.

The EPA is not the governing agency involved with either the Coho salmon or the Southern Resident killer whales, but they are still required to consult the ESA under section 7. Further, section 7 of the ESA, called “Federal Agency Actions and Consultations,” states that “[e]ach Federal agency shall . . . ensure 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 or result in the destruction or adverse modification of habitat of such species.”²⁷¹ This means that an agency must first ensure its own compliance with the ESA and its action to ensure it is not the cause of a take. If the agency has failed to comply then “[c]ourts have repeatedly held government officers liable for violating the take prohibition when the officers authorized activities undertaken by others that caused a take.”²⁷² In this case, the chemical 6PPD is known to cause not only the death of endangered species but also the death of an endangered species’ food stock.

The EPA should be regulating a chemical as toxic as 6PPD. The EPA has a rating system that grades the toxicity of chemicals by establishing aquatic life criteria (ALC).²⁷³ The ALC is based on how likely a chemical is to kill aquatic life.²⁷⁴ At this moment there is not an ALC for 6PPD. A toxicity assessment of the chemical suggests “compare the LC50 for Coho exposed to 6PPD-quinone with that of the most sensitive test organisms used to derive ALC. Among the ‘very highly toxic’ chemicals for which we have ALC, the toxicity of 6PPD-quinone is similar to that of the most toxic of 12 chemicals.”²⁷⁵ This means that the EPA should already be regulating this chemical by its own standards. Additionally, the EPA should be consulting

²⁷¹ Endangered Species Act, 16 U.S.C. § 1536(a)(2).

²⁷² *Seattle Audubon v. Sutherland*, No. CV06-1608MJP, 2007 WL 1300964, at *9 (W.D. Wash. May 1, 2007).

²⁷³ Zhenyu Tian et al, *6PPD-Quinone: Revised Toxicity Assessment and Quantification with a Commercial Standard*, 9 ENV’T SCI. & TECH. LETTERS 140 (2022).

²⁷⁴ Env’t Prot. Agency, *Aquatic Life Criteria and Methods for Toxics*, <https://www.epa.gov/wqc/aquatic-life-criteria-and-methods-toxics#guide> (last updated Oct. 2, 2023) [<https://perma.cc/V5XG-6ZCL>].

²⁷⁵ *Id.*

with the secretary in charge of the ESA to ensure that its actions are not killing endangered species pursuant to its own standards.

The EPA should restrict the use of 6PPD, and the Department of Transportation should stop importing tires that contain this chemical because it is toxic to the environment. The California Department of Toxic Substance Control has determined that 6PPD is a priority product.²⁷⁶ A priority product is “[a] product-chemical combination identified in regulations adopted by DTSC that has the potential to contribute to significant or widespread adverse impacts to humans or the environment.”²⁷⁷ There are two requirements for a chemical to be categorized as a priority product, per the Safer Consumer Products: “(1) There must be potential public and/or aquatic, avian, or terrestrial animal or plant organism exposure to the Candidate Chemical(s) in the product; and (2) There must be the potential for one or more exposures to contribute to or cause significant or widespread adverse impacts.”²⁷⁸ This means that 6PPD should be regulated by other agencies.

The Department of Transportation did not consult the Secretary to see if its actions were affecting endangered species.²⁷⁹ All tires that are imported must comply with strict safety standards under 49 CFR § 571.²⁸⁰ These standards do not include the restriction of 6PPD, which is devastating endangered species populations.²⁸¹ Though it may seem like a burden on industry to stop this import, a First Circuit Court found that “the balance of hardships and the public interest tips heavily in favor of protected species.”²⁸² The agency should not be importing these tires without consulting the Secretary. Their failure to consult with the secretary opens them up to vicarious liability and may permit injunctive relief.²⁸³

The test for injunctive relief has four parts.²⁸⁴ The first part is that the plaintiff must suffer irreparable injury. In this case, the decimation of the Coho salmon and, in consequence, the death of the endangered killer whales constitute the injury. The second part is that the remedies available at law are inadequate to compensate for the injury.²⁸⁵ The plaintiff will be “likely to

²⁷⁶ Simona Bălan et al, *Product - Chemical Profile for Motor Vehicle Tires Containing N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD)*, DEP'T OF TOXIC SUBSTANCES CONTROL 3 (March 2022).

²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ H.R. Rep. No. 118-155, at 59 (2023).

²⁸⁰ Federal Motor Vehicle Safety Standards, 49 C.F.R. § 571.1 *et seq.*

²⁸¹ *Id.*

²⁸² *Strahan v. Coxe*, 127 F.3d 155, 160 (1st Cir. 1997).

²⁸³ Endangered Species Act, 16 U.S.C. § 1536(a)(2).

²⁸⁴ *Winter v. Nat'l Res. Def. Counsel, Inc.*, 555 U.S. 7, 20 (2008).

²⁸⁵ *Id.*

suffer irreparable harm in the absence of preliminary relief.”²⁸⁶ Here, the injury is aesthetic, scientific, recreational, educational, and economic. One cannot put a value on an endangered species. If there was an award of monetary compensation, the injury would still occur. The third part is “that the balance of equities tips in [their] favor.”²⁸⁷ This means that between the two parties, there is an imbalance, and the power is in the hands of the opposing party. A citizen does not have the sole power to stop tire manufacturers from using 6PPD in their tires without directly suing them, but the Agency does. Thus, the imbalance portion of the test is passed. The final element is that “an injunction is in the public interest.”²⁸⁸ Preventing the extinction of one of the most iconic creatures in the nation is in the public interest. The local indigenous tribes would also be positively affected because of their sacred connection with the Coho salmon.

Vicarious liability can be used to receive injunctive relief from the tire manufacturers, preventing them from using the preservative 6PPD in their tires.²⁸⁹ The courts have applied vicarious liability to agencies inconsistently.²⁹⁰ Theoretically, “when the government operates in a regulatory arena, to the extent that it issues a permit for or otherwise authorizes an activity that can result in a take, the agency is liable for any such take.”²⁹¹ Vicarious liability could be the mechanism by which agencies are held accountable for their action or inaction by everyday citizens.²⁹² Even having the risk of being held accountable through this mechanism could encourage positive outcomes from the agencies.²⁹³

Many cases have come out on either side of the vicarious liability issue; however, they are district court cases, meaning they are not binding authority.²⁹⁴ For example, in *Red Wolf Coal v. N.C. Wildlife Res. Comm’n*, “a recent district court order granted a preliminary injunction to plaintiffs who claimed that the North Carolina state wildlife agency was liable for unauthorized take.”²⁹⁵ The take resulted from the agency authorizing the killing of coyotes in the area where the endangered red wolves reside. There

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ *Id.*

²⁸⁹ AM. BAR ASS’N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162-63.

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ *Id.*

²⁹⁵ *Red Wolf Coal v. N.C. Wildlife Res. Comm’n*, No. 2:13-CV-60-BO, 2014 WL 1922234 (E.D.N.C. May 13, 2014) (granting preliminary injunction).

was likely misidentification of the wolves compared to the coyotes, which resulted in a take.²⁹⁶ The court in *Strahan v. Pritchard* found that while the agency could be held liable for the loss of endangered whales being caught in fishing nets, it would not be.²⁹⁷ The district court found that the agency was not responsible for the take of the whales.²⁹⁸ Further, in *Loggerhead Turtle v. Cnty. Council of Volusia Cnty.*, the court held that the agency was not accountable for the take of endangered sea turtles in part because they had no obligation to regulate the actions of the beachfront property owners.²⁹⁹ In *Aransas Project*, the court did not address the issue despite the case coming in front of several courts.³⁰⁰ Overall, trying this approach would be worth it to test the outcome. If courts start ruling that agencies can be accountable in this way, it could have a positive impact on citizens' ability to hold agencies accountable.³⁰¹

Another option for injunctive relief would be to sue the tire manufacturers themselves. The application of injunctive relief still applies—as in *Animal Welfare*, an organization or individual can sue companies to stop them from putting the preservative in their tires.³⁰² In this case, the twelve main manufacturers make almost all of the tires in the United States.³⁰³ 6PPD is in virtually all tires on the road, and to prevent it from entering the ecosystem and killing the salmon, all manufacturers have to discontinue its use.³⁰⁴ The other challenge to this tactic is that tires are shipped into the United States from all over the world, thus needing regulation.

The biggest hurdle to overcome in presenting a civil suit in court is covering the jurisdictional requirement of standing.³⁰⁵ In Federal court, the plaintiff must show that they have standing to bring a case forward in that

²⁹⁶ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162-63.

²⁹⁷ *Strahan v. Pritchard*, 473 F. Supp. 2d 230, 241 (D. Mass. 2007).

²⁹⁸ *Id.*

²⁹⁹ *Loggerhead Turtle v. Cty. Council of Volusia Cty.*, 148 F.3d 1231, 1258 (11th Cir. 1998).

³⁰⁰ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162-63.

³⁰¹ *Id.*

³⁰² AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 162.

³⁰³ *About Us*, U.S. TIRE MFR. ASS'N, <https://www.ustires.org/about-us> (last visited on Mar. 7, 2024).

³⁰⁴ McQuate, *supra* note 1.

³⁰⁵ AM. BAR ASS'N, ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, *supra* note 16, at 250-55.

court.³⁰⁶ In *Lujan v. Defenders of Wildlife*, the Court stated that the “irreducible constitutional minimum of standing” has three requirements:

- (1) actual or imminent injury that is concrete and particularized;
- (2) “a causal connection between the injury and the conduct complained of”; and
- (3) likelihood that a favorable decision will redress the injury.³⁰⁷

This is under the civil suit provision meaning that “the prudential standing doctrine that a plaintiffs' grievance must fall within the zone of interests protected by the statute does not apply to the ESA due to the Act's citizen-suit provision.”³⁰⁸

All of the parties' injuries caused by the extinction of the endangered Southern Resident killer whale can be combined. Ideally, an organization can be formed, or an already existing organization can be used. It would not be difficult to find people and organizations willing to show that they have standing to obtain injunctive relief. It would be ideal to have a group of people that can show different aspects of standing, including locals who grew up with the whales, whale-watching business owners, tourists, the local tribes, and other concerned individuals. Several injuries can be used in this case including aesthetic, scientific, recreational, educational, and loss of profit. To pass the test to prove standing three parts must be met.³⁰⁹ The first part of standing has two prongs.³¹⁰ The first prong is that the injury is actual or imminent.³¹¹ Here, the whale-watching ships go out every summer full of tourists to see these endangered species. Organizations such as Wild Orca exist to research and save killer whales.³¹² This organization and others study this endangered species year-round.³¹³ Local residents of Washington go and see the Southern Resident killer whales in the wild regularly and even host

³⁰⁶ *Id.*

³⁰⁷ *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560-61 (1992).

³⁰⁸ *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540, 559 (D. Md. 2009) (quoting *Bennett v. Spear*, 520 U.S. 154, 162-66 (1997)).

³⁰⁹ *Lujan*, 504 U.S. at 560-61.

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² *About*, WILDORCA.ORG, <https://www.wildorca.org/about/> (last visited Mar. 7, 2024) [<https://perma.cc/F58Q-3FSF>].

³¹³ West Coast Regional Office, *Take Action for Southern Resident Killer Whales*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN, <https://www.fisheries.noaa.gov/west-coast/outreach-and-education/take-action-southern-resident-killer-whales> (last updated Nov. 1, 2022) [<https://perma.cc/YQC7-PJ2F>].

viewing events.³¹⁴ All of these activities make the injury actual and imminent. The second prong of the first part of injury-in-fact is that the injury is concrete and particularized.³¹⁵ Without whales to watch, locals, tourists, scientists, and whale-watching tourists will not have an opportunity to see and study the animals.

The second part of injury-in-fact is that there is a causal connection between the injury and the conduct complained of.³¹⁶ The killer whales are almost extinct due to a depleted food source, so killing the remaining fish at a high rate will directly cause the decline of the species.³¹⁷ The death of the Coho is caused when the chemical 6PPD combines with ozone making 6PPD-Quinone—a chemical that the Department of Transportation imports without consulting the secretary in charge of the ESA.³¹⁸ The EPA also should be regulating this chemical because they are required to regulate chemicals toxic to fish.³¹⁹ 6PPD is just as toxic to aquatic life as the top twelve most toxic chemicals.³²⁰ The final part of injury-in-fact is that a favorable decision will reduce the injury.³²¹ Here, the tire manufacturers stopping the use of 6PPD in their tires will save the Coho and other salmon. The U.S. Tire Manufacturers Association openly agrees that 6PPD is likely causing death and harm to Coho salmon.³²² In turn, it will save the Southern Resident killer whales, meaning that the court will likely find that the case has standing.

A citizen suit is a viable option for compelling the EPA to regulate 6PPD under the ESA to stop the death of the salmon because they are a major food source of the endangered Southern Resident killer whales. This can be accomplished through vicarious liability. The use of vicarious liability could result in injunctive relief of the manufacturers no longer being able to put this preservative in their tires. The biggest hurdle to overcome is whether the parties have standing, though this should be achievable. This means that if this case found itself in the right court, it could save the Endangered Southern Resident killer whales.

³¹⁴ See, e.g., The Whale Trail, *Welcome to the Whale Trail*, <https://thewhaletrail.org/> (last visited Mar. 7, 2024) [<https://perma.cc/4W8P-87A4>].

³¹⁵ *Id.*

³¹⁶ *Id.*

³¹⁷ *Southern Resident Killer Whale Health Assessment*, *supra* note 1.

³¹⁸ H.R. Rep. 118-155, at 59.

³¹⁹ Env't Prot. Agency, National Recommended Water Quality Criteria - Aquatic Life Criteria Table, <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table> (last visited Dec. 29, 2023) [<https://perma.cc/V896-LKPE>].

³²⁰ Zhenyu Tian et al., *supra* note 273.

³²¹ *Id.*

³²² *6PPD and Tire Manufacturing*, *supra* note 209.

CONCLUSION

New litigation techniques need to be implemented to save endangered species, the environment, and waterways such as using the EPA to challenge the dilution of the CWA. The volatility of EPA's application of the CWA is the result of the Supreme Court's rulings, Administrative Rulings, and Presidential Executive Orders. Therefore, we need to move beyond the CWA and find other means to protect the environment, endangered species, and waterways. The harm provision of the Endangered Species Act can be used to show a take of the endangered Southern Resident killer whales. The tire preservative 6PPD is causing large-scale devastation of the Coho salmon, which is one of their main food sources. The ESA can be used to prevent this "take", as seen in previous court cases.

Injunctive relief should be sought through the court system to stop tire companies from using 6PPS in tires. Injunctive relief can be accomplished through vicarious liability because the EPA is allowing its use, and therefore is responsible for the consequences of it being in the environment. The biggest hurdle will be to find a group that has standing. Eliminating the chemical 6PPD from the environment may save the Southern Resident killer whales.