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CASENOTE

IS THERE A NEED TO REGULATE MUSSEL HARVESTING? THE NINTH CIRCUIT DECLARES NO POLLUTION, NO PROBLEM!

Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc. 1

I. INTRODUCTION

Water pollution has plagued our society for many years. Several countries, including the United States, have attempted to combat such pollution with increasing regulation. The Clean Water Act was developed specifically to combat pollution in the nation's navigable waters. "Water pollution" typically evinces images of oil spills killing off fish and other ocean organisms. Concerns often center around the health of the fish and shellfish, especially given the massive level of seafood consumption by humans in many countries. Less typical in terms of images of polluting agents, however, are the fish themselves.

This casenote explores the notion that fish and shellfish feces, as well as other fish/shellfish byproducts, may constitute pollutants when discharged into the nation's waters from fish farm-type facilities. It also conjectures about Missouri's fish farming facilities, including whether the facilities' fish byproducts would qualify as pollutants, necessitating regulation. Lastly, this casenote suggests that even though certain of the state's aquaculture facilities, especially catfish ponds, fall outside the purview of the Clean Water Act, Missouri may wish to preemptively regulate this sector of the state's aquaculture industry before being haled into court to explain its nonregulation. The Ninth Circuit recently decided a case involving mussel-harvesting facilities in Washington State's Puget Sound. The court found that the mussel feces and byproducts were not "pollutants" and that the mussel harvesting rafts did not fit under the Clean Water Act's definition of a pollution "source" needing regulation.

II. FACTS AND HOLDING

The Association to Protect Hammersley, Eld, and Totten Inlets ("APHETI") brought a statutorily created citizen-suit against Taylor Resources, Inc. ("Taylor"), a mussel-harvesting company, seeking declaratory judgment, injunctive relief, and civil penalties for Taylor's alleged violations of the Clean Water Act² ("the Act" or "CWA").³ APHETI is a non-profit organization comprised of approximately 3,000 residents of the southern shores of Puget Sound in Washington State.⁴ Taylor has been harvesting mussels in Puget Sound's Totten Inlet since the early 1990s.⁵ There it has run two facilities which together produce more than 20.000 pounds of mussels on a yearly basis.⁶ Specifically Taylor harvests gallo mussels, a species found in the Puget Sound for approximately twenty-five years.⁷

¹299 F.3d 1007 (9th Cir. 2002).

² 33 U.S.C. § 1251 *et seq.* (2000).

³ Assn. to Protect, 299 F.3d at 1009.

⁴ *Id*.

⁵ *Id*. at 1010.

⁶ *Id*.

⁷ *Id.* While there is dispute as to how the gallo mussel species arrived in Puget Sound, whether naturally or by mussel harvesters, they now reproduce on their own in limited numbers. *Id.*

Taylor's harvesting process involves attaching "mussel brood stock"/"mussel seeds" to suspension ropes that hang from floating rafts. The suspension ropes are then anchored to the sea floor and protected by mesh netting. Taylor adds no chemicals or fish food to the water to promote growth; instead, "the mussels are nurtured exclusively by the nutrients found naturally in the waters of Puget Sound." These mussel "seeds" become full-grown "edible" mussels through the natural processes occurring in the waters of Puget Sound. According to APHETI, the "environmental issue" in the present case involves the mussels "physical and chemical processes." The mussels harvested by Taylor emit "mussel byproduct," feeces, and pseudo-feces. Also, gallo mussel shells began appearing on Totten Inlet's beaches in the mid-1990s. Mussels are considered beneficial by many in that they "act as filters," purifying "excess nutrients" or other harmful matter.

Since its inception, Taylor has applied for the necessary permits in order to comply with both the Washington State Environmental Policy Act and the National Environmental Policy Act; it has received all permits required by both the state and national Environmental Policy Acts. In an effort to comply with the Clean Water Act, Taylor applied for a National Pollutant Discharge Elimination System ("NPDES") permit, the Washington State Department of Ecology ("Ecology") informed Taylor that a permit was not required for its mussel-harvesting facilities. Ecology neither accepted nor processed Taylor's application. On August 18, 1997, the Director of Ecology responded in the negative to an APHETI member's inquiry about whether an NPDES permit was required for mussel harvesting rafts. The Director explained in a letter that mussel-harvesting facilities do not violate the Act because "shellfish farmers" do not add anything to the water to stimulate shellfish growth.

APHETI filed suit against Taylor on August 18, 1999 under the citizen suit provision²⁶ of the Clean Water Act. alleging that Taylor was in violation of the Act by "discharging pollutants," such as ammonia, mussel feces. and mussel shells. into the Puget Sound without an NPDES permit.²⁷ APHETI claimed that the mussel emissions and shells were "pollutants." that the harvesting rafts were "point sources," and that Taylor

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<sup>8</sup> Explained as "infant' mussels if personified." Id.
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The netting is "designed to protect the mussels from predators." *Id.*

¹¹ *Id*.

¹² *Id*.

¹³ LL

¹⁴ More specifically described as "dissolved materials in the form of ammonium and inorganic phosphate." *Id.*

¹³ Id.

¹⁶ *Id*.

¹⁷ Several Native American Tribes from the Puget Sound area submitted *amicus curiae* letters supporting Taylor. The tribes compared their historic shellfish-harvesting methods to Taylor's, arguing that such methods enhance water quality. *Id.*

¹⁸ Id.

¹⁹ Id. at 1011

²⁰ The NPDES permit system, established by the Clean Water Act, regulates the discharge of pollutants into United States waters. *Id.* at 1009.

²¹ Washington State's Department of Ecology is authorized by the Environmental Protection Agency to administer the Clean Water Act's NPDES permit program. *Id.* at 1009-10.

²² *Id.* at 1011.

 $^{^{23}}$ *Id*.

 $^{^{24}}$ Id.

 $^{^{25}}$ *Id*.

²⁶ 33 U.S.C. § 1365.

²⁷ Assn. to Protect, 299 F.3d at 1011.

²⁸ Defined at 33 U.S.C. § 1362(6); *infra* text accompanying n. 65.

accordingly needed an NPDES permit to run its facilities in compliance with the provisions of the Act.³⁰ Specifically APHETI sought three remedies: (1) a declaratory judgment establishing that Taylor "discharged pollutants from its mussel-harvesting facilities" without an NPDES permit; (2) an injunction preventing Taylor from so discharging until it obtained a permit; and (3) civil penalties for the alleged violations.³¹ The United States District Court for the Western District of Washington granted summary judgment in favor of Taylor, holding that Taylor's facilities did not violate the Act in that they neither discharged "pollutants" nor represented "point sources."³²

APHETI appealed to the United States Court of Appeals. The Ninth Circuit affirmed the District Court's decision, holding that while APHETI had a right to bring a citizen suit on behalf of its members, the mussel emissions and mussel shells were not "pollutants," the harvesting rafts were not "point sources." and therefore, Taylor's operations without a permit did not violate the Clean Water Act.³³

III. LEGAL BACKGROUND

A. The Clean Water Act in General

The current version of the Clean Water Act (also known as the Federal Water Pollution Control Act) was enacted in 1972.³⁴ Its statutory predecessor focused primarily on forcing states to adopt water quality standards (WQS) that defined the desired condition of the states' waterbodies.³⁵ While this statutory scheme proved significant in water pollution legislation, it failed to provide incentives for facilities to reduce their pollution discharges.³⁶ In 1972, Congress enacted an extremely revised version of the Federal Water Pollution Control Act, which is today more commonly known as the Clean Water Act.³⁷ Through a complex statutory system, the CWA aims to reach its overarching goal of restoring and maintaining "the chemical. physical. and biological integrity of the Nation's waters."³⁸ One of the Act's subsidiary goals is to achieve a "water quality which provides for the protection and propagation of fish, shellfish, and wildlife."³⁹ The CWA created both state and federal roles for the attainment of these zealous goals.⁴⁰ The Environmental Protection Agency's ("EPA") Administrator, for example, must "establish and enforce technology-based limitations on individual discharges into the country's navigable waters from point sources," while each state must establish water quality standards with accompanying goals for all intrastate waters.⁴¹

²⁹ Defined at 33 U.S.C. § 1362(14); *infra* text accompanying n. 96.

³⁰ Assn. to Protect, 299 F.3d at 1011.

³¹ *Id.* at 1009-11.

³² *Id.* at 1011.

³³ *Id.* at 1018.

³⁴ Walter G. Wright, Jr. & Albert J. Thomas, III, *The Federal/Arkansas Water Pollution Control Programs: Past. Present, and Future*, 23 U. Ark. Little Rock L. Rev. 541, 588 (2001).

³⁵ *Id.* at 588-89.

³⁶ See id. at 589.

³⁷ Steven J. Blair, Student Author, No Looking Back: The Western District Court of Appeals Declares That Missouri's Creation of a 303(d) List Does Not Qualify as Rulemaking, 9 Mo. Envtl. Law & Policy Rev., 154, 158 (2002).
³⁸ 33 U.S.C. § 1251(a).

³⁹ 33 U.S.C. § 1251(a)(2).

⁴⁰ PUD No. 1 of Jefferson County v. Wash. Dept. of Ecology, 511 U.S. 700, 704 (1994). ⁴¹ Id

B. The CWA's NPDES Permit Program

The CWA established the basic premise that "the discharge of any pollutant by any person is unlawful." Some pollutant discharges, however, are legally sanctioned by the EPA through the CWA's permit programs. The cornerstone of the Clean Water Act's pollution control scheme is the National Pollution Discharge Elimination System (NPDES) permit program. The NPDES program was conceived with the Act in 1972; in 1979, the EPA substantially revised the NPDES program. While the Act established the EPA as the agency primarily responsible for the administration of the NPDES permit program, it also allowed the EPA to delegate this authority to the states. As of 1987, thirty-seven states had "assumed responsibility for issuing NPDES permits."

Section 402 NPDES permits "implement technology and water-quality based effluent limitations." Imitations include restrictions on "quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters." The water-quality effluent limitations supplement the technology-based standards. When a technology-based effluent limitation fails to prepare a body of water for the uses for which it is needed, the EPA should develop a water-quality based limitation that will accomplish this water-preparation task. While technology-based standards impose effluent limitations on pollutant sources "based on how much of a reduction technology can achieve." the water-quality based standards impose effluent limitations based on the types and amounts of pollutants in the body of water that is or will be receiving pollutants. The NPDES permit system enforces the effluent standards by "transform[ing] generally applicable effluent limitations and other standards. . . into the obligations (including a timetable for compliance) of the individual discharger. The EPA or analog state agency issues permits only if the point source complies with the already established effluent limitations. In national standards have been promulgated by the EPA for a particular category of point source, the permit writer can use "best professional judgment" to determine on a case-by-case basis what conditions to impose on the applicant. In addition to the effluent limitations, permits generally include reporting and monitoring

⁴² 33 U.S.C. § 1311(a).

⁴³ Robin K. Craig, *The Other Side of Sustainable Aquaculture: Mariculture and Nonpoint Source Pollution*, 9 Wash. U. J.L. & Pol'y 163, 177 (2000).

⁴⁴ Natural Resources Defense Council, Inc. v. EPA, 822 F.2d 104, 108 (D.C. Cir. 1987).

⁴⁵ *Id.* at 108

⁴⁶ 33 U.S.C. § 1342(b); *Natl. Wildlife Fedn. v. Consumers Power Co.*, 862 F.2d 580, 582 (6th Cir. 1988); *See also* William H. Rodgers, Jr., *Nonpoint Sources – Formal Definitions, Theory and Case Law*, 2 Envtl. L. § 4.10 *2 (West 2002).

⁴⁷ Natural Resources Defense Council, 822 F.2d at 110. As of 2002, 43 states had assumed NPDES permitting responsibility. See Craig, 9 Wash. U. J.L. & Pol'y at 188.

⁴⁸ Effluents are "wastes released in liquid form." Melissa Schatzberg. Salmon Aquaculture in Federal Waters: Shaping Offshore Aquaculture Through the Coastal Zone Management Act, 55 Stan. L. Rev. 249, 285 n. 55 (2002).

⁴⁹ James R. May, Recent Developments in Clean Water Act Litigation September 2001-2002, SH041 ALI-ABA 257, 263 (2002).

⁵⁰ 33 U.S.C. § 1362(11).

⁵¹ Natural Resources Defense Council, 822 F.2d at 110.

⁵² *Id*.

⁵³ *Id*.

⁵⁴ Id. (quoting EPA v. CA ex rel. State Water Resources Control Board, 426 U.S. 200, 205 (1976)).

⁵⁵ Nat. Resources Defense Council, 822 F.2d at 111.

⁵⁶ See id.

requirements, as well as compliance schedules.⁵⁷ Because the EPA can delegate the NPDES program to the states, the amount of pollution discharges allowed varies considerably from state to state.⁵⁸ Complying with a specific NPDES permit, however, automatically ensures compliance with the CWA in general.⁵⁹

As all individuals and industries that wish to discharge pollutants must obtain NPDES permits, several definitions become important in water pollution jurisprudence. Section 402 of the Act requires an NPDES permit for the "discharge of a pollutant" from a "point source." The CWA defines the term "discharge of pollutants" as "any addition of any pollutant to navigable waters from any point source." The District of Columbia established an often-cited rubric for determining when NPDES requirements apply to a given situation. The following five elements must be present: (1) a pollutant must be (2) added (3) to navigable waters (4) from (5) a point source. While all five of these definitions have been the subject of much water pollution litigation, the definitions of "pollutant" and "point source" are especially pertinent to this casenote.

C. Pollutant" Under the CWA

According to the CWA, "the term 'pollutant' means: dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial waste discharged into water." One commentator suggested that this "laundry list" of "bads" supports the notion that "pollutants" are "resources out of place." Another commentator expressed the breadth of the "pollutant" definition by noting that it includes "nearly anything added to water, including heat." Although the CWA's list of pollutants does not end with a catch-all inclusive phrase, the list has been construed as suggestive rather than exclusive.

In Sierra Club. Lone Star Chapter v. Cedar Point Oil Co, Inc., 69 an environmental group brought a citizen suit under the Act against an oil company, seeking an injunction to prevent the company from

⁵⁷ *Id.* at 111.

⁵⁸ Schatzberg, 55 Stan. L. Rev. at 258.

⁵⁹ May, SH041 ALI-ABA at 262.

⁶⁰ 33 U.S.C. § 1342.

^{61 33} U.S.C. § 1342(12)(A).

⁶² See Natl. Wildlife Fedn. v. Consumers Power Co., 862 F.2d 580, 583 (6th Cir. 1988) (referring to Natl. Wildlife Fedn. v. Gorush. 693 F.2d 156, 165 (D.C. Cir. 1982)).

Navigable waters include interstate waters, including wetlands; all waters which are currently used, were used in the past, or may be used in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide; tributaries and impoundment of U.S. waters; territorial seas; wetlands adjacent to U.S. waters; and other "isolated" waters (such as intrastate lakes, rivers, streams, soughs, natural ponds, etc.) having a connection with interstate commerce. 40 C.F.R. § 122.2 (2002).

^{65 33} U.S.C. § 1362(6). The section further explains that "this term does not mean (A) 'sewage from vessels' within the meaning of section 1322 of this title: or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources." *Id.*

⁶⁶ Rodgers, supra n 46, at *1.

⁶⁷ Craig. *supra* n. 43, at 179.

Rodgers, supra n. 46, at *1; See also Sandra B. Zellmer, The Virtues of "Command and Control" Regulation: Barring Exotic Species From Aquatic Ecosystems, 2000 U. III. L. Rev. 1233, 1241 (2000).

69 73 F.3d 546 (5th Cir. 1996).

discharging "produced water" into the Galveston Bay without an NPDES permit. The oil company argued that it did not violate the CWA in discharging produced water without a permit because the definition of "pollutant" did not include "produced water." The Fifth Circuit held that while the listing of specific substances is not insignificant, the fact that a substance fails to appear on the list does not take it out of the CWA's reach. While the Fifth Circuit acknowledged that the D.C. Circuit had been reluctant to add terms to the pollutant definition, the Fifth Circuit reasoned that the use of broad terms in the definitional list itself obviated the need for a catch-all phrase.

The Fifth Circuit further held that a court may determine whether an unlisted and discharged substance is a "pollutant" under the CWA, despite the argument that only the EPA should have the power to make this decision. The Court noted that only in rare instances would a court potentially need to decide whether a particular substance was a pollutant. Normally, citizen suits are brought against persons violating permits or general effluent limitations, meaning the EPA would have already determined whether the discharged substance was a pollutant. Sometimes, however, as in *Sierra Club* and the subject of this casenote, a citizen suit may be brought against a person or company that is allegedly discharging a pollutant without a permit even when the EPA has failed to issue a permit or promulgate an applicable effluent limitation. In those cases the EPA will not have made the "pollutant" determination. The Fifth Circuit reasoned that "it would make little sense to allow a citizen to bring an action that the court could not adjudicate. The Fifth Circuit bolstered its reasoning by listing several judicial decisions in which the respective courts made the "pollutant" determination without problem.

Courts have found that a broad range of substances constitute "pollutants" under the CWA. The American Law Institute has surveyed the wide-array of court-determined "pollutants" and found that they include: ⁸² water quality changes caused by dams; ⁸³ bombs dropped from a military plane during target practice: ⁸⁴ dead fish entrained ⁸⁵ by hydroelectric power plants; ⁸⁶ materials added to a drinking water treatment

⁷⁰ "Produced water" is a by-product of the oil and gas production process. *Id.* at 553.

⁷¹ *Id.* at 550.

⁷² *Id.* at 562.

⁷³ *Id.* at 566.

⁷⁴ Natl. Wildlife Fedn. v. Gorush. 693 F.2d 156.

⁷⁵ See Sierra Club. Lone Star Chapter. 73 F.3d at 566.

⁷⁶ Id.

⁷⁷ *Id*.

⁷⁸ *Id*.

⁻⁹ *Id*.

⁸⁰ Id. ⁸¹ Id.

⁸² Steven M. Neugeboren. Clean Water Act Overview, SH41 ALI-ABA 1, 5-6 (2002).

⁸³ Natl. Wildlife Fedn. v. Gorush, 693 F.2d 156. (Though the court found this "pollutant," it held that dams do not "add" pollutants, meaning no NPDES permit was required).

⁸⁴ Weinberger v. Romero-Barcelo, 456 U.S. 305 (1982).

^{85 &}quot;Entrained" refers to the fish and other aquatic organisms that are carried through pumps from Lake Michigan into a reservoir; this process is part of a hydroelectric power plant's system of producing energy. *Natl. Wildlife Fedn v. Consumers Power Co.*, 862 F.2d at 582.

⁸⁶ Natl. Wildlife Fedn v. Consumers Power Co., 657 F. Supp. 989 (W.D. Mich. 1987), rev'd on other grounds, 862 F.2d 580 (6th Cir. 1988). (Though the dead fish and fish parts were "pollutants," the Court held there was no "addition").

plant for beneficial purposes that are then released into surface waters;⁸⁷ and residue of toxic ingredient in a pesticide.⁸⁸ One case even held that escaped non-native salmon fish were "pollutants" under the CWA.⁸⁹

D. "Point Source" Under the CWA

The CWA essentially divides water pollution sources into two categories: "point source" and "nonpoint source." One commentator suggested that "the universe of the causes of water pollution should be considered as covered fully by the categories of point and nonpoint sources." Several theories exist as to why the CWA opted for the point/nonpoint source dichotomy. As a practical matter, when a source fits in the "point source" category its discharges fall under the rigorous NPDES program, while the categorization of a pollution source as "nonpoint" connotes looser oversight under the CWA's planning provisions. Nonpoint source" pollution "is defined by exclusion and includes all water quality problems not subject to § 402. The term "point source" was introduced to the Act in 1972 with the intention of providing a means of identifying industrial polluters – generally a challenging task given the rapidity with which pollutants disperse throughout the waters.

any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling rock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flow from irrigated agriculture. 97

The last sentence of the "point source" definition was added in 1987 by the Water Quality Act and is known as the agricultural stormwater exemption. 98 It reiterates that agricultural stormwater run-off "has always been considered nonpoint-source pollution exempt from the Act." Point sources range from the classic pipe to the "highly diverse, loosely channeled and varying sources of runoff." The American Law Institute surveyed the

⁸⁷ Hudson River Fisherman's Assn. v. N.Y., 751 F. Supp. 1088 (S.D.N.Y. 1990).

⁸⁸ Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526 (9th Cir. 2001).

⁸⁹ U.S. PIRG v. Atlantic Salmon of ME, LLC, 215 F. Supp. 2d 239 (D. Me. 2002).

⁹⁰ 33 U.S.C. § 1362(14).

^{91 33} U.S.C. § 1288; Natl. Wildlife Fedn v. Consumers Power Co., 862 F.2d at 582.

⁹² Rodgers, *supra* n. 46, at *2.

⁹³ Id. One possibility builds on the notion of culpability – "point sources are those traceable to individual wrongdoers; nonpoint sources are assigned to the tragedy of the commons where microdecisions by anonymous people bring us shared degradation." Another theory recognizes a distinction between human and naturally-caused pollution – "pollution with responsible origins comes from point sources; pollution naturally occurring is from nonpoint sources." Still a third possible theory invokes the notions of federalism – "point sources are big problems requiring federal solutions. Nonpoint sources are all the other problems that are best left to the states." Id.

⁹⁵ Natl. Wildlife Fedn v. Consumers Power Co., 862 F.2d at 582 (quoting Natl. Wildlife Fedn. v. Gorush. 693 F.2d at 166).

⁹⁶ U.S. v. Plaza Health Laboratories, Inc., 3 F.3d 643, 647 (2d Cir. 1993).

⁹⁷ 33 U.S.C. § 1362(14).

⁹⁸ Concerned Area Residents for the Env. v. Southview Farm, 34 F.3d 114, 120 (2nd. Cir. 1994).

¹⁰⁰ Rodgers, 2 Envtl. L. § 4.10 at *3.

various types of "point sources" and found that they include: 101 channelized storm water runoff; 102 unintentional overflows from mining spoil piles; 103 backhoes and bulldozers dumping fill material into wetlands; 104 bulldozers and backhoes pulling metal prongs through soil; 105 and, a cattle feedlot capable of discharging pollutants into U.S. waters during extreme storms. 106

In 1993, the Second Circuit had to decide whether a human being could be a point source under the Act. In *U.S. v. Plaza Health Laboratories*, the defendant laboratory co-owner appealed from a judgment entered in the United States District Court for the Eastern District of New York convicting him of two counts of knowingly discharging pollutants into the Hudson River in violation of the CWA. The defendant, at low tide, placed several vials with human blood in a crevice in the bulkhead separating his condominium from the Hudson River. The Second Circuit began its CWA analysis by noting the basic rule that absent an NPDES permit, "the discharge of any pollutant by any person" is unlawful. After recognizing that the defendant's behavior fit the statutory definition of "pollutant," as blood was considered "biological materials." the court noted that the more poignant issue was whether the defendant's conduct fit the "discharge" definition of the CWA. That issue, in turn, boiled down to whether a human being could be a "point source."

The Second Circuit began its analysis with the language and structure of the Act, noting that human beings were not specifically listed in the "point source" definition. Though not an exhaustive list, the Court noted that the list "evoke[d] images of physical structures and instrumentalities that systematically act as a means of conveying pollutants from an industrial source to navigable waterways. The court further noted that the CWA generally uses the term "point source" in reference to industrial or municipal discharges. Furthering its intuition that the CWA did not intend "point source" to include human beings, the Second Circuit illustrated the awkwardness that would result in the language of the statute were human being to be read into the "point source" definition.

The Second Circuit proceeded with its analysis of "point source" by looking at the statute's legislative history, as well as its context. While the legislative history provided the court with "little insight into the meaning of 'point source," it confirmed the CWA's focus on industrial polluters. In examining caselaw, the

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<sup>101</sup> Neugeboren, SH41 ALI-ABA at 6.
<sup>102</sup> NRDC v. Train, 396 F. Supp. 1393 (D.D.C. 1975), aff'd, NRDC v. Costle, 586 F.2d 1369 (D.C. Cir. 1977)
<sup>103</sup> Sierra Club v. Abston Constr. Co., 620 F.2d 41 (5th Cir. 1980).
<sup>104</sup> Avoyelles Sportsmen's League v. Marsh, 715 F.2d 897, 923 (5th Cir. 1983)
<sup>105</sup> Borden Ranch Partnership v. Corps, 261 F.3d 810 (2001).
106 Carr v. Alta Verde Industries, Inc., 931 F.2d 1055 (5th Cir. 1991).
<sup>107</sup> 3 F.3d 643 (2nd Cir. 1993).
<sup>108</sup> Id. at 643.
109 "Bulkhead" means, inter alia, "a retaining structure of timber, steel, or reinforced concrete used for shore protection."
Random House Webster's College Dictionary 174 (Wendalyn R. Nichols ed., 2nd ed., Random House 1999).
110 Plaza Health Laboratories, Inc., 3 F.3d at 644.
<sup>111</sup> Id. at 645 (quoting 33 U.S.C. § 1311(a)).
<sup>112</sup> Id.
<sup>113</sup> Id.
114 Id. at 646.
<sup>115</sup> Id.
<sup>116</sup> Id.
117 Id. at 647. Since "discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any
point source," the CWA's general prohibition would read: "the addition of any pollutant to navigable waters from any
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person by any person shall be unlawful." Id.

¹¹⁸ Id. ¹¹⁹ Id.

Second Circuit found no authority for making "the leap of writing 'human being' into the statutory language without doing violence to the language and structure of the CWA." After considering these various sources of meaning, the Second Circuit concluded that the term "point source" was "ambiguous" at best, as applied to human beings. 121

E. Aquaculture Facilities and the CWA

Having laid out the basic NPDES structure and the important definitions of "pollutant" and "points source." this casenote will now examine how these statutory mechanisms interplay with aquaculture. Aquaculture has been defined as the "cultivation of aquatic organisms, including finfish, shellfish...and aquatic plants. "122 Salmon farming and other types of aquaculture can damage water ecosystems through the discharge of effluents and solid wastes. 123 Sixty-three percent of United States aquaculture products are harvested in ponds. 124 Other methods include production in flow-through raceways or tanks, prepared bottom facilities. closed recirculation tanks, and cages and net pens. ¹²⁵ Some of these production methods involve placing the aquaculture "crop" directly in navigable waters, while others involve land-based facilities that are dependent on nearby navigable waters. The EPA has deemed the former projects "aquaculture projects" 127 and the latter "aquatic animal production facilities" (AAPFs). 129 In terms of the water pollution caused by AAPFs, ponds, and tank systems discharge highly concentrated waste during harvesting and cleaning. 130 Catfish ponds specifically release effluents containing high concentrations of nutrients that often exceed the limits set by the EPA or state governments. 131

Concentrated AAPFs, known as CAAPFs, are explicitly within the purview of the NPDES permit requirements. ¹³² The EPA has determined that CAAPFs are "point sources" under the Act. ¹³³ A CAAPF is a "hatchery, fish farm, or other facility" that fits within the regulatory criteria ¹³⁴ or is qualified as a CAAPF on a

 $[\]frac{120}{121}$ *Id.* at 649.

Schatzberg, 55 Stan. L. Rev. at 285 n. 1. Another source defines aquaculture as "the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any commercial, recreational, or public purpose" Craig, 9 Wash. U. J.L. & Pol'v at 164. (quoting NOAA, Dept. of Comm., Sustainable Fisheries-Objective 4, NOAA Fisheries Strategic Plan. available at http://www.nmfs.noaa.gov/om2/obj-4.html).

¹²³ Schatzberg. 55 Stan. L. Rev. at 258. See also Craig, 9 Wash. U. J.L. & Pol'y at 171.

¹²⁴ Craig. 9 Wash. U. J.L. & Pol'y at 180.

¹²⁵ Id.

¹²⁶ *ld*.

¹² The EPA has defined "aquaculture project" as "a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals." ld. at 181 (quoting 40 C.F.R. § 122.25(b)(1) (2000)).

AAPFs. in contrast to aquaculture projects, do "not use discharges of wastes from a separate industrial or municipal point source for the maintenance, propagation and/or production of harvestable freshwater, marine, or estuarine organisms." Craig. 9 Wash. U. J.L. & Pol'v at 183.

¹²⁹ *Id.* at 180.

¹³⁰ *Id.* at 185.

¹³¹ *Id*.

¹³² *Id.*

¹³³ Assn. to Protect, 299 F.3d at 1018.

Aquaculture facilities which contain grow, or hold aquatic animals in either of the following categories qualify as CAAPFs: "(a) Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include: (1) Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and (2) Facilities which feed less than 2,272

case-by-case basis by the EPA.¹³⁵ In general, only the larger aquaculture facilities fit the regulatory definition such that they qualify as CAAPFs. One commentator suggested that due to lax CAAPF criteria many aquaculture facilities go unregulated.¹³⁶ However, the regulatory scheme provides that smaller facilities may qualify as CAAPFs if they are deemed "significant contributor[s] of pollution to waters of the United States" based on the following: the location and quality of the "receiving" waters; the feeding, holding, and production capacities of the facility; the quantity and nature of the pollutants reaching the waters; and other relevant factors.¹³⁷

Though few cases have come before the judiciary on the nature of aquaculture facilities in relation to the CWA. "[c]ourts are split over whether frolicking, farm raised fish and shellfish and their by-products add pollutants." and whether the facilities constitute "point sources" under the Act. ¹³⁸ In one case, the subject of this casenote, the Ninth Circuit held that shellfish and their by-products were not "pollutants," and that the aquaculture facility was not a CAAPF, and therefore not a "point source." In U.S. Public Interest Research Group v. Atlantic Salmon of Maine, the United States District Court for the District of Maine held oppositely, that salmon feces and urine were "pollutants," and the salmon net pens were CAAPF "point sources." ¹⁴⁰

The court's order in *U.S. Public Interest Research Group*, denying the defendant's motion for summary judgment and granting the plaintiff's motion for summary judgment, affirmed the recommended decision of a magistrate judge in its entirety and attached the United States Magistrate Judge's recommended decision. The plaintiffs brought a citizen suit under the CWA alleging that the defendant's salmon farms released pollutants into several bays off the coast of Maine. The defendant's salmon farms used two types of sea cages/net pens. One type consisted of walkways and steel frames, with an inner containment net and an outer predator net hanging from the steel frame. The other type consisted of a circular structure, plastic piping, and the same nets hanging from the structure. Both types of cages were moored to the sea floor. At its freshwater locations, the defendant grew salmon until they became "smolts" (young salmon ready to migrate from fresh to salt water). At that point the defendant transferred the smolts into the sea cages where they stayed for eighteen to twenty-four months before being harvested for market.

Before deciding whether certain substances were "pollutants," the Judge listed and explained each one. The defendant used a substance that contained copper to treat its nets so as to reduce the marine growth on

kilograms (approximately 5.000 pounds) of food during the calendar month of maximum feeding. (b) Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include: (1) Closed ponds which discharge only during periods of excess runoff; or (2) Facilities which produce less than 45.454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year. Id. at 185-86. (quoting 40 C.F.R. pt. 122. app. C (2000)).

¹³⁵ Craig. 9 Wash. U. J.L. & Pol'v at 185. (quoting 40 C.F.R. § 122.24(b)).

¹³⁶ Schatzberg, 55 Stan. L. Rev. at 258.

¹³⁷ Craig. 9 Wash. U. J.L. & Pol'y at 186-87

¹³⁸ See May. SH041 ALI-ABA at 260.

¹³⁹ Assn. to Protect. 299 F.3d at 1019.

¹⁴⁰ 215 F. Supp. 2d at 249-50.

¹⁴¹ *Id.* at 241.

¹⁴² *Id.* at 242.

¹⁴³ *Id*.

¹⁴⁴ *Id*.

¹⁴⁵ *Id*.

¹⁴⁶ *Id.* at 242-43.

¹⁴⁷ *Id.* at 243.

¹⁴⁸ *Id*.

them.¹⁴⁹ The defendant fed the salmon with ground-up fish (herring and anchovetta based).¹⁵⁰ This feed also contained certain pigments that color the salmon's flesh pink.¹⁵¹ The feed was usually sprayed into the net pens from underwater pipes attached to a barge.¹⁵² Excess feed fell through the net pens and could damage the water environment.¹⁵³ Some of the defendant's salmon contracted bacterial diseases, other viruses, and sea lice, which could be contracted by other fish.¹⁵⁴ The defendant attempted to combat the bacterial diseases by mixing antibiotics with the feed; it used a toxic chemical to combat the sea lice.¹⁵⁵ Salmon feces and urine also entered the surrounding water.¹⁵⁶ Some of the salmon themselves escaped through the nets.¹⁵⁷ They were different than the salmon naturally existing in the Maine bays.¹⁵⁸ The plaintiffs alleged that the defendant's salmon farms released pollutants including salmon, salmon feces, salmon urine, fish feed, copper, pathogens, parasites, and antibiotics.¹⁵⁹ The defendant responded by filing a cross-motion for summary judgment, claiming that it was not required to have an NPDES permit and that it was not prohibited from discharging pollutants.¹⁶⁰

The Judge began with a review of the five elements test to determine whether a "discharge of a pollutant" had occurred. ¹⁶¹ In terms of the first two elements. (1) a pollutant must be (2) added, the Judge held that the escaped salmon, and the salmon feces and urine were pollutants under the Act because they constituted "biological materials" or "agricultural wastes," both specifically mentioned in the statutory definition. ¹⁶² In terms of the salmon feed, the Judge reasoned that due to lack of clarity as to whether the herring and anchovetta in the feed (which would clearly fit "biological material") were from the Maine bays in question, she could not determine whether the fish feed would qualify as an "addition" under the Act. ¹⁶³ The antibiotics added to the feed, however, were pollutants in that they fit the "chemical waste" part of the statutory definition. ¹⁶⁴ The Judge also held that the copper fell within the definition of pollutant. ¹⁶⁵

In one short paragraph the Judge found that the Maine bays in question constituted "navigable waters." meeting the third element of the "discharge of a pollutant" test. ¹⁶⁶ In terms of the fourth and fifth elements. (4) from (5) a point source, the Judge reviewed the AAPF/CAAPF scheme discussed *supra*. The Judge specifically delineated the CAAPF criteria as well as the case-by-case authority to designate a smaller AAPF a CAAPF when it significantly contributes to the pollution of U.S. waters. ¹⁶⁷ The Judge further explained that when an AAPF is designated as a CAAPF under the case-by-case rubric, the facility is not required to have an NPDES

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149 Id.
150 Id.
151 Id.
152 Id.
153 Id.
154 Id.
155 Id.
156 Id.
157 Id.
158 Id.
159 Id. at 247.
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¹⁶⁰ Id. at 245. The defendant had submitted an application for NPDES permits for all of its facilities, but the EPA never responded. The defendant then wrote a letter to the EPA asking for a "letter of assurance" that the salmon farms could operate with a permit; the EPA never responded. Id.

¹⁶¹ Id. at 246. (Referring to: (1) a pollutant must be (2) added (3) to navigable waters (4) from (5) a point source).

¹⁶² *Id*. at 247.

¹⁶³ *Id.* at 248.

¹⁶⁴ *Id*.

¹⁶⁵ *Id*.

¹⁶⁶ Id. at 249.

¹⁶⁷ *Id*.

permit until after the EPA has conducted a site visit and determined that such is necessary. The defendant argued that its offshore net pen facilities did not fit within the delineated CAAPF criteria because it did not grow salmon in "ponds, raceways, or other similar structures." Specifically the defendant argued that this CAAPF criterion focused on "land-based" structures only. While the Judge recognized that no case law spoke directly to this point, she emphasized that neither the proposed rule nor the final rule for 40 C.F.R. § 122.24 indicated the EPA intended a narrow land-based focus.

The defendant next argued that "ponds, raceways, or other similar structures" referred to a "narrow category of land-based structures with discrete discharging pipes." The Judge then listed various cases to demonstrate the wide range of discharging which constitute "point sources." The Judge concluded that to hold as the defendant wished on the "point source" issue would fly in the face of twenty years of caselaw. The Judge then held that all but one of the defendant's facilities met the specific criteria "automatically" qualifying them as CAAPF "point sources," that these salmon farms discharged "pollutants" without an NPDES permit, and therefore the defendant was in violation of the CWA.

IV. INSTANT DECISION

The Ninth Circuit began its opinion by presenting the overarching issue on the merits, namely. "whether the mussel shells, mussel feces and other biological materials emitted from mussels grown on harvesting rafts, and thereby entering the beautiful waters of Puget Sound, constitute the discharge of pollutants from a point source without a permit in violation of the Clean Water Act." The court also pointed out that it would have to address some procedural issues prior to reaching and reviewing the merits of the case de novo. 177

A. Procedural Issues

Taylor made two procedural arguments against APHETI's suit, specifically: (1) that a private party cannot bring a citizen's suit under the Clean Water Act for discharges without a permit when the state agency responsible for administering the NPDES permit program determined that a permit was not required; and, (2) that the Washington State Department of Ecology was a necessary party to the lawsuit under the Act and Federal Rule of Civil Procedure 19(a). As to the first issue, the court held that Taylor's contention must fail because it defied "the plain words of the statute and would frustrate the purposes of the Clean Water Act's empowerment of citizen suit." The court explained that the Act's citizen suit provision permits "private citizens to bring enforcement actions against any person alleged to be in violation of federal pollution control requirements." For the citizen suit right to exist, the private citizen claiming it must follow express

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168 Id.; See 40 C.F.R. § 122.24(c)(2).
169 Atlantic Salmon of ME, 215 F. Supp. 2d at 251.
170 Id.
171 Id. at 252-53.
172 Id. at 253.
173 Id. at 253-54.
174 Id. at 255.
175 Id. at 256.
176 Assn. to Protect, 299 F.3d at 1009.
177 Id.
178 Id. at 1011, 1014.
179 Id. at 1011-12.
180 Id. at 1012; See 33 U.S.C. § 1365(a)(1).
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procedural prerequisites.¹⁸¹ The court determined that APHETI followed the prerequisites in that it notified the EPA and Ecology sixty days prior to bringing its own action, and that neither agency filed suit.¹⁸² Taylor contended that despite complying with these procedural requirements, APHETI was still barred from suing because Ecology had previously communicated to both parties that NPDES permits were not required for mussel-harvesting.¹⁸³ The court disagreed with Taylor, expressing its obligation to "honor the Act's express provisions authorizing citizen suits."¹⁸⁴ Because APHETI met the procedural requirements, the court held that the "statutory issues whether Taylor 'discharged pollutants' from a 'point source' are within our jurisdiction."¹⁸⁵ The court explained that it had subject matter jurisdiction despite a State's choosing to "sit on the sidelines," because such inaction does not prevent a citizen's otherwise proper suit in federal court to enforce the Clean Water Act.¹⁸⁶

The court then refuted Taylor's case law basis for arguing that APHETI could not bring suit in light of the NPDES permit being unobtainable. Taylor relied on *Hughey v. JMS Development Corp*. Is in which a property owner filed a citizen suit under the Act seeking to enjoin a real estate developer from "discharging runoff from storm water without an NPDES permit" even though the state agency would not issue permits for such discharges. In *Hughey* the Eleventh Circuit rejected the citizen plaintiff's suit, but the Ninth Circuit concluded that it would not adopt *Hughey* in the present case. The Ninth Circuit explained, however, that *Hughey*. "even if adopted," would *not* preclude the present citizen suit because the two cases were distinguishable. While in *Hughey* it was impossible for the developer to comply with the "zero discharge" standard of the Clean Water Act. it was not so in the present case. The court reasoned, "Taylor, unlike the developer in *Hughey*, could simply cease operations to comply. . . [b]ecause Taylor can abate the discharge of alleged pollutants by halting its operations. . . *Hughey* does not detract from APHETI's statutory right of a citizen suit." Statutory right of a citizen suit."

Taylor argued a second procedural issue, namely that Ecology was a necessary party under the Federal Rule of Civil Procedure 19(a). The court set out Rule 19(a) as well as Taylor's argument regarding

The private citizen must provide notice (at least sixty days prior to filing suit) of the alleged violation to the EPA, the State where the alleged violation took place, and the alleged violator. If either the United States or the State brings an enforcement action within sixty days, the private citizen cannot bring a separate action, but may intervene in the government's suit. Assn. to Protect. 299 F.3d at 1012; 33 U.S.C. § 1365(a)(1).

¹⁸² Assn. to Protect, 299 F.3d at 1012.

¹⁸³ *Id*.

¹⁸⁴ *ld*.

¹⁸⁵ *ld*.

¹⁸⁶ Id.

¹⁸⁷ *ld.* at 1013.

¹⁸⁸ 78 F.3d 1523 (11th Cir. 1996).

⁴⁸⁹ Assn. to Protect, 299 F.3d at 1013.

¹⁹⁰ Id.

¹⁹¹ *Id*.

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¹⁹³ Id.

¹⁹⁴ 19(a) reads in pertinent part: "a person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if (1) in the person's absence complete relief cannot be accorded among those already parties, or (2) the person claims an interest relating to the subject of the action and is so situated that the disposition of the action in the person's absence may (i) as a practical matter impair or impede the person's ability to protect that interest or (ii) leave any of the persons already parties subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations by reason of the claimed interest." Fed. R. Civ. P. 19 (2001): Assn. to Protect. 299 F.3d at 1013-14.

19(a). 195 Specifically, Taylor argued that because Ecology had previously decided Taylor did not need an NPDES permit, Ecology would need to be joined so as to properly accord relief. 196 Taylor alternatively posited a 19(a)(2) argument, claiming that "any relief accorded in Ecology's absence will impair Ecology's interests in overseeing the State's NPDES program." The court recognized that in essence it was faced with a procedural issue of first impression: whether a state agency that administers the Act's NPDES permit program is a "necessary party" to a citizen suit when that agency has determined that a permit is not required. 198 The court held, consistent with all the federal courts which have reached the issue, 199 that neither federal nor state agencies that administer federal environmental laws were necessary parties in citizen suit enforcement actions.²⁰⁰ Specifically, the court adopted the Second Circuit's and District of Columbia Circuit's views, allowing citizen suits under the Act without requiring joinder of the government agency.²⁰¹

The court further supported its decision by analyzing the facts of the case in light of the language of 19(a)(1) and (2).²⁰² First, after looking at 19(a), it held that adequate federal court relief could be granted in the suit between APHETI and Taylor without the presence of Ecology. Next, it held that 19(a)(2) was inapplicable because Ecology was not claiming any interest that would be adversely affected by the legislation.²⁰⁴

B. Substantive Issues

After concluding its analysis of the two procedural issues, the court analyzed the underlying merits of the case. The court described the "fundamental law" of the Act pertinent to the substantive issues: "pollutant" discharges originating from a "point source" and entering navigable waters violate the Clean Water Act, unless done under the terms of an NPDES permit obtained from the responsible state agency. 205 Since Taylor was unable to obtain the permit contemplated by the Act, the court first analyzed whether the mussel emissions were "pollutant[s]" under the Act.²⁰⁶ APHETI argued that the mussel emissions fit the definition of "pollutant" as "biological matters." The court then explained that the proper "starting point" for statutory interpretation "is the language of the statute itself." The court noted that because § 1362(6) listed a wide variety of pollutants, the meaning of "biological materials" was not easy to discern. Under the doctrine of ejusdem generis, 210 however, the meaning of "biological materials" became a bit more apparent. The court reasoned that the

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<sup>195</sup> Id. at 1014.
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 $^{^{196}}$ \overrightarrow{ld} .

^{19&}lt;sup>-</sup> *Id*.

¹⁹⁹ The 2nd Circuit, the D.C. Circuit, the U.S. District Court in Colorado, and the U.S. District Court in New Jersey

²⁰⁰ Id.

²⁰¹ *Id*.

²⁰² *Id.* at 1015.

 $^{^{203}}$ *Id.*

²⁰⁴ Id. Ecology stated in a briefing to the court that "it recognizes that its decisions are subject to judicial review and will issue an NPDES permit to Taylor if this Court concludes a permit is necessary." Id.

²⁰⁵ Id.

²⁰⁶ *Id.*

²⁰⁷ *Id*.

²⁰⁸ Id. (quoting Gwaltney of Smithfield. Ltd., v. Chesapeake Bay Found., Inc., 484 U.S. 49, 56 (1987)). ²⁰⁹ *Id.* at 1016.

When a statutory provision contains a list of several specific terms and a general term, the general term is usually deemed "of the same category or class as the more specifically enumerated items." Id.

"biological materials," then, would likely indicate waste material "of a human or industrial process." However, the court recognized that "biological materials" could also include the mussel emissions at issue. 212

Due to the statute's inherent ambiguity, the court next turned to Congress' intent in passing the Act to find meaning in the phrase "biological materials." Because one of the Act's purposes was to protect and propagate shellfish, the court reasoned that it would be incongruent to hold that the same shellfish "sought to be protected under the Act" were also "pollutants" prohibited by the Act. Despite its holding that mussel emissions and shells were not "pollutants," the court did not hold that "materials found naturally in the water" could never be considered "biological materials" and therefore "pollutants" under the Act. Discarded fish skin, scales, and bones from a fish processing facility, for example, could be "discharging pollutants." for example. The court distinguished the hypothetical scenario from the present case in that the discarded fish materials "although naturally occurring" in the water, had been "altered by a human or industrial process" whereas the mussel emissions were purely the result of "natural biological processes." The Ninth Circuit's definition of "biological materials," as "waste product of a human or industrial process" coincided with the definitions of other courts which have pondered the specific term's meaning. In concluding that "biological materials" become "pollutants" through intervening human activity, the court explained that its definition was consistent with the Act's definition of "pollution" as the "man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water."

Although the Ninth Circuit held dispositively that Taylor's mussels and mussel byproducts were not pollutants, it decided to analyze the "point source" issue as an alternative basis for its decision. EPA regulations define a "concentrated aquatic animal production facility" ("CAAPF") as a "point source" subject to NPDES permit requirements if it "contains, grows or holds, among other things. [c]old water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year." While Taylor's facilities met this definition, the EPA also excludes two types of facilities from the CAAPF category, namely those "(1) [f]acilities which produce less than [approximately 20.000] pounds of aquatic animals per year; and (2) [f]acilities which feed less than [approximately 5.000 pounds] of food during the calendar month of maximum feeding." The court held that Taylor's facilities fit the second exception because it did not use feed of any kind. APHETI maintained that even if Taylor's facilities did not represent a CAAPF, they were still "point sources" under the general definition of "discernible, confined, and discrete conveyance," or, under the specific definition of "vessel or other floating craft." The court was not

²¹¹ *Id*.

 $^{^{212}}$ *Id*.

 $^{^{213}}$ *Id*.

²¹⁴ *Id*.

²¹⁵ *Id*. at 1016-17.

²¹⁶ *Id.* at 1017.

²¹⁷ Id

²¹⁸ *Id.* The other courts include the 2nd Circuit, the 6th Circuit, the United States District Court for the Eastern District of Pennsylvania, and the 3rd Circuit. *Id.*

²¹⁹ *Id.*; 33 U.S.C. § 1362(19).

A "point source" is: "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch. channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation. or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14).

²²¹ See Assn. to Protect, 299 F.3d at 1018.

²²² *Id.* (quoting 40 C.F.R. Pt. 122, App. C(a)).

²²³ Assn. to Protect, 299 F.3d at 1018 (emphasis omitted).

²²⁴ *Id*.

²²⁵ Id.

persuaded, however, in light of the existence of the specific regulatory definition for aquatic animal farming facilities. 226 To hold that facilities like Taylor's were "point sources" would make surplusage of the CAAPF criteria. 227

The court affirmed the District Court's decision, and concluded its opinion by summarizing its various holdings: (1) APHETI had the right to challenge Taylor's facilities in a citizen suit on behalf of its members. despite Ecology's determination that a permit was unnecessary; (2) the mussel emissions and mussel shells that entered Puget Sound from the "mussel seeds" hanging on Taylor's ropes attached to its rafts were not "pollutants;" (3) Taylor's rafts were not "point sources;" and (4) Taylor's mussel harvesting in this fashion without a permit did not violate the Clean Water Act.²²⁸

V. COMMENT

The Ninth Circuit's holding in the instant decision could significantly affect water pollution jurisprudence, especially with respect to aquaculture, and even in states like Missouri. Very few reported cases have dealt with the narrow issues presented in the subject of this casenote.

> A. Association to Protect or U.S. Public Interest Research Group as Precedent in Missouri?

The instant decision held oppositely from the only other reported case dealing with the same underlying issues. Association to Protect, decided on the west coast and in the same year as U.S. Public Interest Research Group (decided on the east coast), came to diametrically opposed conclusions on two important issues: (1) whether aquaculture organisms' (fish/shellfish) feces, urine, and other byproducts constitute "pollutants" under the CWA, and (2) whether the aquaculture facilities producing the fish/shellfish are "point sources" under the CWA. Because no other reported case has dealt with mussel harvesting in particular, U.S. Public Interest Research Group, though dealing with salmon farms, serves an important function in terms of comparison with the subject of this casenote.

With respect to the "pollutant" issue, while Association to Protect found that mussel shells and mussel by-products, including feces, were not pollutants, U.S. Public Interest Research Group held with even less discussion that salmon feces and urine entering the waters of Maine bays were indeed pollutants under the CWA. While the two cases appear to come down on opposite sides of the pollutant-issue in terms of aquaculture organisms' byproducts, some important distinctions deserve attention. First, the Ninth Circuit clarified its holding that mussel emissions were not pollutants by stating in a footnote. "[a]s a caveat, the record does not indicate that the biological materials released by Taylor's facilities were released in concentrations significantly greater than would otherwise be found in the waters of the Puget Sound."229 The court further explained that it did not have to decide whether mussel emissions in higher concentrations would constitute pollutants.²³⁰ The Ninth Circuit, in the body of its opinion, bolstered this notion in that "so far as the record shows, [the addition of the mussel emissions] does not add any identifiable harm, let alone appreciable or significant damage, to the Puget Sound environment."²³¹ In fact, the court recited in its Facts section that

²²⁶ Id.

²²⁷ *Id.* at 1019.

²²⁹ *Id.* at 1017, n. 9. ²³⁰ *Id*.

²³¹ *Id.* at 1016.

according to some observers, mussels serve as water quality enhancers in that they filter excess matter in the water that can destroy a marine ambient. 232

U.S. Public Interest Research Group, on the other hand, did not discuss the nature of the salmon feces at any length. However, other commentators have discussed salmon farms and their natural byproducts, including feces and urine, finding them to be quite detrimental to surrounding water quality. One commentator discussed the various adverse environmental effects of solid waste emissions from salmon aquaculture operations. 233 She specifically mentioned "fecal waste" as one of the major sources of solid waste that negatively impact a body of water's atmosphere. 234 Along with excess fish feed in the water, salmon fecal waste can lead to oxygen depletion in the waters, 235 harm to "benthic ecosystems," 236 and promotion of toxic algae bloom growth. 237 Toxic algae blooms can result from excess levels of nitrogen and phosphorous from salmon urine. These algae blooms can kill fish and other organisms. 239

While these opinions regarding potential harms from salmon feces and urine cannot be attributed to the U.S. District Court of Maine, the court may have assumed these harms in making its decision that salmon feces and urine were pollutants. In fact, Maine has twenty-five of the thirty-three salmon farms present in the United States.²⁴⁰ Furthermore, the court may have been privy to the knowledge that in places with significant salmon farming, like the coast of British Columbia, discharges from the salmon farms are equal in amount to that of human raw sewage from a city of 500,000 people.²⁴¹

The difference in complexity between mussel harvesting and salmon farming aquaculture may have contributed to the opposite holdings as well. In Association to Protect, Taylor's mussel-harvesting facility involved no feeding; rather, 'nature and the vibrant waters of Puget Sound...transform[ed] the mussel 'seeds' into edible mussels worthy of admiration and human appetite."²⁴² Furthermore, the defendant's musselharvesting involved only two facilities, and grew mussels which naturally reproduce in Puget Sound.²⁴³ In contrast, the defendant in U.S. Public Interest Research Group maintained many more facilities, used fish feed sometimes mixed with antibiotics, and produced salmon which were not naturally occurring in the relevant Maine bays.²⁴⁴ Whether these distinctions sufficiently explain the opposite holdings on the aquaculture byproducts pollutant issue remains to be seen with the development of future caselaw on the subject.

While the Court in U.S. Public Interest Research Group may have haphazardly included salmon feces and urine in its long list of "pollutants" being discharged from the defendant's salmon operations, and although

²³² Id. at 1010.

Mary Liz Brenninkmeyer, Student Author, The Ones That Got Away: Regulating Escaped Fish and Other Pollutants From Salmon Fish Farms, 27 B.C. Envtl. Aff. L. Rev. 75, 79 (1999). ²³⁴ See id.

Oxygen depletion can kill or harm fish and other organisms in the water. *Id.* at 80.

Benthic ecosystems are "bottom" ecosystems. Anoxia, the production of toxic gases resulting from damage to the benthic ecosystems, can harm fish and organisms in the surrounding water. Solid aquaculture wastes may also settle in the bottom sediment, smothering the "natural biota." The higher the amounts of organic matter in the sediment, the longer the benthic community will take to recover from the waste. Id.

^{23°} *Id.* at 81. ²³⁸ *Id.*

²³⁹ Id. Specifically, altered levels of nitrogen and phosphorous in the water can cause the growth of less attractive algae, resulting in less grazing. As the algae eventually die, microorganisms use oxygen to break down the algae, resulting in less oxygen in the water for the fish and other organisms. Id.

²⁴⁰ Id. at 94. Washington State has eight salmon fish farms. Id.

²⁴¹ *Id.* at 81.

²⁴² Assn. to Protect, 299 F.3d at 1010.

²⁴⁴ U.S. Public Interest Research Group, 215 F. Supp. 2d at 243-45.

the court discussed this specific issue very little, its conclusion seems logical given the language of the CWA's "pollutant" definition. In contrast, the Association to Protect Court, unable to derive the plain meaning of the term "biological materials," applied "other tools of reason." These "other tools of reason," including the lack of appreciable harm to the Puget Sound waters from the low levels of mussel emissions, discussed supra, were not used by the U.S. District Court of Maine. In fact, it confidently asserted that salmon feces and urine fit the pollutant definition in that they constituted either "biological materials" or "agricultural wastes," both delineated by the statute.²⁴⁶ While both courts' holdings seem plausible, the Association to Protect Court ultimately rested its decision on the notion that "biological materials" that are "pollutants" under the Act must have been "transformed by human activity." Such a holding, though definitely plausible, and well-reasoned by the court, would not allow for the caveat which the court mentioned, namely that a higher concentration of mussel by-products could constitute "pollutants." Higher concentrations of mussel feces would not meet the "transformed by human activity" definition which the court established as definitional precedent in Association to Protect. Perhaps an equally plausible holding in the instant decision would have deemed the mussel byproducts "biological materials" (and therefore "pollutants") while simultaneously finding that the mussel rafts were not CAAPF point sources. The court would have reached the same ultimate conclusion, that an NPDES permit was not required for operation of the defendant's mussel-harvesting facilities.

In fact, the two cases hold oppositely on the point source issue as well. However, in contrast to the "pollutant" discussions which differed significantly between the courts, both courts discussed the point source issue at more length, and both courts engaged in a parallel analysis of the EPA's CAAPF regulations. While the Ninth Circuit ultimately held that the mussel rafts did not constitute "point sources," the U.S. District Court of Maine held that the salmon netpen operations did meet the "point source" definition. The difference in the courts' outcomes simply resulted from their respective application of the same CAAPF criteria. Although the mussel raft facilities discharged more than 30 days per year, they did not involve fish feed and therefore fit within one of the two CAAPF exceptions. On the other hand, while the salmon farms in U.S. Public Interest Research Group similarly discharged more than thirty days a year, they did not fit either of the CAAPF exceptions.

While mere application of law to fact accounts for the different outcomes on the "point source" issue, the *Association to Protect* Court further honed in on the differences in the two aquaculture facilities. Referring to *amicus curiae* letters in a footnote, the Ninth Circuit noted that a regional Native American Tribe wrote, "mussel rafts have actually been proposed as a means to improve water quality in embayments where poor circulation and point source discharges threaten water quality." The same Native American Tribe further wrote that "[u]nlike salmon net pens and other confined animal farming operations, we do not view this type of activity [referring to the mussel-harvesting rafts] as meeting the EPA definition of 'point source." Were the mussel-harvesting operations to involve feeding supplements or medications, the Ninth Circuit likely would have determined that Taylor's facilities indeed met the definition of a CAAPF point source. Both the Ninth Circuit and the U.S. District Court of Maine reached sound conclusions on the "point source" issue. Either decision, therefore, would serve as valid precedent for the future.

²⁴⁵ Assn. to Protect. 299 F.3d at 1016.

²⁴⁶ U.S. Public Interest Research Group. 215 F. Supp. 2d at 247.

²⁴⁷ Assn. to Protect, 299 F.3d at 1017.

²⁴⁸ *Id.* at 1010, n. 2.

²⁴⁹ *Id.* at 1011, n. 3.

B. Aquaculture Regulation in Missouri: Conjectures and Suggestions

Neither Missouri state courts nor the Eight Circuit have reached the narrow issues presented by this casenote. However, Missouri is home to several aquaculture facilities. including several hatcheries, catfish ponds and trout farming facilities. Trout are raised in free-flowing impoundments that discharge into waters of the state, and generally operate under NPDES permits. Net pens or other forms of aquaculture in which fish are raised directly in a lake or stream are not permitted in Missouri. Whether the Missouri courts or the Eighth Circuit would hold that the Missouri aquaculture crops' fecal matter and urine constitute "pollutants" as "biological materials" is difficult to predict; whether the same courts would hold that the Missouri facilities constitute "point sources" is also difficult to predict. However, the Missouri Clean Water Commission, under the Department of Natural Resources (DNR), has found that at least some of the state's aquaculture facilities discharge pollutants from point sources, as fourteen facilities currently operate under NPDES permits. The facilities exist in many parts of the state²⁵⁴ and discharge into many of the state's bodies of water. Five of the fourteen facilities operate under a general NPDES permit; the remaining nine have site-specific permits. The general permit "authorizes the discharge of flow-through raceway waters or pond overflow from fish farms/hatcheries to waters of the State of Missouri." The general permit does not authorize the disposal of fish manure from cleaning processes or the use of drugs or toxic chemicals, however, without specific departmental approval.

While the fourteen NPDES-permitted aquaculture facilities in Missouri clearly discharge pollutants from point sources according to the DNR, the state may have facilities whose situations are less clear. Though mussel and salmon aquaculture facilities do not exist in Missouri, catfish ponds and the world's largest goldfish pond do function within the State's borders. The goldfish pond does not operate under an NPDES permit: nor do the majority of the catfish pond operations. While it is difficult to conjecture whether a Missouri court would deem these fish's fecal matter and by-products "pollutants" under the CWA, it seems fairly clear that Missouri courts would not find these facilities to be "point sources." In fact, with respect to the catfish ponds, one commentator suggested that the CAAPF point source categorization does not apply to the catfish industry.

²⁵⁴ Counties with NPDES-permitted aquaculture facilities include: Barry, Benton, Crawford, Dent, Douglas, Laclede, McDonald, Newton, Ozark, Pettis, Phelps, Ralls, and Taney. *Id.*

²⁵⁵ *Id.* The receiving bodies of water include: Flat Creek, Roaring River, Hunter Creek, Niangua River, Little Sugar Creek, Hickory Creek, Meramec River, and Lake Taneycomo *Id.*

²⁶¹ *Id*.

²⁵⁰ Telephone Interview with Vicky Kugler, Environmental Specialist. Water Pollution Control Program. Clean Water Commission, Mo. Dept. of Natural Resources. (Feb. 25, 2003).

²⁵¹ E-mail from Curtis B. Gateley, Environmental Specialist, Water Pollution Control. Mo. Dept. of Natural Resources. to Bridget B. Romero, Student, Columbia, Mo., *Re: Info About NPDES Permit System in MO* (Feb. 27, 2003).

E-mail attachment from Dan East, Water Pollution Control, Mo. Dept. of Natural Resources. to Bridget B. Romero. Student, Columbia, Mo., *List of Aquaculture or Fish Hatcheries With Permits* (Feb. 26, 2003).

²⁵⁶ In fact, the general permit for "fish farms/hatcheries," designated by the DNR with Permit No. MO-G130000, officially expired in November of 2001 as its five-year period of validity ended. A new general permit for aquaculture facilities is being developed. Telephone Interview, *supra* n. 250.

²⁵⁷ Email attachment, *supra* n. 253.

Fax from Vicky Kugler, Environmental Specialist, Water Pollution Control Program, Clean Water Commission, Mo. Dept. of Natural Resources, Sample Missouri State Operating Permit, Water Pollution Control Program, General Discharge Permit, Permit No. MO-G130000.

Telephone Interview, supra n. 250.

because these facilities do not discharge pollutants on more than thirty days per year. In fact, the CAAPF regulations specific to warm water fish (including catfish) specifically exempt "closed ponds which discharge only during periods of excess runoff." Accordingly, many states choose not to regulate their catfish industries at all. In fact, of two states with considerable catfish production, Mississippi has issued only one permit for a catfish facility; Arkansas has issued none. Though catfish facilities, operating largely in closed ponds, do not discharge into state bodies of water with nearly the same frequency as salmon farms, their "effluents tend to have high concentrations of pollutants."

Though no citizen suit has been brought questioning the operation of these Missouri facilities without an NPDES permit, the DNR may want to preemptively consider such a possibility. One commentator suggests that the CAAPF requirements in the CFR are too lax, allowing "entire sectors of the aquaculture industry, such as catfish ponds, to remain entirely unregulated under the CWA." That author suggests reducing the number of days a fish farm must discharge in order to be considered a point source needing an NPDES permit. 268

As a matter of policy, the State of Missouri's DNR may wish to explore the idea of designating the state's catfish facilities "point sources" on a case-by-case basis. If, after determining that a particular catfish pond or other aquaculture facility *not* meeting the CAAPF criteria did indeed contribute significantly to the pollution of waters in the State, the DNR could require that the facility only operate under an NPDES permit. ²⁶⁹ It may be wise for the state to preemptively undertake an on-site survey of the state's currently unregulated aquaculture facilities, with the case-by-case CAAPF designation in mind.

Whether catfish feces and their by-products would constitute "pollutants" and whether catfish ponds. or other largely un-permitted aquaculture facilities, would constitute "point sources" under the Missouri analog of the CWA are matters for pure conjecture. Considering the nature of the aquaculture facilities in Missouri (including trout, fish hatcheries, and catfish ponds) it seems likely that *U.S. Public Interest Research Group* would be more appropriate than the instant decision as persuasive precedent on the "pollutant" issue in Missouri. Because the aquaculture facility at issue in *U.S. Public Interest Research Group* involved fish farms rather than mussel harvesting, the "pollutant" analysis seems a better fit. Either the instant decision or *U.S. Public Interest Research Group* would serve as adequate precedent on the "point source" issue in Missouri. since both courts engaged in a straightforward and similar analysis of the CAAPF regulations. However, prior to the state's courts needing to look for precedent, the DNR may wish to consider re-evaluating Missouri's aquaculture facilities, perhaps naming some of them CAAPFS on a case-by-case basis.

VI. CONCLUSION

The Ninth Circuit reached a well-reasoned conclusion in finding that the mussel byproducts did not constitute "pollutants" and the mussel harvesting rafts did not constitute "point sources" under the Clean Water Act. As a result of the instant decision, those operating similar mussel harvesting facilities in Washington State can do so confidently without an NPDES. Furthermore, those operating salmon farms in Maine ought to do so only after obtaining an NPDES permit. Missouri citizens, on the other hand, have virtually no caselaw on which to rely in deciding whether or not their proposed aquaculture facility must operate only under an NPDES

²⁶² Brenninkmeyer, 27 B.C. Envtl. Aff. L. Rev. at 94.

²⁶³ 40 C.F.R. Pt. 122, App. C.

²⁶⁴ Brenninkmeyer, 27 B.C. Envtl. Aff. L. Rev. at 103.

²⁶⁵ *Id*.

²⁶⁶ See id. at 104.

²⁶⁷ *Id*. at 109.

²⁶⁸ Id. She suggests decreasing the number of discharge days to at least 20. Id.

²⁶⁹ See 40 C.F.R. § 122.14(c).

permit. While no suits similar to that in the instant decision have been brought in the state of Missouri, the Department of Natural Resources may wish to reevaluate those aquaculture facilities which it chooses not to regulate. While the CWA does not reach most catfish ponds, and while Missouri has never used the federally-delegated authority to review an aquaculture facility below the threshold for a permit on a case-by-case basis, ²⁷⁰ the state may wish to do just that. By preemptively examining these facilities, Missouri's DNR could avoid challenges in court while simultaneously protecting its aquaculture owners from citizen suits and, perhaps more importantly, it could take a national lead in progressive water pollution control.

BRIDGET B. ROMERO

²⁻⁰ E-mail from Curtis B. Gateley. Environmental Specialist, Water Pollution Control, Mo. Dept. of Natural Resources, to Bridget B. Romero. Student. Columbia. Mo., *Re: Info About NPDES Permit System in MO* (Mar. 3, 2003).