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IN THE UNITED STATES DISTRICT COURT
 DISTRICT OF HAWAI‘I

HAWAI‘I WILDLIFE FUND, a)	CIVIL NO. 12-00198 SOM BMK
Hawai‘i non-profit corporation,)	
SIERRA CLUB - MAUI GROUP, a)	PLAINTIFFS’ MEMORANDUM IN
non-profit corporation, SURFRIDER)	SUPPORT OF MOTION FOR
FOUNDATION, a non-profit)	SUMMARY JUDGMENT RE:
corporation, and WEST MAUI)	DEFENDANT’S LIABILITY FOR
PRESERVATION ASSOCIATION, a)	UNPERMITTED DISCHARGES
Hawai‘i non-profit corporation,)	INTO WELLS 1 AND 2
)	
Plaintiffs,)	
)	
v.)	
)	
COUNTY OF MAUI,)	
)	
Defendant.)	
)	
)	

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I. INTRODUCTION

Earlier this year, this Court held that defendant County of Maui violates the federal Clean Water Act when it discharges, without a permit, wastewater from Wells 3 and 4 at its Lahaina Wastewater Reclamation Facility (“LWRF”) into groundwater that travels to the Pacific Ocean. The Court noted that the Clean Water Act’s prohibition on unpermitted discharges “is not limited to ‘the addition of any pollutant *directly* to navigable waters from any point source,’ but rather extends to ‘the addition of any pollutant *to* navigable waters.” Hawaii Wildlife Fund v. County of Maui, Civ. No. 12-00198 SOM BMK, 2014 WL 2451565 (D. Haw. May 30, 2014), at *12 (quoting Rapanos v. United States, 547 U.S. 715, 743 (2006)). Accordingly, the Court concluded that “[a] party is liable under the Clean Water Act if, without [a National Pollutant Discharge Elimination System (“NPDES”)] permit, it indirectly discharges a pollutant into the ocean through a groundwater conduit.” Id. at *11. In such cases, “the discharge is functionally one into navigable water.” Id. at *15.

The Court articulated a two-part test to determine when such indirect discharges violate the Clean Water Act. First, Plaintiffs “must show that pollutants can be *directly traced* from the injection wells to the ocean such that the discharge at the LWRF is a *de facto* discharge into the ocean.” Id. Second, “Plaintiffs must

show that the level of pollutants emerging into navigable-in-fact water is more than *de minimis*.” Id.

Evaluating those factors is, of course, particularly straightforward when a tracer dye study detects tracer from the point source emerging into the ocean, as was the case for LWRP Wells 3 and 4. Under such circumstances, the Court has an “exceptionally extensive” record before it, with the exact location where pollutants enter the ocean through groundwater pinpointed, allowing precise measurements of the pollutants’ concentrations at those locations. Id. at *18. This Court recognized, however, that such evidence will not always be available, and that it would contravene congressional intent to protect our nation’s waters if polluters could rely on the absence of a conclusive tracer dye study to shield themselves from liability. See id. (“plaintiffs may not have the resources to identify such effects”). The Court affirmed that, “in the absence of a tracer dye study,” courts may look to “proxies to ... determine how much, if any, pollutant is reaching navigable-in-fact water.” Id.

Here, Plaintiffs offer the declaration of Dr. Jean E. Moran, a hydrogeologist with extensive experience studying groundwater flow and transport and the transport of contaminants through groundwater, including seventeen years of experience with tracer dye studies like the one conducted at the LWRP. Moran Decl. ¶¶ 1-6 & Exh. 1 (Moran resume). As Dr. Moran explains, in the absence of a

conclusive tracer dye study for Wells 1 and 2, consideration of other data, analysis and modeling, based on established principles of groundwater flow and transport, provide ample support for this Court to find that wastewater discharged from Wells 1 and 2 is transported through groundwater to the ocean and that, when it emerges into the ocean, the level of pollutants is far from *de minimis*. Plaintiffs respectfully ask the Court to grant summary judgment that Defendant's unpermitted discharges of wastewater from Wells 1 and 2 violate the Clean Water Act and that these violations will continue until Defendant obtains and complies with an NPDES permit for any discharges from Wells 1 or 2.

II. LEGAL STANDARD FOR SUMMARY JUDGMENT

Summary judgment shall be granted when “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Parties must support their position that a material fact is or is not genuinely disputed by either:

citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for the purposes of the motion only), admissions, interrogatory answers, or other materials; or

showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact.

Fed. R. Civ. P. 56(c). “Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). “Factual disputes that are irrelevant or unnecessary will not be counted.” Id.

The burden initially falls on the moving party to identify for the court those “portions of the materials on file that it believes demonstrate the absence of any genuine issue of material fact.” T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors Ass’n, 809 F.2d 626, 630 (9th Cir. 1987) (citing Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986)). “When the moving party has carried its burden under Rule 56(c), its opponent must do more than simply show that there is some metaphysical doubt as to the material facts.” Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 (1986) (footnote omitted). “A scintilla of evidence or evidence that is merely colorable or not significantly probative does not present a genuine issue of material fact.” Addisu v. Fred Meyer, Inc., 198 F.3d 1130, 1134 (9th Cir. 2000). Moreover, “if the factual context makes the non-moving party’s claim *implausible*, that party must come forward with more persuasive evidence than would otherwise be necessary to show that there is a genuine issue for trial.” California Arch’l Bldg. Prods., Inc. v. Franciscan Ceramics, Inc., 818 F.2d 1466, 1468 (9th Cir. 1987) (citing Matsushita Elec. Indus. Co., 475 U.S. at 587).

III. STATUTORY FRAMEWORK

Congress enacted the Clean Water Act to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To further this central goal, section 301(a) of the Act mandates that “the discharge of any pollutant by any person shall be unlawful.” Id. § 1311(a). The Ninth Circuit has recognized this prohibition as “[t]he ‘cornerstone’ and ‘fundamental premise’ of the Clean Water Act.” Northwest Environmental Advocates v. United States Env’tl Prot. Agency, 537 F.3d 1006, 1020 (9th Cir. 2008) (citation omitted).

Section 402 of the Act provides for an exception to the general prohibition imposed by section 301(a) through the issuance of a permit under the National Pollutant Discharge Elimination System “for the discharge of any pollutant or combination of pollutants.” 33 U.S.C. § 1342(a)(1). The NPDES permitting program is considered the “centerpiece” of the Clean Water Act and the primary method for enforcing the effluent and water-quality standards established by the federal Environmental Protection Agency (“EPA”) and state governments. American Iron & Steel Inst. v. Environmental Prot. Agency, 115 F.3d 979, 990 (D.C. Cir. 1997).

Section 402(b) of the Act, 33 U.S.C. § 1342(b), gives the EPA Administrator authority to allow a state to administer its own NPDES program. In

the state of Hawai‘i, the EPA has delegated authority to the State of Hawai‘i Department of Health to issue NPDES permits. Id.; 40 C.F.R. § 123.24. A state-issued NPDES permit can impose effluent limits and other provisions that are more stringent than the federal requirements for an NPDES permit, but all provisions must be at least as stringent as the federal requirements. 40 C.F.R. § 123.25(a); H.A.R. § 11-55-02(c).

Under Hawai‘i law, as under federal law, “[no] person, including any public body, shall discharge any water pollutant into state waters, or cause or allow any water pollutant to enter state waters” except in compliance with the state’s water pollution regulations. H.R.S. § 342D-50(a); see also H.A.R. § 11-55-03.

In the absence of compliance with a valid NPDES permit, a discharger cannot escape liability by arguing that its point source discharge does not “create[] a net increase in the level of pollution.” Committee to Save Mokolunne River v. East Bay Mun. Util. Dist., 13 F.3d 305, 309 (9th Cir. 1993). Rather, the Clean Water Act imposes strict liability, “categorically prohibit[ing] any discharge of a pollutant from a point source without a permit.” Id.; see also Hawaii Wildlife Fund, 2014 WL 2451565, at *15, *23; Save Our Bays and Beaches v. City and County of Honolulu, 904 F. Supp. 1098, 1105 (D. Haw.1994) (“The Act imposes strict liability for NPDES violations”); Hawaii’s Thousand Friends v. City and County of Honolulu, 821 F. Supp. 1368, 1391 (D. Haw. 1993) (“Section 301(a) ...

prohibits any discharges into navigable waters of the United States by any person (including a municipality) without a NPDES permit”).

Congress chose a strict liability permitting regime for the Clean Water Act because it recognized that earlier laws, which “employed ambient water quality standards ... as the primary mechanism in its program for the control of water pollution,” had failed to clean up the nation’s waters. Environmental Prot. Agency v. California ex rel. State Water Resources Control Bd., 426 U.S. 200, 202 (1976); see also id. at 203 (noting “conclusion of the Senate Committee on Public Works that ‘the Federal water pollution control program . . . has been inadequate in every vital aspect’”). By imposing “direct restrictions on discharges,” Congress intended to “facilitate enforcement by making it unnecessary to work backward from an overpolluted body of water to determine which point sources are responsible and which must be abated.” Id. at 204. To determine whether the Clean Water Act is being violated, the straightforward, threshold question is whether the discharge of pollutants – regardless of quantity or environmental impact – into waters of the United States is authorized under an NPDES permit. If not, the law is being violated. Id. at 205 (“it is unlawful for any person to discharge a pollutant without obtaining a permit and complying with its terms”).

IV. FACTUAL BACKGROUND

Defendant owns and operates the Lahaina Wastewater Reclamation Facility, which currently uses four injection wells for the disposal of wastewater. Exh. 8: Answer (Dkt. No. 41) ¶¶ 2, 16, 21. The original design for the facility included two wells for subsurface injection of wastewater, Wells 1 and 2, which were installed in 1979. Exh. 5: 1993 Injection Well Report at 1. Wells 3 and 4 were installed as part of a facility expansion in 1985. Id.

Each LWRF injection well consists of a borehole, with steel casing for a portion of its length, extending to a total depth ranging from 180 to 255 feet below the ground surface. Exh. 9: 2004 Underground Injection Control (“UIC”) Permit Application at Attachment M. Wastewater flows by gravity through the injection wells into the groundwater below the facility. Exh. 10: 2010 Section 401 Water Quality Certification Application at 2, 13; Exh. 11: 2011 UIC Consent Decree ¶¶ 28-29; Exh. 12: 1996 UIC Permit at 7.

Defendant first began discharging wastewater into Injection Wells 1 and 2 at the LWRF in May 1982, and began additional discharges into Injection Wells 3 and 4 in 1985. Answer ¶ 21; Exh. 13: First Amended Complaint (Dkt. No. 36) ¶ 43. Defendant has continued discharging into some or all of the four injection wells on a nearly daily basis to the present. Answer ¶ 21; First Amended Complaint ¶ 43; see, e.g., Exh. 14: February to December 2007 Injection Records;

Exh. 15: 2008 Injection Records; Exh. 16: 2009 Injection Records; Exh. 17: 2010 Injection Records; Exh. 18: 2011 Injection Records; Exh. 19: 2012 Injection Records; Exh. 20: Well 1 Injection Records, July 2012 to July 2014; Exh. 21: Well 2 Injection Records, July 2012 to July 2014; Exh. 27: Well 3 Injection Records, March to July 2014; Exh. 28: Well 4 Injection Records, March to July 2014.

V. DEFENDANT'S UNPERMITTED DISCHARGES OF WASTEWATER FROM WELLS 1 AND 2 VIOLATE THE CLEAN WATER ACT

To establish Defendant's "liability under the Clean Water Act," plaintiffs must prove only that Defendant has "(1) discharged a pollutant ...; (2) into navigable waters ...; (3) from a point source ...; (4) without a discharge permit," regardless of the effect of those discharges on the receiving waters. Committee To Save Mokelumne River, 13 F.3d at 309; see also Hawaii Wildlife Fund, 2014 WL 2451565, at *6. As a matter of law, each of these factors is present here, warranting entry of summary judgment in Plaintiffs' favor.

A. Defendant Discharges Pollutants.

The Clean Water Act's broad definition of "pollutant" includes sewage, sewage sludge, biological materials and municipal waste. 33 U.S.C. § 1362(6). Wastewater from sewage treatment plants like the LWRF is unquestionably a

“pollutant” under the Act. Hawaii’s Thousand Friends, 821 F. Supp. at 1391; see also Hawaii Wildlife Fund, 2014 WL 2451565, at *6, 16.

Defendant admits that, “on average, it disposes of 3 to 5 million gallons of treated wastewater per day into LWRF’s injection wells.” Answer ¶ 22. Since February 15, 2007, the start of the limitations period, Defendant has discharged wastewater into LWRF Injection Wells 1 and 2 on a nearly daily basis. See Answer ¶ 21; First Amended Complaint ¶ 43; 2007 Injection Records; 2008 Injection Records; 2009 Injection Records; 2010 Injection Records; 2011 Injection Records; 2012 Injection Records; Well 1 Injection Records, July 2012 to July 2014; Well 2 Injection Records, July 2012 to July 2014.¹ As a matter of law, Defendant has discharged, and continues to discharge on a nearly daily basis, one or more pollutants within the meaning of the Act from LWRF Wells 1 and 2.

B. Defendant Discharges Wastewater Into Waters Under Clean Water Act Jurisdiction.

The Clean Water Act defines the term “navigable waters” as “the waters of the United States, including the territorial seas.” 33 U.S.C. § 1362(7). The Pacific

¹ In citizen enforcement actions brought under the Clean Water Act, the otherwise applicable “five-year statute of limitations period is tolled sixty days before the filing of the complaint, to accommodate the statutorily-mandated sixty-day notice period.” Sierra Club v. Chevron, USA, Inc., 834 F.2d 1517, 1524 (9th Cir. 1987). Since Plaintiffs filed their complaint on April 16, 2012, the relevant period for calculating the number of days that Defendant has violated the Clean Water Act extends back to February 15, 2007. See Complaint (Dkt. No. 1).

Ocean unquestionably constitutes a navigable water within the meaning of the statute. See Rapanos v. United States, 547 U.S. 715, 739 (2006) (plurality) (“the phrase ‘the waters of the United States’ includes” oceans).

Wells 1 and 2 do not discharge treated wastewater directly into the Pacific Ocean. Rather, they discharge directly into groundwater located beneath the facility. See 1993 Injection Well Report at 4 & App. B; Def’s Section 401 Water Quality Certification Application at 2, 13; 2011 UIC Consent Decree ¶¶ 28-29. The groundwater underneath the LWRF then conveys the pollutants to the ocean. See Moran Decl. ¶¶ 12-16, 27-30, 35-38; Exh. 2: Tracer Dye Study at 4-37, 4-90; Exh. 22: 1973 Environmental Impact Statement at 91; Exh. 23: 1991 Environmental Assessment at 6-2 to 6-3; Exh. 24: 3/10/10 EPA Letter at 2.

In such a case, this Court has held that “the discharge is functionally one into navigable water.” Hawaii Wildlife Fund, 2014 WL 2451565, at *15. As this Court noted, “it would make no sense to exempt a polluter from regulation simply because its pollution passes through a conduit.” Id. The Court explained:

The plurality in Rapanos made clear that the prohibition in the Clean Water Act is not limited to “the addition of any pollutant *directly* to navigable waters from any point source,” but rather extends to “the addition of any pollutant *to* navigable waters.”

Id. at *12 (quoting Rapanos, 547 U.S. at 743; internal quotation marks omitted)).

The Court continued:

“It would, of course, make a mockery of [the Clean Water Act’s regulatory scheme] if [the] authority to control pollution was limited to the bed of the navigable stream itself. The tributaries which join to form the river could then be used as open sewers as far as federal regulation was concerned.” United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1326 (6th Cir.1974). No less can be said for groundwater flowing directly into the ocean. See Williams Pipe Line Co. v. Bayer Corp., 964 F. Supp. 1300, 1319-20 (S.D. Iowa 1997) (“Because the CWA’s goal is to protect the quality of surface waters, the NPDES permit system regulates any pollutants that enter such waters either directly or through groundwater.”); Washington Wilderness Coal. v. Hecla Min. Co., 870 F. Supp. 983, 990 (E.D. Wash. 1994) (“[S]ince the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit.”). See also Mary Christina Wood, *Regulating Discharges into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act*, 12 HARV. ENVTL. L. REV. 569, 596 (1988) (“To forbid pollution of a surface stream, but to permit the stream to be polluted by a nearby waste injection well is a manifest absurdity.”).

Id. at *13.

To ensure that Congress’s intent in enacting the Clean Water Act would not be subverted, this Court established a two-part test to determine whether a “discharge into the groundwater below the LWRF is functionally equivalent to a discharge into the ocean itself.” Id. at *12. First, Plaintiffs “must show that pollutants can be *directly traced* from the injection wells to the ocean such that the discharge at the LWRF is a *de facto* discharge into the ocean.” Id. at *15. Second, “Plaintiffs must show that the level of pollutants emerging into navigable-in-fact water is more than *de minimis*.” Id. As discussed below, Plaintiffs make both

showings, establishing that the discharges from Wells 1 and 2 are “functionally one[s] into navigable water.” Id.

1. Pollutants Can Be Directly Traced From Injection Wells 1 And 2 To The Ocean.

Even prior to the LWRF’s construction, Defendant was well aware that effluent discharged from Wells 1 and 2 into groundwater below the facility would not stay there. When the project underwent environmental review in 1973, Defendant’s consultant readily acknowledged “the effluent will eventually get into the ocean.” 1973 Environmental Impact Statement at 91.²

A couple of decades later, when Defendant was considering upgrades to the LWRF, the conventional wisdom regarding the fate of effluent discharged from the injection wells had not changed. In its environmental assessment, Defendant noted:

Effluent from the Lahaina Wastewater Reclamation Facility currently is discharged via injection wells to fractures in the underlying basalt. This effluent, via gravity and the pressure from up-gradient groundwater, flows towards the ocean.

1991 Environmental Assessment at 6-2. Defendant understood that the marine environment was on the receiving end of pollutants from the LWRF injection wells, conceding that “[t]reatment plant effluent contributes various constituents,

² Since only Wells 1 and 2 were included in the LWRF’s original design, the consultant was referring to pollution from those wells reaching the ocean. See 1993 Injection Well Report at 1.

including but not limited to, suspended solids, dissolved oxygen, and nutrients such as nitrogen and phosphorous to the ocean.” Id. at 6-3.

In recent years, outside the courtroom, Defendant has continued to acknowledge that pollutants discharged from the LWRF injection wells travel to the ocean. At a November 6, 2008 public hearing on a proposed federal UIC permit for the LWRF, Maui County Wastewater Reclamation Division Chief, Dave Taylor, stated that treated wastewater “goes down the injection wells,” then “moves outward through the ground,” and “eventually it comes out into the ocean.” Exh. 25: 11/6/08 UIC Hearing Tr. at 8 (emphasis added). Based on available “hydrogeologic models,” Mr. Taylor estimated that it takes “two to five years” for wastewater discharged from the LWRF injection wells to reach the ocean. Id. at 14.³

In explaining the basis for its proposed UIC permit, the EPA noted that “[t]he geology into which treated effluent [from the LWRF] is injected consists of highly permeable basalt lava flows.” Exh. 26: EPA Statement of Basis for UIC Permit at 3. EPA further stated that “[i]njection of treated wastewater effluent at the [LWRF] wells is expected to form a plume within the aquifer, extending from

³ At the same public hearing, now-Maui Mayor Alan Arakawa, a former wastewater operator at the LWRF and supervisor at Defendant’s Kahului Treatment Plant, stated that effluent from the LWRF is “going into the ocean” and “is probably getting there a lot sooner than most people think.” Id. at 81; see also id. at 80.

the wells to the coast.” Id. Accordingly, EPA designed its UIC permit terms to address harm to not only drinking water supplies, as is customary, but also “the coastal environment.” Id. at 6; see also id. at 5-6 (nitrogen limits seek to reduce impact to coral reefs).

In 2011, EPA collaborated with the State of Hawai‘i Department of Health, the U.S. Army Engineer Research and Development Center and researchers at the University of Hawai‘i to investigate the “existence of a hydraulic connection between the injection of treated wastewater effluent at the [LWRF] and nearby coastal waters, confirm locations of emerging injected effluent discharge in these coastal waters, and determine a travel time from the LWRF injection wells to the coastal waters.” Tracer Dye Study at ES-1. While the study did not conclusively detect at the monitored discharge areas the tracer dye that had been placed into Well 2, that mere fact does not preclude reliable, science-based conclusions regarding the transport of wastewater discharged into Wells 1 and 2. Moran Decl. ¶¶ 9-10.

Plaintiffs offer the declaration of Dr. Jean E. Moran, a hydrogeologist with extensive experience studying groundwater flow and transport and the transport of contaminants through groundwater, including seventeen years of experience with tracer dye studies like the one conducted at the LWRF. Id. ¶¶ 1-6 & Exh. 1 (Moran resume). As Dr. Moran explains, in the absence of a conclusive tracer dye

study, consideration of other data, analysis and modeling, based on established principles of groundwater flow and transport, allow one to reach reliable conclusions about the transport pathway of wastewater discharged from Wells 1 and 2. Moran Decl. ¶ 10.

Like every agency that considered the question before her (including Defendant's Wastewater Reclamation Division and its consultants), Dr. Moran concludes that "wastewater injected into any of the LWRF wells, including Wells 1 and 2, will discharge into the ocean near to the LWRF facility." Id. ¶ 12. Dr. Moran's conclusion that groundwater conveys pollutants from Wells 1 and 2 to the Pacific Ocean is consistent with the basic scientific principle that water flows downhill and with published reports regarding the flow of groundwater in the Lahaina region, all of which provide "a high degree of confidence that groundwater underlying the LWRF will discharge into the ocean." Id. ¶ 15; see also id. ¶¶ 12-16; Exh. 3: U.S. Geological Survey ("USGS") Report on Groundwater Availability in Lahaina District at 12, 17-19, 21, 24, 28, 33 & Figs. 4 & 7.

The model developed for the tracer dye study, which uses well-established methods, likewise shows that wastewater discharged from Well 2 is transported through groundwater into the ocean, regardless of the injection regime at the LWRF. Tracer Dye Study at 4-37, 4-90 (Fig. 4-39); Moran Decl. ¶¶ 27-30. When

Wells 3 and 4 receive the majority of total injected wastewater, as was the case when the tracer dye study was conducted, the model shows that the injectate discharged from Well 2 is initially diverted to the east “before taking a northwesterly path to the ocean.” Tracer Dye Study at 4-37; see also id. at ES-21 (Wells 3 and 4 received “more than 80 percent of the treated wastewater” during tracer dye study), 4-90 (Fig. 4-39a). The model further shows that, at other times, when Well 2 receives the lion’s share of treated wastewater, “the majority of the underground discharge from Well 2 travels to the known submarine springs” offshore of Kahekili Beach. Id. at 4-37; see also id. at 4-90 (Fig. 4-39b); cf. Moran Decl. ¶ 37 & Tbl. 2 (injection records show periods when Wells 1 and 2 received majority of total injectate). As Dr. Moran explains, because the tracer dye study’s field measurements accounted for an exceptionally high percentage of the wastewater injected into Wells 3 and 4, “[t]he direction and rate of the majority of the flow are ... well constrained by the tracer results,” making the model “very credible,” Moran Decl. ¶ 28, and capable of making “credible prediction[s]” about the transport of pollutants from Well 2. Id. ¶ 30.

A USGS study that was published in 2009 and “convincingly” detected a wastewater plume from the LWRF injection wells, provides further support to find that wastewater injected into Wells 1 and 2 has a direct path to the Pacific Ocean. Exh. 7: 2009 USGS Study at 65; see also id. at Fig. 40. The USGS found that

“[t]reated wastewater presence was confirmed by multiple ‘inherent’ wastewater tracers, the most conclusive being pharmaceuticals, organic waste indicator compounds, and heavy $\delta^{15}\text{N}$.” Id. at 68; see also id. at iii. The tracer methods used in the 2009 USGS study capture conditions over different and somewhat longer time periods compared to the tracer dye used in the tracer dye study, and these time-integrated methods show the effects of wastewater discharge in the same area as the tracer dye study detections, as well as effluent discharges at lower concentrations to the north and south of the Kahekili seeps. Moran Decl. ¶ 36.

Notably, during all of 2006 and the first half of 2007, the combined injection from LWRF Wells 1 and 2 consistently made up about half or more of the total volume of wastewater injected at the LWRF. Moran Decl. ¶ 37 & Tbl. 2.⁴ Given the mean travel time from the LWRF injection wells to the ocean of about ten months, when the 2009 USGS study conducted its sampling in the nearshore waters off Kahekili Beach in May of 2008, the discharge it sampled was likely influenced by effluent from Wells 1 and 2. 2009 USGS Study at 14, 16 (Tbl. 1); Moran Decl. ¶ 38. The multiple lines of evidence for the presence of treated wastewater the study reports were therefore observed at a time when a significant

⁴ This injection regime was very different from the one that prevailed during the tracer dye study, when Wells 1 and 2 accounted for less than 20 percent of all injection by volume. Tracer Dye Study at ES-21.

portion of the total discharge in Kahekili's nearshore waters was likely from Wells 1 and 2. Moran Decl. ¶ 38.

These results indicate that the flow and discharge pattern is relatively constant over time and that wastewater discharge to the shallow ocean occurs in the same area when Wells 1 and 2 are used at a higher capacity than they were during the tracer dye study. Id. ¶ 36. These results are entirely consistent with the predictions of the tracer dye study's model that, when injection at Wells 1 and 2 comprises a greater portion of total discharge at the LWRF, injectate from those wells travels to the nearshore seeps off Kahekili Beach. Id. ¶ 38.⁵

In the four decades since Defendant first proposed construction of the LWRF's injection wells, every agency that has considered the issue (including Defendant, outside the courtroom) has concluded that wastewater discharged from

⁵ Defendant's injection records reveal other times that Wells 1 and 2 have received the lion's share of the LWRF's injected wastewater. For example, during the six months between November 2010 and April 2011, Wells 1 and 2 discharged nearly sixty percent (58.94%) of the total injected wastewater from the LWRF. Henkin Decl. ¶ 30; see also 2010 Injection Records; 2011 Injection Records.

Following this Court's ruling that discharges into Wells 3 and 4 are illegal, Defendant appears again to have shifted injection to Wells 1 and 2, which discharged nearly sixty percent (58.71%) of the LWRF's total injectate in June and July 2014. Henkin Decl. ¶ 31; see also Well 1 Injection Records, July 2012 to July 2014; Well 2 Injection Records, July 2012 to July 2014; Well 3 Injection Records, March to July 2014; Well 4 Injection Records, March to July 2014. In last month for which Defendant has provided records, July 2014, nearly two-thirds (66.54%) of the LWRF's injectate was discharged from Wells 1 and 2. Henkin Decl. ¶ 31. Under such circumstances, the tracer dye study's model indicates wastewater discharged from Wells 1 and 2 will flow into the nearshore seeps at Kahekili.

Wells 1 and 2 will be transported through groundwater into the Pacific Ocean. As discussed, all available information confirms that basic fact. Moran Decl. ¶ 16.

2. The Level Of Pollutants From Wells 1 And 2 Emerging Into The Pacific Ocean Is More Than *De Minimis*.

“The Clean Water Act creates a strict liability scheme that “categorically prohibits any discharge of a pollutant from a point source without a permit,” irrespective of whether that discharge affects the receiving water.” Hawaii Wildlife Fund, 2014 WL 2451565, at *15 (quoting Committee To Save Mokelumne River, 13 F.3d at 309); see also id. (“Congress intended to bar all unpermitted discharges, without regard to their effects on protected waters”). Consequently, this Court has affirmed that, to establish Defendant’s Clean Water Act liability, Plaintiffs do not have to show that pollutants that “indirectly reach” the ocean from LWRF Wells 1 and 2 “have significantly affected the receiving water.” Id.

In so holding, this Court recognized that, in some cases, the “diffusion of a pollutant before it reaches the ocean ... may sometimes be so great that it is no longer reasonable to conclude that any pollutant is reaching the ocean.” Id. at *17 (emphasis added). To demonstrate the discharges from Wells 1 and 2 are “functionally one[s] into navigable water,” Plaintiffs must show that, when the wastewater enters the Pacific Ocean, “the level of pollutants ... is more than *de*

minimis.” Id. at *15. As Dr. Moran explains, far from *de minimis*, wastewater injected into Wells 1 and 2 likely enters the ocean “at a similar concentration as wastewater injected into Wells 3 and 4.” Moran Decl. ¶ 11; see also id. ¶¶ 17-26, 31-34.

The dilution of pollutants during transport in groundwater can result from diffusion (into and out of the porous medium through which it travels) and dispersion (*i.e.*, tortuosity of flowpaths and variable rates of transport due to divergent flowpaths or frictional forces between flowing water and the aquifer material). Id. ¶ 26. Diffusion and friction-related dispersion are significant only when groundwater is moving slowly or through small pore openings. Id. Neither of these conditions prevail along the flowpath that groundwater takes from beneath LWRF Wells 1 and 2 to reach the ocean. Id. ¶¶ 17-26.

The tracer dye study unequivocally demonstrates that transport from the LWRF wells is via “fast paths,” through porous media of high hydraulic conductivity. Id. 19; see also Tracer Dye Study at 4-52. The same Wailuku Basalt formation, consisting of the same highly porous media, underlies all four LWRF injection wells, allowing groundwater to travel relatively quickly (on a timescale of months) to the adjacent Pacific Ocean. Moran Decl. ¶¶ 17-19, 24; see also USGS Report on Groundwater Availability in Lahaina District at Fig. 4; 1993 Injection Well Report at 4 & App. B; Exh. 4: UIC Status Report for July 2011 at 1; Exh. 6:

UIC Status Report for January 2012 at 1. The fact that, during well tests, Well 2 is able to receive 6,000 gallons of wastewater per minute with only minimal pressure build up confirms the extremely fast flow path underlying the LWRF. UIC Status Report for July 2011 at 15-19; Moran Decl. ¶¶ 20-25; see also UIC Status Report for January 2012 at Fig. 10. Under such conditions, significant dilution of the wastewater is unlikely. Moran Decl. ¶ 26.

Using the model developed for the tracer dye study, Dr. Moran calculated the extent to which wastewater discharged from Well 2 is diluted by the time it reaches the ocean. Id. ¶ 31 & Tbl. 1. She concluded that the degree of dilution of wastewater entering the ocean from Well 2 would be only slightly greater than the dilution of wastewater from Wells 3 and 4, with the degree of dilution at the same order of magnitude. Id. ¶¶ 33-34 & Tbl. 1. She further determined that dilution of wastewater from Well 1 would be similar to the dilution for Well 2. Id. ¶¶ 33-34.

This Court previously found that wastewater entering the ocean from Wells 3 and 4 had elevated levels of sewage-derived nutrients and was more acidic, lower in salinity, lower in dissolved oxygen and higher in temperature than the receiving water, “altering the properties of water near the seeps.” Hawaii Wildlife Fund, 2014 WL 2451565, at *22; see also id. at *21-22. Based on that evidence, the Court concluded that “[o]cean water near the seeps is, indisputably, being significantly affected” by discharges of wastewater from Wells 3 and 4. Id. at *22.

Modeling shows that wastewater from Wells 1 and 2 are entering the Pacific Ocean at “a similar concentration.” Moran Decl. ¶ 11; see also id. ¶¶ 31, 33-34 & Tbl. 1. Particularly in light of the Clean Water Act’s strict liability regime, under which Plaintiffs need not prove that Defendant’s discharges “create[] a net increase in the level of pollution,” the Court should conclude that the level of pollutants emerging into the Pacific Ocean from Wells 1 and 2 is far from *de minimis*.

Committee To Save Mokelumne River, 13 F.3d at 309. Since measurable levels of pollutants are entering the Pacific Ocean through groundwater, the Court should find that the discharges from Wells 1 and 2 are “functionally one[s] into navigable water.” Hawaii Wildlife Fund, 2014 WL 2451565, at *15; see also id. at *14 (“It is the migration of the pollutant into navigable-in-fact water that brings groundwater under the Clean Water Act”), *18 (“a diffused conduit is no less covered under the Act if it actually conveys pollutants to navigable-in-fact water”).

C. The LWRF Injection Wells Are Point Sources.

A “point source” includes “any discernible, confined and discrete conveyance, including but not limited to any pipe, ... tunnel, conduit, [or] well ... from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14). Wells 1 and 2 “are long pipes into which effluent is pumped.” Hawaii Wildlife Fund, 2014 WL 2451565, at *at 1; see also 2004 UIC Permit Application at Attachment M.

By definition, “[a]n injection well itself is a point source.” Hawaii Wildlife Fund, 2014 WL 2451565, at *16.

D. Defendant Does Not Have A Permit For The Discharges From The LWRF Injection Wells.

Defendant admits that it does not have an NPDES permit for discharges from the LWRF injection wells. Answer ¶¶ 2, 12, 31.

VI. CONCLUSION

In adopting the Clean Water Act, Congress established the NPDES permit program as its chosen “means of achieving and enforcing the effluent limitations” required to protect our nation’s waters. Environmental Prot. Agency, 426 U.S. at 205. To ensure that permits would be both secured and complied with, Congress “categorically prohibit[ed] any discharge of a pollutant from a point source without a permit.” Committee to Save Mokelumne River, 13 F.3d at 309.

Plaintiffs respectfully submit that the undisputed facts in this case compel a finding that Defendant’s discharges of pollutants from LWRF Injection Wells 1 and 2 have violated, and, unless and until Defendant secures and complies with an NPDES permit, will continue to violate, the Clean Water Act. Entry of the requested summary judgment is therefore warranted.

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Dated: Honolulu, Hawai‘i, November 5, 2014.

EARTHJUSTICE
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