IN THE CIRCUIT COURT FOR BALTIMORE CITY

MAYOR AND CITY COUNCIL OF BALTIMORE,	
Plaintiff,	Case No. 24-C-18-004219
vs.	
BP P.L.C., et al.,	
Defendants.	

REPLY MEMORANDUM IN SUPPORT OF DEFENDANTS' MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM UPON WHICH RELIEF CAN BE GRANTED

TABLE OF CONTENTS

			<u>]</u>	Page
I.	INTR	ODUC'	TION	1
II.	ARGI	UMEN	Γ	4
	A.	A. Plaintiff's Claims Are Barred Because State Law Cannot Constitutionally Be Applied.		4
	В.	Plaint	iff's State-Law Claims Are Preempted By The Clean Air Act	14
	C.	Plaint	iff's Claims Raise Nonjusticiable Political Questions	17
	D.	Mary	land Law Requires Dismissal Of Plaintiff's Claims.	19
		1.	Plaintiff Fails Adequately To Allege A Claim For Public Or Private Nuisance.	20
		2.	Plaintiff's Failure-To-Warn Claims Should Be Dismissed Because Defendants Had No Duty To Warn Of Widely Publicized Risks Relating To Climate Change.	25
		3.	Plaintiff's Design Defect Claims Should Be Dismissed Because Plaintiff Fails To Allege Any "Design" Defect	28
		4.	Plaintiff's Trespass Claim Fails Because Plaintiff Has Not Adequately Pleaded Any Of Its Elements.	31
		5.	Plaintiff Fails Adequately To Allege An MCPA Claim	34
III.	CON	CLUSIO	ON	38

	Page(s)
CASES	
ACandS, Inc. v. Godwin, 340 Md. 334 (1995)	27
Am. Elec. Power Co. v. Connecticut, 564 U.S. 410 (2011)	5, 6, 7, 9, 10, 13, 17
Am. Fuel & Petrochemical Mfrs. v. O'Keeffe, 903 F.3d 903 (9th Cir. 2018)	9
Arizona v. United States, 567 U.S. 387 (2012)	17
Baker v. Carr, 369 U.S. 186 (1962)	18
Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398 (1964)	13
Bey v. Shapiro Brown & Alt, LLP, 997 F. Supp. 2d 310 (D. Md. 2014)	35
BMW of N. Am., Inc. v. Gore, 517 U.S. 559 (1996)	13
Boatel Indus., Inc. v. Hester, 77 Md. App. 284 (1988)	35
Est. of Burris v. State, 360 Md. 721 (2000)	18
Cain v. Midland Funding, LLC, 475 Md. 4 (2021)	37
California v. Gen. Motors Corp., 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007)	18, 19
Callahan v. Clemens, 184 Md. 520 (1945)	
City & County of Honolulu v. Sunoco LP, 537 P.3d 1173 (Haw. 2023)	2, 10, 15
City of Bristol v. Tilcon Minerals, Inc., 931 A.2d 237 (Conn. 2007)	
City of Milwaukee v. Illinois, 451 U.S. 304 (1981)	

	<u>Page(s)</u>
City of New York v. Chevron Corp., 993 F.3d 81 (2d Cir. 2021)	2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17
City of Philadelphia v. Beretta U.S.A., Corp., 126 F. Supp. 2d 882 (E.D. Pa. 2000)	23
Cofield v. Lead Indus. Ass'n, Inc., 2000 WL 34292681 (D. Md. Aug. 17, 2000)	28, 30
Comer v. Murphy Oil USA, Inc., 839 F. Supp. 2d 849 (S.D. Miss. 2012)	19
Connecticut v. Am. Elec. Power Co., 582 F.3d 309 (2d Cir. 2009)	10
N.C. ex rel. Cooper v. Tennessee Valley Authority, 615 F.3d 291 (4th Cir. 2010)	14, 15, 16
Dehn v. Edgecombe, 384 Md. 606 (2005)	25, 26
Delaware v. BP Am., Inc., 2024 WL 98888 (Del. Super. Ct. Jan. 9, 2024)	2, 3, 8, 14, 38
Doe v. Pharmacia & Uphohn Co., 388 Md. 407 (2005)	26
Dudley v. Balt. Gas & Elec. Co., 98 Md. App. 182 (1993)	29, 30
E. Coast Freight Lines v. Consol. Gas, Elec. Light & Power Co 187 Md. 385 (1946)	
Exxon Mobil Corp. v. Albright, 433 Md. 303 (2013)	31, 34
Farina v. Nokia, 625 F.3d 97 (3d Cir. 2010)	15
Franchise Tax Bd. of Cal. v. Hyatt, 139 S. Ct. 1485 (2019)	4
Georgia-Pacific Corp. v. Pransky, 369 Md. 360 (2002)	27
Gorman v. Sabo, 210 Md. 155 (1956)	21
Gourdine v. Crews, 405 Md. 722 (2008)	3, 25, 26

	Page(s)
Godoy ex rel. Gramling v. E.I. du Pont de Nemours & Co., 768 N.W.2d 674 (Wis. 2009)	
Green v. Smith & Nephew AHP, Inc., 629 N.W.2d 727 (Wis. 2001)	30
Gusdorff v. Duncan, 94 Md. 160 (1901)	31
Halliday v. Sturm, Ruger & Co., 368 Md. 186 (2002)	21, 29
Hindes v. FDIC, 137 F.3d 148 (3d Cir. 1998)	9
State ex rel. Hunter v. Johnson & Johnson, 499 P.3d 719 (Okla. 2021)	21
Illinois v. City of Milwaukee, 406 U.S. 91 (1972)	5, 6, 9, 10
Illinois v. City of Milwaukee, 731 F.2d 403 (7th Cir. 1984)	5, 10, 11
Int'l Paper Co. v. Ouellette, 479 U.S. 481 (1987)	2, 3, 6, 9, 10, 11, 12, 14, 15, 16, 17
JBG/Twinbrook Metro. Ltd. P'Ship v. Wheeler, 346 Md. 601 (1997)	33
State ex rel. Jennings v. Monsanto Co., 299 A.3d 372 (Del. 2023)	22, 23, 33
Juliana v. United States, 947 F.3d 1159 (9th Cir. 2020)	19
Kansas v. Colorado, 206 U.S. 46 (1907)	13
Kelly v. R.G. Indus., Inc., 304 Md. 124 (1985)	28
Kennedy Krieger Inst., Inc. v. Partlow, 460 Md. 607 (2018)	27
Kiriakos v. Phillips, 448 Md. 440 (2016)	26
Kurns v. R.R. Friction Prods. Corp., 565 U.S. 625 (2012)	8

	Page(s)
In re Lead Paint Litig., 924 A.2d 484 (N.J. 2007)	21
Lloyd v. Gen. Motors Corp., 397 Md. 108 (2007)	36
Maenner v. Carroll, 46 Md. 193 (1877)	21
Massachusetts v. EPA, 549 U.S. 497 (2007)	4, 13
Mayor & City Council of Balt. v. BP P.L.C., 31 F.4th 178 (4th Cir. 2022)	29
Mayor & City Council of Balt. v. Monsanto Co., 2020 WL 1529014 (D. Md. Mar. 31, 2020)	22, 27
Mazda Motor of Am., Inc. v. Rogowski, 105 Md. App. 318 (1995)	27
Merrick v. Diageo Ams. Supply, Inc., 805 F.3d 685 (6th Cir. 2015)	14
In re Methyl Tertiary Butyl Ether ("MTBE") Prods. Liab. Litig., 457 F. Supp. 2d 298 (S.D.N.Y. 2006)	33
Morris v. Osmose Wood Preserving, 340 Md. 519 (1995)	36
Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009)	18, 19
Nicholson v. Yamaha Motor Co., 80 Md. App. 695 (1989)	27
O'Melveny & Myers v. FDIC, 512 U.S. 79 (1994)	9
Philip Morris USA v. Williams, 549 U.S. 346 (2007)	13
Phipps v. Gen. Motors Corp., 278 Md. 337 (1976)	29, 30
Rockland Bleach & Dye Works Co. v. H.J. Williams Corp., 242 Md. 375 (1966)	32, 33
Rosenblatt v. Exxon Co., U.S.A., 335 Md. 58 (1994)	21

	Page(s)
Rutherford v. BMW of N. Am., 579 F. Supp. 3d 737 (D. Md. 2022)	36
Sagoonick v. State, 503 P.3d 777 (Alaska 2022)	19
Smith v. Lead Indus. Ass'n, Inc., 386 Md. 12 (2005)	20
State v. Exxon Mobil Corp., 406 F. Supp. 3d 420 (D. Md. 2019)	22, 27
State v. Lead Indus., Ass'n, Inc., 951 A.2d 428 (R.I. 2008)	20
State ex rel. Stenehjem v. Purdue Pharma L.P., 2019 WL 2245743 (N.D. Dist. 2019)	25
Tex. Indus., Inc. v. Radcliffe Materials, Inc., 451 U.S. 630 (1981)	2, 5, 6, 12
Tioga Pub. Sch. Dist. No. 15 v. U.S. Gypsum Co., 984 F.2d 915 (8th Cir. 1993)	20
United States v. Standard Oil Co. of Cal., 332 U.S. 301 (1947)	5
Valk Mfg. Co. v. Rangaswamy, 74 Md. App. 304 (1988)	27
Warr v. JMGM Grp., LLC, 433 Md. 170 (2013)	26
Wyeth v. Levine, 555 U.S. 555 (2009)	17
Ziegler v. Kawasaki Heavy Indus., Ltd., 74 Md. App. 613 (1988)	29
CONSTITUTIONAL PROVISION	
U.S. Const. art. VI, cl. 2	9
STATUTES	
42 U.S.C. § 7507	15
Md. Code Ann. Com. Law § 13-303	36

	Page(s)
RULE	
Md. R. 2-304	31
TREATISES	
H.G. Wood, The Law of Nuisances (1875)	21
Restatement (Second) of Torts: Liab. for Intentional Intrusions on Land § 158	32
Restatement (Second) of Torts § 402A	30
Restatement (Third) of Torts: Liab. for Econ. Harm § 8	23
Restatement (Third) of Torts: Products Liability § 9	20

I. INTRODUCTION

This action seeks relief for harms allegedly arising from global emissions of greenhouse gases. It is not, as Plaintiff claims, simply a product liability suit regarding "Defendants' failure to warn and deceptive promotion of products in Maryland." Opposition Brief ("Opp.") at 1. Indeed, Plaintiff acknowledges this reality in the opening paragraph of its opposition: This lawsuit's fundamental allegation is that "Defendants' tortious conduct worsened climate change." Id. (emphasis added). Plaintiff's opposition confirms that the essential connection between Defendants' purported misconduct (alleged misrepresentations and deception) and Plaintiff's alleged injuries (e.g., sea level rise and flooding) is "increased emissions" that "have engendered significant climate impacts in" Baltimore. Id. at 28 (emphases added). In fact, Plaintiff concedes that its Complaint alleges that it is "the incremental greenhouse gas emissions resulting from Defendants' wrongful promotion of their fossil fuel products" that caused its injuries. Id. at 35 (emphasis added). Put simply, Plaintiff alleges that its damages all result from cumulative increases in greenhouse gas emissions released every day by billions of consumers in every State in the Nation and every country in the world.

As hard as Plaintiff tries to paint this lawsuit as a run-of-the-mill tort case, Plaintiff cannot dispute—and, in fact, repeatedly concedes (as it must)—that it seeks damages for the alleged impacts of interstate and international emissions. These concessions are fatal to Plaintiff's claims because federal law precludes imposing liability on select energy companies for global emissions and global climate change. This Court should reject Plaintiff's efforts to obscure the obvious, and it should dismiss Plaintiff's claims for several reasons.

First, the structure of the federal Constitution precludes applying state law to Plaintiff's claims. Fundamental principles of federalism embodied in the U.S. Constitution make clear that

state law cannot operate in areas of "uniquely federal interests." *Tex. Indus., Inc. v. Radcliffe Materials, Inc.*, 451 U.S. 630, 640 (1981). The Supreme Court has repeatedly held that interstate air pollution is such an area. In affirming dismissal of nearly identical claims, the Second Circuit held that a "suit seeking to recover damages for the harms caused by global greenhouse gas emissions may [not] proceed under [state] law," noting that "a mostly unbroken string of [Supreme Court] cases has applied federal law to disputes involving interstate air or water pollution." *City of New York v. Chevron Corp.*, 993 F.3d 81, 91 (2d Cir. 2021) (citing cases).

Plaintiff relies on cases—like the Hawai'i Supreme Court's erroneous decision in *City & County of Honolulu v. Sunoco LP*, 537 P.3d 1173 (Haw. 2023)—that never address these constitutional constraints and, instead, incorrectly tries to reframe the question as whether federal common law provides a cause of action that substitutes for its state-law claims. But the critical question here is whether, under our constitutional structure, state law can ever resolve claims seeking damages for interstate and international emissions. As the Second Circuit held in affirming dismissal of nearly identical claims on the merits, the "answer is simple: 'no.'" *City of New York*, 993 F.3d at 91; *accord Delaware v. BP Am., Inc.*, 2024 WL 98888, at *9 (Del. Super. Ct. Jan. 9, 2024) (holding that claims "seeking damages for injuries resulting from out-of-state or global greenhouse emissions" are "beyond the limits of [state] common law").

Second, even if Plaintiff could assert claims under state law, they would be preempted by the Clean Air Act ("CAA"). In *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987), the Supreme Court held that the Clean Water Act ("CWA") prohibits States from regulating out-of-state sources of water pollution. Federal appellate courts have consistently applied this rule to air pollution under the CAA. Plaintiff asserts that its claims fall outside the scope of the CAA because they turn on purported misrepresentation and deception. But regardless of the tort theory on which

its claims are based, Plaintiff undeniably seeks to hold Defendants liable under Maryland law for emissions generated outside Maryland. Under *Ouellette*, that type of interstate regulation is preempted by the CAA's comprehensive regime regulating those same emissions. Indeed, the Delaware Superior Court recently held that *Ouellette* is on all fours with a similar climate lawsuit brought under state law and thus ruled that claims "seeking damages for injuries resulting from out-of-state or global greenhouse emissions and interstate pollution[] are pre-empted by the CAA." *Delaware*, 2024 WL 98888, at *9.

Third, Maryland's political question doctrine bars this Court from adjudicating Plaintiff's claims because there are no judicially discoverable and manageable standards for resolving them—and certainly no way to do so without encroaching upon the prerogatives of the political branches.

Fourth, Plaintiff fails to adequately plead its putative state-law claims and instead invites this Court to "expand traditional tort concepts beyond manageable bounds" to hold Defendants liable. Gourdine v. Crews, 405 Md. 722, 750 (2008). Maryland takes a strikingly narrow view of the scope of duty in tort claims. The Supreme Court has expressly distinguished Maryland law from the law of States that have "embraced the belief that duty should be defined . . . without regard to the size of the group to which the duty would be owed." Id. at 752.

Putting aside Plaintiff's plea for a sweeping expansion of settled Maryland law, its state-law claims still fail. A nuisance claim will not lie based on lawful products, like fossil fuels, that are not inherently dangerous or where, as here, Defendants have no control over the instrumentality of the purported nuisance. Defendants had no duty to warn the world of the potential impact of fossil fuels on the global climate given the Complaint's allegations that those impacts have been open and obvious for decades. Plaintiff has not alleged—and cannot plausibly allege—that the emissions it claims injured it were released due to a *design* defect in Defendants' fossil-fuel

products. Plaintiff's trespass claim fails because it has not alleged that Defendants caused a cognizable entry onto property exclusively possessed by Plaintiff. And Plaintiff's Maryland Consumer Protection Act ("MCPA") claim targeting Defendants' alleged "campaign of deception" is time-barred and meritless—and should be dismissed in its entirety because Plaintiff does not adequately allege reliance.

The Complaint should be dismissed with prejudice.

II. ARGUMENT

A. Plaintiff's Claims Are Barred Because State Law Cannot Constitutionally Be Applied.

Plaintiff's claims seek compensation for harms allegedly caused by *interstate and international* emissions of greenhouse gases that allegedly contribute to *global* climate change. But under our constitutional system, States cannot use their own laws to resolve claims seeking redress for injuries caused by out-of-state emissions. *See* Joint Brief ("Br.") 8–15. This constitutional rule derives from the federal structure of our government. As the Supreme Court has explained, "[t]he States would have had the raw power to apply their own law to such matters before they entered the Union, but the Constitution implicitly forbids that exercise of power because the 'interstate... nature of the controversy makes it inappropriate for state law to control" and instead those disputes "turn on federal 'rules of law." *Franchise Tax Bd. of Cal. v. Hyatt*, 139 S. Ct. 1485, 1498 (2019); *see also Massachusetts v. EPA*, 549 U.S. 497, 519 (2007) (explaining that when "a State enters the Union" it "surrenders certain sovereign prerogatives" to the federal government). Plaintiff does not contend otherwise; indeed, Plaintiff's opposition (like the duplicative amicus brief by the Maryland Attorney General) scarcely addresses Defendants' constitutional argument.

Instead, Plaintiff attacks a strawman, arguing that federal common law does not supply a

cause of action that would preempt state law. *See*, *e.g.*, Opp. 6–9. Plaintiff not only misconstrues Defendants' argument, but also misses the constitutional point: the Constitution's federal structure does not allow the application of state law to claims like Plaintiff's, *irrespective* of whether federal common or statutory law supplies a cause of action.

The Supreme Court has made clear that state law cannot govern cases "in which a federal rule of decision is 'necessary to protect uniquely federal interests." *Tex. Indus.*, 451 U.S. at 640. Certain "matters [are] exclusively federal, because [they are] made so by constitutional or valid congressional command, or . . . so vitally affecting interests, powers and relations of the Federal Government as to require uniform national disposition rather than diversified state rulings." *United States v. Standard Oil Co. of Cal.*, 332 U.S. 301, 307 (1947).

This is such a case. The Supreme Court has repeatedly recognized that disputes "deal[ing] with air and water in their ambient or interstate aspects" are "areas of national concern" because "the basic scheme of the Constitution so demands"—and explained that such areas are not "matters of substantive law appropriately cognizable by the states." *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 421 (2011) ("*AEP*"); *see also, e.g., Illinois v. City of Milwaukee*, 406 U.S. 91, 105 n.6, 108 n.10 (1972) ("*Milwaukee I*") (the "basic interests of federalism . . . demand[]" that, in disputes concerning interstate and international emissions, "the rule of decision [is] federal").

Whether a *remedy* is available under federal common law or whether federal common law has been displaced by statute are separate questions and irrelevant to whether state law can govern this case. As the Second Circuit held in a closely analogous case, "state law does not suddenly become presumptively competent to address issues that demand a unified federal standard simply because Congress saw fit to displace a federal court-made standard with a legislative one." *City of New York*, 993 F.3d at 98; *accord Illinois v. City of Milwaukee*, 731 F.2d 403, 410–11 (7th Cir.

1984) ("Milwaukee III"). And in any event, federal common law has not been displaced with respect to foreign emissions—emissions for which Plaintiff necessarily seeks damages given the sweeping nature of its claims—and "federal common law preempts state law." City of New York, 993 F.3d at 92, 95 n.7. Because Plaintiff attempts to bring its claims under Maryland law and seeks damages for undifferentiated global emissions, those claims must yield to a uniform federal rule of decision, and the Complaint must be dismissed. Plaintiff's arguments to the contrary do not change the analysis.

First, Plaintiff argues that state law must apply because its claims "look nothing like any federal common law causes of action ever recognized." Opp. 7. But it does not matter whether federal law supplies a cause of action for these claims. The dispositive constitutional question is instead whether "a federal rule of decision" addressing claims premised on injuries arising from interstate (and international) emissions "is 'necessary to protect uniquely federal interests." Tex. Indus., 451 U.S. at 640 (emphasis added). Because the answer is "yes," Maryland state law constitutionally cannot apply.

"For over a century, a mostly unbroken string of cases has applied federal law to disputes involving interstate air or water pollution." *City of New York*, 994 F.3d at 91. In *Milwaukee I*, the Supreme Court held that "basic interests of federalism" demand "applying federal law" to a dispute involving "the pollution of a body of water such as Lake Michigan bounded, as it is, by four States." 406 U.S. at 105 n.6. The Supreme Court reaffirmed that understanding more than a decade later when it explained that "the regulation of interstate water pollution is a matter of federal, not state, law." *Ouellette*, 479 U.S. at 488. More recently, the Supreme Court underscored that federal law must govern "[w]hen we deal with air and water in their ambient or interstate aspects" because "the basic scheme of the Constitution so demands." *AEP*, 564 U.S. at 421

(citation omitted). Accordingly, "borrowing the law of a particular State would be inappropriate" in a dispute involving injuries allegedly caused by the effect of global emissions on the Earth's climate. *Id.* at 422.

Plaintiff attempts to distinguish these cases because they involved *nuisance* claims, whereas this case purportedly involves consumer deception. *See* Opp. 9–11. But Plaintiff *does* bring nuisance claims, Compl. ¶¶ 218–36, which are necessarily premised on the alleged impact of interstate (and international) emissions. Indeed, in seeking to salvage its nuisance claims, Plaintiff insists "that the *incremental greenhouse gas emissions* resulting from Defendants' wrongful promotion of their fossil fuel products" *are* the challenged "nuisance conditions." Opp. 35 (emphasis added). In any event, Plaintiff's illusory distinction between nuisance and "consumer deception" claims makes no difference here because the basis for every one of Plaintiff's claims is that Defendants' alleged tortious campaign to conceal their products' climate-related dangers "maximize[d] continued dependence on their products" and that "*increased emissions* attributable to Defendants' tortious conduct have engendered significant climate impacts in Baltimore." *Id.* at 28 (alteration in original; emphasis added). Whatever the label, Plaintiff seeks to use Maryland law to impose liability for cumulative emissions released from billions of sources everywhere in the world. This it cannot do.

City of New York is directly on point. There, the City argued that state law governed because "this case concerns only 'the production, promotion, and sale of fossil fuels, not the regulation of emissions." 993 F.3d at 91. The Second Circuit disagreed. In its view, the determinative consideration was that the City's claims targeted the harms from interstate pollution: "Stripped to its essence, then, the question before us is whether a nuisance suit seeking to recover damages for the harms caused by global greenhouse gas emissions may proceed under New York

law. Our answer is simple: no." *Id.* (emphasis added); *see also id.* at 85 (state governments may not "utilize state tort law to hold multinational oil companies liable for the damages caused by global greenhouse gas emissions."); Ex. A (New York City Complaint). That the City dressed up its claims in the language of promotion and attacked an earlier link in the supposed causal chain was irrelevant: "Artful pleading cannot transform the City's complaint into anything other than a suit over global greenhouse gas emissions. It is precisely *because* fossil fuels emit greenhouse gases—which collectively 'exacerbate global warming'—that the City is seeking damages." 993 F.3d at 91 (emphasis in original). The same is true here.¹

The Delaware Superior Court recently reached a similar conclusion in a materially identical case, holding that claims—like Plaintiff's here—ostensibly predicated on allegedly misleading marketing but "seeking damages for injuries resulting from out-of-state or global greenhouse emissions and interstate pollution" are "beyond the limits of [state] common law." *Delaware*, 2024 WL 98888, at *9. That principle bars *all* of Plaintiff's claims here, which necessarily seek damages for interstate and international emissions.

Plaintiff does not dispute that it seeks damages for harms allegedly caused by interstate emissions. *See*, *e.g.*, Br. 15–18; Opp. 28–29. Plaintiff seeks to impose liability for any alleged misrepresentation—regardless of whether they were made *outside of*, *or directed to*, *Maryland*—and damages for injuries caused by greenhouse gas emissions *worldwide*. *See* Opp. 28. Plaintiff thus seeks to use state law to "regulat[e]" an industry's interstate and extraterritorial operations. *Kurns v. R.R. Friction Prods. Corp.*, 565 U.S. 625, 637 (2012). And its claims entail a "significant

¹ Contrary to Plaintiff's assertion, *City of New York* is not "materially different" from this case. Opp. 11. Both cases involve nuisance and trespass claims based on allegations of deception. While the City may have emphasized different aspects of its claims, that was irrelevant to the outcome. As explained above, the Second Circuit described the question in that case simply as "whether municipalities may utilize state tort law to hold multinational oil companies liable *for the damages caused* by global greenhouse gas emissions." 993 F.3d at 85 (emphasis added).

conflict with an identifiable federal policy or interest." *O'Melveny & Myers v. FDIC*, 512 U.S. 79, 88 (1994).

For the same reason, Plaintiff's contention that its "case pursues the core state 'interest in ensuring the accuracy of commercial information in the marketplace" and "targets misconduct traditionally regulated by the States" (Opp. 20) is a red herring. Such alleged interests were no less at play in Milwaukee I, Ouellette, and City of New York. Yet the plaintiffs in those cases were nonetheless barred from using their own States' laws to advance those claimed interests because doing so would have the impermissible effect of regulating out-of-state conduct and encroaching on uniquely federal interests. In such a case, "borrowing the law of a particular State would be inappropriate." AEP, 564 U.S. at 422; see also Hindes v. FDIC, 137 F.3d 148, 169 (3d Cir. 1998) ("[S]tate laws or requirements which are inconsistent with federal law or its objectives are subordinated to the federal law by virtue of the Supremacy Clause."). And while Plaintiff cites American Fuel & Petrochemical Manufacturers v. O'Keeffe, 903 F.3d 903 (9th Cir. 2018), for the proposition that this action is designed to "redress injuries that 'states have a legitimate interest in combatting,' namely 'the adverse effects of climate change'" (Opp. 20), there was no dispute in that case that the law at issue "d[id] not legislate extraterritorially." 903 F.3d at 917. Here, Plaintiff seeks to apply Maryland law extraterritorially, which it constitutionally cannot do.

Second, Plaintiff argues that "Congress displaced federal common law governing interstate pollution damages suits through the CAA, and after displacement, federal common law does not preempt state law." Opp. 12 (quotation omitted). Again, Plaintiff confuses the issue. As explained above, the U.S. Constitution's allocation of sovereignty among the States and the federal government prevents state law from governing disputes involving interstate pollution. See U.S. Const. art. VI, cl. 2. This constitutional constraint on state authority arises from the "overriding

federal interest in the need for a uniform rule of decision" to avoid the inevitable conflicts that would arise if the laws of every State applied to emissions emanating from every other State. *Milwaukee I*, 406 U.S. at 105 n.6. That overriding federal interest exists regardless of whether the federal government acts through congressional statute to regulate interstate pollution or allows federal common law to apply. As the Second and Seventh Circuits correctly held—but the Hawai'i Supreme Court failed to appreciate in *Honolulu*—the statutory displacement of federal common law does not permit state law to govern an area that it could *never* constitutionally have governed in the first place: "[S]tate law does not suddenly become presumptively competent to address issues that demand a unified federal standard simply because Congress saw fit to displace a federal court-made standard with a legislative one." *City of New York*, 993 F.3d at 98; *accord Milwaukee III*, 731 F.2d at 410–11.

Plaintiff errs in contending that "[t]he reasoning in *Honolulu*"—that displaced federal common law cannot preempt state law—"comports with the U.S. Supreme Court's consistent treatment of displaced federal common law." Opp. 15. *AEP*, for example, did not hold that whether state-law claims are "preempted depend[s] *only* on an analysis of the CAA." *Id.* at 14 (quoting *Honolulu*, 537 P.3d at 1199). To the contrary, *AEP* explained that "the availability *vel non* of a state lawsuit depends, *inter alia*, on the preemptive effect of the" CAA. 564 U.S. at 429 (emphasis added). And the only state law at issue in *AEP* was *source* state laws, *see Connecticut v. Am. Elec. Power Co.*, 582 F.3d 309, 392 (2d Cir. 2009), which would not be preempted by the Constitution's federal structure or by federal common law because there is no potential for interstate conflict or need for national uniformity.

Ouellette likewise did not find that state law could apply in an area that had always been exclusively federal after the CWA displaced the federal common law of interstate water pollution.

Quite the opposite: "In light of [the CWA's] pervasive regulation and the fact that the control of interstate pollution is primarily a matter of federal law, it is clear that the only state suits that remain available are those specifically *preserved* by the [federal] Act." *Ouellette*, 479 U.S. at 492 (emphasis added).² The Court's preemption analysis was thus aimed at determining the extent to which the CWA specifically authorized state law to govern—not whether federal law's *silence* allowed state law to govern. Plaintiff points to the Court's holding that state law can still govern in-state emissions (Opp. 15), but that holding is entirely consistent with Defendants' argument here: The overriding need for federal uniformity precludes States from applying their laws to claims based on *interstate* emissions, but there are no federalism concerns when a State applies its law to *in-state* emissions.

This is consistent with the Seventh Circuit's holding on remand from *Milwaukee I*—which *Ouellette* endorsed, *see* 479 U.S. at 490, 497—that the enactment of the CWA did not give birth to state common law claims that had never existed before the CWA's enactment: "The very reasons the Court gave for resorting to federal common law in *Milwaukee I* are the same reasons why the state claiming injury cannot apply its own state law to out-of-state discharges now." *Milwaukee III*, 731 F.2d at 410. "The claimed pollution of interstate waters is a problem of uniquely federal dimensions requiring the application of uniform federal standards both to guard states against encroachment by out-of-state polluters and equitably to apportion the use of interstate waters among competing states." *Id.* at 410–11.

Once again, *City of New York* is on-point and should be followed here. The Second Circuit began by explaining that the plaintiff's novel and "sprawling" claims were preempted not by "a traditional statutory preemption analysis" but because under our federal constitutional structure

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² As demonstrated below, *Ouellette* makes clear that the only form of state law regulation preserved by the CWA—and hence the CAA—is that which applies to in-state sources of pollution. *See infra*, Part II.

state law never has governed, and never can govern, interstate pollution. 993 F.3d at 98. "[W]here a federal statute [like the CAA] displaces federal common law, it does so" in a field which "the states have traditionally *not* occupied"—that is, a field where federal law *must* govern by virtue of our constitutional structure. *Id.* (cleaned up). As a result, "state law does not suddenly become presumptively competent to address issues that demand a unified federal standard simply because Congress saw fit to displace a federal court-made standard with a legislative one." *Id.* Indeed, the Second Circuit found that idea "too strange to seriously contemplate." *Id.* at 98–99. Citing *Ouellette*, the court reasoned that "resorting to state law on a question previously governed by federal common law is permissible only to the extent *authorized* by federal statute." *Id.* at 99 (emphasis added). And because the CAA "does not authorize the City's state-law claims, . . . such claims concerning domestic emissions are barred." *Id.* at 100. At bottom, regardless of whether Congress has displaced federal common law remedies, "the interstate or international nature of the controversy makes it inappropriate for state law to control." *Tex. Indus.*, 451 U.S. at 641.

Third, Plaintiff insists that its claims targeting foreign emissions survive. Opp. 17–19. But state law cannot govern claims for harms caused by foreign emissions for the same federalism and separation-of-powers reasons discussed above—namely, that allowing state law to intrude into such international affairs would "needlessly complicate the nation's foreign policy, while clearly infringing on the prerogatives of the political branches." City of New York, 993 F.3d at 103. While Plaintiff insists that Maryland law should reach conduct occurring not only outside the State, but outside the country, it does not cite a single case to support its position—because there is none.

By not disputing that it seeks damages based on international emissions, Plaintiff refutes its own contention that the federal common law applicable to its claims has been displaced. Federal common law is "still require[d]" to govern extraterritorial aspects of claims challenging

global emissions because the CAA "does not regulate foreign emissions" and, viewed through that lens, "federal common law preempts [the] state law" claims Plaintiff attempts to plead. *City of New York*, 993 F.3d at 95 n.7, 101; *accord City of Milwaukee v. Illinois*, 451 U.S. 304, 313 n.7 (1981) ("[I]f federal common law exists, it is because state law cannot be used."). This flows from the constitutional principle that States lack the power to regulate international activities or foreign policy and affairs, and that such matters "must be treated exclusively as an aspect of federal law." *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 425 (1964).

Thus, federalism and comity concerns embodied in the Constitution preclude the application of state law to claims like Plaintiff's. While "Congress has ample authority to enact [climate] policy for the entire Nation, it is clear that no single State could do so, or even impose its own policy choice on neighboring States." *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559, 571 (1996) (footnote omitted); *see Massachusetts*, 549 U.S. at 519 ("Massachusetts cannot invade Rhode Island to force reductions in greenhouse gas emissions."); *Philip Morris USA v. Williams*, 549 U.S. 346, 352–53 (2007) ("[O]ne State[]" may not "impose" its "policy choice[s] . . . upon neighboring States with different public policies."). Allowing state law to govern such areas would permit one State to "impose its own legislation on . . . the others," violating the "cardinal" principle that "[e]ach state stands on the same level with all the rest." *Kansas v. Colorado*, 206 U.S. 46, 97 (1907). The implications are apparent here: States and municipalities across the country have filed more than two dozen lawsuits challenging the same conduct targeted by Plaintiff, each arguing that this conduct is subject to *their own* laws.

Simply put, only federal law can govern Plaintiff's interstate and international emissions claims because "the basic scheme of the Constitution so demands." *AEP*, 564 U.S. at 421. Thus, Plaintiff's putative state-law claims are preempted, and this action should be dismissed.

B. Plaintiff's State-Law Claims Are Preempted By The Clean Air Act.

Even if state law could govern interstate pollution under the U.S. Constitution, Plaintiff's claims would fail because "the CAA preempts state law to the extent a state attempts to regulate air pollution originating in other states," and that is precisely what Plaintiff's sprawling lawsuit seeks to do here. *Delaware*, 2024 WL 98888, at *10.

Contrary to Plaintiff's suggestion, Defendants do not contend that States are powerless under the CAA to regulate pollution generated *within* their borders. *See* Opp. 21. But one State may not apply its laws to pollution sources in *other* States. Such claims are preempted *even if*, as Plaintiff alleges, the impacts of those out-of-state emissions are experienced in the State. *See*, *e.g.*, Compl. ¶ 8. The CAA preempts such claims because they "stand[] as an obstacle to the full implementation" of the Act and "interfere[] with the methods by which the federal statute was designed" to regulate pollution. *Ouellette*, 479 U.S. at 494. Indeed, in a materially indistinguishable lawsuit over alleged climate deception brought by the State of Delaware, the Delaware Superior Court recently concluded that the state's claims "seeking damages for injuries resulting from out-of-state or global greenhouse emissions and interstate pollution, are pre-empted by the CAA." *Delaware*, 2024 WL 98888, at *9.

Plaintiff does not dispute that *Ouellette*, which addressed preemption under the CWA, applies with equal force to the CAA. *See* Opp. 23. Plaintiff instead notes that *Ouellette* construed the CWA's savings clauses as preserving certain state authority. *Id.* But the savings clauses preserve state authority to regulate only *in-state* pollution sources, and the Court made clear that the CWA "*precludes* . . . applying the law of an affected State against an out-of-state source." *Ouellette*, 479 U.S. at 494 (emphasis added). The savings clauses in the CAA are comparable. The Sixth Circuit recognized that damages claims "based on the common law of a non-source state . . . are preempted by the Clean Air Act." *Merrick v. Diageo Ams. Supply, Inc.*, 805 F.3d 685,

691, 693 (6th Cir. 2015). Similarly, in *N.C. ex rel. Cooper v. Tennessee Valley Authority*, 615 F.3d 291 (4th Cir. 2010), the Fourth Circuit concluded that, insofar as North Carolina "wanted outof-state entities, including TVA, to follow its state rules" respecting emissions, "it violates *Ouellette*'s directive that source state law applies" to such disputes. *Id.* at 308–09.³

Plaintiff's response boils down to a single contention, erroneously embraced by the Hawai'i Supreme Court, that its lawsuit deals only with "alleged failure to warn and deceptive marketing conduct," not out-of-state sources of pollution. Opp. 23 (quoting *Honolulu*, 537 P.3d at 1205). But that cannot be squared with Plaintiff's own characterization of its Complaint: Plaintiff alleges that "[t]he *increased emissions* attributable to Defendants' tortious conduct have engendered significant climate impacts." *Id.* at 28 (emphasis added). Plaintiff "does *not* allege that Defendants' campaign of deception and disinformation or failures to warn are in and of themselves a public nuisance." *Id.* at n.9 (emphasis added). Plaintiff thus cannot deny that it seeks redress for harms allegedly caused by climate change—a global phenomenon caused by emissions from sources in literally every State and Nation in the world—or that it seeks to hold Defendants liable under Maryland law for those out-of-state emissions.

The "obstacle" that Plaintiff's unprecedented theory would pose "to the full implementation" of the CAA is readily apparent. *Ouellette*, 479 U.S. at 494. For example, Plaintiff attempts to hold certain Defendants responsible for the combustion of their diesel and gasoline products in vehicles. Compl. ¶¶ 20(g), 21(c), 22(g), 23(g), 24(e), 25(e), 26(i), 27(h), 28(e). But greenhouse gas emissions from motor vehicles are regulated comprehensively under the CAA. Br. 21–22. EPA sets national standards, and States may apply more stringent standards *only* for vehicles sold *in-state*, and only under carefully prescribed circumstances. *See* 42 U.S.C. § 7507

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³ Plaintiff's reliance on *Farina v. Nokia*, 625 F.3d 97 (3d Cir. 2010), is misplaced, particularly since the court held that those state-law claims were *preempted* by federal regulations. *See id.* at 133–34.

(providing process for opting into more stringent emissions standards adopted by California). What States may not do is regulate emissions from vehicles sold in *other* States. But that is what Plaintiff seeks to do here—impose liability under Maryland law for injuries allegedly caused by vehicle emissions originating outside the State. Moreover, Plaintiff seeks to impose Maryland's liability regime regardless of whether the out-of-state emissions have "complied fully with . . . state and federal . . . obligations" under the CAA. *Ouellette*, 479 U.S. at 495.

Plaintiff cannot cure this fatal flaw by arguing that its claims arise from Defendants' alleged statements to consumers or under laws concerning product liability, failure to warn, and/or consumer deception. The essence of Plaintiff's causation theory is that these statements induced greater consumption of Defendants' products, and that the resulting emissions *combined with similar emissions in all other States* (and Nations around the world) to exacerbate climate change, thereby allegedly causing injury to Plaintiff in Maryland. Under Plaintiff's theory, liability for emissions in States from Delaware to New York to Texas would be assigned to Defendants as a matter of Maryland law, even if such emissions were within permissible levels established by EPA and each source State.

This would hold true for every State. Fossil fuel suppliers would be subject to "an indeterminate number of potential regulations" through the application of "a variety of commonlaw rules established by the different States." *Ouellette*, 479 U.S. at 496, 499. This is exactly the extraterritorial application of state law that *Ouellette* held would impermissibly "interfere" with Congress's "comprehensive regulation." *Id.* at 500. Plaintiff is not permitted to "upset[] the balance of public and private interests so carefully addressed by" Congress and thereby "effectively override" policy choices made by EPA and neighboring States regulating sources within their own borders. *Id.* at 494–95; *see also Cooper*, 615 F.3d at 302 (observing that courts

"are hardly at liberty to ignore the Supreme Court's concerns and the practical effects of having multiple and conflicting standards to guide emissions").

Plaintiff protests that it is not attempting to *regulate* out-of-state conduct because it only seeks money damages for its alleged injuries. But Plaintiff alleges its injuries purportedly attributable to cumulative global greenhouse gas emissions reach into the tens if not hundreds of millions of dollars. *See, e.g.*, Compl. ¶¶ 81, 191-217. The imposition of such emissions-based liability would inevitably have drastic effects on emissions and energy policy far beyond Maryland's borders.

In short, because Congress has designated EPA "as primary regulator of greenhouse gas emissions," *AEP*, 564 U.S. at 428, the CAA prevents Plaintiff from using Maryland law to remedy injuries allegedly caused by nationwide out-of-state emissions. If permitted, Plaintiff's claims would "stand[] as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress" as expressed in the CAA. *Arizona v. United States*, 567 U.S. 387, 399 (2012). This would violate the Supreme Court's teaching that States cannot "do indirectly what they could not do directly—regulate the conduct of out-of-state sources." *Ouellette*, 479 U.S. at 495. As a result, Plaintiff's claims are preempted by the CAA.⁴

C. Plaintiff's Claims Raise Nonjusticiable Political Questions.

Plaintiff's claims also fail because they would require the Court to usurp the political branches' power to set energy and climate policy, in violation of the political question doctrine. Plaintiff does not dispute that Maryland's political question doctrine precludes judicial resolution

regulation of *interstate* pollution, which is a field "the states have traditionally *not* occupied." *City of New York*, 993 F.3d at 98.

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⁴ For this reason, Plaintiff's reliance on *Wyeth v. Levine*, 555 U.S. 555 (2009), is misplaced. In *Wyeth*, the Supreme Court wrote that one of the "cornerstones" guiding preemption analysis is the presumption that a federal statute does not preempt States' historic police powers unless that is the clear and manifest purpose of Congress. *Id.* at 565. But in our federal system, the States' historic police powers do not include the

of cases that present any "one of the[] formulations" that the U.S. Supreme Court first recognized in *Baker v. Carr*, 369 U.S. 186 (1962), Opp. 24—including "a lack of judicially discoverable and manageable standards for resolving [the dispute]; or the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion." *Est. of Burris v. State*, 360 Md. 721, 745 (2000). Those *Baker* "formulations" are present here.

Plaintiff concedes that many courts have dismissed suits "alleg[ing] injuries directly from emissions themselves, and s[eeking] relief also directly related to emissions" under the political question doctrine. Opp. 26. For example, the court in *Native Village of Kivalina v. ExxonMobil Corp.* dismissed claims seeking to hold energy companies liable for climate change because adjudicating those claims would require the factfinder "to weigh the benefits derived from [energy production] choices against the risk that increasing greenhouse gases would in turn increase the risk of causing flooding," and the plaintiffs "fail[ed] to articulate any particular judicially discoverable and manageable standards that would guide a factfinder in rendering a decision that is principled, rational, and based upon reasoned distinctions." 663 F. Supp. 2d 863, 874–75 (N.D. Cal. 2009), *aff* d, 696 F.3d 849 (9th Cir. 2012). As here, the *Kivalina* plaintiffs also premised liability on allegations that the defendants "misle[d] the public about the science of global warming." 696 F.3d at 854.

Likewise, in *California v. General Motors Corp.*, the court dismissed nuisance claims that sought to hold automobile manufacturers liable for climate change because "the adjudication of Plaintiff's [nuisance] claim would require the Court to balance the competing interests of reducing global warming emissions and the interests of advancing and preserving economic and industrial development," and "[t]he balancing of those competing interests is the type of initial policy determination to be made by the political branches, and not this Court." 2007 WL 2726871, at *8

(N.D. Cal. Sept. 17, 2007). Contrary to Plaintiff's assertion (Opp. 26), those same concerns are equally present here. As explained above, Plaintiff's alleged injuries flow entirely and exclusively from emissions—which Plaintiff asserts is "[t]he mechanism" of global warming. Compl. ¶ 39 (emphasis added). The claims here are thus just as "directly related to emissions" as the claims in *Kivalina*, *General Motors*, and *Comer v. Murphy Oil USA*, *Inc.*, 839 F. Supp. 2d 849 (S.D. Miss. 2012). Opp. 26.

Plaintiff contends that two other cases—*Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020), and *Sagoonick v. State*, 503 P.3d 777 (Alaska 2022)—are "inapposite" because only the *relief* requested in those cases lacked any judicially manageable standards. Opp. 25–26. But as Defendants have explained, Plaintiff's requested abatement relief "presumably would require this Court to estimate potential future damages resulting from global climate change over the next century and to oversee and administer a fund to pay for and address those future injuries." Br. 31. Plaintiff does not contend otherwise. The relief requested here is thus every bit as unmanageable as the relief sought in *Juliana* and *Sagoonick*. *Id.* at 31–32. As the U.S. government recently argued, "addressing climate change requires the active involvement of the federal government," and courts should not be used to "usurp the powers of the political branches." Defs.' Mot. for a Stay Pending a Pet. for a Writ of Mandamus at 8, *Juliana v. United States*, No. 6:15-cv-01517 (D. Or. Jan. 18, 2024), Dkt. 571.

D. Maryland Law Requires Dismissal Of Plaintiff's Claims.

Plaintiff's claims must also be dismissed under state law. Instead of adequately pleading the essential elements of its claims under Maryland law, Plaintiff asks this Court to adopt sweeping tort theories never before recognized in Maryland.

1. Plaintiff Fails Adequately To Allege A Claim For Public Or Private Nuisance.

a. Plaintiff effectively concedes that Maryland appellate courts have *never* recognized a nuisance claim based on the production, promotion, and sale of a lawful consumer product. Br. 33–38; Opp. 31–32. Nor does Plaintiff deny that its theory would eviscerate the boundary between nuisance and products liability. Instead, it dismisses the cases enforcing that boundary on the ground that they "did not involve allegations that a manufacturer wrongfully promoted products while concealing or downplaying the products' risks, allegations central to the City's claims here." Opp. 33. That characterization is incorrect. *See, e.g., Tioga Pub. Sch. Dist. No. 15 v. U.S. Gypsum Co.*, 984 F.2d 915, 917 (8th Cir. 1993) ("Tioga asserted theories of . . . fraud and misrepresentation" in action against drywall manufacturer whose products contained asbestos.); *State v. Lead Indus., Ass'n, Inc.*, 951 A.2d 428, 440 (R.I. 2008) ("The state asserted that defendants failed to warn Rhode Islanders of the hazardous nature of lead" and "concealed these hazards from the public or misrepresented that they were safe.").

But even if it were correct, the fact that Plaintiff purports to premise its nuisance claims on allegations that Defendants misrepresented the risks of their products is a *problem* for its theory, not a solution. A claim that a defendant misrepresented its products' risks is a classic products-liability—not nuisance—claim. *See Smith v. Lead Indus. Ass'n, Inc.*, 386 Md. 12, 16 (2005) ("This is essentially a tort-based product liability case involving, among other causes of action, allegations of fraudulent and negligent misrepresentation and failure to warn of hazards associated with either the product itself [*i.e.*, lead paint] or the use of the product."); Restatement (Third) of Torts: Products Liability § 9 (recognizing a products-liability action when a seller "makes a fraudulent, negligent, or innocent misrepresentation of material fact concerning the product" that causes "harm to persons or property").

Nor does it matter that some of Defendants' cases did not find nuisance liability in part because the alleged harm resulted from third-party misuses of a product, whereas the harms Plaintiff alleges "arise from the only intended uses" of Defendants' products. Opp. 34–35. A claim that a seller misrepresented harms that would occur even if the product is used and functions as intended is still a *products-liability* claim, not a nuisance claim. *Cf. Halliday v. Sturm, Ruger & Co.*, 368 Md. 186, 202 (2002) ("[A] product may be found defective in design if the plaintiff establishes that the product failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner.").

The Maryland cases Plaintiff cites *confirm* the rule that nuisance claims are "linked to the use of land by the one creating the nuisance," not the promotion and sale of a lawful consumer product. *State ex rel. Hunter v. Johnson & Johnson*, 499 P.3d 719, 724 (Okla. 2021); *In re Lead Paint Litig.*, 924 A.2d 484, 495 (N.J. 2007) (same). *Gorman v. Sabo*, for example, involved the blaring of a radio from "the home [defendant] owned and lived in" into a neighbor's home. 210 Md. 155, 161 (1956). *Maenner v. Carroll* involved allegations that "owners of a certain open and unenclosed lot of ground . . . cut on such lot, in a dangerous and exposed portion thereof, a deep excavation." 46 Md. 193, 212 (1877). And *East Coast Freight Lines v. Consolidated Gas, Electric Light & Power Co. of Baltimore* involved "keeping a pole" on a "grass plot" on a highway. 187 Md. 385, 393 (1946).⁵

With no support for its position in Maryland precedents, Plaintiff falls back on decisions of federal district courts, other States, and a nearly 150-year-old treatise, none of which is precedential authority here. *See* Opp. 31–33 (citing, for example, H.G. Wood, *The Law of*

⁵ In fact, private nuisance liability is limited to circumstances in which a defendant's use of land interferes with a "neighbor[ing] use and enjoyment of land." Rosenblatt v. Exxon Co., U.S.A., 335 Md. 58, 80 (1994) (emphasis added).

Nuisances (1875)). Nor are they persuasive. As Defendants have already explained (Br. 36), the two cases from the U.S. District Court for the District of Maryland on which Plaintiff heavily relies (Opp. 31) focused on whether Maryland law requires a defendant to exercise "exclusive control" over the nuisance-causing instrumentality, not the distinct question whether Maryland law recognizes nuisance claims that are unlinked to the use of land and that sound in products liability. See State v. Exxon Mobil Corp., 406 F. Supp. 3d 420, 468 (D. Md. 2019); Mayor & City Council of Balt. v. Monsanto Co., 2020 WL 1529014, at *9 (D. Md. Mar. 31, 2020). And the Maryland cases on which Exxon and Monsanto relied all involved challenged uses of land. Exxon, 406 F. Supp. 3d at 468; Monsanto, 2020 WL 1529014, at *9.

Even if *Exxon* and *Monsanto* had not erred in extending Maryland law to the sale of a consumer product, they still would not support Plaintiff's nuisance claims because both cases alleged facts that established a tight nexus between the sale of a product and the contamination of local lands and waters. They are not, as Plaintiff suggests, cases solely about "defendant[s] who misleadingly market[] products." Opp. 31. In *Exxon*, the plaintiff alleged that the defendants "manufactured and distributed MTBE gasoline in Maryland even though they knew or reasonably should have known that it would be placed into leaking gasoline storage and delivery systems there," from where it was directly "released into [the plaintiff's] waters, resulting in widespread contamination." 406 F. Supp. 3d at 455, 469. In *Monsanto*, the plaintiff alleged that Monsanto, "the sole manufacturer of PCBs," "distributed PCBs in Baltimore's waters, causing harm to the City's humans, animals, and environment." 2020 WL 1529014, at *10–11. Similarly, the plaintiff in *State ex rel. Jennings v. Monsanto Co.*, 299 A.3d 372 (Del. 2023), brought a nuisance claim against "Monsanto, as the sole PCB producer," alleging that its sale of PCBs, chemicals so dangerous that "the federal government banned the[ir] manufacture and sale" in 1977, resulted in

the direct "release of PCBs onto Delaware's lands and into its waters." Id. at 380–81, 386.

These cases thus offer no support for Plaintiff's nuisance theory here, which is *not* based on the direct release of a hazardous chemical onto lands and waters just after the point of sale. As Plaintiff candidly admits, it "does not allege" that "releasing greenhouse gas itself constitutes a nuisance." Opp. 38–39. Rather, Plaintiff's theory is that Defendants' allegedly deceptive conduct "maximize[d] continued dependence" on fossil fuels, which purportedly increased the third-party use and combustion of Defendants' products. *Id.* at 28. According to Plaintiff, that purportedly increased use and combustion of fossil fuels, in turn, supposedly resulted in incrementally higher emissions into the atmosphere, which, though not a nuisance in themselves, when combined with all greenhouse-gas emissions released around the world, allegedly caused harm to Plaintiff decades later through an attenuated causal chain. *See id.* at 28 n.9. That is nothing like the sale of products that, when mishandled or improperly stored, directly release hazardous chemicals onto land and water.

Because Plaintiff's claims do not challenge Defendants' use of land but rather their alleged misrepresentation of the purportedly harmful nature of their products, they sound in products liability, and this Court should reject Plaintiff's "clever, but transparent attempt" to evade limits on products liability. *City of Philadelphia v. Beretta U.S.A., Corp.*, 126 F. Supp. 2d 882, 911 (E.D. Pa. 2000); *see also* Restatement (Third) of Torts: Liab. for Econ. Harm § 8 cmt. g. (addressing nuisance claims against the "makers of products" and explaining that "[1]iability on such theories has been rejected by most courts, and is excluded by this Section, because the common law of public nuisance is an inapt vehicle for addressing the conduct at issue").

b. Plaintiff's nuisance claims also should be dismissed because Plaintiff does not allege that Defendants exercised control over the instrumentality that caused the purported nuisance. Br.

38–41. Plaintiff contends that a defendant may be held liable in nuisance even if it has *no* control over the nuisance-causing instrumentality. Opp. 35. That is incorrect. *See Callahan v. Clemens*, 184 Md. 520, 525 (1945) (rejecting nuisance claim challenging negligently constructed wall where defendants did not "exercise any control over the manner in which the work was performed, and there was no relation of principal and agent"); *E. Coast Freight Lines*, 187 Md. at 401 (rejecting nuisance claim against gas company that constructed light pole on highway median without warning or lighting where "[t]he absence of warning signs or lights is a matter entirely in the control of the City").

Plaintiff concedes that emissions from Defendants' products occurred long *after* Defendants relinquished control of their products to third parties. *See* Opp. 37 (citing cases involving application of nuisance law to products sold to external parties). Moreover, "the City does not allege . . . that releasing greenhouse gas itself constitutes a nuisance." *Id.* at 38–39. Rather, the Complaint emphasizes that it is "the buildup of CO₂ in the environment that drives global warming and its physical, environmental, and socioeconomic consequences," Compl. ¶ 6 (emphasis added), and that "global fossil fuel product-related CO₂" is responsible for "historical, projected, and committed sea level rise and disruptions to the hydrologic cycle," *id.* ¶ 94 (emphasis added). Plainly, Defendants lack control over the concentration of greenhouse gases in the Earth's atmosphere—where such gases allegedly take "thousands of years" to dissipate. *Id.* ¶ 178.

Because Defendants lack control over greenhouse gas emissions or the Earth's atmosphere, Plaintiff contends that the nuisance-causing instrumentality here is Defendants' "marketing, distributing, and selling" of fossil fuels while allegedly "misrepresenting their hazards." Opp. 37. Yet only pages earlier, Plaintiff professes that "the City does not allege that Defendants' campaign of deception and disinformation or failures to warn are in and of themselves a public nuisance,"

but rather that the allegedly misleading marketing caused an incremental increase in the combustion of fossil fuels, which in turn created a public nuisance. *Id.* at 28 n.9. And the Complaint unmistakably alleges that the nuisance-causing instrumentality is the cumulative combustion of fossil fuels as a result of billions of individual decisions by consumers and governments everywhere around the world. Compl. ¶¶ 3, 36–45. At bottom, Plaintiff "cannot escape the true nature of the nuisance claim[s] it has pleaded," which places the worldwide combustion of fossil fuels "directly at the heart of [its] nuisance claim[s], regardless of how it otherwise now tries to characterize its claim[s]." *State ex rel. Stenehjem v. Purdue Pharma L.P.*, 2019 WL 2245743, at *12 (N.D. Dist. 2019) (dismissing opioid-related nuisance claim and rejecting the State's argument that the instrumentality of the nuisance was the opioid manufacturer's marketing rather than third-party opioid use). Plaintiff accordingly fails to state claims for public or private nuisance, and those claims must be dismissed.

2. Plaintiff's Failure-To-Warn Claims Should Be Dismissed Because Defendants Had No Duty To Warn Of Widely Publicized Risks Relating To Climate Change.

The Court should dismiss Plaintiff's failure-to-warn claims because Plaintiff's theory of negligence has no place in Maryland law. Maryland has embraced a narrow definition of "duty" that depends on "a relationship between the actor and the injured person." *Dehn v. Edgecombe*, 384 Md. 606, 619 (2005). There is no duty to warn the world, an indefinite class, nor is there a duty to warn where, as here, the alleged harms were generally known. *See* Br. 41–44.

First, while Plaintiff concedes that "there is no duty to warn the world," it asserts that Defendants nonetheless had a duty to warn Plaintiff as a "foreseeable bystander[]." Opp. 47 (quotation marks omitted). Not so. Even a foreseeable risk of injury does not create a duty to warn an "indeterminate class of people." Gourdine, 405 Md. at 750. Maryland has expressly distinguished itself from States, like Hawai'i, that have "embraced the belief that duty should be

defined mainly with regard to foreseeability, without regard to the size of the group to which the duty would be owed." *Id.* at 752.⁶ Yet Plaintiff alleges that Defendants had a duty to warn such a class, including "the public, consumers, and public officials." Compl. ¶¶ 238, 271. Moreover, there is no duty to warn third parties absent "*a close or direct effect* of the tortfeasor's conduct [or products] *on the injured party*." *Gourdine*, 405 Md. at 746 (emphases added). Here, Plaintiff's theory would extend the purported duty to everyone contributing to climate change because Plaintiff alleges that its injury results not from its own use of or direct exposure to Defendants' products, but from *worldwide* consumers' decisions to use fossil fuels over the course of decades, resulting in the global atmospheric accumulation of greenhouse gases (including much that has long been "locked in"), which then results in climatic changes, sea-level rise, and finally increased mitigation costs to Plaintiff. Compl. ¶¶ 142, 180, 191–217.

Maryland courts have never imposed a duty of care in similar circumstances. Indeed, the Supreme Court has refused to impose a duty even where there was a far narrower class of potential plaintiffs and a much closer nexus between the conduct and injury. *See, e.g., Dehn*, 384 Md. at 621 (physician conducting vasectomy had no duty to patient's wife who became pregnant); *Doe v. Pharmacia & Uphohn Co.*, 388 Md. 407, 421 (2005) (employer of laboratory technician who contracted HIV at work had no duty to technician's wife, who contracted HIV); *Gourdine*, 405 Md. at 754 (drug manufacturer who did not warn about side effects owed no duty to motorist injured by drug's user); *Warr v. JMGM Grp., LLC*, 433 Md. 170, 189 (2013) (dram shop did not

⁶ Plaintiff misleadingly quotes the Supreme Court's decision in *Kiriakos v. Phillips* as purported support for its contention that foreseeability is "perhaps [the] most important" factor in determining whether a duty of care exists. Opp. 46 (alteration in original) (quoting 448 Md. 440, 486 (2016)). But Plaintiff omits the full quote: "Although foreseeability is perhaps 'most important' among these factors, *it alone does not justify the imposition of a duty*." 448 Md. at 486 (emphasis added). In any event, the ruling makes clear that foreseeability is not enough to create a duty to the general public and must be limited to a "specific class." *Id.* at 460.

owe "blanket duty" to its intoxicated patrons). Far from helping Plaintiff, the cases Plaintiff cites only underscore that, for failure to warn cases, bystander liability requires a *direct* nexus between the alleged injury and the third party's use of or exposure to a defendant's product. For example, the alleged injury in *Exxon*—groundwater contamination by the chemical MTBE—was allegedly tied *directly* to the storage, delivery, and leakage *within Maryland* of gasoline containing MTBE, for which the named defendants were themselves allegedly "responsible for all or substantially all of th[e] market." 406 F. Supp. 3d at 463. There is no such direct connection here.⁷

Second, there is no duty to warn of "clear and obvious" dangers and "generally known" risks. Mazda Motor of Am., Inc. v. Rogowski, 105 Md. App. 318, 330–31 (1995); Br. 43–44. Plaintiff contends that whether the dangers were open and obvious is a factual issue that cannot be decided until after discovery. Opp. 47–50. But courts can and do determine obviousness at the outset and based on the pleadings. For example, Nicholson v. Yamaha Motor Co., 80 Md. App. 695 (1989), affirmed dismissal of a failure to warn claim at the pleading stage where "the danger not warned about was clear and obvious." Id. at 721. And even where courts have dismissed failure to warn claims after discovery, it is often because the assertion of non-obviousness was "absurd"—not due to a more developed record. Mazda Motor, 105 Md. App. at 330–31.

Here, dismissal is warranted because the Complaint itself makes clear that the alleged risks have been well known for decades. *See, e.g.*, Compl. ¶ 103 (noting concern about climate change

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⁷ Plaintiff's other cases fare no better. *See Monsanto*, 2020 WL 1529014, at *10 (allowing bystander design defect claim to proceed where PCB manufacturer allegedly contaminated plaintiff's groundwater *directly*); *Georgia-Pacific Corp. v. Pransky*, 369 Md. 360, 366 (2002) (allowing design defect bystander claims to proceed where alleged injury resulted from *direct* exposure to asbestos-containing product in plaintiff's home); *Valk Mfg. Co. v. Rangaswamy*, 74 Md. App. 304, 318 (1988) (motorist harmed by *collision* with snowplow hitch on vehicle could recover against hitch manufacturer as bystander), *rev'd on other grounds sub nom. Montgomery Cty. v. Valk Mfg. Co.*, 317 Md. 185 (1989); *ACandS, Inc. v. Godwin*, 340 Md. 334, 404 (1995) (allowing bystander liability where plaintiffs were *directly* exposed to asbestos); *Kennedy Krieger Inst., Inc. v. Partlow*, 460 Md. 607 (2018) (recognizing a duty of care in "limited circumstances" involving research studies that exposed non-participant children to lead-based paint).

risks that resulted in a report by Lyndon B. Johnson's Science Advisory Committee in 1965); *id.* ¶ 143 (discussing multiple government reports and actions from 1988 to 1992 confirming the role of greenhouse gas emissions in climate change); *id.* ¶¶ 136, 181 (discussing statements by Defendants in the 1990s acknowledging the consensus regarding human-influenced climate change). Plaintiff cannot seriously dispute that a reasonable consumer would have been aware of the alleged impacts of fossil fuel consumption. Thus, Defendants had no duty to warn, and Plaintiff's failure to warn claims fail on the pleadings.⁸

3. Plaintiff's Design Defect Claims Should Be Dismissed Because Plaintiff Fails To Allege Any "Design" Defect.

Plaintiff's opposition confirms that its design defect claims fail as a matter of law. A product that "functions as intended and as expected is not 'defective," even if the use of the product creates negative externalities. *Kelly v. R.G. Indus., Inc.*, 304 Md. 124, 138 (1985); Br. 45. And a *design* defect claim cannot be premised on "a characteristic that is *inherent* in the product itself." *Cofield v. Lead Indus. Ass'n, Inc.*, 2000 WL 34292681, at *2 (D. Md. Aug. 17, 2000) (emphasis added); Br. 45–46. Those undisputed legal principles doom Plaintiff's design defect claims: Plaintiff alleges that all of its injuries resulted from "the normal and intended use" of Defendants' "fossil fuel products," Compl. ¶ 18, and that the "climate effects" that caused its injuries "*inevitably flow from the intended use* of [Defendants'] fossil fuel products," *id.* ¶ 241 (emphasis added). Plaintiff's opposition does not confront these fatal flaws, because it cannot.

Plaintiff nonetheless insists that its claims turn on "Defendants' promotional efforts." Opp. 52 (quotation marks omitted). But that merely restates the problem with Plaintiff's claims: As the

of the alleged dangers of fossil fuels.

28

⁸ Plaintiff suggests that the potential existence of "distractions" renders this case inappropriate for judgment before discovery. Opp. 48–50. The cases it cites, however, merely recognize that the presence of distractions is relevant to determining, in the first place, whether a danger was open and obvious under an objective standard. Here, Plaintiff's allegations foreclose any question as to the openness and obviousness

Supreme Court has explained, the "relevant inquiry in a strict liability action" for design defect "focuses not on the conduct of the manufacturer but rather on the product itself." Phipps v. Gen. Motors Corp., 278 Md. 337, 344 (1976) (emphases added). It is therefore unsurprising that Plaintiff does not cite a single case from Maryland—or any other jurisdiction for that matter—accepting an analogous design defect theory. To the contrary, Plaintiff's primary authority is a footnote in the Fourth Circuit's decision affirming remand in this case, where the court merely recounted "how Baltimore has framed its claim." Mayor & City Council of Balt. v. BP P.L.C., 31 F.4th 178, 234 n.23 (4th Cir. 2022); see Opp. 51–52. Far from endorsing Plaintiff's untenable design-defect theory, that court described Plaintiff's theory as "novel" and noted that "[t]he viability of such a theory under Maryland law is a question for the Maryland courts to decide." Baltimore, 31 F.4th at 234 n.23. And Plaintiff's remaining cases merely recite the consumer expectation test, see Opp. 50–51, without remotely suggesting that a design defect theory can be premised on a defendant's statements or omissions about its products.

Plaintiff does not meaningfully distinguish *Kelley* or other Maryland cases holding that a product cannot be defectively designed if it "operated exactly as intended." *E.g.*, *Ziegler v. Kawasaki Heavy Indus.*, *Ltd.*, 74 Md. App. 613, 623 (1988); *see also Halliday*, 368 Md. at 208 (holding that firearm was not defective because "it worked exactly as it was designed and intended to work"). And where Plaintiff does attempt to distinguish Defendants' cases, it offers nothing of substance. For example, there may have been "no evidence" in *Dudley v. Baltimore Gas & Electric Co.*, 98 Md. App. 182 (1993), "that the defendant gas company concealed" that natural gas is flammable and highly explosive. Opp. 52. But that hardly distinguishes the Appellate Court's holding—that a product cannot be defective because of a quality that is "intrinsic to the nature" of the product—because the plaintiff's claims did not turn on evidence of the defendant's

conduct. *Dudley*, 98 Md. App. at 202. And the court in *Cofield* may have required the plaintiff to plead a safer, commercially reasonable alternative design. Opp. 52 n.31. But that was *independent* of its holding that "[u]nder Maryland law, a product cannot be defective because of a characteristic that is inherent in the product itself." *Cofield*, 2000 WL 34292681, at *2.9

Furthermore, Plaintiff still does not and cannot allege facts showing that Defendants' fossil fuel products are "unreasonably dangerous" to the consumer. *Phipps*, 278 Md. at 344; *see* Br. 46–48. To the contrary, Plaintiff actually concedes it "is *not* alleging that Defendants' products are defective because ... they produce greenhouse gases upon combustion." Opp. 52 (emphasis added). Plaintiff does not cite a *single* case supporting a theory of a product being "unreasonably dangerous" based on its collective use by billions of consumers over decades. Nor could it: The danger Plaintiff alleges is *climate change*, which allegedly causes harm not to a single consumer based on her combustion of fossil fuels but only by collective combustion across the world and for decades. *See* Restatement (Second) of Torts § 402A cmt. g ("The rule stated in this Section applies *only* where the product is, at the time it leaves the seller's hands, in a condition not contemplated by the ultimate consumer, which will be *unreasonably dangerous to him.*" (emphases added)). And in any event, Plaintiff's allegations about the widespread, longstanding knowledge of the alleged connection between fossils fuels and climate change undermine any theory that such routinely used products are defective or unreasonably dangerous. *See* Br. 47–48.

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⁹ The cases Plaintiff cites only underscore the incoherence of its arguments. In *Green v. Smith & Nephew AHP, Inc.*, 629 N.W.2d 727 (Wis. 2001) (cited at Opp. 52 n.31), for example, the plaintiff alleged that latex gloves were defective because, among other reasons, "they were powdered, which allowed the latex to be airborne"—thus arguing "that a *particular design feature*, powder, made the gloves more dangerous." *Godoy ex rel. Gramling v. E.I. du Pont de Nemours & Co.*, 768 N.W.2d 674, 685 (Wis. 2009) (emphasis added); *see also id.* at 684, 687 (holding that white lead carbonate pigment, which "[b]y definition . . . contains lead," was *not* defectively designed because "the presence of an ingredient" (lead) that "is 'characteristic of the product itself' is an improper basis for a defective design claim"). Here, Plaintiff does not and cannot allege that anything about the *design* of Defendants' fossil fuels rendered them defective.

4. Plaintiff's Trespass Claim Fails Because Plaintiff Has Not Adequately Pleaded Any Of Its Elements.

Plaintiff fails to plead facts that, if true, would satisfy three essential elements of its trespass claim. *First*, Plaintiff does not allege any trespass to land over which it has "exclusive possession." *Exxon Mobil Corp. v. Albright*, 433 Md. 303, 408 (2013). Plaintiff incorrectly argues that it is not required to identify specific properties over which it has exclusive possession, pointing to two *federal* cases applying federal pleading rules. *See* Opp. 40–41. But Plaintiff does not address Maryland Rule 2-304, which provides that "[t]ime *and place* shall be averred in a pleading when material to the cause of action or ground of defense" (emphasis added). The "place" of a trespass claim is material, and the claim should be dismissed for failing to meet the applicable pleading requirement. *See Gusdorff v. Duncan*, 94 Md. 160, 166 (1901) (demurrer should have been sustained because pleading failed "to state the location of the premises upon which the trespass is alleged to have been made"). Although Plaintiff vaguely alleges that floodwaters have "enter[ed] the City's real property," Compl. ¶ 284, Defendants and the Court are left to speculate about which property Plaintiff refers to and whether Plaintiff had exclusive possession of any such property.

Second, Plaintiff "does not allege that Defendants, or even their products, intruded upon any property owned by Plaintiff." Br. 49. Instead, Plaintiff alleges only that Defendants "caused flood waters, extreme precipitation, saltwater, and other materials, to enter [its] real property." Compl. ¶284. In support of its far-fetched theory of trespass, Plaintiff cites Albright for the proposition that "a party is liable for trespass when it interferes with another's possessory interest in its property 'by entering or causing something to enter the land." Opp. 41 (emphasis omitted) (quoting Albright, 433 Md. at 408). But that non-controversial statement of trespass law provides no support for the novel assertion that a party can be held liable in trespass because use of its

products—along with the use of products from innumerable third parties—by billions of people around the world for many decades results in weather changes that affect another's property.

The Restatement (Second) of Torts, which Plaintiff cites as purported support for its theory that Defendants caused a trespass (Opp. 42), undermines its claim. The Restatement explains when a defendant may be liable for causing a trespass: "The actor, without himself entering the land, may invade another's interest in its exclusive possession by throwing, propelling, or placing a thing either on or beneath the surface of the land or in the air space above it." Restatement (Second) of Torts: Liab. for Intentional Intrusions on Land § 158 cmt. i. Here, none of the Defendants entered Plaintiff's land or invaded Plaintiff's "exclusive possession" of any land by "throwing, propelling, or placing" anything (particularly fossil fuels) on, over, or beneath it. And under Plaintiff's promotion theory, the alleged wrongful conduct is Defendants' supposed campaign of misinformation—not the production of fossil fuel products. But speech plainly is not an invasion of property, and under no interpretation of trespass law can Defendants be found to have trespassed on Plaintiff's property by promoting their products.

Relying on *Rockland Bleach & Dye Works Co. v. H.J. Williams Corp.*, 242 Md. 375 (1966), Plaintiff argues that a trespass claim can succeed when property "is invaded by an inanimate or intangible object," so long as the defendant has "some connection with or some control over [the] object." Opp. 42 (alteration in original). But the tortious conduct Plaintiff alleges here is not the production of fossil fuels, but the supposedly nefarious marketing of them, which is not an invasion of property. And, in any event, Defendants have no control over the oceans, clouds, or precipitation that allegedly trespassed on Plaintiff's unidentified lands, let alone the "very significant amounts of control" held by the defendant in *Rockland*, 242 Md. at 387–88. Neither *Rockland* nor any other case suggests that liability can be imposed in the absence of such control.

Plaintiff nonetheless argues that Defendants "designed, manufactured, marketed, and sold fossil fuel products whose intended use" would cause "trespasses on City property." Opp. 42. But Plaintiff does not point to any Maryland authority even suggesting that the lawful production of fossil fuel products constitutes sufficient control of property-invading "flood waters" merely because a byproduct created by third-party combustion of fossil fuels may affect the weather.

Plaintiff therefore cannot reasonably allege that Defendants control, or have a legally sufficient "connection with," global weather and the oceans, which would be required even under Plaintiff's overbroad interpretation of *Rockland*. To the contrary, that case, like the other cases cited by Plaintiff, involved trespass by objects controlled by defendants that invaded property from nearby. *See Rockland*, 242 Md. at 378 (defendant general contractor caused mud and debris from excavation to pile up on adjacent property); *In re Methyl Tertiary Butyl Ether ("MTBE") Prods. Liab. Litig.*, 457 F. Supp. 2d 298, 315 (S.D.N.Y. 2006) (defendants' gasoline allegedly leaked from storage tanks); *Monsanto*, 299 A.3d at 389 (PCBs that Monsanto manufactured and sold to Delaware manufacturers and consumers were the instrument of intrusion); *City of Bristol v. Tilcon Minerals, Inc.*, 931 A.2d 237, 259 (Conn. 2007) (leachate from landfill contaminated groundwater and neighboring property). Even direct leakage from one landowner's property to another's may not suffice to state a trespass claim. *See JBG/Twinbrook Metro. Ltd. P'Ship v. Wheeler*, 346 Md. 601, 626 (1997) (gasoline leaked from underground storage tanks found to be insufficient to support trespass claim as a matter of law).¹⁰ Plaintiff does not allege even these facts here.

Thus, Plaintiff's theories of tort liability are much more attenuated than any found in the *Rockland/Wheeler* line of cases. Plaintiff's theory of changed weather leading to rising sea levels

¹⁰ Plaintiff's attempt to distinguish *JBG/Twinbrook*, falls flat. Opp. 42–43. That court considered defendants' contractual rights to the allegedly trespassing tanks. *JBG/Twinbrook*, 346 Md. at 623–26. But that fact does not render the case inapposite. As here, the defendant in *JBG/Twinbrook* did not exercise control over the object that allegedly trespassed on the plaintiff's property.

does not even remotely fit within any recognized theory of trespass.

Third, Plaintiff's trespass claim cannot be based on anticipated future invasions of property, and virtually all of Plaintiff's alleged injuries are entirely speculative and will be felt (if at all) only decades in the future. See Br. 50. Plaintiff contends that the Complaint "alleges numerous invasions of City property that have already occurred" and "costs the City has already incurred to address those invasions." Opp. 43. But the Complaint only vaguely and conclusorily states that Plaintiff "has experienced significant sea level rise and associated impacts over the last half century attributable to Defendants' conduct." Compl. ¶ 196. The focus of the claim is instead speculative future trespasses that Plaintiff merely predicts will result from Defendants' conduct. Id. ¶ 198-99 (noting that "within 80 years, floods breaking today's records would be expected once a year in Baltimore" and "sea level rise and associated flooding" are "expected by the end of this century"). Plaintiff cannot state a trespass claim based on such forecasts because trespass is a retrospective claim that "requires that the defendant . . . entered or caused something harmful or noxious to enter onto the plaintiff's land." Albright, 433 Md. at 408 (emphases added). Future invasions that have not occurred—and may never occur—are not actionable. See id. ("General contamination of an aquifer that may or may not reach a given [plaintiff's] property at an undetermined point in the future is not sufficient to prove an invasion of property.").

5. Plaintiff Fails Adequately To Allege An MCPA Claim.

Plaintiff's opposition confirms that its MCPA claim should be dismissed because Plaintiff fails to allege reliance on the alleged misrepresentations, and because its claim is both meritless and time-barred. Br. 51–55.

First, Plaintiff agrees that an element of an MCPA claim is that the consumer-plaintiff relied on the representations. Opp. 54 & 56 n.36. But Plaintiff has not alleged reliance on the alleged misstatements in connection with its own purchases. Instead, Plaintiff alleges only that

Defendants "obtained income, profits, and other benefits [they] would not otherwise have obtained" because of the alleged conduct, Compl. ¶ 297—not that *Plaintiff* purchased additional fossil fuel products *in reliance on Defendants' alleged misrepresentations*.

In response, Plaintiff states that "Defendants' tactics expanded the use of fossil fuels and delayed action on climate change," citing its assertion that, "[b]y reason of that same conduct, the City of Baltimore incurred harm and was damaged in ways it would not otherwise have been." Compl. ¶ 298; Opp. 55–56. This conclusory assertion does not even mention reliance, much less factually allege that Plaintiff actually bought more fuel than it otherwise would have but for any alleged misstatements by Defendants. If Plaintiff had actually relied on any alleged misstatements or deception, it would have said so clearly and unequivocally. Its failure to do is both fatal and dispositive. *See Bey v. Shapiro Brown & Alt, LLP*, 997 F. Supp. 2d 310, 319 (D. Md. 2014) (dismissing complaint for failure to allege reliance on representations in relation to a transaction); Opp. 56 n.36 (conceding that reliance is an "element" of an MCPA claim). 11

Plaintiff's unsuccessful attempt to salvage its MCPA claim only highlights the fundamental mismatch between Plaintiff's case and the MCPA: Plaintiff's alleged injury is not tied to its *own* fuel purchases. Rather, Plaintiff alleges its injury is the mitigation costs due to "the use of fossil fuels and delayed action on climate change" globally. Opp. 55–56. But Plaintiff does not allege (nor could it plausibly allege) that its injuries resulted from the incrementally higher emissions due to Plaintiff's own increased fuel purchases. Any such incremental emissions (an infinitesimally small fraction of global emissions) would not result in an "identifiable loss"—which is required to

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¹¹ Plaintiff has failed even to allege that it is a "consumer" within the meaning of the MCPA. A consumer is a purchaser of goods "used or bought for use primarily for personal, family, or household purposes." *Boatel Indus.*, *Inc. v. Hester*, 77 Md. App. 284, 301 (1988) (citation omitted). Plaintiff does not allege that it purchased Defendants' products for these purposes, and cannot, under the MCPA, satisfy the elements of an MCPA claim based on alleged reliance by other consumers.

allege an MCPA claim. *Lloyd v. Gen. Motors Corp.*, 397 Md. 108, 143 (2007). Undeterred, Plaintiff repeatedly refers to the emissions associated with *other* consumers. *E.g.*, Compl. ¶ 295 (referring to unspecified, generic "reasonable consumers"); *id.* ¶ 296 (referring to unspecified, generic "recipients of [Defendants'] marketing messages"). But the MCPA only provides a claim for a "consumer" injured "as a result of *his or her* reliance on the seller's misrepresentation"—not the reliance of other consumers. *Lloyd*, 397 Md. at 143 (emphasis added). Because Plaintiff does not and cannot make any such allegation, its entire MCPA claim should be dismissed.

Second, Plaintiff's MCPA claim should also be dismissed because the alleged misrepresentations relate to *climate change* writ large, not Defendants' *products*. The MCPA requires the misrepresentations to be "in" the "sale" or "offer for sale" of "consumer goods" or "consumer services." Md. Code Ann. Com. Law § 13-303(1)–(2). Accordingly, Maryland courts require the representations to be made while "selling, offering, or advertising the [product] that the plaintiffs bought." *Morris v. Osmose Wood Preserving*, 340 Md. 519, 542 (1995). But here, the alleged misrepresentations do not even identify or refer to such products.

Plaintiff offers little in response. Inverting the pleading burdens, Plaintiff asserts that Defendants have not shown "that none of their statements about climate change were made as 'attempts to sell' their fossil fuel products." Opp. 60. But the inquiry is whether Plaintiff's allegations are adequate. And here, none of the representations identified in Plaintiff's Complaint were made in the course of any Defendant selling the products to Plaintiff. *See Rutherford v. BMW of N. Am.*, 579 F. Supp. 3d 737, 751 (D. Md. 2022) (requiring representations forming the basis of MCPA claims to be "made in the course of a sale"). Because the Complaint asserts only a campaign of deception related to climate change, and *not* any Defendants' individual products, the MCPA claim should be dismissed.

Third, Plaintiff's MCPA claim is barred by the applicable "three-year statute of limitations." *Cain v. Midland Funding, LLC*, 475 Md. 4, 39 (2021). As Plaintiff concedes, its claim accrued when it "knew or reasonably should have known" by reasonable diligence the facts giving rise to its claim. *Id.* at 35.

The Complaint itself, together with matters undisputed by Plaintiff, plainly demonstrate that the MCPA claim is time-barred because Plaintiff "knew or reasonably should have known" by reasonable diligence of the facts giving rise to its MCPA claim *far* more than three years before it commenced this action in 2018. For example:

- The Complaint alleges that Defendants' purported "decades-long campaign" of *public* misrepresentations began in 1988 and that the last such alleged statement occurred in 1998—two decades before the relevant limitations period would have had to begin in 2015. Compl. ¶¶ 141, 145–46, 158.
- The Complaint acknowledges both that fossil fuels' impact on climate change was publicly known for *half a century*, *id.* ¶¶ 103, 128, and that Defendants' so-called "campaign" occurred *publicly*, *id.* ¶ 147.
- Plaintiff does not dispute that Defendants' alleged "campaign" was publicly reported in the 1990s in newspapers with substantial circulation in Maryland, that other States and municipalities—*including Baltimore*—filed suits alleging a link between fossil fuels and climate change more than a decade before the commencement of this suit, or that the Maryland General Assembly enacted legislation to address climate change in 2014. *See* Opp. 58–59; Br. 54–55 (raising this argument).

As a result, any suggestion that Plaintiff reasonably did not know or should not have known about Defendants' purported "campaign" before the limitations period is implausible and

controverted by Plaintiff's own allegations and admissions. Indeed, a Delaware state court recently dismissed as time-barred substantially similar consumer-protection claims in a climate change lawsuit, finding that the "general public had knowledge of or had access to information about the disputes, regarding the existence of climate change and effects, decades prior to the expiration of the five-year limitations period." *Delaware*, 2024 WL 98888, at *19. The same is true here where the limitations period is only three years.

III. CONCLUSION

The Court should dismiss the Complaint in its entirety with prejudice.

Dated: January 26, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on the 26th day of January 2024, a copy of the foregoing was served on all counsel of record via email (by agreement of the parties).

Alison C Schurick

EXHIBIT A

UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK x	
CITY OF NEW YORK,	
Plaintiff,	
-against- BP P.L.C.; CHEVRON CORPORATION; CONOCOPHILLIPS; EXXON MOBIL CORPORATION; and ROYAL DUTCH SHELL PLC,	AMENDED COMPLAINT Case No. 18-cv-182-JFK
Defendants.	

TABLE OF CONTENTS

I. Introduction	1
II. Parties	7
A. Plaintiff	7
B. Defendants	8
C. Defendants' connections to New York.	10
III. Jurisdiction and Venue	23
IV. Climate Change Impacts on New York City	24
V. Fossil Fuels Are the Primary Cause of Climate Change	36
VI. Defendants Have Produced Massive Quantities of Fossil Fuels—and Have Continued to Do So Even as Climate Change Has Become Gravely Dangerous	41
VII. Defendants Had Full Knowledge that Fossil Fuels Would Cause Catastrophic Harm	43
VIII. Despite Their Early Knowledge that Climate Change Posed Grave Threats, Defendants Promoted Fossil Fuels for Pervasive Use, While Denying or Downplaying These Threats	51
A. Defendants engaged in an overt public relations campaign intended to cast doubt on climate science and promote their products	51
B. Defendants directly promoted fossil fuels	58
IX. The City Is Expending Substantial Funds, and Will Continue to Do So, to Protect Itself Against Climate Change	62
X. Defendants' Conduct Is Ongoing, and Is Causing Continuous and Recurring Injuries to the City	67
As a First Cause of Action – Public Nuisance	68
As a Second Cause of Action – Private Nuisance	70
As a Third Cause of Action – Trespass	72
Jury Trial Demanded	73
Relief Requested	73

Plaintiff the City of New York ("City"), by its attorney Zachary W. Carter, Corporation Counsel of the City of New York, brings this action sounding in public nuisance, private nuisance, and trespass against Defendants BP p.l.c. ("BP"), Chevron Corporation ("Chevron"), ConocoPhillips ("ConocoPhillips"), Exxon Mobil Corporation ("Exxon"), and Royal Dutch Shell plc ("Shell") (collectively, "Defendants"), and alleges as follows:

I. INTRODUCTION

- 1. This lawsuit is based upon the fundamental principle that a corporation that makes a product causing severe harm when used exactly as intended should shoulder the costs of abating that harm. Defendants here produced, marketed, and sold massive quantities of fossil fuels—primarily oil and natural gas—despite knowing that the combustion and use of fossil fuels emit greenhouse gases ("GHG pollution" or "GHGs"), primarily carbon dioxide ("CO2"). Defendants have also known for decades that GHG pollution accumulates and remains in the atmosphere for up to hundreds of years, where it traps heat, a process commonly referred to as "climate change" or "global warming," and that this process would cause grave harm. Defendants continue to this day to produce, market, and sell massive amounts of fossil fuels and plan to continue doing so for decades into the future; their past and ongoing conduct causes and continually exacerbates global warming and all of its impacts, including hotter temperatures, longer and more severe heat waves, extreme precipitation events including heavy downpours, rising sea levels, and other severe and irreversible harms.
- 2. Defendants' past and ongoing actions are harming New York City now: the City already has suffered damage from climate change, including inundation, erosion, and regular tidal flooding of its property. The City now faces further imminent threats to its property, its infrastructure, and the health and safety of its residents. In this litigation, the City seeks to shift

the costs of protecting the City from climate change impacts back onto the companies that have done nearly all they could to create this existential threat.

- 3. Defendants are the five largest, investor-owned producers of fossil fuels in the world, as measured by the cumulative carbon and methane pollution generated from the use of their fossil fuels, according to published, peer-reviewed research. Defendants are collectively responsible, through their production, marketing, and sale of fossil fuels, for over 11% of all the carbon and methane pollution from industrial sources that has accumulated in the atmosphere since the dawn of the Industrial Revolution. Additionally, Defendants are also responsible for leading the public relations strategy for the entire fossil fuel industry, downplaying the risks of climate change and promoting fossil fuel use despite the risks. It is a myth that everyone is responsible for climate change and therefore that no one is responsible. Recent research demonstrates that just 100 fossil fuel producers are responsible for 62% of all GHG emissions from industrial sources since the dawn of the Industrial Revolution and for 71% of emissions since 1988, that over 90% of these emissions are attributable to the fossil fuels that they produce and sell (rather than emit from their own operations), and that most of these emissions have occurred since 1988.
- 4. Defendants knew decades ago that the fossil fuel products they produce and sell were altering the atmosphere and would cause a dire global warming problem. They acted on this knowledge to protect their own infrastructure and assets, and yet they told the public a very different story. According to recently disclosed documents, by the late 1970s or early 1980s, if not earlier, Defendants knew that averting dangerous climate change required reducing the use of

¹ Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers*, 1854–2010, CLIMATIC CHANGE, Jan. 2014.

their fossil fuel products. At that time, scientists working either directly for Defendants or advising Defendants through an industry-wide consulting arrangement warned Defendants in stark terms that fossil fuel use risked "catastrophic" harm from global warming over the coming decades. The oil and gas industry even formed a "CO2 and Climate Task Force" in the late 1970s—a group that included representatives from each of the Defendants. At a 1980 meeting, this Task Force received a scientific warning that global warming would cause catastrophic harms, found that reductions in fossil fuel usage would result in the "immediate problem being considerably eased," questioned the long-term "future of fossil fuel use," and discussed internally "the technical implications of energy source changeover."

- 5. However, disregarding the findings of their own internal scientists and scientific consultants, Defendants re-committed themselves to fossil fuel exploration, production, marketing, and sales over the ensuing decades. The significant majority of emissions resulting from fossil fuels produced and marketed by Defendants occurred after Defendants became aware of the consequences of climate change. The majority of emissions resulting from fossil fuels produced and marketed by the fossil fuel industry have occurred since 1988, by which time the Defendants knew that their fossil fuel products were causing a buildup of GHG pollution in the atmosphere that would cause dangerous global warming.
- 6. But in an effort to protect their market, Defendants orchestrated a campaign of deception and denial regarding climate change. Defendants sponsored publicity campaigns using front groups and paid "scientific" mouthpieces—including some of the same scientists that the tobacco industry had used to downplay the risks of cigarettes—to discredit the mainstream scientific consensus on global warming and downplay the risks of climate change. Defendants also employed large-scale, sophisticated advertising campaigns to promote pervasive fossil fuel

use, conducted either directly or through surrogates like their main U.S. trade association, the American Petroleum Institute ("API"), and to portray fossil fuels as environmentally responsible—a campaign that continues to this day.

- 7. Defendants are not only quantitatively different from other contributors to climate change given their massive and dangerous levels of fossil fuel production over many years—they are also qualitatively different from other contributors to climate change because of their inhouse scientific resources, early knowledge of climate change impacts, commercial promotions of fossil fuels as beneficial despite their knowledge to the contrary, efforts to protect their fossil fuel market by downplaying the risks of climate change, and leadership roles in the API and other organizations that undertook a communications strategy for the fossil fuel industry. In this coordinated effort to discredit the science, which began in earnest during the 1990s and has continued in a subtler form even in recent years, Defendants and their agents and advocates have made the alleged "uncertainty" of climate science their constantly-repeated mantra. The purpose of this campaign of deception and denial was to increase sales and protect market share. It succeeded, and Defendants have profited enormously as a result.
- 8. Meanwhile, Defendants relied upon their knowledge about climate change science to protect their own business assets from expected rising seas and melting permafrost by incorporating climate change science into their engineering standards for construction of their pipelines, offshore oil platforms, and other projects.
- 9. To this day, Defendants continue to exacerbate global warming by producing and selling massive quantities of fossil fuels and marketing these fuels as environmentally beneficial—despite a scientific consensus that global warming has entered a critically dangerous phase. And they have continued in recent years to misleadingly tell the public that the science of

global warming is uncertain; as recently as 2016, Defendants' main U.S. trade association, the API, falsely referred to global warming on its website as "possible manmade warming." While Defendants pay lip service to global warming and offer minimal steps toward reducing the carbon footprint from their own operations as window dressing, their multi-decade business plans are based upon more of the same: exploration, production, and sale of fossil fuels at levels that are utterly inconsistent with keeping global warming from exceeding a 3.6 degrees Fahrenheit ("oF") (2 degrees Celsius ("oC")) increase over pre-industrial levels, an amount of warming that is commonly accepted as a point beyond which the most dangerous and even catastrophic consequences of climate change cannot be prevented, much less a 2.7°F (1.5°C) increase, which is the widely adopted target necessary to avoid dangerous global warming impacts. The City has committed to reducing its own emissions in line with this 2.7°F goal.

10. The very climate disruption and injuries that Defendants' scientists and consultants warned them about decades ago have now arrived. Climate change is here and is harming New York City. The temperature in the City is rapidly increasing, sea levels are rapidly rising, coastal storms are causing increased flooding, and extreme precipitation events are increasing throughout the Northeastern United States. Studies by the New York City Panel on Climate Change ("NPCC"), a body of more than a dozen independent leading climate and social scientists, demonstrate that global warming is already causing the City to suffer increased hot days, flooding of low-lying areas, increased shoreline erosion, and higher threats of catastrophic storm surge flooding even more severe than the flooding from Hurricane Sandy. Because there is a lag between emission of greenhouse gases and global warming impacts, these harms will continue and worsen in coming years, as previously emitted greenhouse gases from Defendants' products further heat the atmosphere. As the City has emphasized in its plans to deal with the

inevitable impacts, New York City is "particularly vulnerable to the effects of climate change" because it is built primarily on islands and has 520 miles of coastline.² Indeed, Mayor Bill de Blasio has declared that the City faces "an existential threat posed by climate change."³

- 11. The City is taking action now to protect public safety, public health, and City property and infrastructure from the ravages of climate change through an extensive series of resiliency measures. For example, the City is implementing programs to protect vulnerable residents during increasingly severe heat waves, which already kill more New Yorkers each year than all other natural disasters combined. The City has begun to reinforce its coastline and elevate its infrastructure within the floodplain, and to pursue a vast array of additional measures to protect public health and welfare and avoid or minimize damage to City property from climate change. The City is spending billions of dollars on these resiliency measures.
- 12. The City must take many more resiliency actions to more fully protect the public and City property and services as the climate marches toward an overheated state that, according to all scientific data, will be unprecedented in the history of human civilization. To deal with what the future will inevitably bring, the City must build sea walls, levees, dunes, and other coastal armament, and elevate and harden a vast array of City-owned structures, properties, and parks along its coastline. For example, the City must enlarge existing storm and wastewater storage facilities and install additional facilities and associated pumping facilities and infrastructure to prevent flooding in low-lying areas that are vulnerable to rising seas and increasingly severe downpours. These are long-term design and construction projects that must

² CITY OF NEW YORK, ONE NEW YORK: THE PLAN FOR A STRONG AND JUST CITY 166, available at http://www.nyc.gov/html/onenyc/downloads/pdf/publications/OneNYC.pdf.

 $^{^{3}}$ *Id.* at 3.

be built to last for decades, often up to fifty years or more. The City must take these actions as soon as possible in order to protect public health and safety and City property and infrastructure. The costs of these largely unfunded projects run to many billions of dollars and far exceed the City's resources.

- 13. This egregious state of affairs is no accident. Defendants' actions in producing, marketing, and selling fossil fuels for decades and at ever more dangerous levels while knowing of the harm that was substantially certain to result constitutes an unlawful public and private nuisance and an illegal trespass upon City property. The City brings such claims against Defendants in this action and seeks: (1) a money judgment for the costs already incurred by the City to protect City infrastructure and property, and to protect the public health, safety, and property of its residents from the effects of climate change; (2) a money judgment for the costs of actions the City is currently taking, and needs to take to protect City infrastructure and property, and to protect the health, safety, and property of its residents from the impacts of climate change; and (3) an equitable order ascertaining the damages and granting an injunction to abate the public nuisance and trespass that would become effective if Defendants fail to pay the court-determined damages for the past and permanent injuries inflicted.
- 14. The City does not seek to impose liability on Defendants for their direct emissions of greenhouse gases, and does not seek to restrain Defendants from engaging in their business operations.

II. PARTIES

A. Plaintiff

15. Plaintiff the City of New York is a municipal corporation organized under the laws of the State of New York, with its principal place of business located at City Hall, New York, New York. The City is responsible for the public health, safety, and welfare of its more

than 8.5 million residents and the millions of additional people who work in or visit New York City each day.

B. Defendants

- 16. Defendant BP is a public limited company incorporated in England and Wales with its headquarters in London, England, doing business in New York State. BP is a multinational, integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products. On information and belief, Amoco Corporation (which merged into a predecessor of BP in approximately 1998), Atlantic Richfield Company (which merged into a predecessor of BP in approximately 2000), and BP America Inc. (a BP subsidiary that BP describes in an SEC filing as its "chief representative in the US" and "our agent in the US") were members of the API at all relevant times.⁴
- 17. Defendant Chevron is a Delaware corporation with its principal place of business located at 6001 Bollinger Canyon Road, San Ramon, California, doing business in New York State. Chevron is a multinational, integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products. On information and belief, Chevron has been a member of the API at all relevant times.
- 18. Defendant ConocoPhillips is a Delaware corporation with its principal place of business located at 600 North Dairy Ashford, Houston, Texas, doing business in New York State. ConocoPhillips is a multinational oil and gas company that produces, markets, and sells oil and natural gas and for many years also refined and sold finished oil products. On

 $^{^4}$ See BP P.L.C., Annual Report and Form 20-F 2016 59, 290, available at https://www.sec.gov/Archives/edgar/data/313807/000119312517112384/d248481d20f.htm.

information and belief, Conoco Inc. and Phillips Petroleum Company (the two companies which merged to become ConocoPhillips in 2002) were members of the API at all relevant times.

- 19. Defendant Exxon is a New Jersey corporation with its principal place of business located at 5959 Las Colinas Boulevard, Irving, Texas, doing business in New York State. Exxon is a multinational, integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products and, as recently as 2009 produced, marketed, and sold coal. On information and belief, Exxon Company (an Exxon subsidiary) and Mobil Corporation (which merged into Exxon Corporation to form Defendant Exxon Mobil Corporation in 1999) were members of the API at all relevant times.
- 20. Defendant Shell is a public limited company incorporated in England and Wales with its headquarters in The Hague, Netherlands, doing business in New York State. Shell is a multinational, integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products. On information and belief, Shell Oil Company was a member of the API at all relevant times, including the 1980s in particular. Shell Oil Company is Defendant Shell's main U.S. subsidiary; its president is Defendant Shell's "U.S. Country Chair."
- 21. Each Defendant has controlled and continues to control all relevant decisions regarding fossil fuel production, fossil fuel reserves, fossil fuel promotion, and climate policy for their respective corporate families—indeed, these are some of the primary functions that Defendants have performed for their subsidiaries. This control is illustrated by the activities and statements by Defendants described herein. These include advertisements and statements by

⁵ Our Leaders, SHELL U.S., https://www.shell.us/about-us/who-we-are/our-leaders.html (last visited Jan. 9, 2018).

each Defendant promoting its company-wide production of fossil fuels, and by Defendants' public statements acknowledging their control of company-wide production levels, reserves, and climate policy. For example, Defendants—and not their subsidiaries—annually submit reports to the Carbon Disclosure Project addressing their group-wide climate change policies and actions. Each Defendant, through its employees and/or agents, also controls the process by which its fossil fuels, including raw crude oil and natural gas, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers by and through its subsidiaries.

- 22. As a result of Defendants' control over all relevant decisions regarding fossil fuel production, fossil fuel reserves, fossil fuel promotion, and climate policy, Defendants are responsible for their subsidiaries' past and current production and promotion of fossil fuel products and future plans regarding production and promotion.
- 23. Defendants have at all relevant times controlled and acted through their subsidiaries as their agents concerning the conduct alleged in this complaint.

C. Defendants' connections to New York.

- 24. Defendants have contributed to the temperature increases and global warming induced sea level rise now affecting New York City. These impacts constitute severe harm now and a threat of future catastrophic harm.
- 25. Each Defendant, directly and through its subsidiaries and agents, substantially participates in the process by which raw crude oil is extracted from the ground, refined into fossil

⁶ See, e.g., BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Chevron Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; Exxon Mobil Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Royal Dutch Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; available at https://www.cdp.net/en/companies.

fuel products, including finished gasoline products, and delivered, marketed, and sold to New York State residents for use. For example, and as described in more detail below, Defendants intentionally created a fungible and commingled gasoline product in order to be able to utilize a common distribution system that moved gasoline from refineries through pipelines to terminals (large storage tanks). Pipelines and trucks then transport gasoline from terminals to undergrounds storage tanks at retail stations where it is sold to consumers. A petroleum products terminal facility consists of one or more very large aboveground storage tanks for fossil fuel products, including gasoline. A terminal facility is an important part of the distribution chain to supply fossil fuel products, including gasoline, from a refinery to end consumers, including consumers in New York State. Defendants created this distribution system because it was more efficient and cost effective for them to distribute gasoline from refineries to retail gasoline stations. As described below, Defendants substantially participated in this gasoline distribution process by refining raw crude oil into finished gasoline at refineries, supplying gasoline into pipelines, removing gasoline from pipelines at certain storage facilities or placing gasoline into trucks for transport to retail sites, and/or storing gasoline in underground storage tanks at retail gasoline stations.

- 26. All of the Defendants' long-standing and extensive contacts with New York State, described below, have furthered and supported their production, marketing, and sale of massive quantities of fossil fuels and fossil fuel products, which has injured, and continues to injure, New York City.
- 27. BP does business in New York State, including through its subsidiaries and agents. Atlantic Richfield Company, one of BP's predecessors, was headquartered in New York State until 1972, when it moved to California. BP's agent and subsidiary Atlantic Richfield

Company does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1985. BP's agent and subsidiary BP Products North America Inc. does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1933. BP's agent and subsidiary BP America Inc. does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1978.

- 28. BP's website maintains a page of "BP Amoco Stations Near Me" for New York listing numerous BP-branded gasoline stations in New York State, including stations located in New York City. BP exercises control over gasoline product quality and specifications at BP-branded retail stations. BP-branded retail stations display the trademark of BP and can only sell gasoline that contains BP's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at BP-branded retail stations. Upon information and belief, BP has entered into contracts with operators of BP-branded retail stations in New York State, and/or distributors, that, among other things, have required these operators to sell only BP-branded gasoline, and for supply of certain volumes of BP-branded gasoline to BP-branded stations. BP offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including BP-branded retail stations in New York State. BP promotes gasoline sales by offering consumers, through its interactive website, "cent-per-gallon rewards" for using BP credit cards that effectively discount gasoline sold at BP stations, including BP-branded retail stations in New York State.
- 29. BP, including through its subsidiaries acting as its agents, owned and operated the Texas City refinery in Texas from approximately 1999-2013. The Texas City refinery supplied

gasoline to the New York Harbor area, and a substantial amount was supplied to New York State, where it was sold and consumed by New York State residents. BP, including through its subsidiaries and agents Amoco Corporation and/or BP Products North America, Inc., owned and operated numerous gasoline terminals in New York State for decades that stored hundreds of thousands of barrels of gasoline, including in Brooklyn (from approximately the late 1960s to 2016), Inwood (from approximately 1979 to 1993), Mt. Vernon (from approximately 1979 to 1999), and Oceanside (from approximately 1979 to 1983). The BP terminal in Brooklyn had a petroleum product storage capacity of nearly 6 million gallons. BP has entered into contracts regarding the supply of gasoline into and out of its gasoline terminals in New York State, and the supply of gasoline into and out of third-party gasoline terminals in New York State. BP, through its agents and subsidiaries, has leased real property in New York State, for purposes relating to the marketing and sale of fossil fuel products.

30. Chevron does business in New York State, including through its subsidiaries and agents. Chevron's agent and subsidiary Chevron U.S.A. Inc. does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1936. Chevron, through its subsidiaries, owns and operates a refinery in Pascagoula, Mississippi, that, upon information and belief, supplies gasoline to the New York Harbor area, and a substantial amount was and continues to be supplied to New York State, where it is sold and consumed by New York State residents. Chevron offers credit cards to consumers through its interactive website to promote sales of gasoline and other products at its branded gasoline stations. Chevron promotes gasoline sales on its interactive web site by offering consumers three cents per gallon in fuel credits "every fill-up, every time at Chevron and Texaco stations." Chevron has used New York advertising firms to promote fossil fuel

products, including the Chevron advertisements described in Section VIII, below. Chevron, through its subsidiaries and agents, owned and operated numerous gasoline terminals in New York State that stored hundreds of thousands of barrels of gasoline, including in Gulfport (from approximately 1979 to 1986), Johnson City (from approximately 1979 to 1986), Oceanside (from approximately 1979 to 1986), Rensselaer (from approximately 1979 to 1986), Rochester (from approximately 1979 to 1986), Syracuse (from approximately 1979 to 1986), and Utica (from approximately 1979 to 1986). Chevron has entered into contracts regarding the supply of gasoline into and out of its gasoline terminals in New York State, and the supply of gasoline into and out of third-party gasoline terminals in New York State.

31. ConocoPhillips does business in New York State, including through its subsidiaries and agents. ConocoPhillips' earliest predecessor, Continental Oil & Transportation Company, which later became the Continental Oil Company, had its headquarters in New York City from 1964 through approximately 1972. ConocoPhillips, through its subsidiaries, produces oil in the Bakken formation in North Dakota. On information and belief, this crude oil is loaded onto railroad cars and shipped to locations including Albany, New York, where it is then loaded onto barges for delivery to refineries. As of 2014, Albany received approximately 20% to 25% of the Bakken crude oil rail exports. ConocoPhillips, including through its subsidiaries acting as its agents, previously owned and operated four refineries that supplied gasoline to the New York Harbor area, and a substantial amount was supplied to New York State, where it was sold and consumed by New York State residents: the Bayway refinery in New Jersey (from approximately 1993 to 2012), the Trainer refinery in Pennsylvania (from approximately 1997 to 2011), the Sweeny refinery in Texas (from approximately 1947 to 2012), and the Lake Charles refinery in Louisiana (from approximately 1941 to 2012). In or around 1999, Tosco Corporation, a

predecessor to ConocoPhillips, bought approximately 1,740 retail gasoline stations from Exxon, including approximately 235 retail gasoline stations in New York State. ConocoPhillips, through its subsidiaries and agents, continued to operate the stations as Exxon-branded stations through approximately 2008. ConocoPhillips has entered into lease agreements with Exxon for real property in New York State, and upon information and belief, this real property relates to the marketing and sale of fossil fuel products. ConocoPhillips entered into petroleum product exchange and/or throughput agreements relating to third-party petroleum product terminals located in New York State, including: Exxon's terminal in Albany; the Motiva Enterprises LLC terminal in Brooklyn; the Northville Industries Corporation terminal in Holtsville; Exxon's terminal in New Windsor; Warex Cargo Terminal's terminal in New Windsor; two Warex Terminals Corporation's terminals in Newburgh; and the NOCO Energy Corporation terminal in Tonawanda. Such agreements generally allow a company to supply and/or receive petroleum products from a terminal that they do not own. ConocoPhillips owned and operated a petroleum product terminal in Riverhead, New York through 2012 that handled crude oil and refined petroleum products. The Riverhead terminal was comprised of nearly two dozen holding tanks and could store almost 5 million barrels of oil on 280 acres. It was one of the largest facilities of its kind in the United States, and its offshore docking platform for extremely large crude oil tankers was the only one of its kind on the East Coast.

32. Exxon does business in New York State, including through its subsidiaries and agents. Exxon Mobil Corporation has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1950 (it was known at that time as Standard Oil Company).

- 33. For decades, both Mobil Corporation and Exxon Corporation—the two entities that merged in 1999 to form what is now ExxonMobil Corporation—were headquartered in New York State. Between 1957 and 1987, Mobil Corporation was headquartered in New York City, which means that during the time period when Defendants learned about the causes and consequences of climate change and decided to produce, market, sell, and promote fossil fuels despite this knowledge, Mobil Corporation was making such decisions in New York State.
- 34. Defendant Exxon is responsible for the pre-merger conduct of Mobil Corporation with respect to all relevant issues herein, and the contacts of Mobil are attributable to Exxon.
- 35. Similarly, Exxon Corporation was headquartered in New York State from the 1880s through 1989. During this time, Exxon Corporation made the decision to produce, market, sell, and promote fossil fuels from New York State, including several decades when it made that decision from New York State in spite of its knowledge of the consequences of continued fossil fuel use for the climate. Defendant Exxon is, similarly, responsible for that conduct, and these contacts are attributable to it. In sum, throughout the 1960s, 1970s, and 1980s, Defendant Exxon's primary predecessor companies learned about the consequences of continued and unabated fossil fuel use in New York State office buildings, and made the decision to continue producing, refining, marketing, and selling those fossil fuels from New York State.
- 36. A substantial amount of Exxon's crude oil and refined products are used in New York State. For example, Exxon, through its subsidiaries, owns and operates gasoline refineries in Baton Rouge, Louisiana; Baytown, Texas; and Beaumont, Texas. Exxon supplies gasoline from those three refineries to the New York Harbor area via the Colonial Pipeline and other related pipelines, and a substantial amount is supplied to New York State, where it is sold and consumed by New York State residents. Exxon previously owned the Bayway gasoline refinery

in Linden, New Jersey until approximately 1993, and the Paulsboro refinery in New Jersey until 1997. Both the Bayway and Paulsboro refineries supplied substantial amounts of gasoline to New York State. Exxon, through its subsidiaries, produces oil in the Bakken formation in North Dakota. On information and belief, this crude oil is loaded onto railroad cars and shipped to locations including Albany, New York, where it is then loaded onto barges for delivery to refineries. There also are numerous Exxon-branded gasoline stations in New York State, including in New York City. Exxon exercises control over gasoline product quality and specifications at Exxon-branded retail stations. Exxon-branded retail stations carry the trademark of Exxon and can only sell gasoline that contains Exxon's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Exxonbranded retail stations. Exxon has entered into contracts with operators of Exxon-branded retail stations in New York State, and/or distributors, that, among other things, have required these operators to sell only Exxon-branded gasoline, and for supply of certain volumes of Exxonbranded gasoline to Exxon-branded stations. Exxon owned numerous gasoline terminals in New York State that stored hundreds of thousands of barrels of gasoline, including terminals in Albany at 50 Church Street (through approximately 2007), Binghamton (through approximately 2006), Buffalo at 625 Elk Street (from approximately the 1880s to 2005), Glenwood Landing (through approximately 2007), Inwood at 464 Doughty Boulevard (through approximately 2007), Rochester (through approximately 2006), Ithaca, Newburgh, New Windsor at 1281 River Road, Staten Island at 4101 Arthur Kill Road, and the Syracuse terminal at 6700 Herman Road in Warners, New York. Exxon used these terminals to store and distribute fossil fuel products, including gasoline. After Exxon sold the Glenwood Landing and Inwood terminals, it entered into long-term throughput contracts with the new owner to continue using the terminals. Many

of these terminals had the capacity to store hundreds of thousands of barrels of fossil fuel products, including, for example: Albany (approximately 737,000 barrels), Glenwood Landing (approximately 104,000 barrels), Inwood (approximately 326,000 barrels), and Newburgh (approximately 403,000 barrels). Exxon has entered into contracts regarding the supply of gasoline into and out of its gasoline terminals in New York State, and the supply of gasoline into and out of third-party gasoline terminals in New York State. Exxon entered into petroleum product exchange and/or throughput agreements relating to third-party petroleum product terminals located in New York State, including the Northville Industries Corporation terminal in Holtsville, the Warex Cargo Terminal in New Windsor, the Warex Terminals Corporation's terminal in Newburgh, and the NOCO Energy Corporation terminal in Tonawanda. Exxon also previously owned the Paulsboro NJ/PA/NY pipeline system through approximately 2005, consisting of 472 miles of pipeline serving Exxon's petroleum product terminals located in New York State and other areas. The pipeline delivered refined fossil fuel products to locations within New York State, and other places. Exxon's extensive refining, storage, marketing, and sales of fossil fuel products in New York State is also demonstrated by Exxon's numerous legacy environmental contamination sites in New York State.

- 37. Exxon, including through its predecessor entities, has also carried out substantial fossil fuel operations in New York State throughout the relevant time period, including, for example:
 - a. Refining operations in the Greenpoint neighborhood of Brooklyn, New York that continued through 1968, and which had a daily refining capacity of at least 33,000 barrels; and
 - b. Refining operations in Buffalo, New York, which had a daily refining capacity of more than 40,000 barrels (at their peak), and which took place for almost 90 years, from approximately 1892 to 1981. The Buffalo refinery was Mobil's oldest refinery in the United States, and encompassed approximately 90 acres, including

- both a refinery for fossil fuel products and storage facilities. Exxon Mobil Corporation owns the property encompassing the oil refinery.
- 38. Exxon offers credit cards to consumers, through its interactive website, to promote sales of gasoline and other products at its branded gasoline stations, including Exxonbranded retail stations in New York State. Exxon promotes gasoline sales by offering consumers discounts off every gallon of SynergyTM gasoline at ExxonTM or MobilTM stations, including at Exxon-branded retail stations in New York State. On information and belief, Exxon also has used New York advertising firms to promote fossil fuel products. Exxon has leased real property in New York State to ConocoPhillips, and upon information and belief, this real property relates to the marketing and sale of fossil fuel products. Exxon also owns property in New York State, including property that has been used for refining and marketing of fossil fuel products.
- agents. Shell's agent and subsidiary Shell Oil Company had an office in New York City at least as early as 1939, and had its headquarters in New York City from 1949 to 1970. Shell Oil Company does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 1936. Shell's agent and subsidiary Motiva Enterprises LLC does business in New York State, has designated an agent for service of process in New York State since 1998. Shell's agent and subsidiary Motiva Company does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State since 2002. Shell's agent and subsidiary Equilon Enterprises LLC does business in New York State, has designated an agent for service of process in New York State, and has been registered to do business in New York State, and has been registered to do business in New York State, and has been registered to do business in New York State since 1998.

- 40. Shell, including through its subsidiaries acting as its agents, owns and operates three refineries that supply gasoline to the New York Harbor area, and a substantial amount is supplied to New York State, where it is sold and consumed by New York State residents. Shell, through its subsidiaries, partially owns and operates a refinery in Deer Park, Texas, where crude oil is refined into finished fossil fuel products, including gasoline, that are supplied to the New York Harbor area, and a substantial amount was and continues to be supplied to New York State, where it is sold and consumed by New York State residents. Shell has also owned and operated the Norco refinery in Louisiana, from 1929 to the present, and the Convent refinery in Louisiana, from 1988 to the present, both of which supply gasoline to the New York Harbor area, and a substantial amount of this gasoline was and continues to be supplied to New York State, where it was sold and consumed by New York State residents. Shell previously owned and operated the Port Arthur refinery in Texas from 2002 to 2017, which also supplied gasoline to the New York Harbor area, and a substantial amount of this gasoline was supplied to New York State where it was sold and consumed by New York State residents.
- 41. There are numerous Shell-branded gasoline stations in New York State, including in New York City. Shell exercises control over gasoline product quality and specifications at Shell-branded retail stations. Shell-branded retail stations carry the trademark of Shell and can only sell gasoline that contains Shell's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Shell-branded retail stations. Upon information and belief, Shell has entered into contracts with operators of Shell-branded retail stations in New York State, and/or distributors, that, among other things, have required these operators to sell only Shell-branded gasoline, and for supply of certain volumes of Shell-branded gasoline to Shell-branded stations. In 2006, Shell agents and subsidiaries Shell Oil Products US

and Motiva Enterprises LLC more than doubled their presence in the New York City area with the rebranding of 59 BP retail gasoline stations as Shell stations At the time, a news publication reported that Shell stated: "By signing supply agreements with the retail operators of the 59 sites in New York City, we are reinforcing our goal of becoming a preferred fuels supplier by doubling our presence in that market." It also reported that Larry Burch, Vice President of Retail for Shell Oil Products US, stated: "With the conversion of the BP stations in the greater New York City area, we are doubling the Shell brand presence and the availability of our quality fuels" and that "Shell is dedicated to providing New York motorists with a convenient, consistent and quality fuel experience each and every time they stop at a Shell station." The rebranded Shell stations were projected to sell 70 million gallons of Shell gasoline annually, and that once the stations were switched over from BP to Shell, Shell would have a total of 75 gasoline stations in New York City. Shell offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including Shell-branded retail stations in New York State. Shell promotes gasoline sales by offering consumers, through its interactive website, twenty-five cents off every gallon of Shell fuel for the first two months after they open an account.

42. In 2010, Shell acquired (through its purchase of a smaller producer known as East Resources) natural gas acreage in New York State. At the time, Shell described the purchased assets as the "premier shale gas play in the Northeast U.S." While New York State at present prohibits high-volume hydrofracking of natural gas, on information and belief, Shell continues to own and/or control this acreage for future potential exploitation.

⁷ Chris V. Nicholson, *Shell Buying an Oil and Gas Firm for \$4.7 Billion*, N.Y TIMES, May 28, 2010, *available at* http://www.nytimes.com/2010/05/29/business/global/29shell.html.

- 43. Shell's subsidiary and agent, Shell Pipeline Company, LP, is a part-owner of the Colonial Pipeline, which begins in the Gulf Coast area and supplies substantial quantities of gasoline to the northeastern United States, including New York State. Shell, through its subsidiaries and agents, owned and operated gasoline terminals in New York State for decades that stored hundreds of thousands of barrels of gasoline, including in Brooklyn at 1 North 12th Street (from approximately 1979 to 1998), Brooklyn at 25 Paidge Avenue (from approximately 1979 through at least 2006), Lawrence at 74 East Avenue (from approximately 1979 through at least 2006), and Inwood at 200 Roger Avenue (from approximately 1979 to 1989). Shell entered into petroleum product exchange and/or throughput agreements relating to third-party petroleum product terminals located in New York State, including CITGO Petroleum Corporation's terminal located in Glenmont, the Warex Cargo Terminal in New Windsor, and the Warex Terminals Corporation's terminal in Newburgh. Shell has entered into contracts regarding the supply of gasoline into and out of its gasoline terminals in New York State, as well as the supply of gasoline into and out of third-party gasoline terminals in New York State. Shell, through its agents and subsidiaries, owns property in New York State that, upon information and belief, relates to the marketing and sale of fossil fuels.
- 44. The Defendants also have additional contacts with New York State, including by and through API, which was headquartered in New York until at least 1969. On information and belief, the Defendants—including through their predecessor entities—met in, sent information to, and jointly discussed the role of fossil fuels in bringing about climate change in New York State. For example:
 - a. A 1968 report—which was commissioned on behalf of Defendants and which traced rising CO₂ concentrations to fossil fuel use—was delivered to API in New York; and

- b. Even after API moved its headquarters to Washington, D.C., API and its members continued to meet and share information in New York State. For example, members of its "CO₂ and Climate Task Force," including representatives from Exxon, Chevron, and BP (or their predecessor entities), met in New York in 1980 to discuss the causes and consequences of climate change.
- 45. By contributing to the public nuisance, private nuisance, and trespass causing global warming injuries, all Defendants have committed tortious acts both within and without the State of New York causing injury to persons or property within the State of New York.
- 46. All Defendants expect or should reasonably expect their tortious acts to have consequences in the State of New York. Such consequences include increasing the concentration of GHGs, including carbon dioxide, as well as global warming injuries, including accelerated sea level rise and heat impacts.
- 47. All Defendants derive substantial revenue from interstate or international commerce. Defendants' revenues are largely, if not wholly, interstate and international in nature in that they derive their revenues from operations located in multiple states and countries. In 2016, BP reported revenues of over \$33 billion, Chevron reported sales and other operating revenues of over \$110 billion, ConocoPhillips reported sales and other operating revenues of over \$23 billion, Exxon reported sales and other operating revenues of over \$218 billion, and Shell reported revenues of over \$233 billion.

III. JURISDICTION AND VENUE

48. The Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1332. Plaintiff is a citizen of New York for purposes of diversity jurisdiction while Defendants are citizens of California, Delaware, New Jersey, Texas, and foreign countries England and the Netherlands. The amount in controversy exceeds \$75,000, exclusive of interest and costs.

49. Venue is proper under 28 U.S.C. § 1391(b), because a substantial part of the events and omissions giving rise to the claims occurred in this district, and because a substantial part of the property that is the subject of the action is situated in this district.

IV. CLIMATE CHANGE IMPACTS ON NEW YORK CITY

- 50. Climate change is happening now and is injuring New York City. Because of the past and continuing conduct of Defendants and other fossil fuel companies that have followed Defendants' lead, and because recent and current emissions remain in the atmosphere for up to hundreds of years, more extreme and injurious impacts are unavoidable. Climate change impacts will continue and will be exacerbated well into the future.⁸
- 51. The year 2016 was the hottest in modern recorded history, 2015 was the second-hottest year on record, and 2014 was the third hottest; preliminary reports indicate that 2017 is on track to join the top three. Sixteen of the hottest years on record have all occurred since the year 2000. These recent, record-breaking years are part of a long-term trend: since 1970, each of the four decades has been hotter than the one that preceded it, and the last three decades have been hotter than any decade since 1850, when thermometer records began. The United States' most recent National Climate Assessment, a periodic review of the science and impacts in the United States of climate change, issued in November 2017, states that the period 1901 to 2016 "is now the warmest in the history of modern civilization."
- 52. Global warming is most commonly expressed in terms of a global average temperature change. Until recently, the global average temperature was quite stable over the past

⁸ Intergovernmental Panel on Climate Change ("IPCC"), Climate Change 2013, The Physical Science Basis 1033, *available at* https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5 Chapter12 FINAL.pdf.

⁹ DONALD J. WUEBBLES ET AL., 2017: Executive Summary, in CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I (2017), available at https://science2017.globalchange.gov/chapter/executive-summary/.

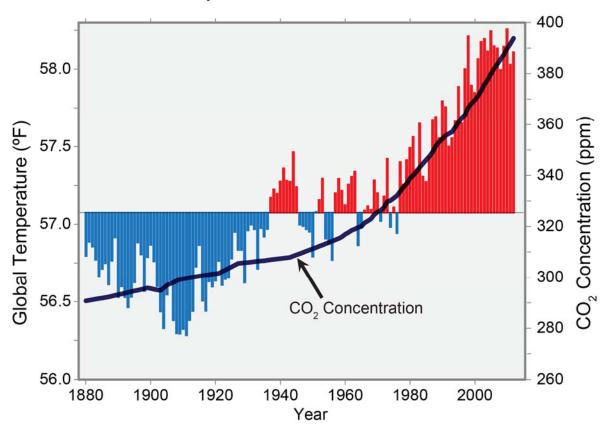
10,000 years. However, the global average temperature has increased over the last century by 1.8°F (1°C)—an extraordinarily rapid and unprecedented rate of change not seen in thousands of years of human history. Most of this warming has occurred since 1970. GHG pollution from the burning of fossil fuels is the dominant cause. By way of comparison, the global average temperature at the depths of the last ice age 20,000 years ago was only about 7°F to 11°F cooler than today, a time when New York City was buried under the Laurentide Ice Sheet. Thus, differences of just a few degrees in global average temperature constitute dramatic changes to our climate, and are the difference between our current climate, an ice age, and the catastrophic changes that global warming threatens to bring in the future. The following graph from the 2017 U.S. National Assessment shows the increase in global average temperature since 1880 with the corresponding buildup of carbon dioxide pollution in the atmosphere: 10

¹⁰ John Walsh et al., 2014: Ch. 2: Our Changing Climate, in

CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT Fig. 2.2 (J. M. Melillo et al., eds., 2014), available at

https://nca2014.globalchange.gov/report/our-changing-climate/observed-change#graphic-16678.

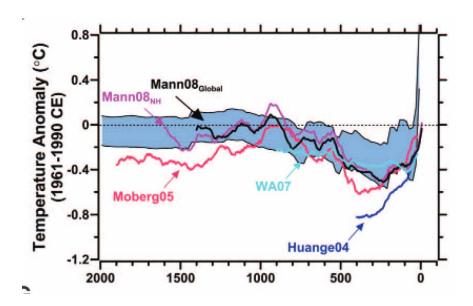
Global Temperature and Carbon Dioxide



53. The recent, rapid rate of temperature increase compared to the last 2,000 years is shown in the following graph from an article published in the peer-reviewed literature¹¹ that the federal government relies upon in a website explaining climate change:¹²

¹¹ Shaun A. Marcott et al., *A Reconstruction of Regional and Global Temperature for the Past 11,300 Years*, 339 SCIENCE 1198, *available at* http://science.sciencemag.org/content/339/6124/1198.

¹² Michon Scott, *What's the Hottest Earth Has Been "Lately"?*, NOAA (Sept. 17, 2014), https://www.climate.gov/news-features/climate-qa/what%E2%80%99s-hottest-earth-has-been%E2%80%9Clately%E2%80%9D.



54. According to the federal government's 2017 U.S. National Assessment, by the end of the century, U.S. warming is projected to be approximately 3°F (1.67°C) to 5°F (2.78°C) for lower emissions scenarios involving substantial reductions in emissions, and 5°F (2.78°C) to 10°F (5.56°C) for higher emissions scenarios that assume continued increases in emissions. This range of GHG pollution and correlating temperature increase is depicted in the following set of graphs from the 2017 National Assessment (with "RCP" standing for "representative concentration pathways," *i.e.*, the future GHG pollution levels): 14

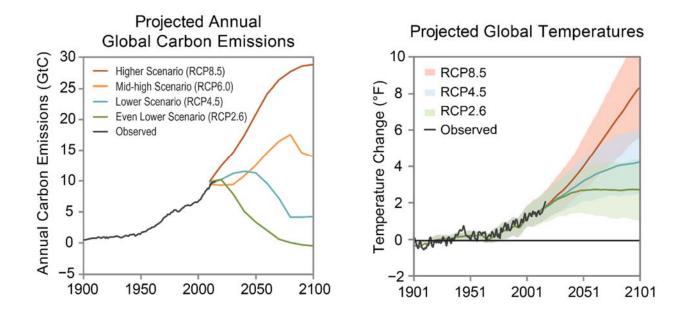
¹³ John Walsh et al., 2014: Ch. 2: Our Changing Climate, in

CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 29 (J. M. Melillo et al., eds., 2014),

available at

https://nca2014.globalchange.gov/report/our-changing-climate/recent-us-temperature-trends#narrative-page-16566.

¹⁴ DONALD J. WUEBBLES ET AL., *supra* note 9, at Fig. 3. The RCPs are standard greenhouse gas concentrations adopted by the IPCC for its fifth Assessment Report ("AR5"). They are based on greenhouse gas concentration trajectories in the atmosphere, and incorporate different assumptions about emissions over the coming decade.



- 55. With sustained warming in the upper end of the range, the polar ice sheets in Greenland and the West Antarctic would be committed to a long-term, irreversible process of disintegration, eventually resulting in thirty feet or more of sea level rise.¹⁵
- 56. The current rate of global warming presents a serious risk of dangerous and potentially catastrophic harms and is on track to exceed a warming of 3.6°F (2°C) within several decades, which is commonly accepted as a point beyond which the most dangerous and even catastrophic consequences of global warming cannot be prevented. The City has recognized that keeping global warming from exceeding a target of 2.7°F (1.5°C) increase is needed for "preventing the worst projected climate impacts, both locally and globally," and that in all

¹⁵ IPCC, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, SUMMARY FOR POLICYMAKERS 12 n. 35, available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf (Greenland – between 1 to 4 ° C additional warming; 7 meters sea level rise); Jonathan L. Bamber et al., Reassessment of the Potential Sea-Level Rise from a Collapse of the West Antarctic Ice Sheet, 324 SCIENCE 901-03 (2009), available at http://science.sciencemag.org/content/324/5929/901 (West Antarctic -- 3 meters sea level rise).

¹⁶ CITY OF NEW YORK, 1.5 ° C, ALIGNING NEW YORK CITY WITH THE PARIS CLIMATE AGREEMENT (Sept. 2017), available at

events keeping global warming below 3.6°F (2°C) is a "critical goal."¹⁷ For this reason, the City has committed, through issuance of Executive Order 26 of 2017 and via a collaborative effort with other cities, to do its part to reduce its emissions to a level consistent with the goal of keeping the global average temperature increase below 2.7°F (1.5°C).

- 57. According to the NPCC, the expert committee convened by the City to provide scientific advice, guidance, and projections on climate change and relied upon by the City in its sustainability and resiliency efforts, climate change is already affecting New York City. The average annual temperature in New York City has increased at a rate of 0.79°F per decade over the last 30 years. The NPCC also reported that extreme precipitation events have increased by approximately 70% in the Northeastern United States from 1958 to 2011. Sea level rise in New York City has averaged 1.2 inches per decade (total of 1.1 feet) since 1900, nearly twice the observed global rate of 0.5 to 0.7 inches per decade over a similar time period, and has risen more quickly in New York City in recent decades. While some of this relative sea level rise is attributable to land subsidence, approximately 60% is driven by climate-related factors.
- 58. The NPCC projects dramatic impacts on New York City in the future.

 Considering the NPCC's projections, the City has recognized that "[r]ising sea levels, increased temperatures and precipitation, and a growing likelihood of more intense storms pose unique

http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/1point5-AligningNYCwithParisAgrmtFORWEB.pdf.

¹⁷ City of New York, Office of the Mayor, Exec. Order No. 26, Climate Action Executive Order (June 2, 2017), *available at* http://www1.nyc.gov/assets/home/downloads/pdf/executive-orders/2017/eo_26.pdf.

challenges to a coastal city like ours." It also has recognized that heat "presents a unique challenge to New York City." 19

- 59. The NPCC makes both "middle range" and "high end" projections. Middle range projections are those in the 25th to 75th percentile of possible outcomes, *i.e.*, 25% of the outcomes are at or below the lower end of the range, and 75% of the outcomes are at or below the upper end of the range. High end projections are those for which 90% of the outcomes are at or below the outcome. Middle range projections show that local average temperatures will increase over the 1971-2000 baseline period by 2.0 to 2.8°F by the 2020s, 4.0 to 5.7°F by the 2050s, 5.3 to 8.8°F by the 2080s, and 5.8 to 10.3°F by 2100.²⁰ This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.* 1971 to 2000) includes a period of significant human-induced warming. Under the "high end" projections, local average temperatures are expected to increase by 3.2°F by the 2020s, 6.6°F by the 2050s, 10.3°F by the 2080s, and 12.1°F by 2100.²¹
- 60. The projections also show that heat waves will become more frequent and more intense. The NPCC's "middle range" projections show that the number of days above 90°F in New York City will increase from eighteen days per year in the baseline period (1971-2000) to twenty-six to thirty-one days per year in the 2020s, to thirty-nine to fifty-two days per year in the 2050s, and forty-four to seventy-six days per year in the 2080s. Again, these projections understate the warming impact from fossil fuels because the baseline period itself includes

¹⁸ CITY OF NEW YORK, supra note 2, at 216.

¹⁹ *Id.* at 222.

²⁰ New York City Panel on Climate Change 2015 Report Chapter 1: Climate Observations and Projections 29 (2015), *available at* http://onlinelibrary.wiley.com/doi/10.1111/nyas.12586/epdf.
²¹ *Id.* at 30.

significant human-induced warming. The "high end" estimates show temperatures at or above 90°F for thirty-three days per year by the 2020s, for fifty-seven days by the 2050s, and for eighty-seven days by the 2080s.²² Put differently, by the 2050s, today's worst heat waves are expected to become ordinary summer days.

- 61. Heat has a direct impact on total daily deaths, with most heat-related deaths occurring on the same day or shortly after exposure to heat. Without mitigation, hotter summers projected for 2020 could cause an estimated 30% to 70% increase in heat-related deaths, or about 110 to 260 additional heat-related deaths per year on average in New York City. The health consequences of global warming disproportionately affect the City's most vulnerable populations—the elderly, children, and low-income communities who already experience elevated instances of cardiovascular and respiratory diseases.
- 62. Global warming exacerbates extreme precipitation, including heavy downpours, because a warmer atmosphere holds more moisture than a cool one, and extreme precipitation from a saturated atmosphere is greater than precipitation from a drier atmosphere. Extreme precipitation events are expected to increase in frequency, intensity, and duration. Comparing the "high end" estimates to the 1971-2000 baseline, the number of days in New York City with rainfall at or above two inches is projected to increase by as much as 67% by the 2020s and the number of days with rainfall at or above four inches is projected to increase by as much as 67% by the 2020s and 133% by the 2080s.²³ This, again, understates the fossil fuel-caused warming impact because the baseline period itself includes human-induced warming.

²² *Id.* at 31.

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

- 63. An increase in flooding and other climate impacts is expected to impact the City's water supply system by increasing turbidity and eutrophication in the City's reservoirs and their tributaries, necessitating changes to components of water supply operations and drinking water treatment in the future. Climate change threatens to increase the frequency of droughts that would diminish the water available to fill the City's upstate reservoirs. Climate extremes also harm City trees and park flora.
- 64. The City is exceptionally vulnerable to sea level rise, because its 520-mile coastline is longer than the coastlines of Boston, Los Angeles, Miami, and San Francisco combined, and because New York City has a large floodplain that is home to more than 218,000 New Yorkers, a floodplain that is already likely larger than any other city in the United States, and is growing in size due to global warming-induced sea level rise. The City's waterfront is among its greatest assets, but it is being harmed by global warming and is under dire threat from continued warming due to past and continuing GHG pollution.
- 65. Global warming-induced sea level rise is expected to be higher in areas surrounding New York City than in many other parts of the world. According to the NPCC's "high end" projection, the sea level surrounding the City is expected to rise above the 2000-2004 baseline level (which already includes climate-change related sea level rise) by ten inches by the 2020s, by thirty inches by the 2050s, by fifty-eight inches by the 2080s, and by seventy-five inches—more than six feet—by 2100.²⁴ Even the "middle range" projections are dire: four to eight inches by the 2020s, eleven to twenty-one inches by the 2050s, eighteen to thirty-nine

²⁴ New York City Panel on Climate Change 2015 Report Chapter 2: Sea Level Rise and Coastal Storms 41 (2015), *available at* http://onlinelibrary.wiley.com/doi/10.1111/nyas.12593/epdf.

inches by the 2080s, and twenty-two to fifty inches by 2100. Even without storms, this sea level rise threatens low-lying areas of the City—for example, by the 2050s approximately forty-three miles of the City's coastline (including many residential neighborhoods) could be at risk of daily or weekly tidal inundation, even during non-storm conditions. And a sea level rise of six feet would put parts of all five boroughs—including portions of the Financial District, Red Hook, and the vast majority of Coney Island and the Rockaways—under water. The City also owns significant infrastructure and numerous facilities along the coast, including roads, bridges, parks, waste transfer stations, and over a dozen wastewater treatment plants, that are at grave risk from sea level rise.

66. Along with sea level rise will come frequent flooding. It is "virtually certain" that sea level rise will lead to coastal flooding in New York City that is more frequent and more intense. According to the NPCC's "high end" estimate, by the 2080s, what would today be considered a 100-year flood (*i.e.*, a flood that has a 1% chance of occurring in any given year) could have as high as a 12% chance of occurring in any given year, and this flooding could be as much as 4.8 feet higher than today's 100-year flood because of sea level rise. Even the middle range projections show that a 100-year flood is between two and five times as likely to occur in any given year by 2080, and that the flood will be 1.5 to 3.3 feet higher than today's 100-year flood because of sea level rise. When the flood threat to the City is likely to be even worse. According to this research, what would ordinarily be considered a 100-year flood will be likely to occur more than six times per year by 2100 in

²⁵ CITY OF NEW YORK, BUILDING A STRONGER, MORE RESILIENT NEW YORK 40-42 (2013), *available at* http://s-media.nyc.gov/agencies/sirr/SIRR_singles_Hi_res.pdf.

²⁶ NEW YORK CITY PANEL ON CLIMATE CHANGE, *supra* note 24, at 41.

the City, or approximately once every two months, under a future with continued high emissions of GHG pollution.²⁷ Under this same scenario, the 500-year flood—a truly massive flood that today would be associated with an apocalyptic storm—would be likely to occur in the City approximately every 18 months.²⁸

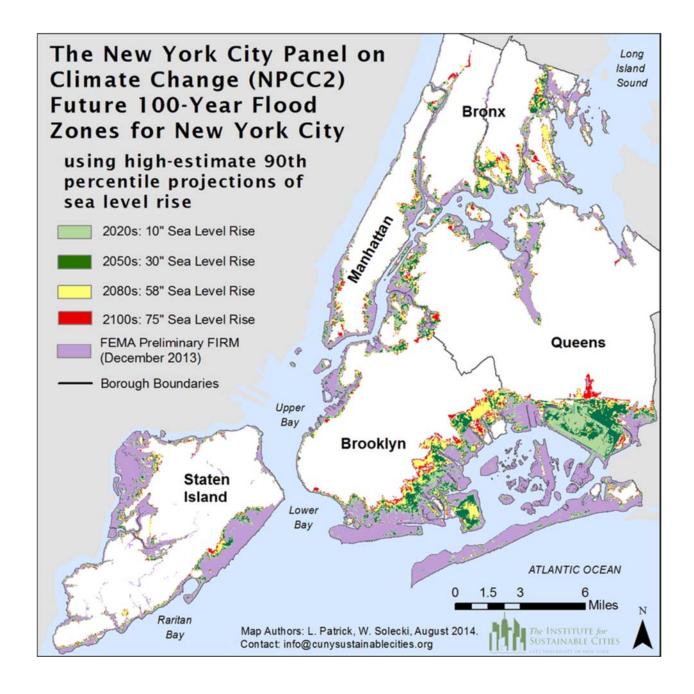
NPCC's "high end" projections, the area that could be flooded in a 100-year storm would expand to 59 square miles, encompassing approximately 88,000 buildings and much of the City's international airport.²⁹ By the 2050s, with more than 2.5 feet of sea level rise, the City's 100-year floodplain would expand to 72 square miles, or nearly a quarter of the City, and would include approximately 114,000 buildings, 97% of the City's power generation, 20% of its hospital beds, a large share of its public housing, and 10% of its overall population.³⁰ This is significantly more than the fifty-one square miles flooded during Hurricane Sandy. The map below shows the areas that are at risk of flooding from a 100-year storm under the NPCC's "high end" sea level rise projections within reasonable scientific uncertainty ranges:

²⁷ Maya K. Buchanan et al., *Amplification of Flood Frequencies with Local Sea Level Rise and Emerging Flood Regimes*, ENVTL. RES. LETT. S-11 (2017), *available at* http://iopscience.iop.org/1748-9326/12/6/064009/media/ERL_12_6_064009_suppdata.pdf. ²⁸ *Id.*

 $^{^{29}}$ NYC Office of Emergency Management, 2014 NYC Hazard Mitigation Plan 243-44 (2014), available at

http://www.nyc.gov/html/oem/downloads/pdf/hazard_mitigation/plan_update_2014/final_draft_nyc_hmp.pdf. These projections are based on the 2013 Preliminary Work Maps, a set of maps developed by FEMA in preparation for the promulgation of the 2015 Preliminary Flood Maps, which are now being revised by FEMA.

³⁰ *Id.* at 243-44.



68. The global warming-induced sea level rise caused by past fossil fuel consumption is an irreversible condition on any relevant time scale: it will last hundreds or even thousands of years. Temperature increases from GHG emissions take decades to manifest themselves because the oceans warm slowly. And once the temperature increases are fully realized, they are essentially irreversible. Time lags and inertia in the climate system mean that impacts will become more severe for years in the future due to past and continuing GHG pollution. Future

emissions will create long-term impacts that are even more dramatic, particularly now that the planet's natural buffering (such as ocean uptake of carbon that would otherwise be in the atmosphere) has begun to decline in efficacy. As the NPCC put it, "sea level rise is projected to accelerate into the 22nd century even if heat-trapping GHG concentrations stabilize later this century." Defendants' current, continuing, and planned production of fossil fuels into the future will further exacerbate global warming, accelerate sea level rise, and require greater and more costly projects and actions to protect the City.

V. FOSSIL FUELS ARE THE PRIMARY CAUSE OF CLIMATE CHANGE

69. Climate science clearly demonstrates that humans—and the burning of fossil fuels—are causing these changes to the climate. According to the Intergovernmental Panel on Climate Change ("IPCC"), "the leading international scientific authority on climate change" as even Exxon has admitted, it is "extremely likely" (*i.e.*, 95-100% certain) that "human influence has been the dominant cause of the observed warming since the mid-20th century." Man-made climate change affects every aspect of the climate system. According to the IPCC, "[h]uman influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes." The NPCC findings are in agreement with what the NASA Goddard Institute for Space Studies has described as the "numerous international and national reports" that recently "have concluded that human activities are changing the climate, leading to

³¹ NEW YORK CITY PANEL ON CLIMATE CHANGE, *supra* note 24, at 42.

³² INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SYNTHESIS REPORT 47 (2014), *available at* http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf.

³³ *Id.*

increased vulnerability and risk."³⁴ Similarly, NASA's website states that a "scientific consensus" exists that "[c]limate-warming trends over the past century are extremely likely due to human activities," noting agreement among more than 97% of climate scientists and "most of the leading scientific organizations," including the American Association for the Advancement of Science, the American Geophysical Union, the American Meteorological Society, the American Physical Society, the Geological Society of America, and the National Academy of Sciences, as well as a large number of international scientific societies.³⁵

70. And the science also shows that fossil fuel combustion is the primary driver of climate change. Carbon dioxide emitted from fossil fuel combustion bears a chemical fingerprint that differentiates it from natural sources of carbon dioxide. Thus, it is a scientific certainty that the current increase in carbon dioxide in the atmosphere is caused by fossil fuel pollution, and that natural processes, including human and animal exhalation, are not a cause of the problem. Atmospheric levels of carbon dioxide, a greenhouse gas, have increased by 40% since the preindustrial era. These concentrations are now higher than at any time in the last three million years. As the IPCC has confirmed, this unprecedented increase in carbon dioxide levels constitutes "[t]he largest contribution" to climate change of any source, and comes "primarily from fossil fuel emissions." The National Academy of Sciences has also confirmed that "the

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³⁴ Publication Abstracts: Horton et al. 2015, NAT'L AERONAUTICS & SPACE ADMIN., https://pubs.giss.nasa.gov/abs/ho00600i.html (last visited Jan. 9, 2018) (citations omitted).

³⁵ Scientific Consensus: Earth's Climate is Warming, NAT'L AERONAUTICS & SPACE ADMIN, https://climate.nasa.gov/scientific-consensus/ (last visited Jan. 9, 2018).

³⁶ Intergovernmental Panel on Climate Change, Climate Change 2013, The Physical Science Basis, Summary for Policymakers 11, 13, *available at* https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf.

rise in CO2 is largely from combustion of fossil fuels."³⁷ Warming from greenhouse gases has a signature, including a differential warming of the upper and lower levels of the atmosphere, that rules out natural explanations for climate change. According to the federal government's Fourth National Climate Assessment, "human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century."³⁸ The 2017 Assessment stated that there is a "*likely* human contribution of 93%–123% of the observed 1951–2010 change" in warming, with the range above 100% indicating that natural processes would have produced a cooling effect but were overwhelmed by man-made global warming.³⁹ "Likely" is a term defined by the US National Climate Assessment as a 66%-100% chance of being true.

- 71. In addition, atmospheric concentrations of methane, another important greenhouse gas emitted through fossil fuel use, are 150% higher than in pre-industrial times, and higher than any time in the last 800,000 years.
- 72. The basic facts of the greenhouse effect have been known for a long time. In 1896, Svante Arrhenius, a Nobel-prize winning scientist, published calculations projecting temperature increases that would be caused by burning fossil fuels. 40 By 1957, scientists at the Scripps Research Institute published a warning in peer-reviewed literature that global warming "may become significant during future decades if industrial fuel combustion continues to rise

³⁷ THE ROYAL SOCIETY & THE NATIONAL ACADEMY OF SCIENCES, CLIMATE CHANGE: EVIDENCE AND CAUSES 6, 8 (2014), *available at* http://dels.nas.edu/resources/static-assets/exec-office-other/climate-change-full.pdf.

³⁸ WUEBBLES ET AL., *supra* note 9, at 1.

³⁹ *Id.* at 14.

⁴⁰ Svante Arrhenius, *On the Influence of Carbonic Acid in the Air Upon the Temperature of the Ground*, 41 PHIL. MAG. & J. OF SCIENCE 237, 237-76 (1896), *available at* http://www.rsc.org/images/Arrhenius1896 tcm18-173546.pdf.

experiment" on the planet. ⁴¹ By 1960, published data established that carbon dioxide concentrations in the atmosphere were in fact rising. ⁴² In 1965, the President's Science Advisory Committee reported that "[p]ollutants have altered on a global scale the carbon dioxide content of the air," ⁴³ and that the effects "could be deleterious from the point of view of human beings." ⁴⁴ The report stated that fossil fuel combustion is "measurably increasing the atmospheric carbon dioxide" and concluded that humans are "conducting a vast geophysical experiment" due to their massive fossil fuel consumption. ⁴⁵ In 1979, the National Academy of Sciences, which is charged with providing independent scientific advice to the United States government, concluded that there was "incontrovertible evidence" that carbon dioxide levels were increasing in the atmosphere as a result of fossil fuel use, and predicted that a doubling of atmospheric carbon dioxide would cause a probable increase in global average surface temperatures of 3°C, or 5.4°F. ⁴⁶ In 1988, NASA scientist Dr. James E. Hansen testified to the

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⁴¹ Roger Revelle & Hans E. Suess, *Carbon Dioxide Exchange between Atmosphere and Ocean and the Question of an Increase of Atmospheric CO2 During the Past Decades*, 9 Tellus 18, 18-27 (1957), *available at* http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1957.tb01849.x/epdf.

⁴² Charles D. Keeling, *The Concentration and Isotopic Abundances of Carbon Dioxide in the Atmosphere*, 12 Tellus 200, 200-203 (1960), available at

http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1960.tb01300.x/epdf.

 $^{^{43}}$ President's Science Advisory Panel, Restoring the Quality of Our Environment 1 (Nov. 1965), available at

http://dge.stanford.edu/labs/caldeiralab/Caldeira%20downloads/PSAC, %201965, %20Restoring %20the %20Quality %20of %20Our %20Environment.pdf.

⁴⁴ *Id.* at 126-27.

⁴⁵ *Id.* at 113, 126.

⁴⁶ See Carbon Dioxide and Climate: A Scientific Assessment, Report of an Ad Hoc Study Group on Carbon Dioxide and Climate to the Climate Research Board, Assembly of Mathematical and Physical Sciences, National Research Council vii, 16 (1979), available at https://www.nap.edu/catalog/12181/carbon-dioxide-and-climate-a-scientific-assessment.

U.S. Senate that "the greenhouse effect has been detected, and it is changing our climate now." In 1990, an international collaboration of scientists working under the auspices of the Stockholm Environment Institute to provide information to assist the work of the IPCC issued a report finding that "[a]n absolute temperature limit of 2.0 °C can be viewed as an upper limit beyond which the risks of grave damage to ecosystems, and of non-linear responses, are expected to increase rapidly." In 1990, the IPCC reported that increasing CO2 concentrations from human activity "will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface," and would cause substantial sea level rise. By 1995, the IPCC had identified "a discernible human influence on global climate," *i.e.*, a global temperature change caused by GHG pollution, that was already occurring. The IPCC confirmed this finding in 2001, and it was reviewed and confirmed again that same year by the U.S. National Academy of Sciences. Upon information and belief, Defendants have maintained scientific staffs for decades who have kept track of the climate science as these warnings and conclusions have been issued.

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⁴⁷ Greenhouse Effect and Global Climate Change: Hearing Before the Comm. on Energy and Natural Resources 40 (1988) (statement of Dr. James Hansen, Director, NASA Goddard Institute for Space Studies), available at https://www.scribd.com/doc/260149292/Transcript-of-pivotal-climate-change-hearing-1988.

⁴⁸ Intergovernmental Panel on Climate Change, Climate Change: The IPCC Scientific Assessment, Policymakers Summary xi (1990), *available at* https://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_spm.pdf.

⁴⁹ *Id.*

⁵⁰ NATIONAL ACADEMY OF SCIENCES, COMMISSION ON GEOSCIENCES, ENVIRONMENT & RESOURCES, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS 1 (2001), available at https://download.nap.edu/cart/download.cgi?record_id=10139.

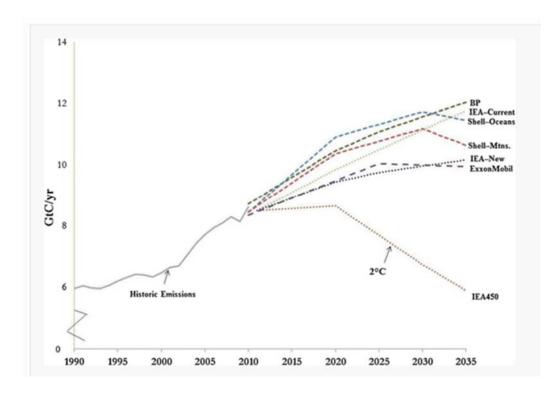
VI. DEFENDANTS HAVE PRODUCED MASSIVE QUANTITIES OF FOSSIL FUELS—AND HAVE CONTINUED TO DO SO EVEN AS CLIMATE CHANGE HAS BECOME GRAVELY DANGEROUS

- 73. For many years, Defendants have produced massive quantities of fossil fuels, including oil and natural gas. They have done so by extracting raw fossil fuels from the ground, refining and processing the raw fuels into forms that can be combusted, and marketing these products to consumers.
- 74. When combusted, these fossil fuels emit carbon dioxide. Additionally, one of Defendants' primary fossil fuel products, natural gas, is composed of methane, which is the second largest GHG contributor to global warming and which, as Defendants know, routinely escapes into the atmosphere from facilities operated by Defendants' customers and other fuel consumers.
- 75. Greenhouse gas molecules cannot be traced to their source, and greenhouse gases quickly diffuse and comingle in the atmosphere. However, because of their rapid and widespread global dispersal, greenhouse gas emissions from each of Defendants' fossil fuel products are present in the atmosphere in New York State.
- 76. Defendants are substantial contributors to the climate change that is causing injury to the City and thus are jointly and severally liable. Defendants' cumulative production of fossil fuels over many years makes each Defendant among the top sources of GHG pollution in the world. Upon information and belief, Defendants are, respectively, the first (Chevron), second (Exxon), fourth (BP), sixth (Shell), and ninth (ConocoPhillips) largest cumulative producers of fossil fuels worldwide from the mid-nineteenth century to present; most of Defendants' GHG pollution from the use of their fuels has occurred since 1980.

- 77. Individually and collectively, Defendants' production, marketing, sale, and promotion of fossil fuel products are responsible for climate change impacts which harm New York City.
- 78. Defendants have in the last ten years or more produced large amounts of unconventional, high carbon-intensity fossil fuels—*i.e.*, fuels that are responsible for more carbon emitted per unit of energy than other fuels, and that therefore contribute disproportionately to global warming. For example, Chevron, Exxon, BP, and ConocoPhillips produce significant amounts of fossil fuels from tar sands in Canada. Shell, until recently, was also responsible for significant tar sands production. Exxon has publicly promoted tar sands production as "a significant, secure energy source for the United States," and ConocoPhillips has said this production is "a significant part of the world's energy future."⁵¹
- 79. Defendants' conduct will continue to cause ongoing and increasingly severe harm to the City because Defendants are committed to a business model of massive fossil fuel production that they know causes a gravely dangerous rate of climate change. The following graph from a 2015 study published in the peer-reviewed scientific literature demonstrates that the actions of Defendants BP, Shell, and Exxon dramatically diverge from those necessary to protect human safety and welfare.

⁵¹ Canadian Oil Sands, EXXON, http://aboutnaturalgas.com/en/current-issues/oil-sands/canadian-oil-sands/overview (last visited Jan. 9, 2018); Oil Sands, CONOCOPHILLIPS CANADA, http://www.conocophillips.ca/our-operations/oil-sands/Pages/default.aspx (last visited Jan. 9, 2018).

Case 1:18-cv-00182-JFK Document 80 Filed 03/16/18 Page 45 of 80



The graph compares BP, Exxon, and Shell's projections of worldwide total future GHG emissions⁵²—projections upon which they make long-term business plans—to the International Energy Agency ("IEA") 450 trajectory. The IEA 450 emissions trajectory line shown in this graph represents the emissions reductions that would be necessary in the future to prevent global warming from exceeding a 2°C increase over the pre-industrial temperature, which, as stated above, is commonly accepted as a point beyond which the most dangerous and even catastrophic consequences of climate change cannot be prevented.⁵³ Upon information and belief, all Defendants base their long-term business plans upon similar projections.

VII. DEFENDANTS HAD FULL KNOWLEDGE THAT FOSSIL FUELS WOULD CAUSE CATASTROPHIC HARM

80. For decades, Defendants have known that their fossil fuel products pose risks of "severe" and even "catastrophic" impacts on the global climate through the work and warnings

⁵² In gigatons of carbon per year.

⁵³ Peter C. Frumhoff et al., *The Climate Responsibilities of Industrial Carbon Producers*, 132 CLIMATIC CHANGE 157, 167 (2015), *available at* https://link.springer.com/article/10.1007/s10584-015-1472-5.

of their own scientists and/or through their trade association, the API. Defendants, large and sophisticated companies devoted to researching significant issues relevant to fossil fuels, also were aware of significant scientific reports on climate change science and impacts at the time they were issued. Yet each Defendant decided to continue its conduct and commit itself to massive fossil fuel production. This deliberate decision placed company profits ahead of human safety, well-being, and property, and foisted onto the public the costs of abating and adapting to climate change.

- 81. The API is a national trade association that represents the interests of America's oil and natural gas industry, including foreign-based companies that produce and market fossil fuels in the United States.
- 82. Beginning in the 1950s, the API began warning its members that fossil fuels pose a grave threat to the global climate. The API's warnings to Defendants included the following:
 - a. In 1951, the API launched a project to research air pollution from petroleum products that examined the fossil fuel fingerprint of carbon dioxide emissions to determine the amount of atmospheric GHG pollution from fossil fuels.
 - b. In 1968, a scientific consultant retained by the API reported that carbon dioxide emissions were "almost certain" to produce "significant" temperature increases by 2000, and that these emissions were almost certainly attributable to fossil fuels. The report warned:

If the Earth's temperature increases significantly, a number of events might be expected to occur including the melting of the Antarctic ice cap, a rise in sea levels, warming of the oceans and an increase in photosynthesis. . . . It is clear that we are unsure as to what our long-lived pollutants are doing to our environment; however, there seems to be no doubt that the potential damage to

our environment could be severe . . . [T]he prospect for the future must be of serious concern.⁵⁴

c. Between 1979 and 1983, the API and Defendants, their predecessors, and/or agents formed a task force to monitor and share climate research, initially called the "CO2 and Climate Task Force" and later renamed the "Climate and Energy Task Force" ("Task Force"). The API kept and distributed meeting minutes to Task Force members. Task Force members included, in addition to API representatives, scientists from Amoco (a predecessor to BP); Standard Oil of California, Texaco, and Gulf Oil Corp. (predecessors to Chevron); Exxon Research and Engineering and Mobil (predecessors to or subsidiaries of current Exxon); Shell; and others. In 1980, the Task Force invited Dr. J.A. Laurman, a "recognized expert in the field of CO2 and climate," to make a presentation. Dr. Laurman's written presentation informed the Task Force that there was a "SCIENTIFIC CONSENSUS ON THE POTENTIAL FOR LARGE FUTURE CLIMATIC RESPONSE TO INCREASED CO2 LEVELS." He further informed the Task Force that, though the exact temperature increases were difficult to predict, the "physical facts agree on the probability of large effects 50 years away." He warned the Task Force of a 2.5°C (4.5°F) global temperature rise by 2038, which would likely have "MAJOR ECONOMIC CONSEQUENCES" and a 5°C (9°F) rise by 2067, which would likely produce "GLOBALLY" CATASTROPHIC EFFECTS." He also suggested that, despite lack of certainty,

⁵⁴ ELMER ROBINSON & R.C. ROBBINS, SOURCES, ABUNDANCE, AND FATE OF GASEOUS ATMOSPHERIC POLLUTANTS, SRI Project PR-6755, prepared for American Petroleum Institute, at 109-110, *available at* https://www.smokeandfumes.org/#/documents/document16. In 1972, API members, including Defendants, received a summary of this report. AMERICAN PETROLEUM INSTITUTE, ENVIRONMENTAL RESEARCH: A STATUS REPORT (Jan. 1972), *available at* http://files.eric.ed.gov/fulltext/ED066339.pdf.

"THERE IS NO LEEWAY" in the time for acting. API minutes show that the Task Force discussed topics including "the technical implications of energy source changeover," "ground rules for energy release of fuels and the cleanup of fuels as they relate to CO2 creation," and researching "the Market Penetration Requirements of Introducing a New Energy Source into World Wide Use." The Task Force even asked the question "what is the 50 year future of fossil fuels?" ⁵⁵

- d. In March 1982, an API-commissioned report estimated the average increase in global temperature from a doubling of atmospheric concentrations of CO2 and projected, based upon computer modeling, global warming of between 2°C and 3.5°C (3.6°F and 6.3°F). The report projected potentially "serious consequences for man's comfort and survival," and noted that "the height of the sea level can increase considerably."
- API findings described above, which were distributed by the API to its members. Each Defendant (or its predecessor) was a member of the API at relevant times, or had a subsidiary that was a member of the API at relevant times. Each subsidiary passed on information it learned from the API on climate change to its parent Defendant (or Defendant's predecessor) and acted as the agent for its parent company, which remained in charge of setting overall production levels in light of climate change and other factors.

⁵⁵ CO₂ and Climate Task Force, Minutes of Meeting, 1-2 & Attachment B (1980) (emphasis in original), *available at* http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf.

⁵⁶ AMERICAN PETROLEUM INSTITUTE, CLIMATE MODELS AND CO2 WARMING: A SELECTIVE REVIEW AND SUMMARY (March 1982), *available at* https://assets.documentcloud.org/documents/2805626/1982-API-Climate-Models-and-CO2-Warming-a.pdf.

- 84. On information and belief, each Defendant was also actually aware (at the time they were made) of public statements on climate change described above, including the 1979 National Academy of Science findings and Dr. Hansen's 1988 testimony. Because these statements were centrally relevant to Defendants' ongoing investment of billions of dollars in fossil fuel production and billions of dollars in profits, and because Defendants employed many experts charged with evaluating climate change and other energy and regulatory trends, Defendants were in a superior position to appreciate the threat described in these statements. Defendants' representatives attended congressional hearings on climate change beginning as early as the late 1970s.
- 85. In addition to the API information, some of Defendants produced their own internal analyses of climate change. For example, newly disclosed documents demonstrate that Exxon knew in the late 1970s and early 1980s that its products posed a "catastrophic" threat to the global climate, and that fossil fuel use would have to be significantly reduced to avoid severe harm.
- 86. Exxon management was informed by its scientists in 1977 that there was an "overwhelming[]" consensus that fossil fuels were responsible for atmospheric carbon dioxide increases. The presentation summarized a warning from a recent international scientific conference that "IT IS PREMATURE TO LIMIT USE OF FOSSIL FUELS BUT THEY SHOULD NOT BE ENCOURAGED." The scientist presenting the material warned management, "Present thinking holds that man has a time window of five to ten years before the need for hard decisions regarding changes in energy strategies might become critical." 57

⁵⁷ Memorandum from J.F. Black, Products Research Division, Exxon Research and Engineering Co., to F.G. Turpin, Vice President, Exxon Research and Engineering Co. (June 6, 1978),

- 87. In a 1979 Exxon internal memo, an Exxon scientist calculated that 80% of fossil fuel reserves would need to remain in the ground and unburned to avoid greater than a doubling of atmospheric carbon dioxide.⁵⁸
- 88. In a 1981 internal Exxon memo, a scientist and director at the Exxon Research and Engineering Company, Roger Cohen, warned that "it is distinctly possible" that CO2 emissions from Exxon's fifty-year Corporate Planning Department scenario of fossil fuel use "will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth's population)."⁵⁹
- 89. A year later, the same scientist wrote another memo to Exxon headquarters, which reported on a "clear scientific consensus" that "a doubling of atmospheric CO2 from its preindustrial revolution value would result in an average global temperature rise of (3.0 ± 1.5) °C [2.7 °F to 8.1 °F]." The clear scientific consensus was based upon computer modeling, a technique Exxon would later publicly attack over a period of decades as unreliable and uncertain in an effort to undermine public confidence in climate science. The memo continued: "There is unanimous agreement in the scientific community that a temperature increase of this magnitude

available at

https://insideclimatenews.org/system/files_force/documents/James%20Black%201977%20Prese ntation.pdf?download=1.

⁵⁸ Memorandum from W.L. Ferrall to R. L. Hirsch, Exxon Research and Engineering Co. (Oct. 16, 1979), at 5, *available at*

http://insideclimatenews.org/sites/default/files/documents/CO2%20and%20Fuel%20Use%20Projections.pdf.

⁵⁹Memorandum from R. W. Cohen to W. Glass, Exxon Research and Engineering Co. (Aug. 18, 1981), *available at*

http://insideclimatenews.org/sites/default/files/documents/%2522Catastrophic%2522%20 Effects%20Letter%20%281981%29.pdf.

would bring about significant changes in the earth's climate, including rainfall distribution and alterations in the biosphere."60

- 90. In November 1982, an Exxon internal report to management warned that "substantial climatic changes" could occur if the average global temperature rose "at least 1 °C [1.8 °F] above [1982] levels," and that "[m]itigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion." The report then warned Exxon management that "there are some potentially catastrophic events that must be considered," including the risk that "if the Antarctic ice sheet which is anchored on land should melt, then this could cause a rise in sea level on the order of 5 meters." The report included a graph demonstrating the expected future global warming from the "CO2 effect" demonstrating a sharp departure from the "[r]ange of natural fluctuations." This graph is attached as Exhibit 1.
- 91. By 1983, Exxon had created its own climate models, which confirmed the main conclusions from the earlier memoranda. Starting by at least the mid-1980s, Exxon used its own climate models and governmental models to gauge the impact that climate change would have on its own business operations. Exxon and other major oil and gas companies, including Mobil and Shell, subsequently took actions to protect their own business assets based on these modeling results, including raising the decks of offshore platforms, protecting pipelines from increasing coastal erosion, and designing helipads, pipelines, and roads in the warming Arctic.⁶² In 1994, for example, Shell, Exxon, Conoco, and other oil and gas companies included climate change

⁶⁰ Memorandum from M. B. Glaser to R. W. Cohen et al. (Nov. 12, 1982), at 2, 12-13, 28, available at

https://insideclimatenews.org/sites/default/files/documents/1982%20 Exxon%20 Primer%20 on%20 CO2%20 Greenhouse%20 Effect.pdf.

⁶¹ *Id*.

⁶² Amy Lieberman & Susanne Rust, *Big Oil Braced for Global Warming While it Fought Regulations*, L.A. TIMES, Dec. 31, 2015, *available at* http://graphics.latimes.com/oil-operations/.

projections in their design of a natural gas pipeline leading from a North Sea offshore platform to the German coastline. In other words, the oil and gas industry, including Defendants, were engaging in climate change adaptation and resiliency measures decades ago, at the very same time they were pursuing a campaign designed to convince the public that the science was too uncertain to warrant fossil fuel reductions. These are precisely the same kinds of climate change adaptation and resiliency measures—elevating and hardening infrastructure to protect against sea level rise—that the City must now undertake in order to protect itself.

92. Exxon's early research and understanding of the climate change impacts of its business was not unique among Defendants. For example, at least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions. Shell produced a film on climate change in 1991, in which it admitted that there had been a "marked increase [in global temperatures] in the 1980s" and that the increase "does accord with computer models based on the known atmospheric processes and predicted buildup of greenhouse gases." It acknowledged a "serious warning" that had been "endorsed by a uniquely broad consensus of scientists" in 1990. In the film, Shell further admitted that by 2050 continued emissions of greenhouse gases at high levels would cause a global average temperature increase of 1.5 to 4°C (2.7 to 7.2°F); that one meter of sea level rise was likely in the next century; that "this could be disastrous;" and that there is a "possibility of change faster than at any time since the end of the ice age, change too fast, perhaps, for life to adapt without severe dislocation."

⁶³ Royal Dutch Shell, Climate of Concern (1991), available at https://www.youtube.com/watch?v=0VOWi8oVXmo.

VIII. DESPITE THEIR EARLY KNOWLEDGE THAT CLIMATE CHANGE POSED GRAVE THREATS, DEFENDANTS PROMOTED FOSSIL FUELS FOR PERVASIVE USE, WHILE DENYING OR DOWNPLAYING THESE THREATS

- 93. Defendants have extensively promoted fossil fuel use in two ways. First,

 Defendants misled the public about climate change by over-emphasizing the uncertainties of
 climate science despite their knowledge that the fundamental science of climate change was well
 established and amply sufficient to warrant reductions in fossil fuel usage, including by using
 paid denialist groups and individuals. Defendants' campaign inevitably and intentionally
 encouraged fossil fuel consumption at levels that were (as Defendants knew) certain to severely
 harm the public. Second, Defendants promoted fossil fuels through frequent advertising,
 including promotions claiming that consumption at current and even expanded levels is
 "responsible" or even "respectful" of the environment. These promotions encouraged continued
 fossil fuel consumption at levels that Defendants knew would harm the public.
 - A. Defendants engaged in an overt public relations campaign intended to cast doubt on climate science and promote their products.
- 94. Notwithstanding Defendants' early knowledge of climate change, Defendants have engaged in advertising and communications campaigns intended to promote their fossil fuel products by downplaying the harms and risks of climate change. Initially, the campaign tried to show that climate change was not occurring or was not caused by Defendants' products. More recently, the campaign has sought to minimize the risks and harms from climate change. The campaign's purpose and effect has been to help Defendants continue to produce fossil fuels and sell their products on a massive scale. This campaign was executed in large part by front groups funded by Defendants, either directly or through the API, and through statements made by Defendants directly.

- 95. One front group was the Global Climate Coalition ("GCC"). The GCC operated between 1989 and 2002. Its members included the API and predecessors or subsidiaries of Defendants, with such subsidiaries acting as Defendants' agents. On information and belief, these members included BP America Inc. (a BP subsidiary that BP identifies as its U.S. agent); Amoco Corporation and the Atlantic Richfield Company (predecessors of BP); Texaco Inc. (a predecessor of Chevron) as well as Chevron itself; Phillips Petroleum (a predecessor of ConocoPhillips) and later ConocoPhillips itself; Exxon and its predecessors; and Shell Oil Company (Shell's main U.S. subsidiary). William O'Keefe, former president of the GCC, was also a former executive of the API; the first GCC director was an executive employed by Phillips Petroleum.
- 96. The GCC spent millions of dollars on campaigns to discredit climate science, including \$13 million on one advertising campaign alone. In this campaign, the GCC distributed a video to hundreds of journalists claiming that carbon dioxide emissions would increase crop production and feed the hungry people of the world.
- 97. However, internal GCC documents admitted that their "contrarian" climate theories were unfounded. In December 1995, the GCC's Science and Technology Advisory Committee ("GCC-STAC"), whose members included employees of Mobil Oil Corporation (an Exxon predecessor) and the API, drafted a primer on the science of climate change for GCC members. The primer concluded that the GCC's contrarian theories "do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change." Faced with this inconvenient conclusion, at its next meeting in January 1996 the

⁶⁴ Global Climate Coalition, Science and Technology Advisory Committee, Primer on Climate Change Science (Jan. 18, 1996), at 16, *available at*

GCC-STAC decided simply to drop this seven-page section of the report. For years afterward, the GCC and its members continued to tout their contrarian theories about climate change, even though the GCC had admitted internally these arguments were invalid.

- 98. In February 1996, an internal GCC presentation stated that a doubling of carbon dioxide levels over pre-industrial concentrations would occur by 2100 and cause "an average rate of warming [that] would probably be greater than any seen in the past 10,000 years." The presentation noted "potentially irreversible" impacts that could include "significant loss of life."
- 99. Certain Defendants also funded another front group in the 1990s, the Global Climate Science Communications Team ("GCSCT"). GCSCT members included Exxon, Chevron, and the API. A 1998 GCSCT task force memo outlined an explicit strategy to invest millions of dollars to manufacture uncertainty on the issue of climate change, directly emulating a similar disinformation campaign by the tobacco industry. The memo stated: "Victory Will Be Achieved When," among other things, "Average citizens 'understand' (recognize) uncertainties in climate science," public "recognition of uncertainty becomes part of the 'conventional wisdom." and the "Media 'understands' (recognizes) uncertainties in climate science." The plan stated that progress would be measured by the percentage of news articles that raise questions about climate change.

https://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-7_GCC-Climate-Primer.pdf.

⁶⁵ John Kinsman, Edison Electric Institute, Global Climate Change Science – Overview of Recent Developments (Feb. 13, 1996).

⁶⁶ Global Climate Science Communications: Action Plan (Apr. 3, 1998), *available at* https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf.

- 100. Defendant Exxon played a lead role in the campaign of deception and denial. Exxon paid researchers and front groups to create uncertainties about basic climate change science and used denialist groups to attack well-respected scientists. These were calculated business decisions by Exxon to undermine climate change science and bolster production of fossil fuels. Between 1998 and 2014, Exxon paid millions of dollars to organizations to promote disinformation on climate change. During the early- to mid-1990s, Exxon directed some of this funding to Dr. Fred Seitz, Dr. Fred Singer, and/or Seitz and Singer's Science and Environmental Policy Project ("SEPP") in order to launch repeated attacks on mainstream climate science and IPCC conclusions, even as Exxon scientists participated in the IPCC process. Dr. Seitz and Dr. Singer were not climate scientists. Dr. Seitz, Dr. Singer, and SEPP had previously been paid by the tobacco industry to create doubt in the public mind about the hazards of smoking.
- 101. In 2000, Exxon took out an advertisement, one among a series of advertisements, on the Op-Ed page of the *New York Times* entitled "Unsettled Science." The advertisement claimed that "scientists remain unable to confirm" the proposition that "humans are causing global warming." This was six years after the IPCC had confirmed the causal link between planetary warming and anthropogenic greenhouse gas emissions and eighteen years after Exxon itself had admitted in a 1982 internal memoranda to corporate headquarters that there was "a clear scientific consensus" that greenhouse gas emissions would cause temperatures to rise.
- 102. Exxon also used denialist groups to attack well-respected scientists. In response to the IPCC's historic conclusion in 1995 that humans were causing global warming, Exxon funded a group that launched a vicious smear attack on Dr. Benjamin Santer, the lead IPCC

⁶⁷ ExxonMobil, Unsettled Science, *available at* https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf.

scientist in charge of this finding. Dr. Santer was a MacArthur Fellow working in California at the Lawrence Livermore National Laboratory. An Exxon-funded scientist, Dr. Fred Seitz, who formerly had worked for R.J. Reynolds and founded organizations to deny tobacco science, published a *Wall Street Journal* op-ed that falsely claimed that Dr. Santer had violated IPCC protocol in changing a draft version of the report—a claim subsequently refuted by the IPCC chairman. Nonetheless, Dr. Seitz and another scientist funded by Exxon, Dr. Fred Singer (who also had been a tobacco denier, infamous for attacking EPA's draft secondhand smoke rule as "junk science"), launched a dizzying array of attacks on Dr. Santer that to this day remain alive and well on the web. In short, Exxon funded a smear campaign that misleadingly convinced the public that the IPCC's historic causal conclusion was the subject of legitimate scientific controversy. It did so even though Exxon participated in the IPCC process through its scientists—a point that Exxon recently highlighted as evidence that it supposedly has always been in the scientific mainstream.

103. In the early 2000s, Exxon again attacked a respected scientist, Dr. Michael Mann. Dr. Mann had published a paper in peer-reviewed literature of what has come to be known as the "hockey stick" graph, which shows modern temperature sharply diverting from the temperatures of the last 1,000 years, and which was relied on by the IPCC in its 2001 report for its strengthened finding that humans were causing global warming, a report in which Exxon scientists participated. In response to the IPCC's causal finding, Exxon sponsored its own bogus scientific research by paying \$120,000 over the course of two years (2003–2004) to the Fraser Institute, a Canadian organization that specializes in climate denialism. Senior Fraser Institute

⁶⁸ See Susan K. Avery et al., Special Insert: An Open Letter to Ben Santer (July 25, 1996), available at http://www.realclimate.org/docs/BAMS_Open_Letter.pdf.

Fellow Dr. Ross McKitrick and a co-author then published a supposed refutation of Dr. Mann's "hockey stick" graph.⁶⁹ Dr. McKitrick was an economist, not a scientist, and his co-author was a mining company executive. In 2003, the McIntyre and McKitrick paper was rushed into print, without peer review and, in a departure from the standard scientific practice, without offering Dr. Mann and his co-authors an opportunity to respond prior to publication. The McIntyre and McKitrick paper was subsequently debunked,⁷⁰ but the smear of Dr. Mann's work remains available on the web today and continues to be cited by climate deniers.⁷¹ Exxon's promotion by deception thus lives on.

engineer named Dr. Wei Hock Soon. Between 2001 and 2012, various fossil fuel interests, including Exxon and the API, paid Dr. Soon over \$1.2 million. Dr. Soon was the lead author of a 2003 article that argued that the climate had not changed significantly. The article was widely promoted by other denial groups funded by Exxon, including via "Tech Central Station," a website supported by Exxon. Soon published other bogus "research" in 2009, attributing climate change to solar activity, for which Exxon paid him \$76,106. This 2009 grant was made several years after Exxon had publicly committed not to fund climate change deniers.

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⁶⁹ Stephen McIntyre & Ross McKitrick, *Corrections to the Mann et al. (1998) Proxy Database and Northern Hemispheric Average Temperature Series*, 14 Energy & Environment 751 (2003), available at

http://stephenschneider.stanford.edu/Publications/PDF_Papers/mcintyre_02.pdf.

⁷⁰ See, e.g., False Claims by McIntyre and McKitrick Regarding the Mann et al. (1998) Reconstruction, REALCLIMATE (Dec. 4. 2004),

http://www.realclimate.org/index.php/archives/2004/12/false-claims-by-mcintyre-and-mckitrick-regarding-the-mann-et-al-1998 reconstruction/.

⁷¹ Hockey Stick, 1998-2005, R.I.P., WORLD CLIMATE REPORT (Mar. 3, 2005), http://www.worldclimatereport.com/index.php/2005/03/03/hockey-stick-1998-2005-rip/; Anthony Watts, McIntyre and McKitrick to Receive Award, WATTS UP WITH THAT? (June 14, 2010),

https://wattsupwiththat.com/2010/06/14/mcintyre-and-mckitrick-to-receive-award/.

105. As noted above, in 1982 Exxon's scientific staff had relied on climate models to conclude that there was a "clear scientific consensus" on projected future climate change and starting shortly thereafter Exxon relied upon these projections to protect its own business assets.⁷² But that did not stop Exxon from engaging in a long effort to discredit the climate models as unreliable. For example, in 1999, former CEO Lee Raymond stated at an annual Exxon meeting that future climate "projections are based on completely unproven climate models, or, more often, on sheer speculation."⁷³ In a 2005 corporate citizenship report, even as Exxon admitted "the risk that greenhouse gas emissions may have serious impacts justifies taking action" (action it still has not taken), it still attacked the climate models in an effort to discredit the basic causal connection between its products and climate change: "gaps in the scientific basis for theoretical climate models and the interplay of significant natural variability make it very difficult to determine objectively the extent to which recent climate changes might be the result of human actions."⁷⁴ This was several years after the IPCC's 2001 report concluding that human-induced warming had been detected, a report in which Exxon scientists participated. Exxon has recently kept up the attacks on the models: in May 2015, at Exxon's annual shareholder meeting, then-CEO Rex Tillerson misleadingly stated: "What if everything we do it turns out our models were really lousy and we achieved all of our objectives and it turned out the planet behaved differently because the models just weren't good enough to predict it?"

⁷² See also Geoffrey Supran & Naomi Oreskes, Assessing ExxonMobil's Climate Change Communications (1977-2014), 12 ENVTL. RES. LETT. (2017), available at http://iopscience.iop.org/article/10.1088/1748-9326/aa815f/pdf.

⁷³ Sara Jerving et al., What Exxon Knew About the Earth's Melting Arctic, L.A. TIMES, Oct. 9, 2015, available at http://graphics.latimes.com/exxon-arctic/.

⁷⁴ EXXONMOBIL CORPORATION, 2005 CORPORATE CITIZENSHIP REPORT 23.

- 106. Until recently, the API's website referred to climate change as "possible manmade warming" and claimed that the human contribution is "uncertain." The API removed this statement from its website in 2016 when journalistic investigations called attention to the API's misleading statements on climate change and its participation in the climate change Task Force during the late 1970s and early 1980s.
- 107. Similarly, until recently Exxon's website continued to emphasize the "uncertainty" of climate change science and impacts: "current scientific understanding provides limited guidance on the likelihood, magnitude, or time frame" of events like temperature extremes and sea level rise. Exxon's insistence on crystal-ball certainty was clear misdirection, since Exxon knew at this time that the fundamentals of climate science were well settled and that climate change presented a clear and present danger.

B. Defendants directly promoted fossil fuels.

Defendants continue to promote massive fossil fuel use. Defendants promote fossil fuels through advertisements that laud fossil fuels as "responsible" and "respectful" to the environment, identify fossil fuels as the only way to sustain modern standards of living, and promote sales of fossil fuels without qualification. The API also promotes the benefits of fossil fuel products on behalf of Defendants and its other members. Defendants' message to consumers is that fossil fuels may continue to be burned in massive quantities without risking significant harm.

⁷⁵ Formerly found at http://www.api.org/policy-and-issues/policy-items/environment/climate change.

⁷⁶ Formerly found at http://corporate.exxonmobil.com/en/current-issues/climatepolicy/meeting-global-needs/managing-climate-change-business-risks.

- 109. Defendants continue to bombard the public and consumers with these advertisements, which build on the decades of misleading statements on climate change described above. Defendants' advertisements have included the following:
 - a. Exxon's "Lights Across America" website advertisement states that natural gas is "helping dramatically reduce America's emissions," even though natural gas is a fossil fuel causing widespread planetary warming and harm, and the use of natural gas competes with wind and solar, which have no greenhouse gas emissions.
 - b. A Shell website promotion states: "We are helping to meet the world's growing energy demand while limiting CO2 emissions, by delivering more cleaner-burning natural gas." 78
 - c. BP touts natural gas on its website as "a vital lower carbon energy source" and as playing a "crucial role" in a transition to a lower carbon future.⁷⁹
 - d. Chevron's website tells the public that "we produce safe, reliable energy products for people around the world." Chevron also says in its advertising that "[o]il and natural gas will continue to fulfill a significant portion of global energy demand for decades to come even in a carbon-constrained scenario." A prior Chevron

⁷⁷ ExxonMobil, Lights Across America (2015) (at 0:46), available at https://www.youtube.com/watch?v=tMu1CBjXfq4&list=PLirXIHj7zayYGaExiTp_B4t6gqTtkGf 9A&index=6 .

⁷⁸ Transforming Natural Gas, SHELL UNITED STATES, http://www.shell.us/energy-and-innovation/transforming-natural-gas.html (last visited Jan. 1, 2018).

⁷⁹ BP SUSTAINABILITY REPORT 2016, available at https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf; http://www.bp.com/energytransition/shifting-towards-gas.html. ⁸⁰ Products and Services, CHEVRON, https://www.chevron.com/operations/products-services (last visited Jan. 1, 2018).

⁸¹ Managing Climate Change Risks, CHEVRON, https://www.chevron.com/corporate-responsibility/climate-change/managing-climate-risk.

advertisement that is still available on the web, and that was never disavowed by Chevron promotes Chevron fossil fuels on a massive scale by stating that "our lives demand oil."82

- e. ConocoPhillips promotes its fossil fuel products by stating that it "responsibly suppl[ies] the energy that powers modern life." 83
- 110. Defendants BP and Exxon have also used long-term energy forecasts and similar reports as advocacy pieces to promote their products under the guise of expert, objective "analysis." These forecasts have repeatedly sought to justify heavy reliance on fossil fuels by overstating the cost of renewable energy.
- promoted to the public through their respective websites and other direct media. Exxon continues to promote its annual "Outlook for Energy" reports in videos currently available on the internet. But Exxon's energy "analyses" are self-serving means of promoting fossil fuels and undercutting renewable energy and clean technologies. For example, Exxon has misleadingly claimed in a recent forecast that natural gas is a cheaper way to reduce carbon dioxide emissions than wind or solar power. Similarly, BP has claimed that solar and wind power will be more expensive in 2050 than natural gas or coal—even though wind and solar are *already* cheaper than natural gas or coal in some circumstances and their prices are dropping precipitously. Exxon and BP also have understated in recent "forecasts" the expected market share of electric vehicles, even though electric vehicle technology has taken off, prices have dropped, and GM announced (in 2015) that it was investing billions in electric cars because the "future is electric."

⁸² Chevron, Human Energy (2009), available at https://www.youtube.com/watch?v=-KyjTGMVTkA.

⁸³ Formerly found at http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx.

- 112. Defendants' energy forecast reports also promote their fossil fuel products by warning consumers of supposed downsides to reducing fossil fuel use and carbon dioxide emissions. For example, Exxon's most recent report claims that the costs of carbon dioxide reductions are "ultimately borne by consumers and taxpayers." 84
- 113. These reports by BP and Exxon, and a similar one by Shell, predict massive increases in fossil fuel use over roughly the next 15 years. These reports are part of a larger strategy of "mak[ing] the case for the necessary role of fossil fuels," as BP's chief executive stated in a moment of candor in 2015.85
- Defendants has now finally admitted. On November 28, 2017, Shell finally acknowledged the importance of "keeping the rise in global temperatures below 2 degrees C," and also acknowledged that this "means that, *over time*, we as society must stop adding to the stock of greenhouse gases in the atmosphere," *i.e.*, a phase down of fossil fuels to net zero emissions. But, critically, Shell did not say when this should occur. While Shell also announced on the same day that it would be reducing the carbon footprint of its energy products by "around" half by 2050, Shell in fact was merely agreeing to reduce the carbon "intensity" of its mix of energy products (*i.e.*, the carbon emissions per unit of energy). Shell has said nothing to alter the fact that its total fossil fuel production and sales, and hence the total GHG pollution from its products, may well, and likely will, go up in absolute terms. Shell's announcement is too little and too late to avert the climate change impacts that already are occurring, and that will

⁸⁴ EXXONMOBIL, 2017 OUTLOOK FOR ENERGY: A VIEW TO 2040 31 (2017).

⁸⁵ Bob Dudley, BP, 2015 Annual General Meeting: Group Chief Executive (Apr. 16, 2015), *available at* http://www.bp.com/en/global/corporate/media/speeches/2015-annual-general-meeting-group-chief-executive.html.

inevitably grow worse over the coming decades based in substantial part upon Shell and other Defendants' past and continuing conduct and future business plans.

- Commission that it "has decided to further enhance the Company's disclosures" consistent with a 2017 shareholder proposal requesting that Exxon more fully disclose the impacts of climate change policies on its business, and stated that it "will seek to issue" disclosures on "energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future" in the "near future." Shareholders have been calling on Exxon to make further detailed disclosures on how climate change will impact its business for years. Exxon's brief announcement—which says nothing about reducing oil and gas production—will do nothing to avert climate change impacts that already are occurring, and that will inevitably grow more severe based upon Exxon and other Defendants' past and continuing conduct and future business plans.
- 116. The bottom line is that Defendants continue to double down on the production of massive amounts of oil and natural gas, and encourage consumers to use unlimited amounts of fossil fuel products, despite having known for decades that this conduct was substantially certain to cause grave harm, including by putting coastal cities like New York City on the front lines of climate disaster.

IX. THE CITY IS EXPENDING SUBSTANTIAL FUNDS, AND WILL CONTINUE TO DO SO, TO PROTECT ITSELF AGAINST CLIMATE CHANGE

117. Given New York City's particular vulnerability to climate change, the City has been forced to take proactive steps to protect itself and its residents from its dangers and impacts.

⁸⁶ Exxon, Regulation FD Disclosure to the United States Securities and Exchange Commission, available at

https://www.sec.gov/Archives/edgar/data/34088/000003408817000057/r8k121117.htm.

- 118. The City's first formal planning endeavor occurred with the issuance in 2007 of "PlaNYC: A Greener, Greater New York," a pioneering effort to accommodate a growing population, enhance the quality of life for all New Yorkers, and plan for climate change.

 PlaNYC included a recommendation that the City convene the NPCC, which the City did. The analysis and commitments contained in PlaNYC are now embodied in "OneNYC: The Plan For A Strong And Just City," which incorporates equity considerations into the foundation set forth in PlaNYC to consider how to make the City more resilient and sustainable.
- 119. The City made a further unprecedented commitment to climate adaption and resiliency in the aftermath of Hurricane Sandy, when it launched a \$20 billion-plus multilayered investment program in climate resiliency across all five boroughs.⁸⁷ These first steps of the City's resiliency effort will take many years to complete, and include constructing levees and seawalls, elevating City facilities and streets, waterproofing and hardening City infrastructure, and modifying or reconstructing sewers and stormwater infrastructure to handle additional stormwater and adapt to interference with outfalls from sea level rise.
- 120. For example, the East Side Coastal Resiliency Project, currently budgeted at \$760 million, is designed to protect Manhattan's lower east side neighborhoods from flood risk due to coastal storms and sea level rise by constructing a 2.4 mile-long barrier along the City's East River. The Two Bridges Project, currently budgeted at \$203 million, will extend that protection

⁸⁷ Mayor Announces New Resiliency Guidelines to Prepare City's Infrastructure and Buildings for Effects of Climate Change (Apr. 28, 2017), http://www1.nyc.gov/office-of-the-mayor/news/271-17/mayor-new-resiliency-guidelines-prepare-city-s-infrastructure-buildings-for.

south to the Brooklyn Bridge. A barrier to be constructed along the southeast shore of Staten Island will protect some of the communities most devastated by Hurricane Sandy.⁸⁸

- 121. The City is undertaking Cool Neighborhoods NYC, a comprehensive program to keep City communities safe in extreme heat, at a cost of over \$100 million to the City; multiple resiliency measures implemented by Health + Hospitals, the City's public health care network, with over \$100 million of City funds; and the Raised Shorelines Program, which will elevate shorelines throughout the City to protect low-lying areas, at a City budget of \$100 million to fund 9 initial sites, among 91 identified. To protect the City's solid waste-management program from sea level rise and storm surge, the City hardened two marine transfer stations and raised platforms in one of them. Many such City projects have not yet been fully funded.
- 122. In addition to these already-identified and commenced resiliency efforts, the City must promptly take a wide array of more robust measures to make the City more resilient and protect the public and City property from the dire threat of climate change. Indeed, the coastal flood protection projects initiated after Sandy largely protect areas of the City that were flooded during that storm, but do not protect other low-lying areas of the City that are vulnerable to flooding from storms that can come from other directions, such as northwest Queens and the Bronx. The City must build sea walls, levees, dunes, and other coastal armaments and must elevate, solidify, and adapt a vast array of City-owned structures, properties, and parks along its whole coastline, not only the stretches flooded by Sandy. The City must enlarge existing storm and wastewater storage facilities and install additional new facilities, as well as associated infrastructure and pumping facilities, to prevent flooding in low-lying areas that are vulnerable to rising seas or could potentially be overwhelmed by increasingly severe downpours. Making the

⁸⁸ CITY OF NEW YORK, *supra* note 25, at 283-87.

City's storm and wastewater infrastructure more robust will, in certain locations, require building high-level storm sewers and modifying other related infrastructure.

- 123. The City owns and maintains dozens of parks located partially or entirely on the shoreline (including the Hudson River and the East River estuaries). These include Rockaway Beach and Boardwalk, with 7 miles of City-owned beach and 5.5 miles of boardwalk; Coney Island Beach and Boardwalk, consisting of 399 acres with almost 3 miles of coastline; Franklin D. Roosevelt Boardwalk and Beach, with 2.5 miles of coastline; Pelham Bay Park; Ferry Point Park's Wolfe's Pond Park; Flushing Meadows-Corona Park; the Battery; and Riverside Park. These are just some of the City-owned properties threatened by rising sea levels and higher storm surges, and many are being hardened or will need to be hardened against these threats in the near future.
- designs and builds City capital projects, and requires the City to fund modifications and additional protections. The City has developed preliminary Climate Resiliency Design Guidelines ("Guidelines") to provide an approach for using forward-looking climate data in the design of City capital projects. The Guidelines will help ensure that the City's investments in buildings and infrastructure are more resilient to climate change hazards, including rising sea levels and changes in extreme precipitation and heat.⁸⁹ These Guidelines are needed to protect the City from extreme weather associated with climate change and threats such as sea level rise. Although preliminary, the Guidelines are already influencing design decisions. For example, the

⁸⁹ CITY OF NEW YORK, MAYOR'S OFFICE OF RECOVERY & RESILIENCY, PRELIMINARY CLIMATE RESILIENCY DESIGN GUIDELINES (2017), *available at* http://www1.nyc.gov/assets/orr/images/content/header/ORR_ClimateResiliencyDesignGuideline s_PRELIMINARY_4_21_2017.pdf.

Department of Environmental Protection, which builds and operates the City's water and wastewater infrastructure, is now using the Guidelines to inform the design of their infrastructure to be resilient in a changing climate.

- 125. Because of the severe public health impacts of extreme weather that will worsen with climate change, the City has launched a number of public health preparedness programs to reduce the public health impacts to its citizens from heat waves, sea level rise, and coastal storms. The City is spending millions of dollars on programs to help vulnerable City residents stay safe during dangerous weather emergencies that will be exacerbated by climate change, and expects these programs will need to grow exponentially in the future because they are critical to saving lives during heat waves and other climate change-related hazards.
- 126. The City has also increased its efforts to plan temporary protections against climate change-related risks. In 2016, the City's Department of Emergency Management and the Mayor's Office of Recovery and Resiliency launched the Interim Flood Protection Measures program, a multi-million dollar program that provides for the temporary installation and deployment of protective measures, such as HESCO barriers and water-filled tubes, in low-lying areas and adjacent to vulnerable City assets to reduce overland flooding from coastal flood events. These programs will need to expand, and will become more costly, as the floodplains continue to grow as a result of climate change.
- 127. The costs of all these measures will only increase as climate change worsens.

 Most these projects are long-term design and construction projects—and they must be built to last for several decades, often as long as fifty years or more. The design and construction of these projects must begin now in order to complete them in time to protect the safety, health, and welfare of City residents and municipal property and infrastructure from the increasing dangers

of climate change, given the pace of global warming. The City is seeking the additional costs incurred in taking actions that, without climate change, would not have been necessary, could have been deferred or postponed, or would have otherwise been less costly. The cost of needed resiliency projects runs to many billions of dollars.

account when planning for and building their own operations and infrastructure, the same thing that the City now must do. Exxon has stated that since its operations may be disrupted by "severe weather events" and "natural disasters," to protect business assets such as its offshore production facilities, coastal refining operations, and petrochemical plants in vulnerable areas, its designs should account for the "engineering uncertainties that climate change and other events may potentially introduce." Chevron also takes into account potential risks to its operations and assets, including "storm severity and frequency" and "sea level rise" to "plan for their resiliency." Likewise, ConocoPhillips has warned that it could incur increased expenses for its assets and operations if there are "significant changes in the Earth's climate, such as more severe or frequent weather conditions." Defendants thus recognize that protecting infrastructure and operations from climate change is necessary and entails additional planning and costs than would otherwise be required. In the same way, the City seeks to be able to more fully protect itself from climate change impacts to which Defendants have substantially contributed.

X. DEFENDANTS' CONDUCT IS ONGOING, AND IS CAUSING CONTINUOUS AND RECURRING INJURIES TO THE CITY

129. Defendants' conduct is causing a continuous encroachment upon and interference with the City's property. For example, areas of the City that were once above the mean high tide

⁹⁰ Exxon Mobil Corporation, Form 10-K for the Fiscal Year Ended Dec. 31, 2016, at 4.

⁹¹ Chevron Corporation, Form 10-K for the Fiscal Year Ended Dec. 31, 2016, at 20.

⁹² ConocoPhillips, Form10-K for the Fiscal Year Ended Dec. 31, 2016, at 25.

line now experience regular tidal inundation. This sea level rise will inevitably grow worse, regularly inundating additional City-owned property, and eventually portions of coastal areas owned by the City may be continuously submerged.

- 130. Defendants' conduct is also causing recurring harms to the City. These harms include encroachments upon and interferences with the City's property from higher storm surges and more intense storms, as well as injuries to public health resulting from more frequent and more intense heat waves and flooding. These recurring harms will also grow worse and more frequent in the future.
- and public health has also been continuous and ongoing. As described above, Defendants continue to produce, market, distribute, and sell fossil fuels in massive quantities; to promote fossil fuel consumption in these massive quantities; and to downplay the threat posed by climate change. This ongoing conduct will cause increasingly severe injuries to the City, including new and more significant continuous encroachments upon and interferences with City property, and increasingly severe threats to public health.

AS A FIRST CAUSE OF ACTION – PUBLIC NUISANCE

- 132. The City realleges and reaffirms each and every allegation set forth in all the preceding paragraphs as if fully stated herein.
- 133. Defendants' production, marketing, and sale of massive quantities of fossil fuels, and their promotion of pervasive use of these fossil fuels, have caused, created, assisted in the creation of, maintained, and/or contributed to the current and threatened climate change impacts on the City described above. These impacts are indivisible injuries, and include but are not limited to harms to the safety, health, and welfare of City residents and to the City's property and infrastructure from sea level rise, increased flooding and storm surge, higher temperatures,

greater heat waves, and increases in the frequency and intensity of precipitation. Defendants' conduct continues to cause, create, assist in the creation of, maintain, and/or contribute to these impacts.

134. The City has suffered injuries beyond those of the community at-large. For example, the City has the primary responsibility to elevate, harden, and/or adapt existing municipally-owned infrastructure (much of it on City-owned property) damaged or threatened by climate change, including roads, pumping stations, beaches, parks, sewers, aqueducts, marine transfer stations, and wastewater treatment facilities. The City also has the primary responsibility to build new infrastructure to protect its residents from climate change. The City also protects public hospitals and medical facilities and funds programs to protect New Yorkers from the health consequences of climate change. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combine with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to result in dangerous levels of global warming with grave harms, including the harms to coastal cities like New York. Defendants have promoted the use of fossil fuels at unsafe levels with knowledge of the hazard that such use would create. Defendants' conduct has been the actual and proximate cause of harm to New York City. Defendants' conduct, individually and collectively, has been a substantial factor in causing climate change in New York City, which has caused (and will continue to cause) sea level rise, increased flooding, more frequent and extreme weather events, temperature increases, and the other impacts described above. These injuries are the foreseeable result of Defendants' conduct and Defendants were substantially certain at the relevant times that they would occur as a result of their conduct.

- 135. Defendants continue to produce, market, and sell massive quantities of fossil fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases and exacerbate global warming and the City's injuries. Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the City, including flooding and erosion of City property.
- 136. Defendants' conduct constitutes a substantial and unreasonable interference with and obstruction of public rights and property, including the public rights to health, safety, and welfare of a considerable number of people who reside in and visit New York City. The safety and property of these people and the safety of municipal property have been harmed, are being harmed, and will be harmed in the future by sea level rise, increased storm surge flooding, extreme heat, and other climate change impacts.
- 137. Defendants are jointly and severally liable to the City for committing a public nuisance.
 - 138. The City is entitled to relief as set forth below.

AS A SECOND CAUSE OF ACTION – PRIVATE NUISANCE

- 139. The City realleges and reaffirms each and every allegation set forth in all the preceding paragraphs as if fully stated herein.
- 140. Defendants' production, marketing, and sale of massive quantities of fossil fuels, and their promotion of pervasive use of these fossil fuels, have caused, created, assisted in the creation of, maintained, and/or contributed to the current and threatened climate change impacts on the City described above. These impacts are indivisible injuries, and include harms to City property from sea level rise, increased flooding, higher temperatures, increased costs to protect the City's water supply, and increases in the frequency and intensity of precipitation.

Defendants' conduct continues to cause, create, assist in the creation of, maintain, and/or contribute to these impacts.

- 141. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combines with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to result in dangerous levels of global warming with grave harms for coastal cities like New York City. Defendants have promoted the use of fossil fuels at unsafe levels even though they should have known, and in fact have known for many years, of the hazard that such use would create.
- York City. Defendants' conduct, individually and collectively, has been a substantial factor in causing climate change in New York City, which has caused (and will continue to cause) sea level rise, increased flooding, temperature increases, and the other impacts described above. These injuries are the foreseeable result of Defendants' conduct and Defendants were substantially certain at the relevant times that they would occur as a result of their conduct.
- 143. Defendants continue to produce, market, and sell massive quantities of fossil fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases and exacerbate global warming and the City's injuries. Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the City, including flooding and erosion of City property.
- 144. Defendants' conduct constitutes a substantial and unreasonable interference with the City's rights to the use and enjoyment of its property. City-owned property has been harmed,

is being harmed, and will continue to be harmed in the future by sea level rise, increased storm surge flooding, extreme heat, and other climate change impacts.

- 145. Defendants are jointly and severally liable to the City for committing a private nuisance.
 - 146. The City is entitled to relief as set forth below.

AS A THIRD CAUSE OF ACTION – TRESPASS

- 147. The City realleges and reaffirms each and every allegation set forth in all the preceding paragraphs as if fully stated herein.
- 148. Defendants have intentionally produced, marketed, and sold massive quantities of fossil fuels, and promoted their pervasive use, despite their knowledge that such fuels would lead to climate change-related injuries, including sea level rise. The City has not granted permission to Defendants to engage in this conduct -i.e., to intentionally produce, market, and sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by Defendants that doing so would lead to climate change-related injuries (including sea level rise).
- 149. Defendants' conduct was substantially certain to result in the invasion of property owned by the City, without permission or right of entry, by way of increased heat, sea level rise, storm surge flooding, and flooding from increased intensity and frequency of precipitation.

 These invasions are now occurring, and will continue to occur onto additional City-owned property in the future. The City has not granted permission to Defendants to engage in these invasions of the City's property, and the invasions were otherwise unjustified.
- 150. Defendants' conduct, individually and collectively, was a substantial factor in causing global warming impacts, including accelerated sea level rise, increased flooding, increased storm inundation, and increased intensity and frequency of precipitation, and was the actual and proximate cause of the invasion of the City's property.

- 151. Defendants continue to produce, market, and sell massive quantities of fossil fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases and exacerbate global warming and the City's injuries. The City has not granted permission to Defendants to engage in this conduct *i.e.*, to intentionally produce, market, and sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by Defendants that doing so would lead to climate change-related injuries (including sea level rise). Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the City, including flooding and erosion of City property.
- 152. Defendants' conduct constitutes a continuing, unauthorized intrusion and a continuing trespass onto the City's property. Defendants' continued trespass has caused, and will continue to cause, substantial damage to the City. The City has not granted permission to Defendants to engage in these intrusions and trespasses on the City's property, which are otherwise unjustified.
 - 153. The City is entitled to relief as set forth below.⁹³

JURY TRIAL DEMANDED

154. Plaintiff demands a trial by jury for all issues triable by jury.

RELIEF REQUESTED

WHEREFORE, the City respectfully requests a judgment against all Defendants awarding the City:

1. Compensatory damages in an amount according to proof, for the costs already incurred by the City to protect City infrastructure and property, and to protect the public health, safety, and property of its residents from the impacts of climate change;

⁹³ The City does not seek equitable relief or damages with respect to any federal land under any of its causes of action.

- 2. Compensatory damages in an amount according to proof, of the costs of actions the City is currently taking and needs to take to protect City infrastructure and property, and to protect the public health, safety, and property of its residents from the impacts of climate change;
- 3. An equitable order ascertaining the damages and granting an injunction to abate the public nuisance and trespass that would not be effective unless Defendants fail to pay the court-determined damages for the past and permanent injuries inflicted;
 - 4. Costs and disbursements of this action as permitted by law;
 - 5. Attorneys' fees as permitted by law;
 - 6. Pre- and post-judgment interest as permitted by law; and
 - 7. Such other relief as this Court deems just and proper.

Dated: March 16, 2018 New York, New York

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New York, New York 10005 Telephone: (212) 584-0700 Facsimile: (212) 584-0799 Exhibit 1: "Range of Global Mean Temperature From 1850 to the Present with the Projected Instantaneous Climatic Response to Increasing CO2 Concentrations"

Source: M.B. Glasser, Memo for Exxon management (Nov. 12, 1982), pp. 1, 28

Case 1:18-cv-00182-JFK Document 80 Filed 03/16/18 Page 79 of 80 N RESEARCH AND ENGINEERING COMPANY P.O. BOX 101, FLORHAM PARK, NEW JERSEY 07932 M. B. GLASER

Manager Environmental Affairs Programs

Cable: ENGREXXON, N.Y.

November 12, 1982

"Greenhouse" Effect

82EAP 266

See Distribution List Attached TO:

Attached for your information and guidance is briefing material on the CO2 "Greenhouse" Effect which is receiving increased attention in both the scientific and popular press as an emerging environmental issue. A brief summary is provided along with a more detailed technical review prepared by CPPD.

The material has been given wide circulation to Exxon management and is intended to familiarize Exxon personnel with the subject. It may be used as a basis for discussing the issue with outsiders as may be appropriate. However, it should be restricted -to-Exxon personnel and not distributed externally.

Very truly yours,

M. B. GLASER

MBG:rva

Attachments

H. N. WEINBERG

NOV 1 5 1982

Figure 9

Range of Global Mean Temperature From 1850 to the Present with the Projected Instantaneous Climatic Response to

Increasing CO₂ Concentrations.

