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COUNTY OF MAUI

IN THE CIRCUIT COURT OF THE SECOND CIRCUIT

STATE OF HAWAI‘I

COUNTY OF MAUI Plaintiff, vs. SUNOCO LP; ALOHA PETROLEUM, LTD.; ALOHA PETROLEUM LLC; EXXON	CIVIL NO. _____ (Other Non-Vehicle Tort) COMPLAINT; DEMAND FOR JURY TRIAL; SUMMONS (Caption continued on next page)

MOBIL CORPORATION; EXXONMOBIL OIL CORPORATION; ROYAL DUTCH SHELL plc; SHELL OIL COMPANY; SHELL OIL PRODUCTS COMPANY LLC; CHEVRON CORPORATION; CHEVRON U.S.A. INC.; BHP GROUP LIMITED; BHP GROUP PLC; BHP HAWAII INC.; BP p.l.c.; BP AMERICA INC.; MARATHON PETROLEUM CORPORATION; CONOCOPHILLIPS; CONOCOPHILLIPS COMPANY; PHILLIPS 66; PHILLIPS 66 COMPANY; AND DOES 1 through 100, inclusive,

Defendants.

COMPLAINT

TABLE OF CONTENTS

I. INTRODUCTION

1. Defendants, major corporate members of the fossil fuel industry, have known for nearly half a century that unrestricted production and use of fossil fuel products create greenhouse gas pollution that warms the planet and changes our climate. They have known for decades that those impacts could be catastrophic and that only a narrow window existed to take action before the consequences would be irreversible. They have nevertheless engaged in a coordinated, multi-front effort to conceal and deny their own knowledge of those threats, discredit the growing body of publicly available scientific evidence, and persistently create doubt in the minds of customers, consumers, regulators, the media, journalists, teachers, and the public about the reality and consequences of the impacts of their fossil fuel pollution.

2. At the same time, Defendants have promoted and profited from a massive increase in the extraction, production, and consumption of oil, coal, and natural gas, which has in turn caused an enormous, foreseeable, and avoidable increase in global greenhouse gas pollution and a concordant increase in the concentration of greenhouse gases,[1] particularly carbon dioxide ("CO_2") and methane, in the Earth's atmosphere. Those disruptions of the Earth's otherwise balanced carbon cycle have substantially contributed to a wide range of dire climate-related effects, including, but not limited to, global atmospheric and ocean warming, ocean acidification, melting polar ice caps and glaciers, more extreme and volatile weather, drought, and sea level rise.

[1] As used in this Complaint, the term "greenhouse gases" refers collectively to carbon dioxide, methane, and nitrous oxide. Where a cited source refers to a specific gas or gases, or when a process relates only to a specific gas or gases, this Complaint refers to each gas by name.

3. Plaintiff, the County of Maui,[2] its departments and agencies, along with the County's residents, infrastructure, and natural resources, suffer the consequences of Defendants' campaign of deception.

4. Defendants are extractors, producers, refiners, manufacturers, distributors, promoters, marketers, and/or sellers of fossil fuel products, each of which contributed to deceiving the public about the role of their products in causing the global climate crisis. Decades of scientific research has shown that pollution from Defendants' fossil fuel products plays a direct and substantial role in the unprecedented rise in emissions of greenhouse gas pollution and increased atmospheric CO_2 concentrations that have occurred since the mid-20th century. This dramatic increase in atmospheric CO_2 and other greenhouse gases is the main driver of the gravely dangerous changes occurring to the global climate and environment.

5. Anthropogenic greenhouse gas pollution, primarily in the form of CO_2, is far and away the dominant cause of global warming,[3] resulting in severe impacts including, but not limited to, sea level rise, increasingly frequent and intense wildfires, disruption to the hydrologic cycle, more frequent and intense extreme precipitation events and associated flooding, more frequent and intense heatwaves, more frequent and intense droughts, and associated consequences of those physical and environmental changes. The consequences of Defendants' actions disproportionately impact people of color and those living in poverty. The primary cause of the climate crisis is the

[2] In this Complaint, the term "County" refers to Plaintiff the County of Maui, unless otherwise stated. The term "Maui" refers to the Island of Maui.

[3] *See* IPCC, *Climate Change 2014: Synthesis Report*, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014) 6, Figure SMP.3, https://www.ipcc.ch/report/ar5/syr.

combustion of coal, oil, and natural gas,[4] referred to collectively in this Complaint as "fossil fuel products."

6. The rate at which Defendants have extracted and sold fossil fuel products has exploded since the Second World War, as have emissions from those products. The substantial majority of all greenhouse gas emissions in history have occurred since the 1950s, a period known as the "Great Acceleration."[5] About three quarters of all industrial CO_2 emissions in history have occurred since the 1960s, and more than half have occurred since the late 1980s.[6] The annual rate of CO_2 emissions from extraction, production, and consumption of fossil fuels has increased substantially since 1990.[7]

7. Defendants have known for more than 50 years that greenhouse gas pollution from their fossil fuel products would have significant adverse impacts on the Earth's climate and sea levels. Defendants' awareness of the negative implications of their actions corresponds almost exactly with the Great Acceleration and with skyrocketing greenhouse gas emissions. With that knowledge, Defendants took steps to protect their own assets from those threats through immense internal investment in research, infrastructure improvements, and plans to exploit new opportunities in a warming world.

8. Instead of warning of those known consequences following from the intended and foreseeable use of their products and working to minimize the damage associated with the use and combustion of such products, Defendants concealed the dangers, promoted false and misleading

[4] *See* Pierre Friedlingstein et al., *Global Carbon Budget 2019*, 11 EARTH SYST. SCI. DATA 1783 (2019), https://www.earth-syst-sci-data.net/11/1783/2019.

[5] Will Steffen et al., *The Trajectory of the Anthropocene: The Great Acceleration*, 2 THE ANTHROPOCENE REVIEW 81, 81 (2015).

[6] R. J. Andres et al., *A Synthesis of Carbon Dioxide Emissions from Fossil-Fuel Combustion*, 9 BIOGEOSCIENCES 1845, 1851 (2012).

[7] Friedlingstein et al., *supra* note 4, at 630.

information, sought to undermine public support for greenhouse gas regulation, and engaged in massive campaigns to promote the ever-increasing use of their products at ever-greater volumes. All Defendants' actions in concealing the dangers of, promoting false and misleading information about, and engaging in massive campaigns to promote increasing use of their fossil fuel products have contributed substantially to the buildup of CO_2 in the atmosphere that drives global warming and its physical, environmental, and socioeconomic consequences, including those affecting the County.

9. Defendants are directly responsible for the substantial increase in all CO_2 emissions between 1965 and the present. Defendants individually and collectively played leadership roles in denialist campaigns to misinform and confuse the public and obscure the role of Defendants' products in causing global warming and its associated impacts. But for such campaigns, climate crisis impacts in the County would have been substantially mitigated or eliminated altogether. Accordingly, Defendants are directly responsible for a substantial portion of the climate crisis-related impacts in and to the County.

10. As a direct and proximate consequence of Defendants' wrongful conduct described in this Complaint, the environment in and around the County is changing, with devastating adverse impacts on the County and its residents. For instance, average sea level has already risen and will continue to rise substantially along the County's coastlines, causing flooding, inundation, erosion, and beach loss; extreme weather, including hurricanes and tropical storms, "rain bomb" events, drought, heatwaves, wildfires, and other phenomena will become more frequent, longer-lasting, and more severe; ocean warming and acidification will injure or kill coral reefs that protect the island from increasingly intense storm surges; freshwater supplies will become increasingly scarce; endemic species will lose habitat, while invasive and disease carrying-pest species will

thrive; and the cascading social, economic, and other consequences of those and myriad other environmental changes—all due to anthropogenic global warming—will increase in the County.

11. As a direct result of those and other climate crisis-caused environmental changes, the County has suffered and will continue to suffer severe injuries, including, but not limited to: injury or destruction of County-owned or -operated facilities critical for operations, utility services, and risk management, as well as other assets essential to community health, safety, and well-being; increased planning and preparation costs for community adaptation and resiliency to the effects of the climate crisis; decreased tax revenue due to impacts on the County's tourism- and ocean-based economy and property tax base; and others.

12. Defendants' individual and collective conduct, including, but not limited to, their introduction of fossil fuel products into the stream of commerce while knowing but failing to warn of the threats those products posed to the world's climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with the use of those products; their public deception campaigns designed to obscure the connection between their products and global warming and the environmental, physical, social, and economic consequences flowing from it; and their failure to pursue less hazardous alternatives, actually and proximately caused the County's injuries.

13. Accordingly, the County brings this action against Defendants for Public Nuisance, Private Nuisance, Strict Liability for Failure to Warn, Negligent Failure to Warn, and Trespass.

14. The County hereby disclaims injuries arising on federal property and those that arose from Defendants' provision of fossil fuel products to the federal government.

15. The County seeks to ensure that the parties who have profited from externalizing the consequences and costs of dealing with global warming and its physical, environmental, social,

and economic consequences, bear the costs of those impacts on the County, rather than the County, taxpayers, residents, or broader segments of the public.

II. PARTIES

A. Plaintiff

16. Plaintiff, the County of Maui, brings this action as an exercise of its police power, which includes but is not limited to its power to prevent injuries to and pollution of the County's property and waters, to prevent and abate nuisances, and to prevent and abate hazards to public health, safety, welfare, and the environment.

17. The County consists of several offices, departments, and divisions, each with purview over County operations, facilities, property, and/or programs that have been injured by Defendants' conduct as alleged herein and consequent global warming-related impacts. The County includes the islands of Maui, Lānaʻi, Kahoʻolawe, most of the island of Molokaʻi, and all other islands lying within three nautical miles off the shores thereof, including the islet of Molokini.

B. Defendants

18. When reference in this Complaint is made to an act or omission of the Defendants, unless specifically attributed or otherwise stated, such references should be interpreted to mean that the officers, directors, agents, employees, or representatives of the Defendants committed or authorized such an act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation, or control of the affairs of Defendants, and did so while acting within the scope of their employment or agency.

19. **Sunoco Entities**

a. Sunoco LP is a fossil fuel product distributor, marketer, and promoter. Sunoco LP is registered in Delaware and has its headquarters in Dallas, Texas. Sunoco LP consists

of numerous divisions, subsidiaries and affiliates engaged in all aspects of the fossil fuel industry, including exploration, development, extraction, manufacturing and energy production, transport, trading, marketing, distribution, and/or sales.

b. Sunoco LP controls and has controlled companywide decisions about the quantity, nature, and extent of fossil fuel production, marketing, and sales, including those of its subsidiaries. Sunoco LP's managing partners determine whether and to what extent Sunoco subsidiary holdings around the globe—including in Hawai‘i—market, produce, and/or distribute fossil fuel products.

c. Sunoco LP controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment and communities from climate change from its fossil fuel products, including those of its subsidiaries.

d. Each of Sunoco LP's subsidiaries functions as an alter ego of Sunoco LP, including by conducting fossil fuel-related business in Hawai‘i that Sunoco LP would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both Sunoco LP and the subsidiary, and employing the same people.

e. Each of Sunoco LP's subsidiaries functions as an agent of Sunoco LP, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

f. Aloha Petroleum LLC is a subsidiary of Sunoco LP. Aloha Petroleum LLC is registered in Delaware and has its principal place of business in Dallas, Texas. Aloha Petroleum LLC's principal line of business includes the marketing, terminalling, and distribution of gasoline, diesel, ethanol, lubricants, and other petroleum products in Hawai‘i. Aloha Petroleum LLC purchased the assets of Shell Oil Company, Inc., in the State of Hawai‘i in or about 2010.

g. Aloha Petroleum, Ltd. is a subsidiary of Sunoco LP. Aloha Petroleum, Ltd. is incorporated in Hawai‘i with its principal place of business in Honolulu. Aloha Petroleum, Ltd.'s principal line of business includes the marketing, terminalling, and distribution of gasoline, diesel, biodiesel, ethanol, lubricants, and other petroleum and fossil fuel products. Aloha Petroleum, Ltd. was formerly known as Associated Oil, a division of Tidewater Oil. At times relevant to this litigation, Associated Oil, was a subsidiary of Phillips 66, a predecessor-in-interest to ConocoPhillips.

h. Defendants Sunoco LP, Aloha Petroleum LLC, Aloha Petroleum, Ltd., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "Sunoco."

i. Sunoco has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including to the County. Sunoco's statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of Sunoco's products. That conduct was intended to reach and influence the County, as well as its

residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Hawai‘i, resulting in the County’s injuries.

j. Sunoco has advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *Wall Street Journal*, *New York Times*, *Time*, and *Sports Illustrated*. These advertisements contained no warning commensurate with the risks of Sunoco’s products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Sunoco’s fossil fuel products and climate change, and/or misrepresenting Sunoco’s products or Sunoco itself as environmentally friendly

k. A substantial portion of Sunoco’s fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Hawai‘i, from which Sunoco derives and has derived substantial revenue. Sunoco is one of the largest fossil fuel product marketers and sellers in Hawai‘i. Sunoco has a long history of marketing and selling fossil fuel products in Hawai‘i, including operating numerous gas stations going back to at least the mid-20th century. Sunoco acquired Shell Hawaii’s assets in 2010, which included 32 retail sites, five fuel distribution terminals, and associated assets on O‘ahu, Maui, the Big Island, and Kaua‘i. Sunoco was a member of the American Petroleum Institute’s CO_2 Task Force during the 1970s and 1980s, which played a key role in hiding the industry’s knowledge concerning climate change and disseminating misinformation. Sunoco retains the license for, and operates, Shell-branded gas stations across Hawai‘i, in addition to its own Aloha-branded stations. Sunoco maintains an interactive website by which it directs prospective customers to Aloha-branded service stations in Hawai‘i. Sunoco offers an Aloha-branded proprietary credit card known as the “Save-A-$ Club Card,” which allows consumers in Hawai‘i to pay for gasoline and other products

at Aloha-branded service stations, and which encourages consumers to use Aloha-branded gas stations by offering various rewards, including discounts on gasoline purchases.

20. Exxon Entities

a. Exxon Mobil Corporation is a multi-national, vertically integrated energy and chemicals company incorporated in the State of New Jersey with its headquarters and principal place of business in Irving, Texas. Exxon Mobil Corporation is among the largest publicly traded international oil and gas companies in the world. Exxon Mobil Corporation was formerly known as, did or does business as, and/or is the successor in liability to ExxonMobil Refining and Supply Company, Exxon Chemical U.S.A., ExxonMobil Chemical Corporation, ExxonMobil Chemical U.S.A., ExxonMobil Refining & Supply Corporation, Exxon Company, U.S.A., Exxon Corporation, and Mobil Corporation. Exxon Mobil Corporation is registered to do business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i.

b. Exxon Mobil Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Exxon Mobil Corporation’s 2017 Form 10-K filed with the United States Securities and Exchange Commission represents that its success, including its “ability to mitigate risk and provide attractive returns to shareholders, depends on [its] ability to successfully manage [its] overall portfolio, including diversification among types and locations of [its] projects.” Exxon Mobil Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Exxon Mobil Corporation controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link

between fossil fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries. Exxon Mobil Corporation's Board holds the highest level of direct responsibility for climate change policy within the company. Exxon Mobil Corporation's Chairman of the Board and Chief Executive Officer, its President, and the other members of its Management Committee are actively engaged in discussions relating to greenhouse gas emissions and the risks of climate change on an ongoing basis. Exxon Mobil Corporation requires its subsidiaries to provide an estimate of greenhouse gas-related emissions costs in their economic projections when seeking funding for capital investments.

d. Each of Exxon Mobil Corporation's subsidiaries functions as an alter ego of Exxon Mobil Corporation, including by conducting fossil fuel-related business in Hawai‘i that Exxon Mobil Corporation would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both Exxon Mobil Corporation and the subsidiary, and employing the same people.

e. Each of Exxon Mobil Corporation's subsidiaries functions as an agent of Exxon Mobil Corporation, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

f. Exxonmobil Oil Corporation is a wholly owned subsidiary of Exxon Mobil Corporation that acts on Exxon Mobil Corporation's behalf and subject to Exxon Mobil Corporation's control. Exxonmobil Oil Corporation is incorporated in the State of New York with its principal place of business in Irving, Texas. Exxonmobil Oil Corporation is registered to do

business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i. Exxonmobil Oil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Mobil Oil Corporation.

g. “Exxon” as used hereafter, means collectively Defendants Exxon Mobil Corporation and Exxonmobil Oil Corporation, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions.

h. Exxon consists of numerous divisions and affiliates in all areas of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and transportation, promotion, marketing, and sale of crude oil, natural gas, and petroleum products. Exxon is also a major manufacturer and marketer of commodity petrochemical products.

i. Exxon has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including to the County. Exxon’s statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of Exxon’s products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Hawai‘i, resulting in the County’s injuries.

j. Over the last twenty-five years, Exxon has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products.

During that period, Exxon also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *New York Times*, *Wall Street Journal*, *Time*, *Sports Illustrated*, *People*, *Fortune*, *The New Yorker*, *The Atlantic*, and *Ebony*. These advertisements contained no warning commensurate with the risks of Exxon's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Exxon's fossil fuel products and climate change, and/or misrepresenting Exxon's products or Exxon itself as environmentally friendly.

k. A substantial portion of Exxon's fossil fuel products are or have been transported, traded, supplied, distributed, promoted, marketed, sold, and/or consumed in Hawai‘i, from which Exxon derives and has derived substantial revenue. For example, Exxon directly and through its subsidiaries and/or predecessors-in-interest supplied substantial quantities of fossil fuel products, including, but not limited to, crude oil, to Hawai‘i during the period relevant to this litigation.

21. **Shell Entities**

a. Royal Dutch Shell PLC is a vertically integrated, multinational energy and petrochemical company. Royal Dutch Shell is incorporated in England and Wales, with its headquarters and principal place of business in The Hague, Netherlands. Royal Dutch Shell PLC consists of numerous divisions, subsidiaries and affiliates engaged in all aspects of the fossil fuel industry, including exploration, development, extraction, manufacturing and energy production, transport, trading, marketing, and sales.

b. Royal Dutch Shell PLC controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Royal Dutch Shell PLC's Board of Directors determines whether and to what extent Shell

subsidiary holdings around the globe produce Shell-branded fossil fuel products. For instance, in 2015, a Royal Dutch Shell PLC subsidiary employee admitted in a deposition that Royal Dutch Shell PLC's Board of Directors made the decision about whether to drill a particular oil deposit off the coast of Alaska.

c. Royal Dutch Shell PLC controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries. Overall accountability for climate change within the Shell group of companies lies with Royal Dutch Shell PLC's Chief Executive Officer and Executive Committee. For instance, at least as early as 1988, Royal Dutch Shell PLC, through its subsidiaries, was researching companywide CO_2 emissions and concluded that the Shell group of companies accounted for "4% of the CO_2 emitted worldwide from combustion," and that climatic changes could compel the Shell group, as controlled by Royal Dutch Shell PLC, to "examine the possibilities of expanding and contracting [its] business accordingly." Royal Dutch Shell PLC's CEO has stated that Royal Dutch Shell PLC would reduce the carbon footprint of its products, including those of its subsidiaries "by reducing the net carbon footprint of the full range of Shell emissions, from our operations and from the consumption of our products." Additionally, in November 2017, Royal Dutch Shell PLC announced it would reduce the carbon footprint of "its energy products" by "around" half by 2050. Royal Dutch Shell PLC's effort is inclusive of all fossil fuel products produced under the Shell brand, including those of its subsidiaries.

d. Each of Royal Dutch Shell PLC's subsidiaries functions as an alter ego of Royal Dutch Shell PLC, including by conducting fossil fuel-related business in Hawai‘i that Royal

Dutch Shell PLC would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both Royal Dutch Shell PLC and the subsidiary, and employing the same people.

e. Each of Royal Dutch Shell PLC’s subsidiaries functions as an agent of Royal Dutch Shell PLC, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies’ benefit. Specifically, the subsidiaries furthered the parents’ campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

f. Shell Oil Company is a wholly owned subsidiary of Royal Dutch Shell PLC that acts on Royal Dutch Shell PLC’s behalf and subject to Royal Dutch Shell PLC’s control. Shell Oil Company is incorporated in the State of Delaware and with its principal place of business in Houston, Texas. Shell Oil Company is registered to do business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i. Shell Oil Company was formerly known as, did or does business as, and/or is the successor in liability to Deer Park Refining LP, Shell Oil, Shell Oil Products, Shell Chemical, Shell Trading US, Shell Trading (US) Company, Shell Energy Services, The Pennzoil Company, Shell Oil Products Company LLC, Shell Oil Products Company, Star Enterprise, LLC, and Pennzoil-Quaker State Company.

g. Shell Oil Products Company LLC is a wholly owned subsidiary of Royal Dutch Shell PLC that acts on Royal Dutch Shell PLC’s behalf and subject to Royal Dutch Shell PLC’s control. Shell Oil Products Company LLC is incorporated in the State of Delaware and maintains its principal place of business in Houston, Texas. Shell Oil Products Company LLC is registered to do business in Hawai‘i and has a registered agent for service of process in Honolulu,

Hawai‘i. Shell Oil Products Company LLC is an energy and petrochemical company involved in refining, transporting, distributing, and marketing Shell fossil fuel products.

h. Defendants Royal Dutch Shell PLC, Shell Oil Company, Shell Oil Products Company LLC, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Shell."

i. Shell has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including to the County. Shell's statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of Shell's products. That conduct was intended to reach and influence the County, as well is its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants' fossil fuel products in and outside Hawai‘i, resulting in the County's injuries.

j. Over the last twenty-five years, Shell has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products. During that period, Shell also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *Wall Street Journal*, *Time*, *Sports Illustrated*, *People*, *The New Yorker*, *The Atlantic*, *Ebony*, and *Newsweek*. These advertisements contained no warning commensurate with the risks of Shell's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the

connection between Shell's fossil fuel products and climate change, and/or misrepresenting Shell's products or Shell itself as environmentally friendly.

k. A substantial portion of Shell's fossil fuel products are or have been supplied, traded, distributed, promoted, marketed, sold, and/or consumed in Hawai‘i, from which Shell derives and has derived substantial revenue. Among other endeavors, Shell conducts and/or controls, either directly or through franchise agreements, retail fossil fuel sales at over thirty-five Shell-branded petroleum service stations located in Hawai‘i, at which it promotes, markets, and advertises its fossil fuel products under its Shell brand name. Shell markets and advertises its fossil fuel products in Hawai‘i including by maintaining an interactive website available to prospective customers by which it directs Hawai‘i residents to Shell's nearby retail service stations in Hawai‘i. Shell offers a proprietary credit card known as the "Shell Fuel Rewards Card," which allows consumers in Hawai‘i to pay for gasoline and other products at Shell-branded service stations, and which encourages consumers to use Shell-branded gas stations by offering various rewards, including discounts on gasoline purchases. Shell further maintains a smartphone application known as the "Shell US App" that offers Hawai‘i consumers a cashless payment method for gasoline and other products at Shell-branded service stations. Hawai‘i consumers utilize the payment method by providing their credit card information through the application. Hawai‘i consumers can also receive rewards including discounts on gasoline purchases by registering their personal identifying information in the Shell US App and using the application to identify and activate gas pumps at Shell service stations during a purchase. Shell continues to license the Shell fossil fuel product brand name to petroleum sellers in Hawai‘i. During the period relevant to this litigation, Shell owned and operated five fossil fuel distribution terminals and associated assets on O‘ahu, Maui, the Big Island, and Kaua‘i.

22. **Chevron Entities**

a. Chevron Corporation is a multinational, vertically integrated energy and chemicals company incorporated in the State of Delaware, with its global headquarters and principal place of business in San Ramon, California.

b. Chevron Corporation operates through a web of United States and international subsidiaries at all levels of the fossil fuel supply chain. Chevron Corporation's and its subsidiaries' operations consist of: (1) exploring for, developing, and producing crude oil and natural gas; (2) processing, liquefaction, transportation, and regasification associated with liquefied natural gas; (3) transporting crude oil by major international oil export pipelines; (4) transporting, storing, and marketing natural gas; (5) refining crude oil into petroleum products; marketing of crude oil and refined products; (6) transporting crude oil and refined products by pipeline, marine vessel, motor equipment, and rail car; (7) basic and applied research in multiple scientific fields including chemistry, geology, and engineering; and (8) manufacturing and marketing of commodity petrochemicals, plastics for industrial uses, and fuel and lubricant additives.

c. Chevron Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Chevron Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

d. Chevron Corporation controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil

fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries.

e. Each of Chevron Corporation's subsidiaries functions as an alter ego of Chevron Corporation, including by conducting fossil fuel-related business in Hawai‘i that Chevron Corporation would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both Chevron Corporation and the subsidiary, and employing the same people.

f. Each of Chevron Corporation's subsidiaries functions as an agent of Chevron Corporation, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

g. Chevron U.S.A. Inc. is a Pennsylvania corporation with its principal place of business located in San Ramon, California. Chevron U.S.A. Inc. is registered to do business in and has a registered agent for service of process in Honolulu, Hawai‘i. Chevron U.S.A. Inc. is a wholly-owned subsidiary of Chevron Corporation that acts on Chevron Corporation's behalf and subject to Chevron Corporation's control. Chevron U.S.A. Inc. was formerly known as, and did or does business as, and/or is the successor in liability to Gulf Oil Corporation, Gulf Oil Corporation of Pennsylvania, Chevron Products Company, and Chevron Chemical Company.

h. "Chevron" as used hereafter, means collectively, Defendants Chevron Corporation, and Chevron U.S.A. Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions.

i. Chevron has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including the County’s injuries. Chevron’s statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of Chevron’s products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Hawai‘i, resulting in the County’s injuries.

j. Over the last twenty-five years, Chevron has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products. During that period, Chevron also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *New York Times*, *Wall Street Journal*, *Time*, *Sports Illustrated*, *People*, *Fortune*, *The New Yorker*, *The Atlantic*, *Ebony*, and *Newsweek*. These advertisements contained no warning commensurate with the risks of Chevron’s products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Chevron’s fossil fuel products and climate change, and/or misrepresenting Chevron’s products or Chevron itself as environmentally friendly.

k. A substantial portion of Chevron’s fossil fuel products are or have been refined, traded, distributed, promoted, marketed, sold, and/or consumed in Hawai‘i, from which

Chevron derives and has derived substantial revenue. For instance, during the period relevant to this litigation, Chevron owned and operated a 58,000-barrel-per-day refinery on Oʻahu. Chevron owns and operates four fossil fuel storage terminals on Oʻahu, Maui, Kauaʻi, and the Big Island. Chevron conducts and controls, and/or has conducted and controlled, either directly or through franchise agreements, retail fossil fuel sales at over eighty Chevron-branded petroleum services stations in Hawaiʻi, at which it promotes, markets, and advertises its fossil fuel products to consumers. Chevron offers a proprietary credit cards known as the "Chevron Techron Advantage Card," and "Texaco Techron Advantage Card," which allow consumers in Hawaiʻi to pay for gasoline and other products at Chevron- and/or Texaco-branded service stations, and which encourage consumers in Hawaiʻi to use Chevron- and/or Texaco-branded service stations by offering various rewards, including discounts on gasoline purchases at Chevron- and/or Texaco-branded service stations and cash rebates. Chevron maintains an interactive website available in Hawaiʻi by which it directs prospective customers to Chevon- and Texaco-branded service stations in Hawaiʻi. Chevron further maintains smartphone applications known as the "Chevron App" and "Texaco App" that offer Hawaiʻi consumers a cashless payment method for gasoline and other products at Chevron- and/or Texaco-branded service stations. Consumers in Hawaiʻi utilize the payment method by providing their credit card information through the application. Consumers in Hawaiʻi can also receive rewards including discounts on gasoline purchases by registering their personal identifying information into the Chevron App and Texaco App and using the application to identify and activate gas pumps at Chevron and/or Texaco service stations during a purchase.

23. **BHP Entities**

a. BHP is a dual-listed company consisting of two parent companies: BHP Group Limited, which is registered in Australia and maintains its headquarters in Melbourne,

Victoria, Australia; and BHP Group plc, which is registered in England and Wales, and maintains its headquarters in London, England. Collectively, those entities are referred to herein as "BHP Group."

b. BHP Group operates as a multinational, vertically-integrated, petroleum, natural gas, and coal company, consisting of multiple affiliates, subsidiaries, and segments. BHP Group's fossil fuel products-related operations consist of exploration, evaluation, development, extraction, processing, transportation, marketing, and logistics.

c. BHP Group controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. BHP Group determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

d. BHP Group controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries.

e. Each of BHP Group's subsidiaries functions as an alter ego of BHP Group, including by conducting fossil fuel-related business in Hawai‘i that BHP Group would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both BHP Group and the subsidiary, and employing the same people.

f. Each of BHP Group's subsidiaries functions as an agent of BHP Group, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the

parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

g. BHP Group owns several subsidiaries that do fossil fuel products-related business in the United States, including in Hawai‘i, including, but not limited to, BHP Hawaii Inc. BHP Hawaii Inc. is incorporated in Hawai‘i.

h. "BHP," as used hereafter, refers to Defendants BHP Group Limited, BHP Group plc, and BHP Hawaii Inc., together with their predecessors, successors, parents, subsidiaries, affiliates, and divisions.

i. BHP has tortiously distributed, marketed, advertised, and promoted its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including the County's injuries. BHP's statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of BHP's products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants' fossil fuel products in and outside Hawai‘i, resulting in the County's injuries.

j. BHP has advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *Wall Street Journal* and *Fortune*. These advertisements contained no warning commensurate with the risks of BHP's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material

omissions obfuscating the connection between BHP's fossil fuel products and climate change, and/or misrepresenting BHP's products or BHP itself as environmentally friendly.

k. A substantial portion of BHP's fossil fuel products are or have been manufactured, refined, traded, distributed, promoted, marketed, sold, and/or consumed in Hawai‘i, from which BHP derives and has derived substantial revenue. For example, BHP owned and operated a fossil fuel refinery in Kapolei on O‘ahu during the time relevant to this litigation. BHP conducts and controls, and/or has conducted and controlled, either directly or through franchise agreements, retail fossil fuel sales at more than thirty BHP-branded retail petroleum service stations throughout Hawai‘i, at which it is engaging or at times relevant to this complaint has engaged in the promotion, marketing, and advertisement of its fossil fuel products.

24. **BP Entities**

a. BP P.L.C. is a multinational, vertically integrated energy and petrochemical company, registered in England and Wales with its principal place of business in London, England. BP P.L.C. consists of three main operating segments: (1) exploration and production, (2) refining and marketing, and (3) gas power and renewables. BP P.L.C. is the ultimate parent company of numerous subsidiaries, referred to collectively as the "BP Group," which explore for and extract oil and gas worldwide; refine oil into fossil fuel products such as gasoline; and market and sell oil, fuel, other refined petroleum products, and natural gas worldwide. BP P.L.C.'s subsidiaries explore for oil and natural gas under a wide range of licensing, joint arrangement, and other contractual agreements.

b. BP P.L.C. controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. BP P.L.C. is the ultimate decisionmaker on fundamental decisions about the BP Group's core business, *i.e.*,

the level of companywide fossil fuels to produce, including production among BP P.L.C.'s subsidiaries. For instance, BP P.L.C. reported that in 2016–17 it brought online thirteen major exploration and production projects. Those contributed to a 12-percent increase in the BP Group's overall fossil fuel product production. Those projects were carried out by BP P.L.C.'s subsidiaries. Based on those projects, BP P.L.C. expects the BP Group to deliver to customers 900,000 barrels of new product per day by 2021. BP P.L.C. further reported that in 2017 it sanctioned three new exploration projects in Trinidad, India, and the Gulf of Mexico.

c. BP P.L.C. controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries. BP P.L.C. makes fossil fuel production decisions for the entire BP Group based on factors including climate change. BP P.L.C.'s Board is the highest decision-making body within the company, with direct responsibility for the BP Group's climate change policy. BP P.L.C.'s chief executive is responsible for maintaining the BP Group's system of internal control that governs the BP Group's business conduct. BP P.L.C.'s senior leadership directly oversees a carbon steering group, which manages climate-related matters and consists of two committees overseen directly by the board that focus on climate-related investments.

d. Each of BP P.L.C.'s subsidiaries functions as an alter ego of BP P.L.C., including by conducting fossil fuel-related business in Hawai‘i that BP P.L.C. would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both BP P.L.C. and the subsidiary, and employing the same people.

e. Each of BP P.L.C.'s subsidiaries functions as an agent of BP P.L.C., including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

f. BP America Inc. is a wholly owned subsidiary of BP P.L.C. that acts on BP P.L.C.'s behalf and subject to BP P.L.C.'s control. BP America Inc. is a vertically integrated energy and petrochemical company incorporated in the State of Delaware with its headquarters and principal place of business in Houston, Texas. BP America Inc., consists of numerous divisions and affiliates in all aspects of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and transportation, marketing, and sale of crude oil, natural gas, and petroleum products. BP America Inc. is registered to do business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i. BP America Inc. was formerly known as, did or does business as, and/or is the successor in liability to Amoco Corporation, Amoco Oil Company, ARCO Products Company, Atlantic Richfield Delaware Corporation, Atlantic Richfield Company (a Delaware Corporation), BP Exploration & Oil, Inc., BP Products North America Inc., BP Amoco Corporation, BP Amoco Plc, BP Oil, Inc., BP Oil Company, Sohio Oil Company, Standard Oil of Ohio (SOHIO), Standard Oil (Indiana), The Atlantic Richfield Company (a Pennsylvania corporation) and its division, the Arco Chemical Company.

g. Defendants BP P.L.C. and BP America, Inc., together with their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "BP."

h. BP has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including to the County. BP’s statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of BP’s products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Hawai‘i, resulting in the County’s injuries.

i. Over the last twenty-five years, BP has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products. During that period, BP also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *New York Times*, *Wall Street Journal*, *Time*, *Fortune*, *The New Yorker*, *The Atlantic*, and *Newsweek*. These advertisements contained no warning commensurate with the risks of BP’s products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between BP’s fossil fuel products and climate change, and/or misrepresenting BP’s products or BP itself as environmentally friendly.

j. A substantial portion of BP’s fossil fuel products are or have been supplied, transported, traded, distributed, promoted, marketed, sold, and/or consumed in Hawai‘i, from which BP derives and has derived substantial revenue. For example, BP directly and through its subsidiaries and/or predecessors-in-interest supplied substantial quantities of fossil fuel products,

including, but not limited to, crude oil, to Hawai‘i during the period relevant to this litigation. At times relevant to this complaint, BP engaged in the production of crude oil in Alaska, a substantial portion of which is shipped to, shipped through, and sold to refinery customers in Hawai‘i. BP maintains an interactive website by which it directs prospective customers to retail locations in Hawai‘i offering BP’s fossil fuel products for sale, including, but not limited to, its Castrol brand of lubricants. BP offers a proprietary credit card known as the “BP Credit Card,” which allows consumers in Hawai‘i to pay for gasoline and other products. Consumers who use the BP Credit Card receive various rewards, including discounts on gasoline purchases.

25. **Marathon Petroleum Corporation**

a. Marathon Petroleum Corporation is a multinational energy company incorporated in the State of Delaware and with its principal place of business in Findlay, Ohio. Marathon Petroleum Corporation was spun off from the operations of Marathon Oil Corporation in 2011. It consists of multiple subsidiaries and affiliates involved in fossil fuel product refining, marketing, retail, and transport, including both petroleum and natural gas products. Marathon Petroleum Corporation merged in October 2018 with Andeavor Corporation, formerly known as Tesoro Corporation.

b. Marathon Petroleum Corporation is a successor-in-interest to Tesoro Corporation and Tesoro Hawaii Corporation.

c. Marathon Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Marathon Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

d. Marathon Petroleum Corporation controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries.

e. Each of Marathon Petroleum Corporation's subsidiaries functions as an alter ego of Marathon Petroleum Corporation, including by conducting fossil fuel-related business in Hawai‘i that Marathon Petroleum Corporation would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both Marathon Petroleum Corporation and the subsidiary, and employing the same people.

f. Each of Marathon Petroleum Corporation's subsidiaries functions as an agent of Marathon Petroleum Corporation, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

g. Defendant Marathon Petroleum Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Marathon."

h. Marathon has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including the County's injuries. Marathon's statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial,

and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of Marathon’s products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Hawai‘i, resulting in the County’s injuries.

i. Over the last twenty-five years, Marathon has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products. During that period, Marathon also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the magasine *Time*. These advertisements contained no warning commensurate with the risks of Marathon’s products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Marathon’s fossil fuel products and climate change, and/or misrepresenting Marathon’s products or Marathon itself as environmentally friendly.

j. A substantial portion of Marathon’s fossil fuel products are or have been refined, transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Hawai‘i, from which Marathon derives and has derived substantial revenue. For example, Marathon marketed, promoted, and sold its gasoline and other fossil fuel products to consumers in Hawai‘i, including through over thirty petroleum service stations it owned in Hawai‘i and operated under the “Tesoro” name. Additionally, during the time relevant to this litigation, Marathon owned and operated the largest petroleum refinery in Hawai‘i, which was capable of refining 94,000 barrels of fossil fuel per day.

26. **ConocoPhillips Entities**

a. ConocoPhillips is a multinational energy company incorporated in the State of Delaware and with its principal place of business in Houston, Texas. ConocoPhillips consists of numerous divisions, subsidiaries, and affiliates that carry out ConocoPhillips's fundamental decisions related to all aspects of the fossil fuel industry, including exploration, extraction, production, manufacture, transport, and marketing.

b. ConocoPhillips controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. ConocoPhillips determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products. ConocoPhillips's most recent annual report subsumes the operations of the entire ConocoPhillips group of subsidiaries under its name. Therein, ConocoPhillips represents that its value—for which ConocoPhillips maintains ultimate responsibility—is a function of its decisions to direct subsidiaries to explore for and produce fossil fuels: "Unless we successfully add to our existing proved reserves, our future crude oil, bitumen, natural gas and natural gas liquids production will decline, resulting in an adverse impact to our business." ConocoPhillips optimizes the ConocoPhillips group's oil and gas portfolio to fit ConocoPhillips's strategic plan. For example, in November 2016, ConocoPhillips announced a plan to generate $5 billion to $8 billion of proceeds over two years by optimizing its business portfolio, including its fossil fuel product business, to focus on low cost-of-supply fossil fuel production projects that strategically fit its development plans.

c. ConocoPhillips controls and has controlled companywide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil

fuel use and impacts on the environment and communities from climate change, including those of its subsidiaries. For instance, ConocoPhillips's board has the highest level of direct responsibility for climate change policy within the company. ConocoPhillips has developed and implements a corporate Climate Change Action Plan to govern climate change decision-making across all entities in the ConocoPhillips group.

d. Each of ConocoPhillips's subsidiaries functions as an alter ego of ConocoPhillips, including by conducting fossil fuel-related business in Hawai‘i that ConocoPhillips would otherwise conduct if it were present in Hawai‘i, sharing directors and officers with supervisory roles over both ConocoPhillips and the subsidiary, and employing the same people.

e. Each of ConocoPhillips's subsidiaries functions as an agent of ConocoPhillips, including by conducting activities in Hawai‘i at the direction of their parent company or companies and for the parent company or companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in Hawai‘i and increased sales to the parents.

f. ConocoPhillips Company is a wholly owned subsidiary of ConocoPhillips that acts on ConocoPhillips's behalf and subject to ConocoPhillips's control. ConocoPhillips Company is incorporated in the State of Delaware and has its principal office in Bartlesville, Oklahoma. ConocoPhillips Company is qualified to do business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i.

g. Phillips 66 is a multinational energy and petrochemical company incorporated in the State of Delaware and with its principal place of business in Houston, Texas.

It encompasses downstream fossil fuel processing, refining, transport, and marketing segments that were formerly owned and/or controlled by ConocoPhillips.

h. Phillips 66 Company is a wholly owned subsidiary of Phillips 66 that acts on Phillips 66's behalf and subject to Phillips 66's control. Phillips 66 Company is incorporated in Delaware and has its principal office in Houston, Texas. Phillips 66 Company is qualified to do business in Hawai‘i and has a registered agent for service of process in Honolulu, Hawai‘i. Phillips 66 Company was formerly known as, did or does business as, and/or is the successor in liability to Phillips Petroleum Company, Conoco, Inc., Tosco Corporation, Tosco Refining Co., and Associated Oil (a predecessor-in-interest of defendant Aloha Petroleum, Ltd.).

i. Defendants ConocoPhillips, ConocoPhillips Company, Phillips 66, Phillips 66 Company, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "ConocoPhillips."

j. ConocoPhillips has and continues to tortiously distribute, market, advertise, and promote its products in Hawai‘i, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Hawai‘i, including to the County. ConocoPhillips's statements in and outside of Hawai‘i made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Hawai‘i, were intended to conceal and mislead the public, including the County and its residents, about the serious adverse consequences from continued use of ConocoPhillips's products. That conduct was intended to reach and influence the County, as well as its residents and residents of the State of Hawai‘i, among others, to continue unabated use of Defendants' fossil fuel products in and outside Hawai‘i, resulting in the County's injuries.

k. Over the last twenty-five years, ConocoPhillips has spent substantially on radio, television, and/or outdoor advertisements in the Hawai‘i market related to its fossil fuel products. During that period, ConocoPhillips also advertised in print publications circulated widely to Hawai‘i consumers, including but not limited to the *New York Times*, *Wall Street Journal*, *Time*, *Sports Illustrated*, *People*, *Fortune*, and *The Atlantic*. These advertisements contained no warning commensurate with the risks of ConocoPhillips's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between ConocoPhillips's fossil fuel products and climate change, and/or misrepresenting ConocoPhillips's products or ConocoPhillips itself as environmentally friendly.

l. A substantial portion of ConocoPhillips's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Hawai‘i, from which ConocoPhillips derives and has derived substantial revenue. For instance, ConocoPhillips transports and delivers crude oil to purchasers, refiners, and/or distributors in Hawai‘i, including through its subsidiaries. ConocoPhillips has owned and/or operated a bulk fossil fuel terminal near Honolulu, at which it received imported fossil fuels for distribution and sale throughout Hawai‘i. ConocoPhillips conducts and controls, and/or has conducted and controlled, either directly or through franchise agreements, retail fossil fuel sales at its branded gas station locations throughout Hawai‘i, at which it is engaging or at times relevant to this complaint has engaged in the promotion, marketing, and advertisement of its fossil fuel products under its various brand names, including ConocoPhillips, Phillips 66, and/or 76. ConocoPhillips maintains an interactive website available in Hawai‘i by which it directs prospective customers to retail locations offering its fossil fuel products for sale, including but not limited to 76-branded gasoline

and service stations. ConocoPhillips also offers Hawai‘i consumers multiple proprietary credit cards, including the “Drive Savvy Rewards Credit Card” and the “76 Fleet Card,” which allow Hawai‘i consumers and business customers to pay for gasoline and other products at Phillips 66-, Conoco-, and 76-branded service stations, and which incentivize use of ConocoPhillips’s products by offering various rewards, including discounts on gasoline purchases. ConocoPhillips further maintains smartphone applications, including the “My 76 App” and the “My Phillips 66 App,” which offer Hawai‘i consumers a cashless payment method for gasoline and other products at its branded service stations. Hawai‘i consumers utilize the payment method by providing their credit card information through the application. Hawai‘i consumers can also receive rewards including discounts on gasoline purchases by registering their personal identifying information into the My 76 App and My Phillips 66 App and using the application to identify and activate gas pumps at service stations during a purchase.

C. Relevant Non-Parties: Fossil Fuel Industry Associations

27. As set forth in greater detail below, each Defendant had actual knowledge that its fossil fuel products were hazardous. Defendants obtained knowledge of the hazards of their products independently and through their membership and involvement in trade associations.

28. Acting on behalf of and under the supervision and/or control of Defendants, numerous industry associations and industry-created front groups, including those listed below, conducted early climate research, distributed their findings to Defendants, and engaged in a long-term course of conduct to misrepresent, omit, and conceal the dangers of Defendants’ fossil fuel products with the aim of protecting or enhancing Defendants’ sales to consumers, including consumers in the County. Defendants actively supervised, facilitated, consented to, and/or directly

participated in the misleading messaging of these front groups, from which they profited significantly, including in the form of increased sales in the County—as was the intent.

29. **The American Petroleum Institute ("API")** is a national trade association formed in 1919 and based in the District of Columbia and registered to conduct activity in Hawai‘i. API's purpose is to advance its individual member's collective business interests, which includes increasing consumers' consumption of oil and gas to Defendants' financial benefit. Among other functions, API coordinates among members of the petroleum industry and gathers information of interest to the industry and disseminates that information to its members.

a. Through membership, Executive Committee roles, and/or budgetary funding of API, Defendants have collectively steered the policies and trade practices of API. Defendants have also coordinated with API to craft and disseminate misleading messaging regarding climate change to advance their shared goal of increasing consumer demand for Defendants' fossil fuels. The following Defendants and/or their predecessors-in-interest are and/or have been core API members at times relevant to this litigation: Exxon, BP, Shell, Marathon, Chevron, BHP, ConocoPhillips, and Sunoco. Executives from some Defendants served on the API Executive Committee and/or as API Chairman, which is akin to serving as a corporate officer. For example, Exxon's CEO served on API's Executive Committee almost continuously for over 20 years (1991, 1996–97, 2001, and 2005–2016). BP's CEO served as API's Chairman in 1988, 1989, and 1998. Chevron's CEO served as API Chairman in 1994, 1995, 2003, and 2012. Shell's President served on API's Executive Committee from 2005–06. In 2020, API elected Phillips 66 Chairman and CEO Greg Garland to serve a two-year term as the President of its Board of Directors. Exxon President and CEO Darren Woods was Board President from 2018 to 2020, and ConocoPhillips Chairman and CEO Ryan Lance was Board President from 2016 to 2018.

Executive members of ConocoPhillips, and Marathon also served as members of API's Board of Directors at various times.

b. Relevant information was shared among API and Defendants and their predecessors-in-interest through (1) API distributing information it held to its members and (2) participation of officers and other personnel from Defendants and their predecessors-in-interest on API boards, committees, and task forces. Acting on behalf of and under the supervision and control of Defendants, API has participated in and led several coalitions, front groups, and organizations that have promoted disinformation about fossil fuel products to consumers, including the Global Climate Coalition, Partnership for a Better Energy Future, Coalition for American Jobs, Alliance for Energy and Economic Growth, and Alliance for Climate Strategies. These front groups were formed to provide climate disinformation and advocacy from a misleadingly objective source, when, in fact, they were financed and controlled by Defendants. Defendants have benefited from the spread of this disinformation, because, among other things, it has ensured a thriving consumer market for oil and gas, resulting in substantial profits for Defendants.

c. According to its website, API's stated mission includes "influenc[ing] public policy in support of a strong, viable U.S. oil and natural gas industry," which includes increasing consumers' consumption of oil and gas to Defendants' financial benefit. Through their Executive Committee roles, API board membership, and/or budgetary funding of API, Defendants collectively wielded control over the policies and trade practices of API. In addition, Defendants directly supervised and participated in API's misleading messaging regarding climate change. Defendants used their control over and involvement in API to further their goal of influencing consumer demand for their fossil fuel products through a long-term advertising and communications campaign centered on climate change denialism.

30. **The Western States Petroleum Association ("WSPA")** is a trade association representing oil producers in Arizona, California, Nevada, Oregon, and Washington.[8] The following Defendants and/or their predecessors-in-interest are and/or have been WSPA members at times relevant to this litigation: Exxon, BP, Chevron, Shell, and ConocoPhillips.[9]

31. **The American Fuel and Petrochemical Manufacturers ("AFPM")** is a national association of petroleum and petrochemical companies. AFPM has promoted disinformation about fossil fuel products to consumers through its membership in Partnership for a Better Energy Future. The following Defendants and/or their predecessors-in-interest are and/or have been AFPM members at times relevant to this litigation, and staff from these Defendants serve or have served on AFPM's board of directors: Exxon, BP, Marathon, Shell, Chevron, and ConocoPhillips.[10] AFPM has promoted disinformation about fossil fuel products to consumers, including those in the County, through its membership in Partnership for a Better Energy Future. Defendants have benefited from the spread of this disinformation, because among other things, it has ensured a thriving consumer market for oil and gas, resulting in substantial profits for Defendants.

32. **U.S. Oil & Gas Association ("USOGA")** is a national trade association representing oil and gas producers, formerly known as the Mid-Continent Oil & Gas Association. The following Defendants and/or their predecessors-in-interest are and/or have been USOGA members at times relevant to this litigation: Exxon, BP, Chevron, Shell, BHP, Marathon and ConocoPhillips.[11]

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[8] *About*, WESTERN STATES PETROLEUM ASS'N, https://www.wspa.org/about (last visited Oct. 7, 2020).

[9] *Id.*

[10] *Membership Directory*, AM. FUEL & PETROCHEMICAL MFRS., https://www.afpm.org/membership-directory (last visited Oct. 24, 2019).

[11] *See, e.g.*, *Member Companies*, LOUISIANA MID-CONTINENT OIL & GAS ASS'N, https://www.lmoga.com/membership/member-companies (last visited Oct. 7, 2020).

33. **Western Oil & Gas Association** was a California nonprofit trade association representing the oil and gas industries consisting of over 75 member companies. Its members included companies and individuals responsible for more than 65 percent of petroleum production and 90 percent of petroleum refining and marketing in the Western United States. The following Defendants and/or their predecessors-in-interest are and/or have been WOGA members at times relevant to this litigation: Exxon, Chevron, ConocoPhillips, and Shell.

34. **The Information Council for the Environment ("ICE")** was formed by coal companies and their allies, including the Western Fuels Association and the National Coal Association. Associated companies included Pittsburg and Midway Coal Mining (Chevron).

35. **The Global Climate Coalition ("GCC")** was an industry group formed to oppose greenhouse gas emission reduction initiatives. GCC was founded in 1989, shortly after the first meeting of the Intergovernmental Panel on Climate Change ("IPCC"), the United Nations body for assessing the science related to climate change. GCC disbanded in or around 2001. Founding members included API. Over the course of its existence, GCC corporate members included Amoco (BP), API, Chevron, Exxon, Ford, Shell Oil, Texaco (Chevron) and Phillips Petroleum (ConocoPhillips). Over its existence other members and funders included ARCO (BP), and the Western Fuels Association.

III. AGENCY

36. At all times herein mentioned, each of the Defendants was the agent, servant, partner, aider and abettor, co-conspirator, and/or joint venturer of each of the remaining Defendants herein and was at all times operating and acting within the purpose and scope of said agency, service, employment, partnership, conspiracy, and joint venture and rendered substantial

assistance and encouragement to the other Defendants, knowing that their conduct was wrongful and/or constituted a breach of duty.

37. All Defendants, by and through non-party fossil fuel trade associations and industry groups, conspired to conceal and misrepresent the known dangers of fossil fuels, to knowingly withhold information regarding the effects of using fossil fuel products, to discredit climate change science and create the appearance such science is uncertain, and to engage in massive campaigns to promote heavy use of their fossil fuel products, which they knew would result in injuries to the County. Through their own actions and the actions of their agents, and through their membership and participation in fossil fuel industry trade associations, each Defendant was and is a member of that conspiracy. Defendants committed substantial acts to further the conspiracy in Hawai‘i by making misrepresentations and omissions to Hawai‘i consumers and failing to warn them about the disastrous effects of fossil fuel use. A substantial effect of the conspiracy has also and will also occur in Hawai‘i, as the County has suffered and will suffer injuries from Defendants’ wrongful conduct including, but not limited to, sea level rise, flooding, erosion, loss of wetlands and beaches, drought, wildfire, extreme precipitation events, and other social and economic consequences of these environmental changes. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, that their actions in Hawai‘i and elsewhere would result in these injuries in and to Hawai‘i and the County. Finally, the climate effects described herein are direct and foreseeable results of Defendants’ conduct in furtherance of the conspiracy.

IV. JURISDICTION AND VENUE

38. This Court has subject matter jurisdiction over this civil action under Hawai‘i Revised Statutes section 603-21.5.

39. This Court has personal jurisdiction over each Defendant either because they are domiciled in Hawai‘i; were served with process in Hawai‘i; are organized under the laws of Hawai‘i; and/or maintain their principal place of business in Hawai‘i; or because they transact business in Hawai‘i; perform work in Hawai‘i; contract to supply goods, manufacture products, or provide services in Hawai‘i; advertise and promote their products in Hawai‘i; caused tortious injury in Hawai‘i; engage in persistent courses of conduct in Hawai‘i; derive substantial revenue from manufactured goods, products, or services used or consumed in Hawai‘i; and/or have interests in, use, or possess real property in Hawai‘i.

40. Venue in this Court is proper under Hawai‘i Revised Statutes section 603-36(5) because the County's claims for relief arose in the County of Maui.

V. FACTUAL BACKGROUND

A. Climate Disruption—Cause and Effects

41. Human-caused warming of the Earth is unequivocal. As a result, the atmosphere and oceans are warming, the sea level is rising, snow and ice cover is diminishing, oceans are acidifying, and hydrologic systems have been altered, among other environmental changes.

42. The mechanism by which human activity causes global warming and climate disruption is well established: ocean and atmospheric warming is overwhelmingly caused by anthropogenic greenhouse gas emissions.

43. Greenhouse gases are largely byproducts of humans combusting fossil fuels to produce energy and using fossil fuels to create petrochemical products.

44. Prior to World War II, most anthropogenic CO_2 emissions were caused by land-use practices, such as forestry and agriculture, which altered the ability of the land and global biosphere to absorb CO_2 from the atmosphere; the impacts of such activities on Earth's climate were

relatively minor. Since that time, however, both the annual rate and total volume of anthropogenic CO_2 emissions have increased enormously following the advent of major uses of oil, gas, and coal.

45. The graph below illustrates that fossil fuel emissions are the dominant source of increases in atmospheric CO_2 since the mid-twentieth century.

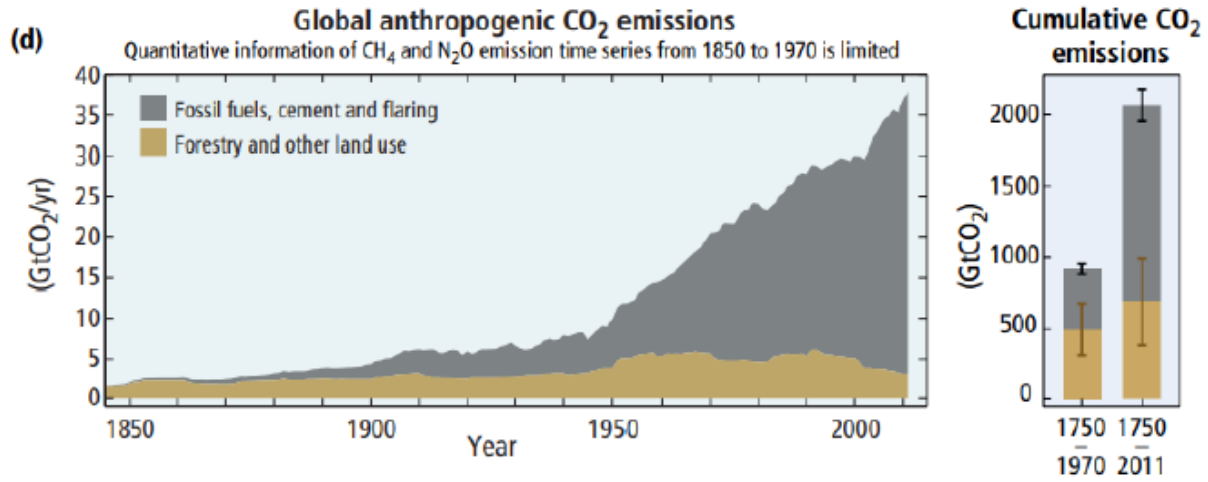

Figure 1: Global Anthropogenic CO_2 Emissions[12]

46. The recent acceleration of fossil fuel emissions has led to a correspondingly sharp spike in atmospheric concentration of CO_2. Since 1960, the concentration of CO_2 in the atmosphere has gone from under 320 parts per million ("ppm") to approximately 415 ppm.[13] The rate of growth of atmospheric CO_2 is also accelerating. From 1960 to 1970, atmospheric CO_2 increased by an average of approximately 1 ppm per year; in the last five years, it has increased by more than 2.5 ppm per year.[14]

47. The graph below indicates the tight nexus between the sharp increase in emissions from the combustion of fossil fuels and the steep rise of atmospheric concentrations of CO_2.

[12] *See* IPCC 2014 SYNTHESIS REPORT, *supra* note 3, at 3.

[13] Global Monitoring Laboratory, *Trends in Atmospheric Carbon Dioxide*, NOAA (last visited Oct. 8, 2020), https://www.esrl.noaa.gov/gmd/ccgg/trends.

[14] *Id.*

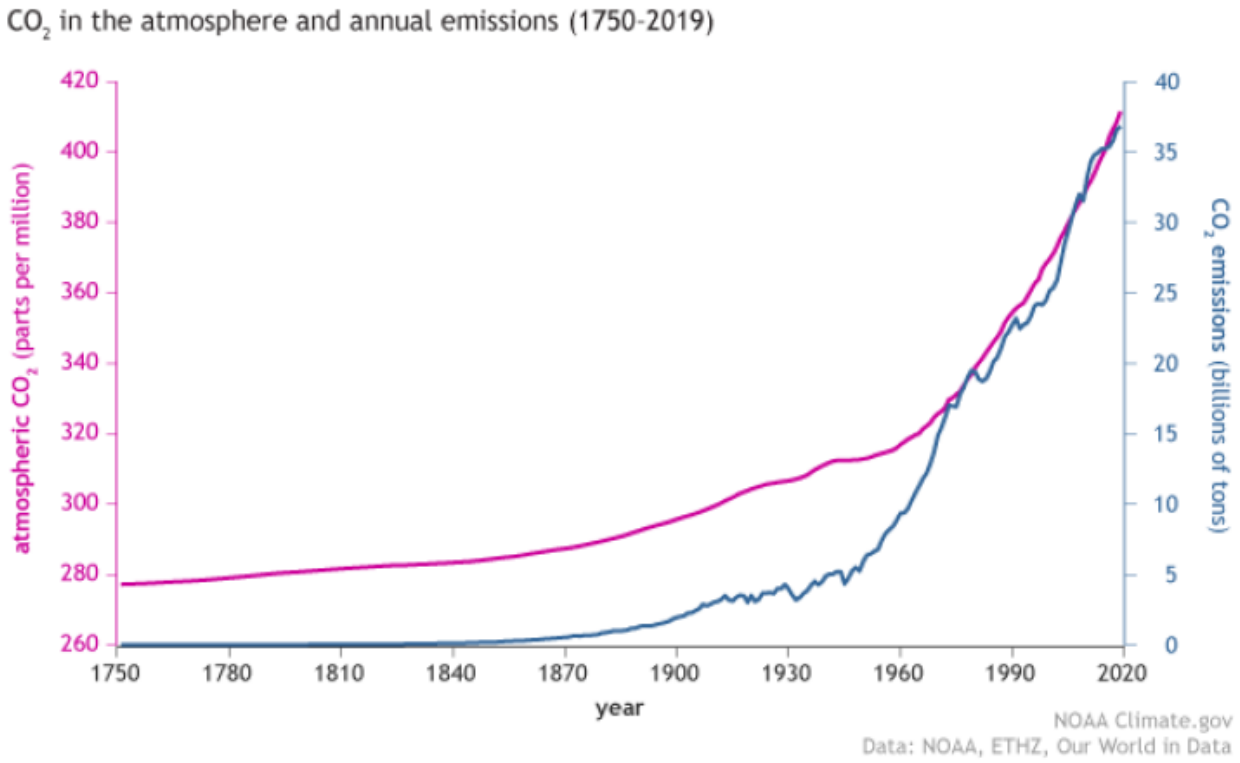

Figure 2: Atmospheric CO_2 Concentration and Annual Emissions[15]

48. Because of the increased burning of fossil fuels, concentrations of greenhouse gases in the atmosphere are now at a level unprecedented in at least 3 million years.[16]

49. As greenhouse gases accumulate in the atmosphere, the Earth radiates less energy back to space. This accumulation and associated disruption of the Earth's energy balance have myriad environmental and physical consequences, including, but not limited to, the following:

a. Warming of the Earth's average surface temperature both locally and globally, and increased frequency and intensity of heatwaves; to date, global average air

[15] Rebecca Lindsey, *Climate Change: Atmospheric Carbon Dioxide*, NOAA (Aug. 14, 2020), https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide.

[16] *More CO_2 than ever before in 3 million years, shows unprecedented computer simulation*, SCIENCE DAILY (Apr. 3, 2019), https://www.sciencedaily.com/releases/2019/04/190403155436.htm; *see also* IPCC 2014 SYNTHESIS REPORT, *supra* note 3, at 4.

temperatures have risen approximately 1 degree C (1.8 degrees F) above preindustrial temperatures; temperatures in particular locations have risen more;

b. Sea level rise, due to the thermal expansion of warming ocean waters and runoff from melting glaciers and ice sheets;

c. Flooding and inundation of land and infrastructure, increased erosion, higher wave run-up and tides, increased frequency and severity of storm surges, saltwater intrusion, and other impacts of higher sea levels;

d. Changes to the global climate, and generally toward longer periods of drought interspersed with fewer and more severe periods of precipitation, and associated impacts on the quantity and quality of water resources available to both human and ecological systems;

e. Increased frequency, intensity, and destructive force of wildfires, due to shifts in the hydrologic cycle that result in increased fuel availability and changing wind patterns;

f. Ocean acidification, due to the increased uptake of atmospheric carbon dioxide by the oceans;

g. Increased frequency and intensity of extreme weather events due to the increase in the atmosphere's ability to hold moisture and increased evaporation;

h. Changes to terrestrial and marine ecosystems, and consequent impacts on the range of flora and fauna; and

i. Adverse impacts on human health associated with extreme weather, extreme heat, decreased air quality, and vector-borne illnesses.

50. As discussed in Part V.H, *infra*, these consequences of Defendants' conduct and its exacerbation of the climate crisis are already impacting the County and will continue to increase in severity in the County.

51. Without Defendants' exacerbation of global warming caused by their conduct as alleged herein, the current and future physical and environmental changes caused by global warming would have been far less than those observed to date. Similarly, effects that will occur in the future would also be far less.[17]

B. Attribution

52. Defendants' efforts between 1965 and the present to deceive about the consequences of the normal use of their fossil fuel products; conceal the hazards of those products from consumers; promote their fossil fuel products despite knowing the dangers associated with those products; doggedly campaign against regulation of those products based on falsehoods, omissions, and deceptions; and failure to pursue less hazardous alternative products available to them; unduly inflated the market for fossil fuel products. Consequently, substantially more anthropogenic greenhouse gases have been emitted into the environment than would have been absent that conduct.

53. By quantifying greenhouse gas pollution attributable to Defendants' products and conduct, climatic and environmental responses to those emissions are also calculable, and can be attributed to Defendants on an individual and aggregate basis.

54. Defendants' conduct caused a substantial portion of global atmospheric greenhouse gas concentrations, and the attendant historical, projected, and committed disruptions to the environment—and consequent injuries to the County—associated therewith.

55. Defendants, individually and together, have substantially and measurably contributed to the County's climate crisis-related injuries.

[17] *See, e.g.*, Peter U. Clark et al., *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change*, 6 NATURE CLIMATE CHANGE 360, 365 (2016) ("Our modelling suggests that the human carbon footprint of about [470 billion tons] by 2000 . . . has already committed Earth to a [global mean sea level] rise of ~1.7m (range of 1.2 to 2.2 m).").

C. Defendants Went to Great Lengths to Understand, and Either Knew or Should Have Known About, the Dangers Associated with Their Fossil Fuel Products.

56. The fossil fuel industry has known about the potential warming effects of greenhouse gas emissions since as early as the 1950s. In 1954, geochemist Harrison Brown and his colleagues at the California Institute of Technology wrote to API, informing the trade association that preliminary measurements of natural archives of carbon in tree rings indicated that fossil fuels had caused atmospheric carbon dioxide levels to increase by about 5% since 1840.[18] API funded the scientists for various research projects, and measurements of carbon dioxide continued for at least one year and possibly longer, although the results were never published or otherwise made available to the public.[19]

57. In 1957, H.R. Brannon of Humble Oil (predecessor-in-interest to ExxonMobil) measured an increase in atmospheric carbon dioxide similar to that measured by Harrison Brown. Brannon communicated this information to API. Brannon knew of Brown's measurements, compared them with his, and found they agreed. Brannon published his results in the scientific literature, which was available to Defendants and/or their predecessors-in-interest.[20]

58. In 1959, API organized a centennial celebration of the American oil industry at Columbia University.[21] High-level representatives of Defendants were in attendance. One of the keynote speakers was the nuclear physicist Edward Teller. Teller warned the industry that "a temperature rise corresponding to a 10 per cent increase in carbon dioxide will be sufficient to melt the icecap and submerge . . . [a]ll the coastal cities." Teller added that since "a considerable

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[18] *See* Benjamin Franta, *Early Oil Industry Knowledge of CO_2 and Global Warming*, 8 NATURE CLIMATE CHANGE 1024, 1024–25 (2018).

[19] *Id.*

[20] H.R. Brannon, Jr. et al., *Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels*, 38 AMERICAN GEOPHYSICAL UNION TRANSACTIONS 643, 643–50 (1957).

[21] *See* ALLAN NEVINS & ROBERT G. DUNLOP, ENERGY AND MAN: A SYMPOSIUM (Appleton-Century-Crofts, New York 1960); *see also* Franta, *supra* note 18, at 1024–25.

percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe."

59. Following his speech, Teller was asked to "summarize briefly the danger from increased carbon dioxide content in the atmosphere in this century." He responded that "there is a possibility the icecaps will start melting and the level of the oceans will begin to rise."

60. By 1965, concern over the potential for fossil fuel products to cause disastrous global warming reached the highest levels of the United States' scientific community. In that year, President Lyndon B. Johnson's Science Advisory Committee's Environmental Pollution Panel reported that a 25% increase in carbon dioxide concentrations could occur by the year 2000, that such an increase could cause significant global warming, that melting of the Antarctic ice cap and rapid sea level rise could result, and that fossil fuels were the clearest source of the pollution.[22]

61. Three days after President Johnson's Science Advisory Committee report was published, the president of API, Frank Ikard, addressed leaders of the petroleum industry in Chicago at the trade association's annual meeting. Ikard relayed the findings of the report to industry leaders, saying,

> The substance of the report is that there is still time to save the world's peoples from the catastrophic consequence of pollution, but time is running out.[23]

Ikard also relayed that "by the year 2000 the heat balance will be so modified as possibly to cause marked changes in climate beyond local or even national efforts" and quoted the report's finding that "the pollution from internal combustion engines is so serious, and is growing so fast, that an alternative nonpolluting means of powering automobiles, buses, and trucks is likely to become a national necessity."

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[22] PRESIDENT'S SCIENCE ADVISORY COMMITTEE, *Restoring the Quality of Our Environment: Report of the Environmental Pollution Panel* 9, 119–24 (Nov. 1965), https://hdl.handle.net/2027/uc1.b4315678.

[23] *See* Franta, *supra* note 18, at 1024–25.

62. Thus, by 1965, Defendants and their predecessors-in-interest were aware that the scientific community had found that fossil fuel products, if used profligately, would cause global warming by the end of the century, and that such global warming would have wide-ranging and costly consequences.

63. In 1968, API received a report from the Stanford Research Institute, which it had hired to assess the state of research on environmental pollutants, including carbon dioxide.[24] The assessment endorsed the findings of President Johnson's Scientific Advisory Council from three years prior, stating, "Significant temperature changes are almost certain to occur by the year 2000, and . . . there seems to be no doubt that the potential damage to our environment could be severe." The scientists warned of "melting of the Antarctic ice cap" and informed API that [p]ast and present studies of CO_2 are detailed and seem to explain adequately the present state of CO_2 in the atmosphere." What was missing, the scientists said, was work on "air pollution technology and . . . systems in which CO_2 emissions would be brought under control."[25]

64. In 1969, the Stanford Research Institute delivered a supplemental report on air pollution to API, projecting with alarming particularity that atmospheric CO_2 concentrations would reach 370 ppm by 2000[26]—almost exactly what it turned out to be (369 ppm).[27] The report explicitly connected the rise in CO_2 levels to the combustion of fossil fuels, finding it "unlikely that the observed rise in atmospheric CO_2 has been due to changes in the biosphere."

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[24] Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants*, STANFORD RESEARCH INST. (Feb. 1968), https://www.smokeandfumes.org/documents/document16.

[25] *Id.*

[26] Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement*, STANFORD RESEARCH INST. (June 1969).

[27] NASA GODDARD INST. FOR SPACE STUDIES, *Global Mean CO_2 Mixing Ratios (ppm): Observations*, https://data.giss.nasa.gov/modelforce/ghgases/Fig1A.ext.txt (last visited Oct. 8, 2020).

65. By virtue of their memberships and participation in API at that time, Defendants received or should have received the Stanford Research Institute reports and were on notice of their conclusions.

66. In 1972, API members, including Defendants, received a status report on all environmental research projects funded by API. The report summarized the 1968 SRI report describing the impact of fossil fuel products, including Defendants', on the environment, including global warming and attendant consequences. Defendants and/or their predecessors-in-interest that received this report include, but were not limited to: American Standard of Indiana (BP), Asiatic (Shell), Ashland (Marathon), Atlantic Richfield (BP), British Petroleum (BP), Chevron Standard of California (Chevron), Esso Research (ExxonMobil), Ethyl (formerly affiliated with Esso, which was subsumed by ExxonMobil), Getty (ExxonMobil), Gulf (Chevron, among others), Humble Standard of New Jersey (ExxonMobil/Chevron/BP), Marathon, Mobil (ExxonMobil), Pan American (BP), Shell, Standard of Ohio (BP), Texaco (Chevron), Union (Chevron), Skelly (ExxonMobil), Colonial Pipeline (ownership has included BP, ExxonMobil, and Chevron entities, among others), Continental (ConocoPhillips), Dupont (former owner of Conoco), Phillips (ConocoPhillips), and Caltex (Chevron).[28]

67. In 1977, James Black of Exxon's Products Research Division presented to the Exxon Corporation Management Committee on the greenhouse effect. The next year, in 1978, Black presented to another internal Exxon group, PERCC. In a memo to the Vice President of Exxon Research and Engineering, Black summarized his presentations.[29] He reported that "current

[28] AM. PETROLEUM INST., *Environmental Research, A Status Report*, Committee for Air & Water Conservation (Jan. 1972), http://files.eric.ed.gov/fulltext/ED066339.pdf.

[29] Letter from J.F. Black, Exxon Research and Engineering Co., to F.G. Turpin, Exxon Research and Engineering Co., *The Greenhouse Effect*, CLIMATEFILES (June 6, 1978), http://www.climatefiles.com/exxonmobil/1978-exxon-memo-on-greenhouse-effect-for-exxon-corporation-management-committee.

scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel consumption," and that doubling atmospheric carbon dioxide, according to the best climate model available, would "produce a mean temperature increase of about 2°C to 3°C over most of the earth," with two- to three-times as much warming at the poles. The figure below, reproduced from Black's memo, illustrates Exxon's understanding of the timescale and magnitude of global warming its products would cause.

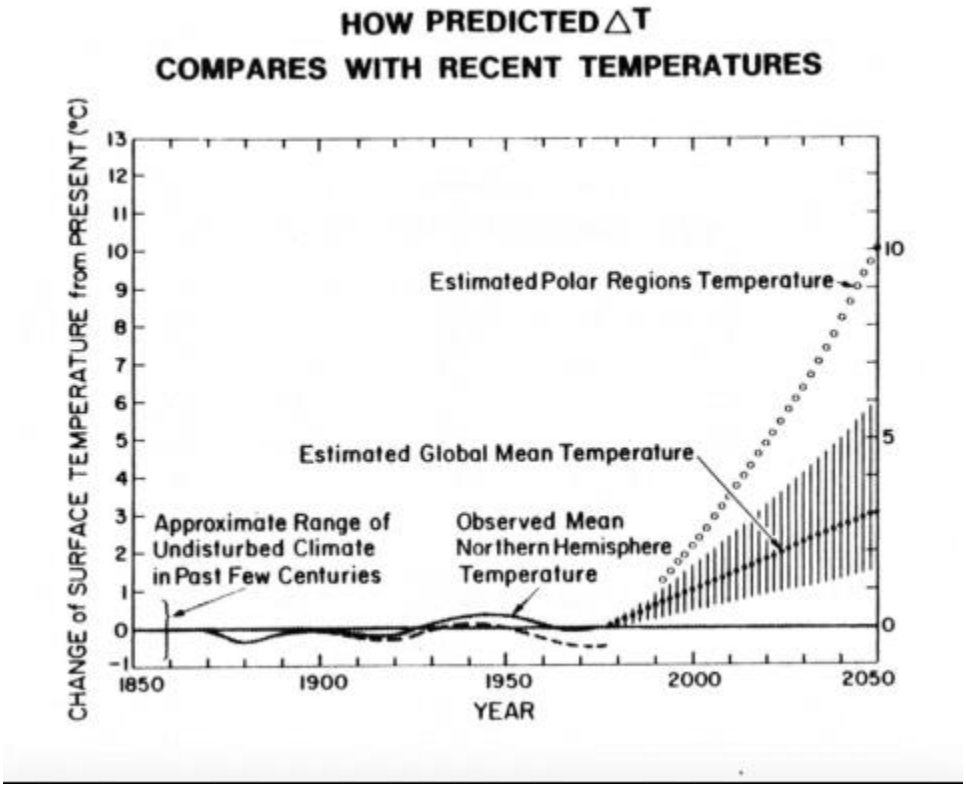

Figure 3: Future global warming predicted internally by Exxon in 1977[30]

The impacts of such global warming, Black reported, would include "more rainfall," which would "benefit some areas and would harm others." "Some countries would benefit, but others could have their agricultural output reduced or destroyed." "Even those nations which are favored,

[30] *Id*. The company predicted global warming of 3°C by 2050, with 10°C of warming in polar regions. The difference between the dashed and solid curves prior to 1977 represents global warming that Exxon believed may already have been occurring.

however, would be damaged for a while since their agricultural and industrial patterns have been established on the basis of the present climate." Black reported that "It is currently estimated that mankind has a 5–10 yr. time window to obtain the necessary information" and "establish what must be done," at which time, "hard decisions regarding changes in energy strategies might become critical."

68. Also in 1977, Henry Shaw of the Exxon Research and Engineering Technology Feasibility Center attended a meeting of scientists and governmental officials in Atlanta, Georgia, on developing research programs to study carbon dioxide and global warming.[31] Shaw's internal memo to Exxon's John W. Harrison reported that "The climatic effects of carbon dioxide release may be the primary limiting factor on energy production from fossil fuels[.]"

69. In 1979, Exxon's W.L. Ferrall distributed an internal memorandum.[32] The memo reported that "The most widely held theory [about global warming] is that: The increase [in carbon dioxide] is due to fossil fuel combustion; [i]ncreasing CO_2 concentration will cause a warming of the earth's surface; [and t]he present trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050. [...] The potential problem is great and urgent." The memo stated that if limits were not placed on fossil fuel production:

> Noticeable temperature changes would occur around 2010 as the [carbon dioxide] concentration reaches 400 ppm [parts per million]. Significant climatic changes occur around 2035 when the concentration approaches 500 ppm. A doubling of the pre-industrial concentration [*i.e.*, 580 ppm] occurs around 2050. The doubling would bring about dramatic changes in the world's environment[.]

[31] Henry Shaw, *Environmental Effects of Carbon Dioxide*, CLIMATE INVESTIGATIONS CTR. (Oct. 31, 1977), https://www.industrydocuments.ucsf.edu/docs/tpwl0228.

[32] Letter from W.L. Ferrall, Exxon Research and Engineering Co., to Dr. R.L. Hirsch, *Controlling Atmospheric CO_2*, CLIMATE INVESTIGATIONS CTR. (Oct. 16, 1979), https://www.industrydocuments.ucsf.edu/docs/mqwl0228.

Those projections proved remarkably accurate: annual average atmospheric CO_2 concentrations surpassed 400 parts per million in 2015 for the first time in millions of years.[33] Limiting the carbon dioxide concentration in the atmosphere to 440 ppm, or a 50% increase over preindustrial levels, which the memo said was "assumed to be a relatively safe level for the environment," would require fossil fuel emissions to peak in the 1990s and non-fossil energy systems to be rapidly deployed. Eighty percent of fossil fuel resources, the memo calculated, would have to be left in the ground to avoid doubling atmospheric carbon dioxide concentrations. Certain fossil fuels, such as shale oil, could not be substantially exploited at all.

70. In November 1979, Exxon's Henry Shaw wrote to Exxon's Harold Weinberg urging "a very aggressive defensive program in […] atmospheric science and climate because there is a good probability that legislation affecting our business will be passed."[34] Shaw stated that an expanded research effort was necessary to "influence possible legislation on environmental controls" and "respond" to environmental groups, which had already opposed synthetic fuels programs based on carbon dioxide emissions. Shaw suggested the formation of a "small task force" to evaluate a potential program in carbon dioxide and climate, acid rain, carcinogenic particulates, and other pollution issues caused by fossil fuels.

71. In 1979, API and its members, including Defendants, convened a Task Force to monitor and share cutting edge climate research among the oil industry. The group was initially called the CO_2 and Climate Task Force, but in 1980 changed its name to the Climate and Energy Task Force (hereinafter referred to as "API CO_2 Task Force"). Membership included senior scientists and engineers from nearly every major U.S. and multinational oil and gas company,

[33] Nicola Jones, *How the World Passed a Carbon Threshold and Why It Matters*, YALE ENV'T 360 (Jan. 26, 2017), http://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters.

[34] Memorandum from H. Shaw to H.N. Weinberg, *Research in Atmospheric Science*, CLIMATE INVESTIGATIONS CTR. (Nov. 19, 1979), https://www.industrydocuments.ucsf.edu/docs/yqwl0228.

including Exxon, Mobil (ExxonMobil), Amoco (BP), Phillips (ConocoPhillips), Texaco (Chevron), Shell, Sunoco, Sohio (BP), as well as Standard Oil of California (BP) and Gulf Oil (Chevron), among others. The Task Force was charged with monitoring government and academic research, evaluating the implications of emerging science for the petroleum and gas industries and identifying where reductions in greenhouse gas emissions from Defendants' fossil fuel products could be made.[35]

72. In 1979, API prepared a background paper on carbon dioxide and climate for the CO_2 and Climate Task Force, stating that CO_2 concentrations were rising steadily in the atmosphere, and predicting when the first clear effects of global warming might be detected.[36] The API reported to its members that although global warming would occur, it would likely go undetected until approximately the year 2000, because, the API believed, its effects were being temporarily masked by a natural cooling trend. However, this cooling trend, the API warned its members, would reverse around 1990, adding to the warming caused by carbon dioxide.

73. In 1980, API's CO_2 Task Force invited Dr. John Laurmann, "a recognized expert in the field of CO2 and climate," to present to its members.[37] The meeting lasted for seven hours and included a "complete technical discussion" of global warming caused by fossil fuels, including "the scientific basis and technical evidence of CO2 buildup, impact on society, methods of modeling and their consequences, uncertainties, policy implications, and conclusions that can be drawn from present knowledge." Representatives from Standard Oil of Ohio (predecessor to BP),

[35] Neela Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, INSIDE CLIMATE NEWS (Dec. 22, 2015), https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco.

[36] Memorandum from R.J. Campion to J.T. Burgess, *The API's Background Paper on CO_2 Effects*, CLIMATE INVESTIGATIONS CTR. (Sep. 6, 1979), https://www.industrydocuments.ucsf.edu/docs/lqwl0228.

[37] Letter from Jimmie J. Nelson, American Petroleum Institute, to AQ-9 Task Force, *The CO_2 Problem; Addressing Research Agenda Development*, CLIMATE INVESTIGATIONS CTR. (Mar. 18, 1980), https://www.industrydocuments.ucsf.edu/docs/gffl0228.

Texaco (now Chevron), Exxon, and the API were present, and the minutes of the meeting were distributed to the entire API CO_2 Task Force. Laurmann informed the Task Force of the "scientific consensus on the potential for large future climatic response to increased CO2 levels" and that there was "strong empirical evidence that [the carbon dioxide] rise [was] caused by anthropogenic release of CO2, mainly from fossil fuel burning." Unless fossil fuel production and use were controlled, atmospheric carbon dioxide would be twice preindustrial levels by 2038, with "likely impacts" along the following trajectory:

> 1°C RISE (2005): BARELY NOTICEABLE
>
> 2.5°C RISE (2038): MAJOR ECONOMIC CONSEQUENCES, STRONG REGIONAL DEPENDENCE
>
> 5°C RISE (2067): GLOBALLY CATASTROPHIC EFFECTS

Laurmann warned the API CO_2 Task Force that global warming of 2.5°C could "bring[] world economic growth to a halt[.]" Laurmann also suggested that action should be taken immediately, asking, "Time for action?" and noting that if achieving high market penetration for new energy sources would require a long time period (*e.g.*, decades), then there would be "no leeway" for delay. The minutes of the API CO_2 Task Force's meeting show that one of the Task Force's goals was "to help develop ground rules for […] the cleanup of fuels as they relate to CO_2 creation," and the Task Force discussed the requirements for a worldwide "energy source changeover" away from fossil fuels.

74. In 1980, Imperial Oil Limited (a Canadian ExxonMobil subsidiary) reported to managers and environmental staff at multiple affiliated Esso and Exxon companies that there was "no doubt" that fossil fuels were aggravating the build-up of CO_2 in the atmosphere.[38] Imperial

[38] IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979 (Aug. 6, 1980), http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2.

noted that "[t]echnology exists to remove CO_2 from stack gases but removal of only 50% of the CO_2 would double the cost of power generation."

75. In December 1980, Exxon's Henry Shaw distributed a memorandum on the "CO_2 Greenhouse Effect."[39] Shaw stated that the future buildup of carbon dioxide was a function of fossil fuel use, and that internal calculations performed at Exxon indicated that atmospheric carbon dioxide would double around the year 2060. According to the "most widely accepted" climate models, Shaw reported, such a doubling of carbon dioxide would "most likely" result in global warming of approximately 3°C, with a greater effect in polar regions. Calculations predicting a lower temperature increase, such as 0.25°C, were "not held in high regard by the scientific community," Shaw said. Shaw also noted that the ability of the oceans to absorb heat could delay (but not prevent) the temperature increase "by a few decades," and that natural, random temperature fluctuations would hide global warming from CO_2 until around the year 2000. The memo included the Figure below, which illustrates global warming anticipated by Exxon, as well as the company's understanding that significant global warming would occur before exceeding the range of natural variability and being detected.

[39] Memorandum from Henry Shaw to T.K. Kett, *Exxon Research and Engineering Company's Technological Forecast: CO_2 Greenhouse Effect* (Dec 18, 1980), https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html.

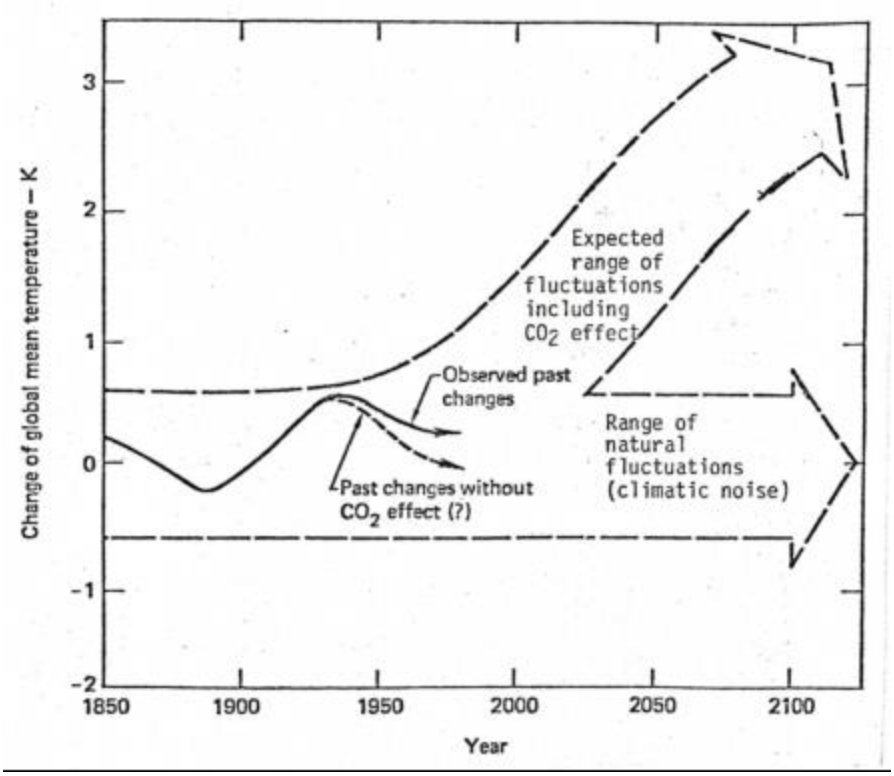

Figure 4: Future global warming predicted internally by Exxon in 1980[40]

The memo reported that such global warming would cause "increased rainfall[] and increased evaporation," which would have a "dramatic impact on soil moisture, and in turn, on agriculture." Some areas would turn to desert, and the American Midwest would become "much drier." "[W]eeds and pests," the memo reported, "would tend to thrive with increasing global average temperature." Other "serious global problems" could also arise, such as the melting of the West Antarctic ice sheet, which "could cause a rise in the sea level on the order of 5 meters." The memo called for "society" to pay the bill, estimating that some adaptive measures would cost no more than "a few percent" of Gross National Product (*i.e.*, 400 billion USD in 2018).[41] Exxon predicted that national policy action would not occur until around 1989, when the Department of Energy

[40] The company anticipated a doubling of carbon dioxide by around 2060 and that the oceans would delay the warming effect by a few decades, leading to approximately 3° C warming by the end of the century.

[41] *See Gross National Product*, FED. RESERVE BANK OF ST. LOUIS (updated Oct. 8, 2020), https://fred.stlouisfed.org/series/GNPA.

would finish a ten-year study of carbon dioxide and global warming.[42] Shaw also reported that Exxon had studied various responses for avoiding or reducing a carbon dioxide build-up, including "stopping all fossil fuel combustion at the 1980 rate" and "investigat[ing] the market penetration of non-fossil fuel technologies." The memo estimated that such non-fossil energy technologies "would need about 50 years to penetrate and achieve roughly half of the total [energy] market."

76. In February 1981, Exxon's Contract Research Office prepared and distributed an "Scoping Study on CO_2" to the leadership of Exxon Research and Engineering Company.[43] The study reviewed Exxon's current research on carbon dioxide and considered whether to expand Exxon's research on carbon dioxide or global warming further at that time. The study recommended against expanding Exxon's research activities in those areas, because its current research programs were sufficient for achieving the company's goals of closely monitoring federal research, building credibility and public relations value, and developing in-house expertise with regard to carbon dioxide and global warming. However, the study recommended that Exxon centralize its activities in monitoring, analyzing, and disseminating outside research being done on carbon dioxide and global warming. The study stated that Exxon's James Black was actively monitoring and keeping the company apprised of outside research developments, including those on climate modeling and "CO_2-induced effects." The study also noted that other companies in the fossil fuel industry were "auditing Government meetings on the subject." In discussing "options for reducing CO_2 build-up in the atmosphere," the study noted that although capturing CO_2 from flue gases was technologically possible, the cost was high, and "energy conservation or shifting to renewable energy sources[] represent the only options that might make sense."

[42] Shaw, *supra* note 39.

[43] Letter from G.H. Long, Exxon Research and Engineering Co., to P.J. Lucchesi et al., *Atmospheric CO_2 Scoping Study*, CLIMATE INVESTIGATIONS CTR. (Feb. 5, 1981), https://www.industrydocuments.ucsf.edu/docs/yxfl0228.

77. Thus, by 1981, Exxon and other fossil fuel companies were actively monitoring all aspects of carbon dioxide and global warming research both nationally and internationally, and Exxon had recognized that a shift to renewable energy sources would be necessary to avoid a large carbon dioxide build-up in the atmosphere and resultant global warming.

78. Exxon scientist Roger Cohen warned his colleagues in a 1981 internal memorandum that "future developments in global data gathering and analysis, along with advances in climate modeling, may provide strong evidence for a delayed CO_2 effect of a truly substantial magnitude," and that under certain circumstances it would be "very likely that we will unambiguously recognize the threat by the year 2000."[44] Cohen had expressed concern that the memorandum understated the potential effects of unabated CO_2 emissions from Defendants' fossil fuel products, saying, "it is distinctly possible that [Exxon Planning Division's] [...] scenario will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth's population)."[45]

79. In 1981, Exxon's Henry Shaw, the company's lead climate researcher at the time, prepared a summary of Exxon's current position on the greenhouse effect for Edward David Jr., president of Exxon Research and Engineering, stating in relevant part:

- "Atmospheric CO_2 will double in 100 years if fossil fuels grow at 1.4%/a"
- "3^{o}C global average temperature rise and 10^{o}C at poles if CO_2 doubles"
    - "Major shifts in rainfall/agriculture"
    - "Polar ice may melt"[46]

[44] Memorandum from Roger W. Cohen to W. Glass, CLIMATEFILES (Aug. 18, 1981), http://www.climatefiles.com/exxonmobil/1981-exxon-memo-on-possible-emission-consequences-of-fossil-fuel-consumption.

[45] *Id.*

[46] Memorandum from Henry Shaw to Dr. E.E. David, *CO_2 Position Statement*, INSIDE CLIMATE NEWS (May 15, 1981), https://insideclimatenews.org/documents/exxon-position-co2-1981.

80. In 1982, another report prepared for API by scientists at the Lamont-Doherty Geological Observatory at Columbia University recognized that atmospheric CO_2 concentration had risen significantly from about 290 parts per million at the beginning of the industrial revolution to about 340 parts per million in 1981.[47] The report acknowledged that despite differences in climate modelers' predictions, there was scientific consensus that a doubling of atmospheric CO2 from the pre-industrial revolution value would result in a global mean temperature rise of 4°C.[48] It went further, warning that "[s]uch a warming can have serious consequences for man's comfort and survival since patterns of aridity and rainfall can change, the height of the sea level can increase considerably and the world food supply can be affected."[49] Exxon's own modeling research acknowledged and confirmed this scientific consensus, and the company's results were later published in at least three peer-reviewed scientific papers.[50]

81. Also in 1982, Exxon's Environmental Affairs Manager distributed a primer on climate change to a "wide circulation [of] Exxon management […] intended to familiarize Exxon personnel with the subject."[51] The primer was "restricted to Exxon personnel and not to be distributed externally." The primer compiled science on climate change, confirmed fossil fuel combustion as a primary anthropogenic contributor to global warming, and estimated a CO_2

[47] AM. PETROLEUM INST., CLIMATE MODELS AND CO_2 WARMING: A SELECTIVE REVIEW AND SUMMARY 4 (Lamont-Doherty Geological Observatory, Columbia University, Mar. 1982), https://assets.documentcloud.org/documents/2805626/1982-API-Climate-Models-and-CO2-Warming-a.pdf.

[48] *Id.* at 5.

[49] *Id.*

[50] *See* Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, CLIMATEFILES (Sept. 2, 1982), http://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research (discussing research articles).

[51] Memorandum from M.B. Glaser, Exxon Research and Engineering Co., to R.W. Cohen et al., *CO_2 "Greenhouse" Effect* (Nov. 12, 1982), https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf.

doubling [i.e., 580 ppm] by 2070 with a "Most Probable Temperature Increase" of more than 2°C over the 1979 level, as shown in the Figure below.

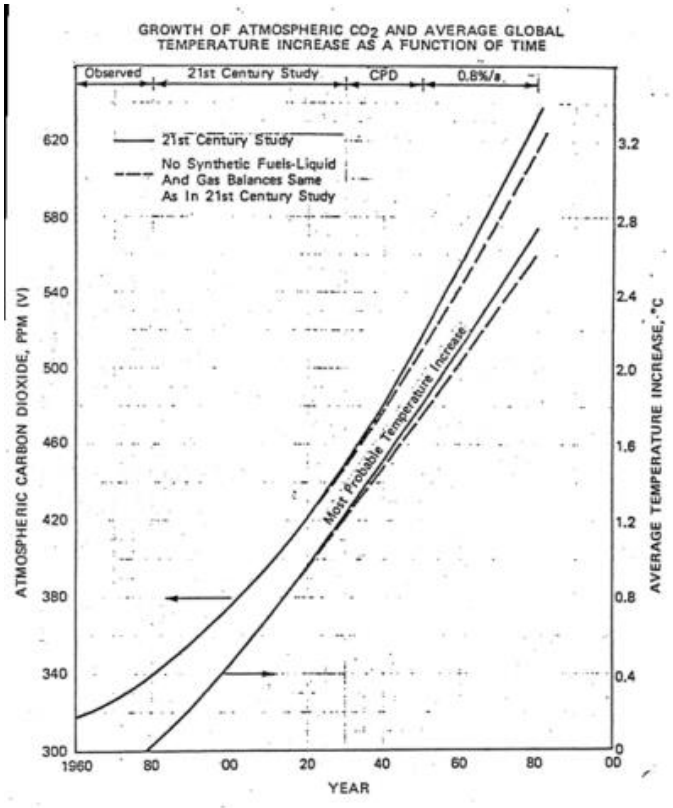

Figure 5: Exxon's internal prediction of future carbon dioxide increase and global warming from 1982[52]

The report also warned of "uneven global distribution of increased rainfall and increased evaporation," that "disturbances in the existing global water distribution balance would have dramatic impact on soil moisture, and in turn, on agriculture," and that the American Midwest would dry out. In addition to effects on global agriculture, the report stated, "there are some potentially catastrophic effects that must be considered." Melting of the Antarctic ice sheet could result in global sea level rise of five meters, which would "cause flooding on much of the U.S.

[52] The company predicted a doubling of atmospheric carbon dioxide concentrations above pre-industrial levels by around 2070 (left curve), with a temperature increase of more than 2°Cover the 1979 level (right curve). The same document indicated that Exxon estimated that by 1979 a global warming effect of approximately 0.25°C may already have occurred.

East Coast, including the State of Florida and Washington, D.C." Weeds and pests would "tend to thrive with increasing global temperature." The primer warned of "positive feedback mechanisms" in polar regions, which could accelerate global warming, such as deposits of peat "containing large reservoirs of organic carbon" becoming "exposed to oxidation" and releasing their carbon into the atmosphere. "Similarly," the primer warned, "thawing might also release large quantities of carbon currently sequestered as methane hydrates" on the sea floor. "All biological systems are likely to be affected," and "the most severe economic effects could be on agriculture." The report recommended studying "soil erosion, salinization, or the collapse of irrigation systems" in order to understand how society might be affected and might respond to global warming, as well as "[h]ealth effects" and "stress associated with climate related famine or migration[.]" The report estimated that undertaking "[s]ome adaptive measures" (not all of them) would cost "a few percent of the gross national product estimated in the middle of the next century" (i.e., 400 billion USD in 2018).[53] To avoid such impacts, the report discussed an analysis from the Massachusetts Institute of Technology and Oak Ridge National Laboratory, which studied energy alternatives and requirements for introducing them into widespread use, and which recommended that "vigorous development of non-fossil energy sources be initiated as soon as possible."[54] The primer also noted that other greenhouse gases related to fossil fuel production, such as methane, could contribute significantly to global warming, and that concerns over carbon dioxide could be reduced if fossil fuel use were decreased due to "high price, scarcity, [or] unavailability." "Mitigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion," the primer stated. The primer was widely distributed to Exxon leadership.

[53] *See Gross National Product*, *supra* note 41.

[54] M.B. Glaser, *supra* note 51.

82. In September 1982, the Director of Exxon's Theoretical and Mathematical Sciences Laboratory, Roger Cohen, wrote Alvin Natkin of Exxon's Office of Science and Technology to summarize Exxon's internal research on climate modeling.[55] Cohen reported:

> [O]ver the past several years a clear scientific consensus has emerged regarding the expected climatic effects of increased atmospheric CO_2. The consensus is that a doubling of atmospheric CO_2 from its pre-industrial revolution value would result in an average global temperature rise of (3.0 ± 1.5)°C. […] The temperature rise is predicted to be distributed nonuniformly over the earth, with above-average temperature elevations in the polar regions and relatively small increases near the equator. There is unanimous agreement in the scientific community that a temperature increase of this magnitude would bring about significant changes in the earth's climate, including rainfall distribution and alterations of the biosphere. The time required for doubling of atmospheric CO_2 depends on future world consumption of fossil fuels.

Cohen described Exxon's own climate modeling experiments, reporting that they produced "a global averaged temperature increase that falls well within the range of the scientific consensus," were "consistent with the published predictions of more complex climate models," and were "also in agreement with estimates of the global temperature distribution during a certain prehistoric period when the earth was much warmer than today." "In summary," Cohen wrote, "the results of our research are in accord with the scientific consensus on the effect of increased atmospheric CO_2 on climate." Cohen noted that the results would be presented to the scientific community by Exxon's collaborator Martin Hoffert at a Department of Energy meeting, as well as by Exxon's Brian Flannery at the Exxon-supported Ewing Symposium, later that year.

83. In October 1982, at the fourth biennial Maurice Ewing Symposium at the Lamont-Doherty Geophysical Observatory which was attended by members of API and the Exxon Research and Engineering Company, the Observatory's president E. E. David delivered a speech

[55] Cohen, *supra* note 50.

titled: "Inventing the Future: Energy and the CO_2 'Greenhouse Effect.'"[56] His remarks included the following statement: "Few people doubt that the world has entered an energy transition away from dependence upon fossil fuels and toward some mix of renewable resources that will not pose problems of CO_2 accumulation." He went on, discussing the human opportunity to address anthropogenic climate change before the point of no return:

> It is ironic that the biggest uncertainties about the CO_2 buildup are not in predicting what the climate will do, but in predicting what people will do. . . .[It] appears we still have time to generate the wealth and knowledge we will need to invent the transition to a stable energy system.

84. Throughout the early 1980s, at Exxon's direction, Exxon climate scientist Henry Shaw forecasted emissions of CO_2 from fossil fuel use. Those estimates were incorporated into Exxon's 21st century energy projections and were distributed among Exxon's various divisions. Shaw's conclusions included an expectation that atmospheric CO_2 concentrations would double by 2090 per the Exxon model, with an attendant 2.3–5.6º F average global temperature increase. Shaw compared his model results to those of the EPA, the National Academy of Sciences, and the Massachusetts Institute of Technology, indicating that the Exxon model predicted a longer delay than any of the other models, although its temperature increase prediction was in the mid-range of the four projections.[57]

85. During the 1980s, many Defendants formed their own research units focused on climate modeling. The API, including the API CO_2 Task Force, provided a forum for Defendants

[56] Dr. E.E. David, Jr., President, Exxon Research and Engineering Co., Remarks at the Fourth Annual Ewing Symposium, Tenafly, NJ, CLIMATEFILES (Oct. 26, 1982), http://www.climatefiles.com/exxonmobil/inventing-future-energy-co2-greenhouse-effect.

[57] Neela Banerjee, *More Exxon Documents Show How Much It Knew About Climate 35 Years Ago*, INSIDE CLIMATE NEWS (Dec. 1, 2015), https://insideclimatenews.org/news/01122015/documents-exxons-early-co2-position-senior-executives-engage-and-warming-forecast.

to share their research efforts and corroborate their findings related to anthropogenic greenhouse gas emissions.[58]

86. During this time, Defendants' statements expressed an understanding of their obligation to consider and mitigate the externalities of unabated promotion, marketing, and sale of their fossil fuel products. For example, in 1988, Richard Tucker, the president of Mobil Oil, presented at the American Institute of Chemical Engineers National Meeting, the premier educational forum for chemical engineers, where he stated:

> [H]umanity, which has created the industrial system that has transformed civilization, is also responsible for the environment, which sometimes is at risk because of unintended consequences of industrialization. . . . [M]aintaining the health of this life-support system is emerging as one of the highest priorities. . . . [W]e must all be environmentalists.
>
> . . .
>
> The environmental covenant requires action on many fronts . . . the low-atmosphere ozone problem, the upper-atmosphere ozone problem and the greenhouse effect, to name a few. . . . Our strategy must be to reduce pollution before it is ever generated—to prevent problems at the source.
>
> . . .
>
> Prevention means engineering a new generation of fuels, lubricants and chemical products. . . . Prevention means designing catalysts and processes that minimize or eliminate the production of unwanted byproducts. . . . Prevention on a global scale may even require a dramatic reduction in our dependence on fossil fuels—and a shift towards solar, hydrogen, and safe nuclear power. It may be possible that—just possible—that the energy industry will transform itself so completely that observers will declare it a new industry. . . . Brute force, low-tech responses and money alone won't meet the challenges we face in the energy industry.[59]

87. Also in 1988, the Shell Greenhouse Effect Working Group issued a confidential internal report, "The Greenhouse Effect," which acknowledged global warming's anthropogenic

[58] Banerjee, *supra* note 35.

[59] Richard F. Tucker, *High Tech Frontiers in the Energy Industry: The Challenge Ahead*, Address at the AIChE National Meeting, Washington, D.C. (Nov. 30, 1988), https://babel.hathitrust.org/cgi/pt?id=pur1.32754074119482&view=1up&seq=531&q1=humanity%20industrial%20system%20civilization.

nature: "Man-made carbon dioxide, released into and accumulated in the atmosphere, is believed to warm the earth through the so-called greenhouse effect." The authors also noted the burning of fossil fuels as a primary driver of CO_2 buildup and warned that warming could "create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather." They further pointed to the potential for "[d]irect operational consequences" of sea level rise on "offshore installations, coastal facilities and operations (*e.g.* platforms, harbors, refineries, depots)."[60]

88. Similar to early warnings by Exxon scientists, the Shell report notes that "by the time the global warming becomes detectable it could be too late to take effective countermeasures to reduce the effects or even to stabilise the situation." The authors mention the need to consider policy changes on multiple occasions, noting that "[t]he potential implications for the world are . . . so large that policy options need to be considered much earlier" and that research should be "directed more to the analysis of policy and energy options than to studies of what we will be facing exactly."

89. In 1989, Esso Resources Canada (ExxonMobil) commissioned a report on the impacts of climate change on existing and proposed natural gas facilities in the Mackenzie River Valley and Delta, including extraction facilities on the Beaufort Sea and a pipeline crossing Canada's Northwest Territory.[61] It reported that "large zones of the Mackenzie Valley could be affected dramatically by climatic change" and that "[t]he greatest concern in Norman Wells [oil town in North West Territories, Canada] should be the changes in permafrost that are likely to

[60] SHELL INTERNATIONALE PETROLEUM, GREENHOUSE EFFECT WORKING GROUP, THE GREENHOUSE EFFECT (May 1988), https://www.documentcloud.org/documents/4411090-Document3.html#document/p9/a411239.

[61] *See* Stephen Lonergan & Kathy Young, *An Assessment of the Effects of Climate Warming on Energy Developments in the Mackenzie River Valley and Delta, Canadian Arctic*, 7 ENERGY EXPLORATION & EXPLOITATION 359–81 (1989).

occur under conditions of climate warming."[62] The report concluded that, in light of climate models showing a "general tendency towards warmer and wetter climate," operation of those facilities would be compromised by increased precipitation, increase in air temperature, changes in permafrost conditions, and significantly, sea level rise and erosion damage.[63] The authors recommended factoring those eventualities into future development planning and also warned that "[a] rise in sea level could cause increased flooding and erosion damage on Richards Island."

90. Ken Croasdale, a senior ice researcher for Exxon's subsidiary Imperial Oil, stated to an audience of engineers in 1991 that greenhouse gases are rising "due to the burning of fossil fuels. Nobody disputes this fact."[64]

91. Also in 1991, Shell produced a film called "Climate of Concern." The film advises that while "no two [climate change projection] scenarios fully agree, . . . [they] have each prompted the same serious warning. A warning endorsed by a uniquely broad consensus of scientists in their report to the UN at the end of 1990." The warning was an increasing frequency of abnormal weather, and of sea level rise of about one meter over the coming century. Shell specifically described the impacts of anthropogenic sea level rise on tropical islands, "barely afloat even now, . . . [f]irst made uninhabitable and then obliterated beneath the waves. Wetland habitats destroyed by intruding salt. Coastal lowlands suffering pollution of precious groundwater." It warned of "greenhouse refugees," people who abandoned homelands inundated by the sea, or were displaced because of catastrophic changes to the environment. The video concludes with a stark admonition:

[62] *Id.* at 369, 376.

[63] *Id.* at 360, 377–78.

[64] RONALD C. KRAMER, CARBON CRIMINALS, CLIMATE CRIMES 66 (1st ed. 2020).

"Global warming is not yet certain, but many think that the wait for final proof would be irresponsible. Action now is seen as the only safe insurance."[65]

92. Also in 1991, BP released a short film called "The Earth – What Makes Weather?" In it, a narrator states: "Our . . . dependence on carbon-based fuels is now a cause for concern. When coal, oil or gas are burned, they release carbon dioxide and other reactive gases." The narrator then goes on to explain:

> As the earth gives off heat, carbon dioxide, together with water vapor, absorbs and radiates it back, acting like a blanket. . . . If world population growth is matched by energy consumption, even more carbon dioxide will be released, making this greenhouse effect even stronger. An overall increase in temperature of even a few degrees could disrupt our climate with devastating consequences. If the oceans got warmer and the ice sheets began to melt, sea levels would rise, encroaching on coastal lowlands. From warmer seas, more water would evaporate, making storms and the havoc they cause more frequent. . . . Catastrophic floods could become commonplace, and low-lying countries like Bangladesh would be defenseless against them. Too much water or too little. Away from the coasts we could see a return to the conditions which devastated America's Midwest in the 1930s. Global warming could repeat on a more disastrous scale the dustbowl phenomenon which virtually destroyed farming on the Great Plains. . . . The threat of such climatic change is now one of our most urgent concerns.[66]

The film was not widely distributed.

93. The fossil fuel industry was at the forefront of carbon dioxide research for much of the latter half of the 20th century. It developed cutting edge and innovative technology and worked with many of the field's top researchers to produce exceptionally sophisticated studies and models. For instance, in the mid-nineties Shell began using scenarios to plan how the company could

[65] Jelmer Mommers, *Shell Made a Film About Climate Change in 1991 (Then Neglected to Heed Its Own Warning)*, DE CORRESPONDENT (Feb. 28, 2017), https://thecorrespondent.com/6285/shell-made-a-film-about-climate-change-in-1991-then-neglected-to-heed-its-own-warning.

[66] Vatan Hüzeir, *BP Knew the Truth About Climate Change 30 Years Ago*, FOLLOW THE MONEY (May 26, 2020), https://www.ftm.nl/artikelen/bp-video-climate-change-1990-engels; *see also* BP Video Library, *This Earth – What Makes Weather?* (1991), https://www.bpvideolibrary.com/record/463.

respond to various global forces in the future. In one scenario published in a 1998 internal report, Shell paints an eerily prescient scene:

> In 2010, a series of violent storms causes extensive damage to the eastern coast of the U.S. Although it is not clear whether the storms are caused by climate change, people are not willing to take further chances. The insurance industry refuses to accept liability, setting off a fierce debate over who is liable: the insurance industry or the government. After all, two successive IPCC reports since 1993 have reinforced the human connection to climate change . . . Following the storms, a coalition of environmental NGOs brings a class-action suit against the US government and fossil-fuel companies on the grounds of neglecting what scientists (including their own) have been saying for years: that something must be done. A social reaction to the use of fossil fuels grows, and individuals become 'vigilante environmentalists' in the same way, a generation earlier, they had become fiercely anti-tobacco. Direct-action campaigns against companies escalate. Young consumers, especially, demand action.[67]

94. Fossil fuel companies did not just consider climate change impacts in scenarios. In the mid-1990s, ExxonMobil, Shell, and Imperial Oil (ExxonMobil) jointly undertook the Sable Offshore Energy Project in Nova Scotia. The project's own Environmental Impact Statement declared: "The impact of a global warming sea-level rise may be particularly significant in Nova Scotia. The long-term tide gauge records at a number of locations along the N.S. coast have shown sea level has been rising over the past century. . . . For the design of coastal and offshore structures, an estimated rise in water level, due to global warming, of 0.5 m [1.64 feet] may be assumed for the proposed project life (25 years)."[68]

95. Climate change research conducted by Defendants and their industry associations frequently acknowledged uncertainties in their climate modeling—those uncertainties, however, were merely with respect to the magnitude and timing of climate impacts resulting from fossil fuel consumption, not that significant changes would eventually occur. The Defendants' researchers

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[67] ROYAL DUTCH/SHELL GROUP, GROUP SCENARIOS 1998–2020 115, 122 (1998), http://www.documentcloud.org/documents/4430277-27-1-Compiled.html.

[68] EXXONMOBIL, SABLE PROJECT DEVELOPMENT PLAN, vol. 3, 4–77, http://soep.com/about-the-project/development-plan-application.

and the researchers at their industry associations harbored little doubt that climate change was occurring and that fossil fuel products were, and are, the primary cause.

96. Despite the overwhelming information about the threats to people and the planet posed by continued unabated use of their fossil fuel products, Defendants failed to act as they reasonably should have to mitigate or avoid those dire adverse impacts. Defendants instead adopted the position, as described below, that they had a license to continue the unfettered pursuit of profits from those products. This position was an abdication of Defendants' responsibility to consumers and the public, including the County, to act on their unique knowledge of the reasonably foreseeable hazards of unabated production and consumption of their fossil fuel products.

D. Defendants Did Not Disclose Known Harms Associated with the Extraction, Promotion, and Consumption of Their Fossil Fuel Products, and Instead Affirmatively Acted to Obscure Those Harms and Engaged in a Campaign to Deceptively Protect and Expand the Use of Their Fossil Fuel Products.

97. By 1988, Defendants had amassed a compelling body of knowledge about the role of anthropogenic greenhouse gases, and specifically those emitted from the normal use of Defendants' fossil fuel products, in causing global warming and its cascading impacts, including disruptions to the hydrologic cycle, extreme precipitation and drought, heatwaves, and associated consequences for human communities and the environment. On notice that their products were causing global climate change and dire effects on the planet, Defendants faced the decision whether or not to take steps to limit the damages their fossil fuel products were causing and would continue to cause Earth's inhabitants, including the people of the County.

98. Defendants at any time before or thereafter could and reasonably should have taken any number of steps to mitigate the damages caused by their fossil fuel products, and their own comments reveal an awareness of what some of those steps should have been. Defendants should have warned consumers, the public, and regulators of the dangers known to Defendants of the

unabated consumption of their fossil fuel products, and they could and should have taken reasonable steps to limit the potential greenhouse gas emissions arising out of their fossil fuel products.

99. Several key events during the period 1988–1992 appear to have prompted Defendants to change their tactics from general research and internal discussion on climate change to a public campaign aimed at deceiving the public about and evading regulation of their fossil fuel products and/or emissions therefrom. They include:

a. In 1988, National Aeronautics and Space Administration (NASA) scientists confirmed that human activities were actually contributing to global warming.[69] On June 23rd of that year, NASA scientist James Hansen's presentation of this information to Congress engendered significant news coverage and publicity for the announcement, including coverage on the front page of the *New York Times*. In that Congressional hearing Hansen asserted "with 99% confidence" that global warming was already occurring.[70]

b. On July 28, 1988, Senator Robert Stafford and four bipartisan co-sponsors introduced S. 2666, "The Global Environmental Protection Act," to regulate CO_2 and other greenhouse gases. Four more bipartisan bills to significantly reduce CO_2 pollution were introduced over the following ten weeks, and in August, U.S. Presidential candidate George H.W. Bush pledged that his presidency would combat the greenhouse effect with "the White House effect."[71] Political will in the United States to reduce anthropogenic greenhouse gas emissions and mitigate the harms associated with Defendants' fossil fuel products was gaining momentum.

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[69] *See* Peter C. Frumhoff et al., *The Climate Responsibilities of Industrial Carbon Producers*, 132 CLIMATIC CHANGE 157, 161 (2015).

[70] Amy Lieberman & Susanne Rust, *Big Oil Braced for Global Warming While It Fought Regulations*, L.A. TIMES (Dec. 31, 2015), https://graphics.latimes.com/oil-operations.

[71] *The White House and the Greenhouse*, N.Y. TIMES (May 9, 1989), http://www.nytimes.com/1989/05/09/opinion/the-white-house-and-the-greenhouse.html.

c. In December 1988, the United Nations formed the Intergovernmental Panel on Climate Change (IPCC), a scientific panel dedicated to providing the world's governments with an objective, scientific analysis of climate change and its environmental, political, and economic impacts.

d. In 1990, the IPCC published its First Assessment Report on anthropogenic climate change,[72] in which it concluded that (1) "there is a natural greenhouse effect which already keeps the Earth warmer than it would otherwise be," and (2) that

> emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface. The main greenhouse gas, water vapour, will increase in response to global warming and further enhance it.[73]

The IPCC reconfirmed those conclusions in a 1992 supplement to the First Assessment report.[74]

e. The United Nations began preparing for the 1992 Earth Summit in Rio de Janeiro, Brazil, a major, newsworthy gathering of 172 world governments, of which 116 sent their heads of state. The Summit resulted in the United Nations Framework Convention on Climate Change (UNFCCC), an international environmental treaty providing protocols for future negotiations aimed at "stabiliz[ing] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[75]

100. Those world events marked a shift in public discussion of climate change and its consequences, and the initiation of international efforts to curb anthropogenic greenhouse

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[72] *See* IPCC, Reports, https://www.ipcc.ch/reports.

[73] IPCC, Climate Change: The IPCC Scientific Assessment xi (1990), https://archive.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_spm.pdf.

[74] IPCC, 1992 IPCC Supplement to the First Assessment Report (1992).

[75] United Nations Framework Convention on Climate Change, art. 2 (1992), https://unfccc.int/resource/docs/convkp/conveng.pdf.

emissions—developments that had stark implications for, and would have diminished the profitability of, Defendants' fossil fuel products.

101. But rather than collaborating with the international community by acting to forestall, or at least decrease, their fossil fuel products' contributions to global warming, and its impacts, including sea level rise, disruptions to the hydrologic cycle, and associated consequences to the County and other communities, Defendants embarked on a decades-long campaign of deception designed to maximize continued dependence on their products and undermine national and international efforts to rein in greenhouse gas emissions.

102. Defendants' campaign to conceal, discredit, and/or misrepresent information that tended to support restricting consumption of (and thereby decreasing demand for) Defendants' fossil fuel products, took several forms. The campaign enabled Defendants to accelerate their business practice of exploiting fossil fuel reserves, and concurrently externalize the social and environmental costs of their fossil fuel products. Those activities stood in direct contradiction to Defendants' own prior recognition that the science of anthropogenic climate change was clear and that action was needed to avoid or mitigate dire consequences to the planet and communities like the County.

103. Defendants took affirmative steps to conceal, from the County and the general public, the foreseeable impacts of the use of their fossil fuel products on the Earth's climate and associated harms to people and communities. As described below, Defendants embarked on a concerted public-relations campaign to cast doubt on the science connecting global climate change to fossil fuel products and greenhouse gas emissions, in order to influence public perception of the existence of anthropogenic global warming and sea level rise, disruptions to weather cycles, extreme precipitation and drought, and other associated consequences. The effort included

promoting their hazardous products through advertising campaigns that failed to warn of the existential risks associated with the use of those products, and the initiation and funding of climate change denialist organizations, designed to influence consumers to continue using Defendants' fossil fuel products irrespective of those products' damage to communities and the environment.

104. For example, in 1988, Joseph Carlson, an Exxon public affairs manager, described the "Exxon Position," which included, among others, two important messaging tenets: (1) "[e]mphasize the uncertainty in scientific conclusions regarding the potential enhanced Greenhouse Effect"; and (2) "[r]esist the overstatement and sensationalization [sic] of potential greenhouse effect which could lead to noneconomic development of nonfossil fuel resources."[76]

105. Reflecting on his time as an Exxon consultant in the 1980s, Professor Martin Hoffert, a former New York University physicist who researched climate change, expressed regret over Exxon's "climate science denial program campaign" in his sworn testimony before Congress:

> [O]ur research [at Exxon] was consistent with findings of the United Nations Intergovernmental Panel on Climate Change on human impacts of fossil fuel burning, which is that they are increasingly having a perceptible influence on Earth's climate. . . . If anything, adverse climate change from elevated CO2 is proceeding faster than the average of the prior IPCC mild projections and fully consistent with what we knew back in the early 1980's at Exxon. . . . I was greatly distressed by the climate science denial program campaign that Exxon's front office launched around the time I stopped working as a consultant—but not collaborator—for Exxon. The advertisements that Exxon ran in major newspapers raising doubt about climate change were contradicted by the scientific work we had done and continue to do. Exxon was publicly promoting views that its own scientists knew were wrong, and we knew that because we were the major group working on this.[77]

[76] Memorandum from Joseph M. Carlson, *The Greenhouse Effect* (Aug. 3, 1988), https://assets.documentcloud.org/documents/3024180/1998-Exxon-Memo-on-the-Greenhouse-Effect.pdf.

[77] *Examining the Oil Industry's Efforts to Suppress the Truth About Climate Change*, *Hearing Before the Subcomm. On Civil Rights and Civil Liberties of the Comm. On Oversight and Reform*, 116th Cong. 7–8 (Oct. 23, 2019) (statement of Martin Hoffert, Former Exxon Consultant, Professor Emeritus, Physics, N.Y. Univ.), https://oversight.house.gov/legislation/hearings/examining-the-oil-industry-s-efforts-to-suppress-the-truth-about-climate-change.

106. A 1994 Shell report entitled "The Enhanced Greenhouse Effect: A Review of the Scientific Aspects" by Royal Dutch Shell environmental advisor Peter Langcake stands in stark contrast to the company's 1988 report on the same topic. Whereas before, the authors recommended considering policy solutions early on, Langcake warned of the potentially dramatic "economic effects of ill-advised policy measures." While the report recognized the IPCC conclusions as the mainstream view, Langcake still emphasized scientific uncertainty, noting, for example, that "[t]he postulated link between any observed temperature rise and human activities has to be seen in relation to natural variability, which is still largely unpredictable." The Shell Group position is stated clearly in the report: "Scientific uncertainty and the evolution of energy systems indicate that policies to curb greenhouse gas emissions beyond 'no regrets' measures could be premature, divert resources from more pressing needs and further distort markets."[78]

107. In 1991, for example, the Information Council for the Environment ("ICE"), whose members included affiliates, predecessors and/or subsidiaries of Defendants, launched a national climate change science denial campaign with full-page newspaper ads, radio commercials, a public relations tour schedule, "mailers," and research tools to measure campaign success. Included among the campaign strategies was "[r]eposition[ing] global warming as theory (not fact)." Its target audience included older less-educated males who are "predisposed to favor the ICE agenda, and likely to be even more supportive of that agenda following exposure to new info."[79] ICE also targeted younger, lower-income women with its deceptive messages, noting that:

[78] P. LANGCAKE, SHELL INTERNATIONALE PETROLEUM, THE ENHANCED GREENHOUSE EFFECT: A REVIEW OF THE SCIENTIFIC ASPECTS (Dec. 1994), https://www.documentcloud.org/documents/4411099-Document11.html#document/p15/a411511.

[79] UNION OF CONCERNED SCIENTISTS, *Deception Dossier #5: Coal's Information Council on the Environment" Sham* (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf (last visited Oct. 8, 2020); *see also* Kathy Mulvey et al., *The Climate Deception Dossiers* (Union of Concerned Scientists, July 2015), https://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf.

> These women are more receptive than other audience segments to factual information concerning evidence for global warming. They are likely to be "green" consumers, to believe the earth is warming, and to think the problem is serious. However, they are also likely to soften their support for federal legislation after hearing new information on global warming.[80]

108. A goal of ICE's advertising campaign was to change public opinion and avoid regulation. A memo from Richard Lawson, president of the National Coal Association, asked members to contribute to the ICE campaign with the justification that "policymakers are prepared to act [on global warming]. Public opinion polls reveal that 60% of the American people already believe global warming is a serious environmental problem. Our industry cannot sit on the sidelines in this debate."[81]

109. The following images are examples of ICE-funded print advertisements challenging the validity of climate science and intended to obscure the scientific consensus on anthropogenic climate change and induce political inertia to address it.[82]

Figure 6: Information Council for the Environment Advertisements

[80] *Id.*

[81] Naomi Oreskes, *My Facts Are Better Than Your Facts: Spreading Good News About Global Warming* (2010), in PETER HOWLETT ET AL., HOW WELL DO FACTS TRAVEL?: THE DISSEMINATION OF RELIABLE KNOWLEDGE 136–66, (Cambridge University Press, 2011).

[82] UNION OF CONCERNED SCIENTISTS, *supra* note 79, at 47–49.

110. In 1996, Exxon released a publication called "Global Warming: Who's Right? Facts about a debate that's turned up more questions than answers." Exxon CEO Lee Raymond wrote the publication's preface in which he inaccurately stated that "[t]aking drastic action immediately is unnecessary since many scientists agree there's ample time to better understand the climate system." Raymond also misleadingly implied that climate change was an "unproven theory" and claimed that "a multinational effort, under the auspices of the United Nations, is underway to cut the use of fossil fuels, based on the unproven theory that they affect the earth's climate." Raymond concluded his preface by attacking advocates for limiting the use of his company's fossil fuel products as "drawing on bad science, faulty logic, or unrealistic assumptions." He failed to mention Exxon's contrary findings such as those in the 1982 Cohen Memo.[83]

111. The publication itself described the greenhouse effect as "unquestionably real and definitely a good thing," while ignoring the severe consequences that would result from the influence of the increased CO_2 concentration on the Earth's climate. Instead, it characterized the greenhouse effect as simply "what makes the earth's atmosphere livable." Directly contradicting Exxon's own knowledge and peer-reviewed science, the publication ascribed the rise in temperature since the late 19th century to "natural fluctuations that occur over long periods of time" rather than to the anthropogenic emissions that Exxon itself and other scientists had confirmed were responsible. The publication also falsely challenged the computer models that projected the future impacts of unabated fossil fuel product consumption, including those developed by Exxon's own employees, as having been "proved to be inaccurate." The publication contradicted the numerous reports prepared by and circulated among Exxon's own staff, and by the API, stating

[83] EXXON CORP., *Global Warming: Who's Right?* (1996), https://www.documentcloud.org/documents/2805542-Exxon-Global-Warming-Whos-Right.html.

that "the indications are that a warmer world would be far more benign than many imagine . . . moderate warming would reduce mortality rates in the U.S., so a slightly warmer climate would be more healthful." The publication did not mention Exxon's earlier conclusion that significant sea level rise would cause catastrophic flooding.

112. API published an extensive report in the same year warning against concern over CO_2 buildup and any need to curb consumption or regulate the fossil fuel industry. The introduction stated that "there is no persuasive basis for forcing Americans to dramatically change their lifestyles to use less oil." The authors discouraged the further development of certain alternative energy sources, writing that "government agencies have advocated the increased use of ethanol and the electric car, without the facts to support the assertion that either is superior to existing fuels and technologies" and that "[p]olicies that mandate replacing oil with specific alternative fuel technologies freeze progress at the current level of technology, and reduce the chance that innovation will develop better solutions." The paper also denied the human connection to climate change, by falsely stating that no "scientific evidence exists that human activities are significantly affecting sea levels, rainfall, surface temperatures or the intensity and frequency of storms." The report's message was false but clear: "[F]acts don't support the arguments for restraining oil use."[84]

113. In a speech presented at the World Petroleum Congress in Beijing in 1997 at which many of the Defendants were present, Exxon CEO Lee Raymond reiterated those views. This time, he presented a false dichotomy between stable energy markets and abatement of the marketing, promotion, and sale of fossil fuel products Defendants knew to be hazardous. He stated:

> [T]here are some people who argue that we should drastically curtail our use of fossil fuels for environmental reasons. . . . [M]y belief [is] that such proposals are

[84] SALLY BRAIN GENTILLE ET AL., AMERICAN PETROLEUM INST., REINVENTING ENERGY: MAKING THE RIGHT CHOICES (1996), http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy.

> neither prudent nor practical. With no readily available economic alternatives on the horizon, fossil fuels will continue to supply most of the world's and this region's energy for the foreseeable future.
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> . . .
>
> Governments also need to provide a stable investment climate. . . . They should avoid the temptation to intervene in energy markets in ways that give advantage to one competitor over another—or one fuel over another.
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> . . .
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> We also have to keep in mind that most of the greenhouse effect comes from natural sources. . . . Leaping to radically cut this tiny sliver of the greenhouse pie on the premise that it will affect climate defies common sense and lacks foundation in our current understanding of the climate system.
>
> . . .
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> [L]et's agree there's a lot we really don't know about how climate will change in the 21st century and beyond. . . . It is highly unlikely that the temperature in the middle of the next century will be significantly affected whether policies are enacted now or 20 years from now. . . . [I]t's bad public policy to impose very costly regulations and restrictions when their need has yet to be proven.[85]

114. Imperial Oil (ExxonMobil) CEO Robert Peterson falsely denied the established connection between Defendants' fossil fuel products and anthropogenic climate change in the Summer 1998 Imperial Oil Review, "A Cleaner Canada":

> [T]his issue [referring to climate change] has absolutely nothing to do with pollution and air quality. Carbon dioxide is not a pollutant but an essential ingredient of life on this planet. . . . [T]he question of whether or not the trapping of "greenhouse" gases will result in the planet's getting warmer . . . has no connection whatsoever with our day-to-day weather.
>
> . . .
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> There is absolutely no agreement among climatologists on whether or not the planet is getting warmer, or, if it is, on whether the warming is the result of man-made factors or natural variations in the climate. . . . I feel very safe in saying that the view that burning fossil fuels will result in global climate change remains an unproved hypothesis.[86]

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[85] Lee R. Raymond, Chairman and Chief Executive Officer, Exxon Corp., Address at the World Petroleum Congress (Oct. 13, 1997), https://assets.documentcloud.org/documents/2840902/1997-Lee-Raymond-Speech-at-China-World-Petroleum.pdf.

[86] Robert Peterson, *A Cleaner Canada*, IMPERIAL OIL REVIEW (Summer 1998), https://www.desmogblog.com/sites/beta.desmogblog.com/files/A%20Cleaner%20Canada%20Imperial%20Oil.pdf.

115. Mobil (ExxonMobil) paid for a series of "advertorials," advertisements located in the editorial section of the *New York Times* and meant to look like editorials rather than paid ads. Those ads discussed various aspects of the public discussion of climate change and sought to undermine the justifications for tackling greenhouse gas emissions as unsettled science. The 1997 advertorial below[87] argued that economic analysis of emissions restrictions was faulty and inconclusive and therefore a justification for delaying action on climate change.

[87] Mobil, *When Facts Don't Square with the Theory, Throw Out the Facts*, N.Y. TIMES A31 (Aug. 14, 1997), https://www.documentcloud.org/documents/705550-mob-nyt-1997-aug-14-whenfactsdontsquare.html.

like race.

But when we no longer allow those choices, both civility and common sense will have been diminished. □

who was dragged from his sister's car by police officers and shot in the face at point-blank range. The cops who have the power to do something about those officers, but choose not to. □

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When facts don't square with the theory, throw out the facts

That seems to characterize the administration's attitude on two of its own studies which show that international efforts to curb global warming could spark a big run-up in energy prices.

For months, the administration—playing its cards close to the vest—has promised to provide details of the emission reduction plan it will put on the table at the climate change meeting in Kyoto, Japan, later this year. It also promised to evaluate the economics of that policy and measure its impact. Those results are important because the proposals submitted by other countries thus far would be disruptive and costly to the U.S. economy.

Yet, when the results from its own economic models were finally generated, the administration started distancing itself from the findings and models that produced them. The administration's top economic advisor said that economic models can't provide a "definitive answer" on the impact of controlling emissions. The effort, she said, was "futile." At best, the models can only provide a "range of potential impacts."

Frankly, we're puzzled. The White House has promised to lay the economic facts before the public. Yet, the administration's top advisor said such an analysis won't be based on models and it will "preclude...detailed numbers." If you don't provide numbers and don't rely on models, what kind of rigorous economic examination can Congress and the public expect?

We're also puzzled by ambivalence over models. The administration downplays the utility of economic models to forecast cost impacts 10–15 years from now, yet its negotiators accept as gospel the 50–100-year predictions of global warming that have been generated by climate models—many of which have been criticized as seriously flawed.

The second study, conducted by Argonne National Laboratory under a contract with the Energy Department, examined what would happen if the U.S. had to commit to higher energy prices under the emission reduction plans that several nations had advanced last year. Such increases, the report concluded, would result in "significant reductions in output and employment" in six industries—aluminum, cement, chemical, paper and pulp, petroleum refining and steel.

Hit hardest, the study noted, would be the chemical industry, with estimates that up to 30 percent of U.S. chemical manufacturing capacity would move offshore to developing countries. Job losses could amount to some 200,000 in that industry, with another 100,000 in the steel sector. And despite the substantial loss of U.S. jobs and manufacturing capacity, the net emission reduction could be insignificant since developing countries will not be bound by the emission targets of a global warming treaty.

Downplaying Argonne's findings, the Energy Department noted that the study used outdated energy prices (mid-1996), didn't reflect the gains that would come from international emissions trading and failed to factor in the benefits of accelerated developments in energy efficiency and low-carbon technologies.

What it failed to mention is just what these new technologies are and when we can expect their benefits to kick in. As for emissions trading, many economists have theorized about the role they could play in reducing emissions, but few have grappled with the practicality of implementing and policing such a scheme.

We applaud the goals the U.S. wants to achieve in these upcoming negotiations—namely, that a final agreement must be "flexible, cost-effective, realistic, achievable and ultimately global in scope." But until we see the details of the administration's policy, we are concerned that plans are being developed in the absence of rigorous economic analysis. Too much is at stake to simply ignore facts that don't square with preconceived theories.

Mobil The energy to make a difference.

http://www.mobil.com

Figure 7: 1997 Mobil Advertorial

116. In 2000, an ExxonMobil newspaper advertisement misleadingly implied that the same climate models it relied on internally were unreliable: "Today's global models simply don't work at a regional level." It went on to assert that the National Assessment Synthesis Report (on climate change) "is written as a political document, not an objective summary of the underlying science." The advertisement failed to disclose what ExxonMobil's own internal documents had already confirmed: that burning fossil fuels would result in catastrophic climate change.[88]

117. In 1998, API, on behalf of its members, developed a Global Climate Science Communications Plan that stated that unless "climate change becomes a non-issue . . . there may be no moment when we can declare victory for our efforts." Rather, API proclaimed that "[v]ictory will be achieved when . . . average citizens 'understand' (recognize) uncertainties in climate science; [and when] recognition of uncertainties becomes part of the 'conventional wisdom.'"[89] The multi-million-dollar, multi-year proposed budget included public outreach and the dissemination of educational materials to schools to "begin to erect a barrier against further efforts to impose Kyoto-like measures in the future"[90]—a blatant attempt to disrupt international efforts, pursuant to the UNFCCC, to negotiate a treaty that curbed greenhouse gas emissions.

118. Soon after, API distributed a memo to its members illuminating API's and Defendants' concern over the potential regulation of Defendants' fossil fuel products: "Climate is at the center of the industry's business interests. Policies limiting carbon emissions reduce

[88] ExxonMobil, *Political cart before a scientific horse*, WASH. POST (2000), https://www.documentcloud.org/documents/2477866-exxon-ad.html.

[89] Email from Joe Walker to Global Climate Science Team, *Draft Global Climate Science Communications Plan* (Apr. 3, 1998), https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf.

[90] *Id.*

petroleum product use. That is why it is API's highest priority issue and defined as 'strategic.'"[91] Further, the API memo stresses many of the strategies that Defendants individually and collectively utilized to combat the perception of their fossil fuel products as hazardous. They included:

a. Influencing the tenor of the climate change "debate" as a means to establish that greenhouse gas reduction policies like the Kyoto Protocol were not necessary to responsibly address climate change;

b. Maintaining strong working relationships between government regulators and communications-oriented organizations like the Global Climate Coalition, the Heartland Institute, and other groups carrying Defendants' message minimizing the hazards of the unabated use of their fossil fuel products and opposing regulation thereof;

c. Building the case for (and falsely dichotomizing) Defendants' positive contributions to a "long-term approach" (ostensibly for regulation of their products) as a reason for society to reject short term fossil fuel emissions regulations, and engaging in climate change science uncertainty research; and

d. Presenting Defendants' positions on climate change in domestic and international forums, including by preparing rebuttals to IPCC reports.

119. Additionally, Defendants mounted a deceptive public campaign against regulation of their business practices in order to continue wrongfully promoting and marketing their fossil fuel products, despite their own knowledge and the growing national and international scientific consensus about the hazards of doing so.

[91] *Allegations of Political Interference with Government Climate Change Science, Hearing Before the Comm. on Oversight and Government Reform*, 110th Cong. 324 (Mar. 19, 2007), https://ia601904.us.archive.org/25/items/gov.gpo.fdsys.CHRG-110hhrg37415/CHRG-110hhrg37415.pdf.

120. The Global Climate Coalition (GCC), on behalf of Defendants and other fossil fuel companies, funded deceptive advertising campaigns and distributed misleading material to generate public uncertainty around the climate debate, with the specific purpose of preventing U.S. adoption of the Kyoto Protocol, despite the leading role that the U.S. had played in the Protocol negotiations.[92] Despite an internal primer stating that various "contrarian theories" (i.e., climate change skepticism) do not "offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change," GCC excluded this section from the public version of the backgrounder[93] and instead funded and promoted some of those same contrarian theories. Between 1989 and 1998, the GCC spent $13 million on advertisements as part of a campaign to cast doubt on climate science.[94]

121. For example, in a 1994 report, the GCC stated that "observations have not yet confirmed evidence of global warming that can be attributed to human activities," that "[t]he claim that serious impacts from climate change have occurred or will occur in the future simply has not been proven," and "[c]onsequently, there is no basis for the design of effective policy action that would eliminate the potential for climate change."[95] In 1995, the GCC published a booklet called "Climate Change: Your Passport to the Facts," which stated, "While many warnings have reached the popular press about the consequences of a potential man-made warming of the Earth's

[92] *Id.*

[93] Memorandum from Gregory J. Dana, Assoc. of Int'l Auto. Mfrs., to AIAM Technical Committee, *Global Climate Coalition (GCC) - Primer on Climate Change Science - Final Draft* (Jan. 18, 1996), http://www.webcitation.org/6FyqHawb9.

[94] Wendy E. Franz, Kennedy School of Government, Harvard University, *Science, Skeptics and Non-State Actors in the Greenhouse*, ENRP Discussion Paper E-98-18, at 13 (Sept. 1998), https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20Non-State%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf.

[95] GCC, *Issues and Options: Potential Global Climate Change*, CLIMATE FILES (1994), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1994-potential-global-climate-change-issues.

atmosphere during the next 100 years., there remains no scientific evidence that such a dangerous warming will actually occur."[96]

122. A key strategy in Defendants' efforts to discredit scientific consensus on climate change and the IPCC was to bankroll scientists who, although accredited, held fringe opinions that were even more questionable given the sources of their research funding. Those scientists obtained part or all of their research budget from Defendants directly or through Defendant-funded organizations like API,[97] but they frequently failed to disclose their fossil fuel industry underwriters.[98]

123. Creating a false sense of disagreement in the scientific community (despite the consensus that its own scientists, experts, and managers had previously acknowledged) has had an evident impact on public opinion. A 2007 Yale University-Gallup poll found that while 71 percent of Americans personally believed global warming was happening, only 48 percent believed that there was a consensus among the scientific community, and 40 percent believed there was a lot of disagreement among scientists over whether global warming was occurring.[99]

124. 2007 was the same year the IPCC published its Fourth Assessment Report, in which it concluded that "there is *very high confidence* that the net effect of human activities since 1750

[96] GCC, *Climate Change: Your Passport to the Facts*, CLIMATE FILES (1995), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1995-climate-change-facts-passport.

[97] *E.g.*, Willie Soon & Sallie Baliunas, *Proxy Climatic and Environmental Changes of the Past 1000 Years*, 23 CLIMATE RESEARCH 88, 105 (Jan. 31, 2003), http://www.int-res.com/articles/cr2003/23/c023p089.pdf.

[98] *E.g., Smithsonian Statement: Dr. Wei-Hock (Willie) Soon*, SMITHSONIAN (Feb. 26, 2015), https://web.archive.org/web/20181105223030/https://www.si.edu/newsdesk/releases/smithsonian-statement-dr-wei-hock-willie-soon.

[99] *American Opinions on Global Warming: A Yale/Gallup/Clearvision Poll*, Yale Program on Climate Change Communication (July 31, 2007), http://climatecommunication.yale.edu/publications/american-opinions-on-global-warming.

has been one of warming."[100] The IPCC defined "very high confidence" as at least a 9 out of 10 chance.[101]

125. Defendants borrowed pages out of the playbook of prior denialist campaigns. A "Global Climate Science Team" ("GCST") was created that mirrored a front group created by the tobacco industry, known as The Advancement of Sound Science Coalition, whose purpose was to sow uncertainty about the fact that cigarette smoke is carcinogenic. The GCST's membership included Steve Milloy (a key player on the tobacco industry's front group), Exxon's senior environmental lobbyist; an API public relations representative; and representatives from Chevron and Southern Company that drafted API's 1998 Communications Plan. There were no scientists on the "Global Climate Science Team." GCST developed a strategy to spend millions of dollars manufacturing climate change uncertainty. Between 2000 and 2004, Exxon donated $50,000 to Milloy's Advancement of Sound Science Center; and an additional $60,000 to the Free Enterprise Education Institute and $50,000 to the Free Enterprise Action Institute, both of which were registered to Milloy's home address.[102]

126. Defendants, through their trade association memberships, worked directly, and often in a deliberately obscured manner, to evade regulation of the emissions resulting from use of their fossil fuel products.

127. Defendants have funded dozens of think tanks, front groups, and dark money foundations pushing climate change denial. These include the Competitive Enterprise Institute, the

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[100] IPCC, *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (2007), https://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf.

[101] *Id.*

[102] Seth Shulman et al., *Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big Tobacco's Tactics to Manufacture Uncertainty on Climate Science*, UNION OF CONCERNED SCIENTISTS (Jan. 19, 2007), http://www.ucsusa.org/sites/default/files/ legacy/assets/documents/global_warming/exxon_report.pdf.

Heartland Institute, Frontiers for Freedom, Committee for a Constructive Tomorrow, and Heritage Foundation. From 1998 to 2014 ExxonMobil spent almost $31 million funding numerous organizations misrepresenting the scientific consensus that Defendants' fossil fuel products were causing climate change, sea level rise, and injuries to the County, among other communities.[103] Several Defendants have been linked to other groups that undermine the scientific basis linking Defendants' fossil fuel products to climate change and sea level rise, including the Frontiers of Freedom Institute and the George C. Marshall Institute.

128. Exxon acknowledged its own previous success in sowing uncertainty and slowing mitigation through funding of climate denial groups. In its 2007 Corporate Citizenship Report, Exxon declared: "In 2008, we will discontinue contributions to several public policy research groups whose position on climate change could divert attention from the important discussion on how the world will secure the energy required for economic growth in an environmentally responsible manner."[104] Despite this pronouncement, Exxon remained financially associated with several such groups after the report's publication.

129. Defendants could have contributed to the global effort to mitigate the impacts of greenhouse gas emissions by, for example delineating practical technical strategies, policy goals, and regulatory structures that would have allowed them to continue their business ventures while reducing greenhouse gas emissions and supporting a transition to a lower carbon future. Instead, Defendants undertook a momentous effort to evade international and national regulation of greenhouse gas emissions to enable them to continue unabated fossil fuel production.

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[103] *ExxonMobil Climate Denial Funding 1998–2014*, EXXONSECRETS (last visited October 9, 2020), http://exxonsecrets.org/html/index.php.

[104] EXXONMOBIL, *2007 Corporate Citizenship Report* (Dec. 31, 2007), http://www.documentcloud.org/documents/2799777-ExxonMobil-2007-Corporate-Citizenship-Report.html.

130. As a result of Defendants' tortious, false, and misleading conduct, consumers of Defendants' fossil fuel products and policy-makers, in Hawai‘i as elsewhere, have been deliberately and unnecessarily deceived about: the role of fossil fuel products in causing global warming, sea level rise, disruptions to the hydrologic cycle, and increased extreme precipitation, heatwaves, drought and other consequences of the climate crisis; the acceleration of global warming since the mid-20th century and the continuation thereof; and the fact that the continued increase in fossil fuel product consumption creates severe environmental threats and significant economic costs for communities, including the County. Reasonable consumers and policy makers have also been deceived about the depth and breadth of the state of the scientific evidence on anthropogenic climate change, and in particular, about the strength of the scientific consensus demonstrating the role of fossil fuels in causing both climate change and a wide range of potentially destructive impacts, including sea level rise, disruptions to the hydrologic cycle, extreme precipitation, heatwaves, drought, and associated consequences.

E. In Contrast to Their Public Statements, Defendants' Internal Actions Demonstrate Their Awareness of and Intent to Profit from the Unabated Use of Fossil Fuel Products.

131. In contrast to their public-facing efforts challenging the validity of the scientific consensus about anthropogenic climate change, Defendants' acts and omissions evidence their internal acknowledgement of the reality of climate change and its likely consequences. Those actions include, but are not limited to, making multi-billion-dollar infrastructure investments for their own operations that acknowledge the reality of coming anthropogenic climate-related change. Those investments included (among others), raising offshore oil platforms to protect against sea level rise; reinforcing offshore oil platforms to withstand increased wave strength and storm

severity; and developing and patenting designs for equipment intended to extract crude oil and/or natural gas in areas previously unreachable because of the presence of polar ice sheets.[105]

132. For example, in 1973 Exxon obtained a patent for a cargo ship capable of breaking through sea ice[106] and for an oil tanker[107] designed specifically for use in previously unreachable areas of the Arctic.

133. In 1974, Chevron obtained a patent for a mobile arctic drilling platform designed to withstand significant interference from lateral ice masses,[108] allowing for drilling in areas with increased ice floe movement due to elevated temperature.

134. That same year, Texaco (Chevron) worked toward obtaining a patent for a method and apparatus for reducing ice forces on a marine structure prone to being frozen in ice through natural weather conditions,[109] allowing for drilling in previously unreachable Arctic areas that would become seasonally accessible.

135. Shell obtained a patent similar to Texaco's (Chevron) in 1984.[110]

136. In 1989, Norske Shell, Royal Dutch Shell's Norwegian subsidiary, altered designs for a natural gas platform planned for construction in the North Sea to account for anticipated sea

[105] Lieberman & Rust, *supra* note 70.

[106] ExxonMobil Research Engineering Co., *Patent US3727571A: Icebreaking cargo vessel* (granted Apr. 17, 1973), https://www.google.com/patents/US3727571.

[107] ExxonMobil Research Engineering Co., *Patent US3745960A: Tanker vessel* (granted July 17, 1973), https://www.google.com/patents/US3745960.

[108] Chevron Research & Technology Co., *Patent US3831385A: Arctic offshore platform* (granted Aug. 27, 1974), https://www.google.com/patents/US3831385.

[109] Texaco Inc., *Patent US3793840A: Mobile, arctic drilling and production platform* (granted Feb. 26, 1974), https://www.google.com/patents/US3793840.

[110] Shell Oil Co., *Patent US4427320A: Arctic offshore platform* (granted Jan. 24, 1984), https://www.google.com/patents/US4427320.

level rise. Those design changes were ultimately carried out by Shell's contractors, adding substantial costs to the project.[111]

a. The Troll field, off the Norwegian coast in the North Sea, was proven to contain large natural oil and gas deposits in 1979, shortly after Norske Shell was approved by Norwegian oil and gas regulators to operate a portion of the field.

b. In 1986, the Norwegian parliament granted Norske Shell authority to complete the first development phase of the Troll field gas deposits, and Norske Shell began designing the "Troll A" gas platform, with the intent to begin operation of the platform in approximately 1995. Based on the very large size of the gas deposits in the Troll field, the Troll A platform was projected to operate for approximately 70 years.

c. The platform was originally designed to stand approximately 100 feet above sea level—the amount necessary to stay above waves in a once-in-a-century strength storm.

d. In 1989, Shell engineers revised their plans to increase the above-water height of the platform by 3–6 feet, specifically to account for higher anticipated average sea levels and increased storm intensity due to global warming over the platform's 70-year operational life.[112]

e. Shell projected that the additional 3–6 feet of above-water construction would increase the cost of the Troll A platform by as much as $40 million.

F. Defendants' Actions Have Exacerbated the Costs of Adapting to and Mitigating the Adverse Impacts of the Climate Crisis.

137. As greenhouse gas pollution accumulates in the atmosphere, some of which does not dissipate for potentially thousands of years (namely CO_2), climate changes and consequent adverse environmental changes compound, and their frequencies and magnitudes increase. As

[111] *Greenhouse Effect: Shell Anticipates a Sea Change*, N.Y. TIMES (Dec. 20, 1989), http://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html.

[112] *Id.*; Lieberman & Rust, *supra* note 70.

those adverse environmental changes compound and their frequencies and magnitudes increase, so too do the physical, environmental, economic, and social injuries resulting therefrom.

138. Delayed efforts to curb anthropogenic greenhouse gas emissions have therefore increased environmental harms and increased the magnitude and cost to address harms, including to the County, that have already occurred or are locked in by previous emissions.

139. Therefore, Defendants' campaign to obscure the science of climate change so as to protect and expand the use of fossil fuels greatly increased and continues to increase the harms and rate of harms suffered by the County and its residents. The costs of inaction on anthropogenic climate change and its adverse environmental effects were not lost on Defendants. In a 1997 speech by John Browne, Group Executive for BP America, at Stanford University, Browne described Defendants' and the entire fossil fuel industry's responsibility and opportunities to reduce use of fossil fuel products, reduce global CO_2 emissions, and mitigate the harms associated with the use and consumption of such products:

> A new age demands a fresh perspective of the nature of society and responsibility.
>
> We need to go beyond analysis and to take action. It is a moment for change and for a rethinking of corporate responsibility. . . .
>
> [T]here is now an effective consensus among the world's leading scientists and serious and well informed people outside the scientific community that there is a discernible human influence on the climate, and a link between the concentration of carbon dioxide and the increase in temperature.
>
> The prediction of the IPCC is that over the next century temperatures might rise by a further 1 to 3.5 degrees centigrade [1.8º–6.3º F], and that sea levels might rise by between 15 and 95 centimetres [5.9 and 37.4 inches]. Some of that impact is probably unavoidable, because it results from current emissions. . . .
>
> [I]t would be unwise and potentially dangerous to ignore the mounting concern.
>
> The time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven … but when the possibility cannot be discounted and is taken seriously by the society of which we are part. . . .

> We [the fossil fuel industry] have a responsibility to act, and I hope that through our actions we can contribute to the much wider process which is desirable and necessary.
>
> BP accepts that responsibility and we're therefore taking some specific steps.
>
> To control our own emissions.
>
> To fund continuing scientific research.
>
> To take initiatives for joint implementation.
>
> To develop alternative fuels for the long term.
>
> And to contribute to the public policy debate in search of the wider global answers to the problem.[113]

140. Despite Defendants' knowledge of the foreseeable, measurable, and significant harms associated with the unabated consumption and use of their fossil fuel products, in Hawai'i and elsewhere, and despite Defendants' knowledge of technologies and practices that could have helped to reduce the foreseeable dangers associated with their fossil fuel products, Defendants continued to wrongfully market and promote heavy fossil fuel use and mounted a campaign to obscure the connection between their fossil fuel products and the climate crisis, dramatically increasing the cost of abatement. At all relevant times, Defendants were deeply familiar with opportunities to reduce the use of their fossil fuel products, reduce global greenhouse gas emissions associated therewith, and mitigate the harms associated with the use and consumption of such products. Examples of that recognition include, but are not limited to the following:

a. In 1961, Phillips Petroleum Company filed a patent application for a method to purify gas, among other things, as "natural gas containing gasoline hydrocarbons can contain undesirable amounts of sulfur and other compounds such as carbon dioxide which are undesirable in the finished gasoline product." [114]

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[113] John Browne, *BP Climate Change Speech to Stanford*, CLIMATE FILES (May 19, 1997), http://www.climatefiles.com/bp/bp-climate-change-speech-to-stanford.

[114] Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (filed Aug. 22, 1961), https://patents.google.com/patent/US3228874.

b. In 1963, Esso (Exxon Mobil) obtained multiple patents on technologies for fuel cells, including on the design of a fuel cell and necessary electrodes,[115] and on a process for increasing the oxidation of a fuel, specifically methanol, to produce electricity in a fuel cell.[116]

c. In 1970, Esso (Exxon Mobil) obtained a patent for a "low-polluting engine and drive system" that used an interburner and air compressor to reduce pollutant emissions, including CO_2 emissions, from gasoline combustion engines (the system also increased the efficiency of the fossil fuel products used in such engines, thereby lowering the amount of fossil fuel product necessary to operate engines equipped with this technology).[117]

d. In 1980, Imperial Oil wrote in its "Review of Environmental Protection Activities for 1978–79: "There is no doubt that increases in fossil fuel usage and decreases in forest cover are aggravating the potential problem of increased CO_2 in the atmosphere. Technology exists to remove CO_2 from stack gases but removal of only 50% of the CO_2 would double the cost of power generation."[118]

e. A 1987 company briefing produced by Shell on "Synthetic Fuels and Renewable Energy" noted that while "immediate prospects" were "limited," "nevertheless it is by pursuing commercial opportunities now and in the near future that the valuable experience needed for further development will be gained." The brief also noted that "the task of replacing oil resources is likely to become increasingly difficult and expensive and there will be a growing need to develop lean, convenient alternatives. Initially these will supplement and eventually replace

[115] ExxonMobil Research Engineering Co., *Patent US3116169A: Fuel cell and fuel cell electrodes* (granted Dec. 31, 1963), https://www.google.com/patents/US3116169.

[116] ExxonMobil Research Engineering Co., *Patent US3113049A: Direct production of electrical energy from liquid fuels* (granted Dec. 3, 1963), https://www.google.com/patents/US3113049.

[117] ExxonMobil Research Engineering Co., *Patent US3513929A: Low-polluting engine and drive system* (granted May 26, 1970), https://www.google.com/patents/US3513929.

[118] IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979, *supra* note 38, at 2.

valuable oil products. Many potential energy options are as yet unknown or at very early stages of research and development. New energy sources take decades to make a major global contribution. Sustained commitment is therefore needed during the remainder of this century to ensure that new technologies and those currently at a relatively early stage of development are available to meet energy needs in the next century."[119]

f. A 1989 article in a publication from Exxon Corporate Research for company use only stated: "CO_2 emissions contribute about half the forcing [sic] leading to a potential enhancement of the Greenhouse Effect. Since energy generation from fossil fuels dominates modern CO_2 emissions, strategies to limit CO_2 growth focus near term on energy efficiency and long term on developing alternative energy sources. Practiced at a level to significantly reduce the growth of greenhouse gases, these actions would have substantial impact on society and our industry—near-term from reduced demand for current products, long term from transition to entirely new energy systems."[120]

g. In 1996, more than thirty years after API's president warned that "time is running out" for the world to address the "catastrophic consequences of pollution," API published the book "Reinventing Energy: Making the Right Choices" to refute this very conclusion. Contradicting the scientific consensus known by its members for decades, the book claims: "Currently, no conclusive—or even strongly suggestive—scientific evidence exists that human

[119] *Synthetic Fuels and Renewable Energy*, SHELL SERVICE BRIEFING, no. 2, 1987, https://assets.documentcloud.org/documents/4411089/Document2.pdf.

[120] Brian Flannery, *Greenhouse Science*, CONNECTIONS: CORPORATE RESEARCH, EXXON RESEARCH & ENGINEERING CO. (Fall 1989), http://www.climatefiles.com/exxonmobil/1989-exxon-mobil-article-technologys-place-marketing-mix.

activities are significantly affecting sea levels, rainfall, surface temperatures, or the intensity and frequency of storms."[121]

h. The book downplayed nearly every aspect of established climate science. API baldly claimed that scientists do not understand how carbon flows in and out of the atmosphere and whether fossil fuels are even responsible for increasing concentrations of atmospheric CO_2. It then explained that even if some warming does occur, such warming "would present few if any problems" because, for example, farmers could be "smart enough to change their crop plans" and low-lying areas would "likely adapt" to sea level rise.[122]

i. As the County's vulnerability demonstrates, however, such adaptations, made necessary by Defendants' conduct, are enormously expensive. Defendants' strategy merely transferred the significant costs and externalities of their actions onto the County, and in the process, they reaped billions of dollars in profit.

j. In the publication, API also contended that "the state of the environment does not justify the call for the radical lifestyle changes Americans would have to make to substantially reduce the use of oil and other fossil fuels" and that the "benefits of alternatives aren't worth the cost of forcing their use." "Some jobs definitely will be created in making, distributing and selling alternatives. But they will come at the expense of lost jobs in the traditional automobile and petroleum industries," the authors continued. "Alternatives will likely be more expensive than conventional fuel/vehicle technology. Consumers, obviously, will bear these increased expenses, which means they will have less to spend on other products and cost jobs."[123]

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[121] AMERICAN PETROLEUM INSTITUTE, REINVENTING ENERGY: MAKING THE RIGHT CHOICES 79 (1996), http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy.

[122] *Id*. at 86–87.

[123] *Id*. at 59, 68, 69.

k. API published this book in service of one goal—ensuring its members could continue to produce and sell fossil fuels in massive quantities that it knew would devastate the planet. The book's final section reveals this purpose. API concluded: "[S]evere reduction in greenhouse gas emissions by the United States or even all developed countries would impose large costs on countries but yield little in the way of benefits—even under drastic climate change scenarios."[124]

141. Defendants could have made major inroads to mitigate the County's injuries through technology by developing and employing technologies to capture and sequester greenhouse gases emissions associated with conventional use of their fossil fuel products. Defendants had knowledge dating at least back to the 1960s, and indeed, internally researched and perfected many such technologies. For instance:

a. Phillips Petroleum Company (ConocoPhillips) obtained a patent in 1966 for a "Method for recovering a purified component from a gas" outlining a process to remove carbon from natural gas and gasoline streams;[125] and

b. In 1973, Shell was granted a patent for a process to remove acidic gases, including CO_2, from gaseous mixtures.

142. Despite this knowledge, Defendants' later forays into the alternative energy sector were largely pretenses. For instance, in 2001, Chevron developed and shared a sophisticated information management system to gather greenhouse gas emissions data from its explorations and production to help regulate and set reduction goals.[126] Beyond this technological breakthrough,

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[124] *Id*. at 89.

[125] Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (granted Jan. 11, 1966), https://patents.google.com/patent/US3228874.

[126] *Chevron Introduces New System to Manage Energy Use* (press release), CHEVRON CORP. (Sept. 25, 2001), https://web.archive.org/web/20170510120220/https://www.chevron.com/stories/chevron-introduces-new-system-to-manage-energy-use (accessed October 9, 2020).

Chevron touted "profitable renewable energy" as part of its business plan for several years and launched a 2010 advertising campaign promoting the company's move towards renewable energy. Despite all this, Chevron rolled back its renewable and alternative energy projects in 2014.[127]

143. Similarly, ConocoPhillips's 2012 Sustainable Development report declared developing renewable energy a priority in keeping with their position on sustainable development and climate change.[128] Their 10-K filing from the same year told a different story: "As an independent E&P company, we are solely focused on our core business of exploring for, developing and producing crude oil and natural gas globally."[129]

144. Likewise, while Shell orchestrated an entire public relations campaign around energy transitions towards net zero emissions, a fine-print disclaimer in its 2016 net-zero pathways report reads: "We have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10–20 years."[130]

145. BP, appearing to abide by the representations Lord Browne made in his speech described in paragraph 137, *supra*, engaged in a rebranding campaign to convey an air of environmental stewardship and renewable energy to its consumers. This included renouncing its membership in the GCC in 2007, changing its name from "British Petroleum" to "BP" while adopting the slogan "Beyond Petroleum," and adopting a conspicuously green corporate logo. However, BP's self-touted "alternative energy" investments during this turnaround included investments in natural gas, a fossil fuel, and in 2007 the company reinvested in Canadian tar sands,

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[127] Benjamin Elgin, *Chevron Dims the Lights on Green Power*, BLOOMBERG (May 29, 2014), https://www.bloomberg.com/news/articles/2014-05-29/chevron-dims-the-lights-on-renewable-energy-projects.

[128] CONOCOPHILLIPS, *Sustainable Development* (2013), http://www.conocophillips.com/sustainable-development/Documents/2013.11.7%201200%20Our%20Approach%20Section%20Final.pdf.

[129] ConocoPhillips, Form 10-K, U.S. SEC. & EXCH. COMM'N (Dec. 31, 2012), https://www.sec.gov/Archives/edgar/data/1163165/000119312513065426/d452384d10k.htm.

[130] SHELL INT'L BV, *Energy Transitions Towards Net Zero Emissions* (NZE) (2016).

a particularly high-carbon source of oil.[131] The company ultimately abandoned its wind and solar assets in 2011 and 2013, respectively, and even the "Beyond Petroleum" moniker in 2013.[132]

146. After posting a $10 billion quarterly profit, Exxon in 2005 stated that "We're an oil and gas company. In times past, when we tried to get into other businesses, we didn't do it well. We'd rather re-invest in what we know."[133]

147. Even if Defendants did not adopt technological or energy source alternatives that would have reduced use of fossil fuel products, reduced global greenhouse gas pollution, and/or mitigated the harms associated with the use and consumption of such products, Defendants could have taken other practical, cost-effective steps to reduce the use of their fossil fuel products, reduce global greenhouse gas pollution associated therewith, and mitigate the harms associated with the use and consumption of such products. Those alternatives could have included, among other measures:

a. Acknowledging and sharing the validity of scientific evidence on anthropogenic climate change and the damages it will cause people; communities, including the County and the environment. Acceptance of that evidence along with associated warnings and actions would have altered the debate from *whether* to combat climate change and sea level rise to *how* to combat it; and avoided much of the public confusion that has ensued over more than 30 years, since at least 1988;

b. Forthrightly communicating with Defendants' shareholders, banks, insurers, the public, regulators, and the County about the global warming hazards of Defendants'

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[131] Fred Pearce, *Greenwash: BP and the Myth of a World 'Beyond Petroleum'*, THE GUARDIAN, (Nov. 20, 2008), https://www.theguardian.com/environment/2008/nov/20/fossilfuels-energy.

[132] Javier E. David, *'Beyond Petroleum' No More? BP Goes Back to Basics*, CNBC (Apr. 20, 2013), http://www.cnbc.com/id/100647034.

[133] James R. Healy, *Alternate Energy Not in Cards at ExxonMobil*, USA TODAY (Oct. 28, 2005), https://usatoday30.usatoday.com/money/industries/energy/2005-10-27-oil-invest-usat_x.htm.

fossil fuel products that were known to Defendants, which would have enabled those groups to make material, informed decisions about whether and how to address climate change and sea level rise vis-à-vis Defendants' products;

c. Refraining from affirmative efforts, whether directly, through coalitions, or through front groups, to distort public debate, and to cause many consumers and business and political leaders to think the relevant science was far less certain that it actually was;

d. Sharing their internal scientific research with the public, and with other scientists and business leaders, so as to increase public understanding of the scientific underpinnings of climate change and its relation to Defendants' fossil fuel products;

e. Supporting and encouraging policies to avoid dangerous climate change, and demonstrating corporate leadership in addressing the challenges of transitioning to a low-carbon economy;

f. Prioritizing alternative sources of energy through sustained investment and research on renewable energy sources to replace dependence on Defendants' inherently hazardous fossil fuel products; and

g. Adopting their shareholders' concerns about Defendants' need to protect their businesses from the inevitable consequences of profiting from their fossil fuel products. Over the period of 1990-2015, Defendants' shareholders proposed hundreds of resolutions to change Defendants' policies and business practices regarding climate change. Those included increasing renewable energy investment, cutting emissions, and performing carbon risk assessments, among others.

148. Despite their knowledge of the foreseeable harms associated with the consumption of Defendants' fossil fuel products, and despite the existence and fossil fuel industry knowledge

of opportunities that would have reduced the foreseeable dangers associated with those products, Defendants wrongfully and falsely promoted, campaigned against regulation of, and concealed the hazards of use of their fossil fuel products.

G. Defendants Continue to Mislead About the Impact of Their Fossil Fuel Products on Climate Change Through Greenwashing Campaigns and Other Misleading Advertisements in Hawai‘i and Elsewhere.

149. Defendants' coordinated campaign of disinformation and deception continues today, even as the scientific consensus about the cause and consequences of climate change has strengthened. Defendants have falsely claimed through advertising campaigns in Hawai‘i and/or intended to reach Hawai‘i, that their businesses are substantially invested in lower carbon technologies and renewable energy sources. In truth, each Defendant has invested minimally in renewable energy while continuing to expand its fossil fuel production. They have also claimed that certain of their fossil fuel products are "green" or "clean," and that using these products will sufficiently reduce or reverse the dangers of climate change. None of Defendants' fossil fuel products are "green" or "clean" because they all continue to pollute and ultimately warm the planet.

150. Instead of widely disseminating this information, reducing their pollution, and transitioning to non-polluting products, Defendants placed profits over people. In connection with selling gasoline and other fossil fuel products to consumers in the County throughout Hawai‘i, Defendants have failed to inform those consumers about the effects of their fossil fuel products in causing and accelerating the climate crisis.

151. Defendants' advertising and promotional materials fail to disclose the extreme safety risk associated with the use of Defendants' dangerous fossil fuel products, which are causing "catastrophic" climate change, as understood by Defendants' and the industry's own scientists

decades ago and with the effects of global warming now being felt in the County. They continue to omit that important information to this day.

152. Moreover, Defendants have not just failed to disclose the catastrophic danger their products cause. After having engaged in a long campaign to deceive the public about the science behind climate change, Defendants are now engaging in "greenwashing" by employing false and misleading advertising campaigns promoting themselves as sustainable energy companies committed to finding solutions to climate change, including by investing in alternative energy.

153. These misleading "greenwashing" campaigns are intended to capitalize on consumers' concerns for climate change and lead a reasonable consumer to believe that Defendants are actually substantially diversified energy companies making meaningful investments in low carbon energy compatible with avoiding catastrophic climate change.

154. Contrary to this messaging, however, Defendants' spending on low carbon energy is substantially and materially less than Defendants indicate to consumers. According to a recent analysis, between 2010 and 2018, BP spent 2.3% of total capital spending on low carbon energy sources, Shell spent 1.2%, and Chevron and Exxon just 0.2% each.[134] Meanwhile, Defendants continue to expand fossil fuel production and typically do not even include non-fossil energy systems in their key performance indicators or reported annual production statistics.[135]

155. Ultimately, Defendants currently claim to support reducing greenhouse gas emissions, but their conduct belies these statements. Defendants have continued to ramp up fossil fuel production globally, to invest in new fossil fuel development—including in tar

[134] Anjli Raval & Leslie Hook, *Oil and Gas Advertising Spree Signals Industry's Dilemma*, FIN. TIMES (Mar. 6, 2019), https://www.ft.com/content/5ab7edb2-3366-11e9-bd3a-8b2a211d90d5.

[135] *See, e.g.*, Reserves and production table, *A year of strong delivery and growth: BP Annual Report and Form 20-F 2017*, BP P.L.C. 24 (2018), https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf.

sands crude and shale gas fracking, some of the most carbon-intensive extraction projects—and to plan for unabated oil and gas exploitation indefinitely into the future.

156. Exxon is projected to increase oil production by more than 35% between 2018 and 2030—a sharper rise than over the previous 12 years.[136]

157. Shell is forecast to increase output by 38% by 2030, by increasing its crude oil production by more than half and its gas production by over a quarter.

158. Recently, BP projected its production of oil and gas is expected to increase just over 20% by 2030.[137]

159. Chevron set an oil production record in 2018 of 2.93 million barrels per day, and the company predicts further significant growth in oil production this year.[138] Like the other Defendants, it sees the next 20 years—the crucial window in which the world must reduce greenhouse gas emissions to avert the most catastrophic effects of the climate crisis—as a time of increased investment and production in its fossil fuel operations. For example, a 2019 investor report touts the company's "significant reserve additions in 2018" in the multiple regions in North America and around the world, as well as significant capital projects involving construction of refineries worldwide.[139]

[136] Jonathan Watts, Jillian Ambrose & Adam Vaughan, *Oil Firms to Pour Extra 7m Barrels Per Day Into Markets, Data Shows*, THE GUARDIAN (Oct. 10, 2019), https://www.theguardian.com/environment/2019/oct/10/oil-firms-barrels-markets.

[137] *Id*.

[138] Kevin Crowley & Eric Roston, *Chevron Aligns Strategy with Paris Deal But Won't Cap Output*, BLOOMBERG (Feb. 7, 2019), https://www.bloomberg.com/news/articles/2019-02-07/chevron-pledges-alignment-with-paris-accord-but-won-t-cap-output (accessed February 21, 2020).

[139] *Chevron 2019 Investor Presentation*, CHEVRON CORP. (Feb. 2019), https://chevroncorp.gcs-web.com/static-files/c3815b42-4deb-4604-8c51-bde9026f6e45.

H. Defendants Caused the County's Injuries.

160. Defendants' individual and collective conduct, including, but not limited to, their failures to warn of the threats their fossil fuel products posed to the world's climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with the use of those products; their public deception campaigns designed to obscure the connection between their products and global warming and its environmental, physical, social, and economic consequences; and their failure to pursue less hazardous alternatives available to them; is a substantial factor in causing global warming and consequent sea level rise and attendant flooding, erosion, and beach loss in the County; increased frequency and intensity of extreme weather events in the County, including hurricanes and tropical storms, "rain bomb" extreme precipitation events, drought, heatwaves, wildfires, and others; ocean warming and acidification that will injure or kill coral reefs in the County's waters; habitat loss of endemic species in the County, and range expansion of invasive and disease carrying-pest species; diminished availability of freshwater resources; and the cascading social, economic, and other consequences of those environmental changes. These adverse impacts will continue to increase in frequency and severity in the County.

161. As actual and proximate results of Defendants' conduct, which caused the aforementioned environmental changes, the County has suffered and will continue to suffer severe harms and losses, including, but not limited to: injury or destruction of County-owned or operated facilities and property deemed critical for operations, utility services, and risk management, as well as other assets that are essential to community health, safety, and well-being; increased planning and preparation costs for community adaptation and resiliency to global warming's effects; decreased tax revenue due to impacts on the County's tourism- and ocean-based economy; and increased costs associated with public health impacts.

162. The County already has incurred, and will foreseeably continue to incur, injuries and damages due to Defendants' conduct, their contribution to the climate crisis, and the environmental, physical, social, and economic consequences of the climate crisis's impact on the environment. As a result of Defendants' wrongful conduct described in this Complaint, the County has, is, and will experience significant adverse impacts attributable to Defendants' conduct, including, but not limited to:

Rising Temperatures

163. The average air temperature in the County is warming, and the rate at which it is doing so is accelerating. 2019 was the warmest year on record for nearly every city in Hawai'i, including Kahului on the island of Maui, which broke or tied 61 daily record temperatures in 2019 alone.[140] Kahului broke or tied daily temperature records every month in 2019 except February and March.[141]

164. Warming air temperatures have led to heat waves, expanded pathogen and invasive species ranges, thermal stress for native flora and fauna, increased electricity demand, increased occurrence and intensity of wildfire, threats to human health such as from heat stroke and dehydration, and decreased water supply due to increased evaporation and demand.

Sea Level Rise

165. The County is already experiencing sea level rise and associated impacts, and will experience significant additional and accelerating sea level rise over the coming decades through at least the end of the century. The County is particularly vulnerable to the impacts of sea level

[140] NOAA National Centers for Environmental Information, STATE OF THE CLIMATE: NATIONAL CLIMATE REPORT FOR 2019, (Jan. 2020) https://www.ncdc.noaa.gov/sotc/national/201913/supplemental/page-1.

[141] *What winter? In 2019, Hawaii broke or tied 273 heat records. In 2020, expect more of the same*, HAWAII NEWS NOW (Jan. 2, 2020) https://www.hawaiinewsnow.com/2020/01/02/hawaii-broke-or-tied-hundreds-heat-records-warm-winter-is-expected.

rise because of its substantial developed coastline and substantial low-lying areas, particularly along the south coast of the island of Maui, Kahului on the island of Maui, and the city of Kaunakakai on the island of Moloka‘i.

166. The figure below delineates the island of Maui’s sea level rise exposure area, a State of Hawai‘i-recognized sea level rise vulnerability zone that the County is using to formulate sea level rise adaptation strategies.

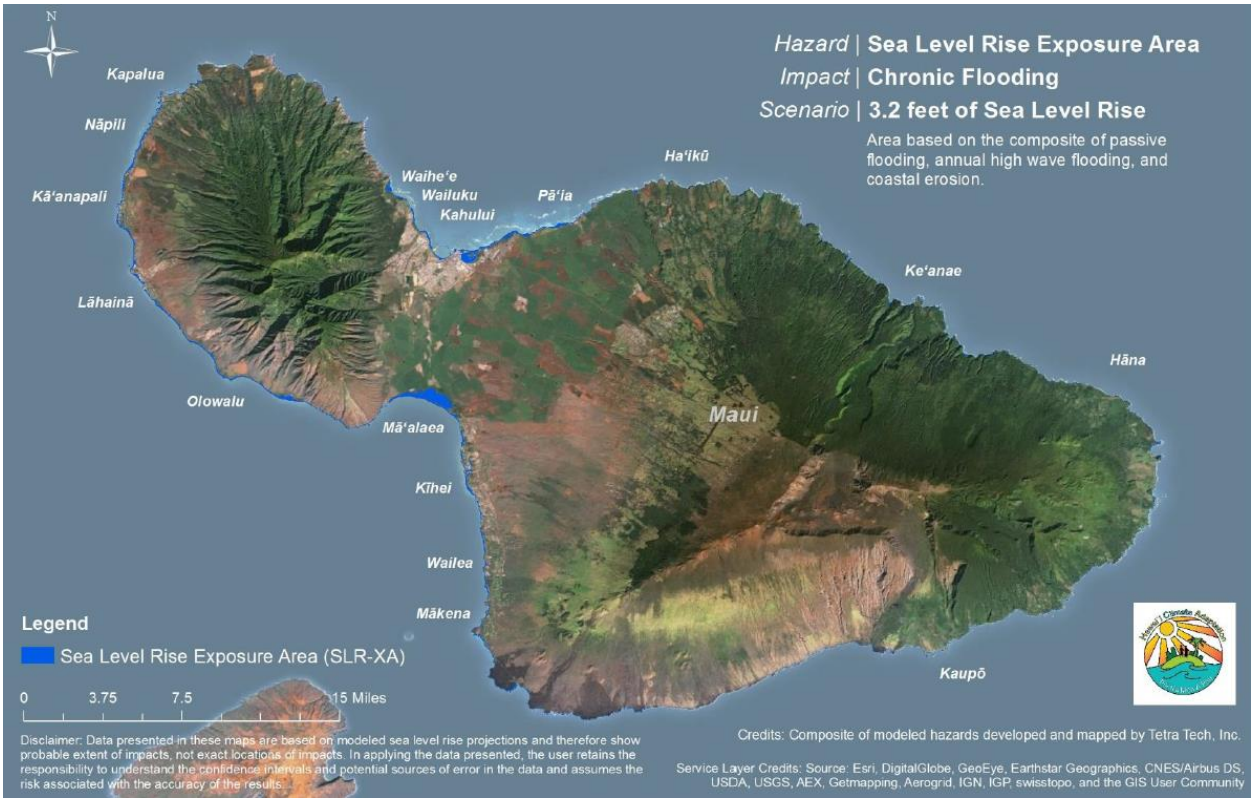

Figure 8: Maui’s Sea Level Rise Exposure Area

Loss of Land and Infrastructure

167. More than $3.2 billion in assets, including over 3,100 acres of land, 760 structures such as hotels that are critical to Maui’s tourism-based economy, and 11.2 miles of major roads, are located within the Sea Level Rise Exposure area and are at risk of inundation and destruction due to sea level rise estimated to occur by the year 2100.

168. The same is true for the other islands in the County. On Molokaʻi over 2,500 acres of land, 780 structures, and 2.2 miles of major roads are located within the Sea Level Rise Exposure area. Areas that are expected to be exposed to chronic flooding include Moʻomomi, Hale o Lono Harbor, and Kapaʻakea. These areas include important communities and natural assets including portions of the Moʻomomi Preserve, located in northwest Molokaʻi which is home to rare native and endangered species; Hale o Lono Harbor, a manmade harbor on the southwestern coast of the island that hosts two annual outrigger canoe competitions; and Kapaʻakea, a Hawaiian Homelands community near Kaunakakai. These areas would all become flooded with 3.2 feet of sea level rise. The coastal community of Kapaʻakea will suffer from an increased frequency and severity of flooding which will make some areas near the coast impassable or uninhabitable.

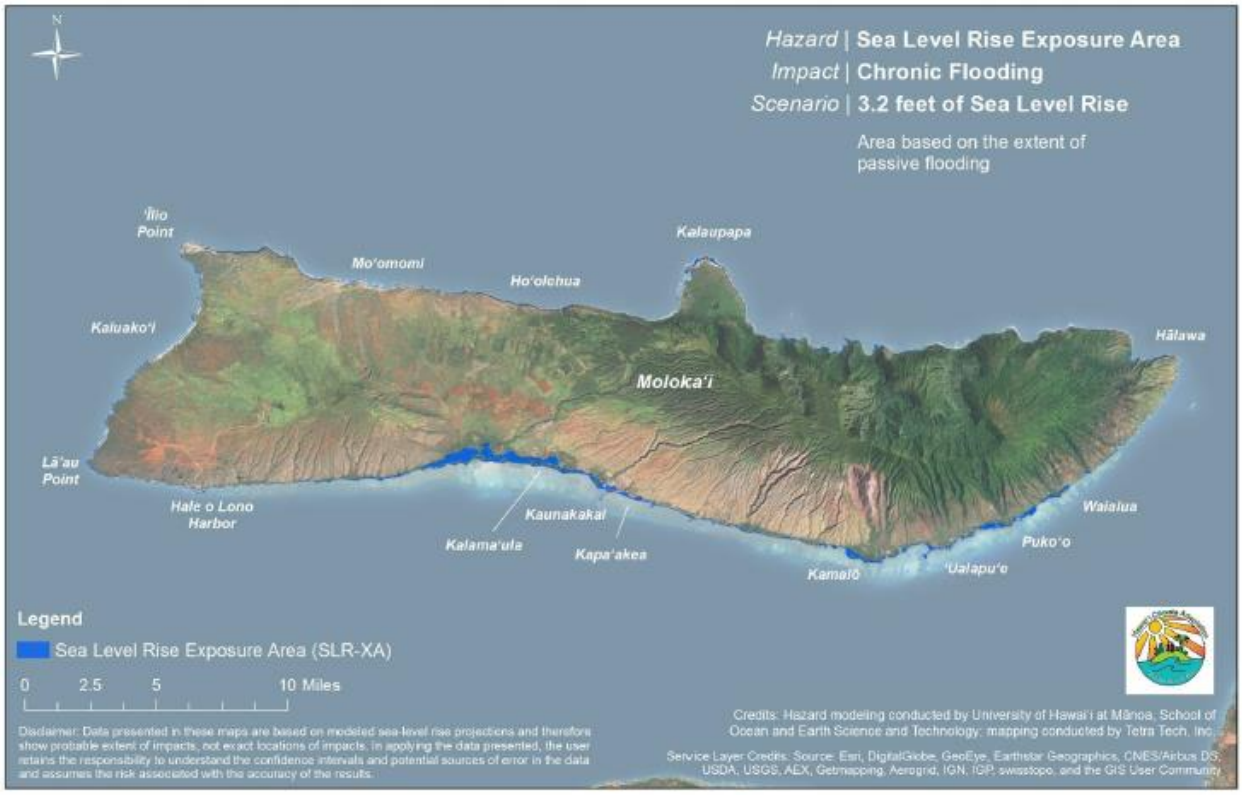

Figure 9: Molokai's Sea Level Rise Exposure Area

169. On Lānaʻi, approximately 380 acres of land, 13 structures, and 0.2 miles of roads are located within the Sea Level Rise Exposure area. Low lying, economically important areas,

such as Hulopoʻe Bay and Mānele Bay would experience increased frequency and extent of flooding. This would interrupt interisland shipping and travel and impact residents, visitors, and all forms of economic activity.

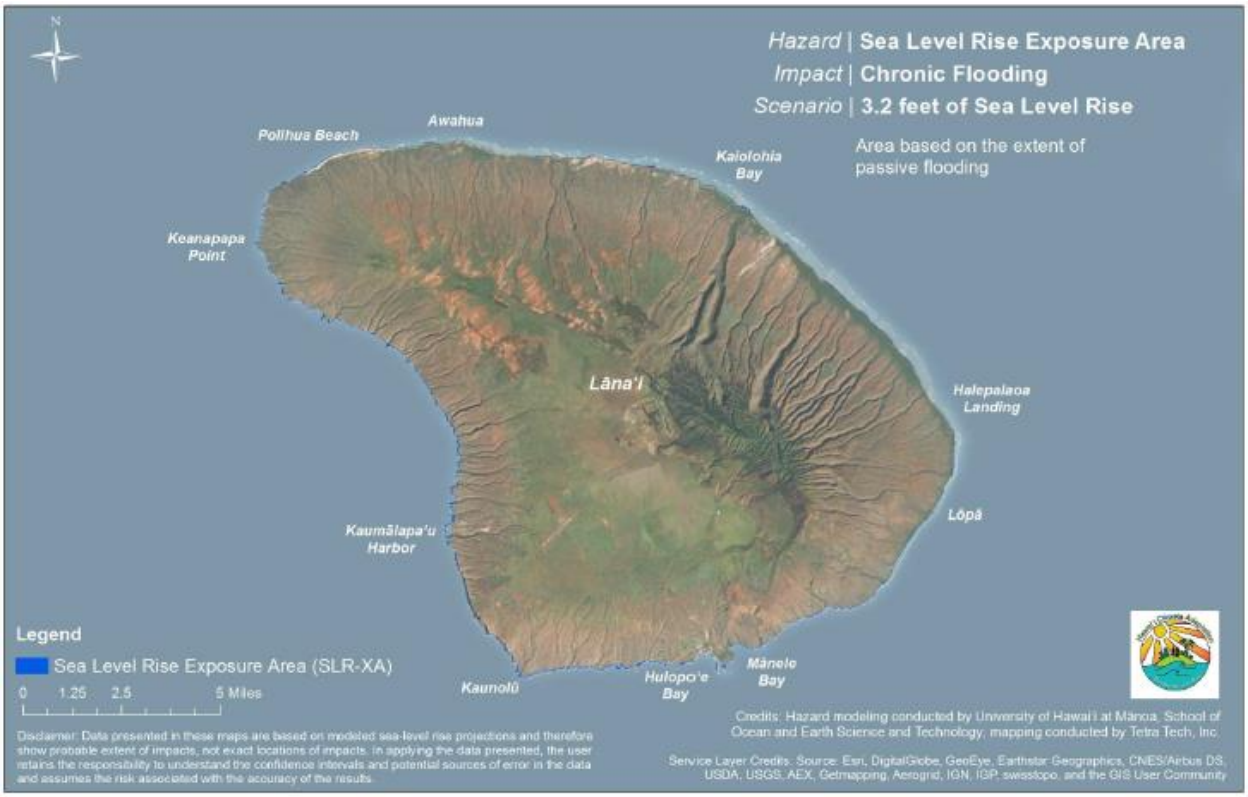

Figure 10: Lānai's Sea Level Rise Exposure Area

170. In total, more than 2,000 County residents will be displaced with that level of sea level rise. It is estimated that the economic losses in the County due to structure and land loss will be in the billions of dollars, which does not include the cost to fortify, rebuild, or relocate critical infrastructure.

171. The County's critical infrastructure is concentrated along low-lying shores and is highly vulnerable to flooding and erosion. Of the top 20 state coastal highways susceptible to erosion and structural degradation as a result of sea level rise, the County has 10 — five each on Maui and Molokaʻi. Portions of many coastal roads, such as Honoapiʻilani Highway, which

connects West Maui and Central Maui, will become chronically flooded by 2100 and lawmakers are already developing plans to relocate the highway. Two portions of highway on Molokaʻi, one in Kaluaʻaha and the other in Pukoʻo are also at high risk of flooding and erosion as a result of rising sea levels. This will result in wide-spread regional issues such as loss of commerce, loss of access to emergency services and increased traffic on other roads and highways, some of which serve as the only access in and out of many communities; and service disruptions due to damage or loss of electric and telecommunication transmission lines that commonly follow roads subject to flooding and subsurface saltwater intrusion.

172. Critical transportation hubs and other critical infrastructure, such as the County's five commercial harbors and five airports, will become increasingly exposed to chronic flooding from sea level rise, resulting in disruption of interisland and transoceanic shipping and travel that will impact the County and its residents, visitors, and all forms of economic activity. Since the County is almost entirely dependent upon imported food, fuel, and material, the vulnerability of ports and airports to extreme events, sea level rise, and increasing wave heights is of serious concern. Native Hawaiian cultural and historical resources are located near the County's shorelines and are already threatened by coastal erosion associated with sea level rise at areas that have served as burial grounds, home sites, fishponds, and other places of cultural significance. Even if all carbon emissions were to cease immediately, the County would continue to experience sea level rise and its associated impacts due to the "locked in" greenhouse gases already emitted and the lag time between emissions and sea level rise.

Wildfires

173. Wildfires are becoming more frequent, intense, and destructive in the County. As climate changes, stronger El Niño events become more frequent. El Niños alter Hawaii's weather

patterns, bringing wetter summers which in turn provide prime conditions for fast-growing grasses and invasive species, followed by prolonged periods of drought and hotter average temperatures, which desiccate vegetation thereby increasing the fuel available for fires.

174. The County's fire "season" now runs year-round, rather than only a few months of the year. In 2019, called the "year of fire" on Maui, 26,000 acres burned in the County—more than six times the total area burned in 2018.

Ecosystem Harm

175. The County's natural resources are in decline because of global warming. Many species endemic to the County and the Hawaiian Islands are already showing shifting habitats because of environmental changes attributable to global warming. Hawai‘i is often referred to as the "Endangered Species Capital of the World." While comprising less than one percent of the United States' land mass, nearly a third of the species listed as endangered or threatened in the United States are in Hawai‘i – about 500 species. That is nearly double the next highest state, California, which has about 300 endangered species.

176. For example, the population of the kiwikiu (or kīkēkoa), also known as the Maui parrotbill, has dropped to less than 300. The kiwikiu can only be found in 19 square miles of mesic and wet forests at 3,940–7,050 feet on the windward slopes of Maui's largest mountain, Haleakalā. The bird's range is shrinking as a result of climate change and mosquitos carrying avian malaria are moving higher up the mountain due to rising temperatures.

177. In addition, the ‘ahinahina, or silversword, which grow on the slopes of Haleakalā are also rapidly disappearing. The number of ‘ahinahina have declined by approximately sixty percent since the 1990s. This decline is a direct result of the hotter and drier conditions on the mountain due to climate change.

178. The ʻiʻiwi, or scarlet Hawaiian honeycreeper, which can be found in east Maui, is also in danger of immediate or near-term extinction. The ʻiʻiwi is a beautiful red bird with a long, curved salmon-colored bill. Like the kiwikiu, the habitat of the ʻiʻiwi is shrinking as a result of climate change. While it was once found in native forests on all Hawaiian islands, it is now restricted to elevations above 1,250 meters where it is too cool for mosquitoes to deliver diseases such as avian malaria and avian pox. As temperatures increase, the ʻiʻiwi will be pushed farther upslope and will run out of room altogether.

179. Over 200 plant taxa in Hawaiʻi are considered to have 50 or fewer individuals remaining in the wild. Many of these endangered species are only found in the County. The Center for Biological Diversity estimated it would cost about $2.3 billion a year to implement recovery plans for every federally listed species.[142]

180. Increased atmospheric carbon has also resulted in more CO_2 uptake in the ocean, which in turn drives ocean acidification. Ocean acidification prevents marine organisms, many at or near the bottom of the food chain, from forming shells, which threatens their survival. Increasing sea surface temperatures are shifting marine species' ranges and causing coral bleaching and death. In 2019 the Hawaiʻi State Department of Land and Natural Resources conducted a rapid assessment of coral health at Molokini and along Maui's south shore from Makena to Māʻalaea. The study found about 50 percent of a coral species that makes up much of Molokini's reef already was bleached or "paling heavily."[143]

[142] Noah Greenwald, Brett Hartl, Loyal Mehrhoff, & Jamie Pang, *Shortchanged Funding Needed to Save America's Most Endangered Species Center for Biological Diversity*, CENTER FOR BIOLOGICAL DIVERSITY 1, 6 (2016), https://www.biologicaldiversity.org/programs/biodiversity/pdfs/Shortchanged.pdf.

[143] *See* Department of Land & Natural Resources, *As Ocean Waters Heat Up Evidence of Coral Bleaching is Appearing* (Sept. 11, 2019), https://dlnr.hawaii.gov/blog/2019/09/11/nr19-162.

181. In addition to the loss of the intrinsic value of those unique natural resources, those changes contribute to adverse effects on the County's tourism and fishing industries, which in turn impact economic activity within and revenue to the County.

Public Health

182. Public health impacts of Defendants' conduct have injured and will continue to cause injury to the County. Extreme heat-induced public health impacts in the County will result in increased risk of heat-related illnesses (mild heat stress to fatal heat stroke) and the exacerbation of pre-existing conditions in the medically fragile, chronically ill, and vulnerable.

183. Changes in air temperature, rain, and carbon dioxide concentrations in air can lead to more ozone, pollen, mold spores, fine particles, and chemicals that can irritate and damage the lungs and airways. Increased extreme temperatures, heat waves, and wildfires have contributed and will contribute to and exacerbate, allergies, respiratory disease, and other health issues in children and adults. Vulnerable populations such as the disabled, the elderly, children, people who live alone, people of color, and less-resourced communities are more likely to suffer health effects from higher air temperatures, flooding, and air pollution. As pest species ranges expand, vector-borne illnesses will increase in the County's population. The County has borne and will continue to bear costs associated with mitigating and responding to these public health threats.

Impacts to Native Hawaiian Communities and Cultural Resources

184. Compounding those physical and environmental impacts are cascading social and economic impacts that cause injuries to the County that have and will continue to arise out of localized climate change-related conditions. In particular, low-income communities, communities of color, and Native Hawaiian communities are and will continue to be the hardest hit by the physical and environmental consequences of Defendants' actions, and will require the most

resources, including from the County, to respond and adapt to the climate crisis. Income inequality is growing in the County.[144] In areas of the County where populations are majority Native Hawaiian, such as on the island of Molokaʻi,[145] incomes are well below the statewide average and unemployment levels are often twice that of those statewide.[146] Molokaʻi ranks among the County's most socially vulnerable communities, as measured by the capacity to prepare for and respond to hazardous events.[147] Native Hawaiian communities, people of color, and low-income residents in the County therefore experience exacerbated climate crisis impacts of Defendants' conduct, including, but not limited to, in the following ways:

185. Increased sea levels and storms caused by climate change have disparate impacts among the County's communities. In general, lower-income residents are hit harder by weather events because many are unable to prepare for extreme weather in advance and will need to use a bigger proportion of their resources to rebuild in the aftermath. Native Hawaiian and other communities living on Molokaʻi are especially vulnerable to sea level rise, as increased flooding, erosion, and destruction of coastal roads, homes, businesses, and beaches is predicted over the coming decades.[148] Much of the island's critical infrastructure is located on low-lying shores and is thus particularly at risk from sea level rise.[149] Furthermore, 3.2 feet of sea level rise would flood

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[145] LILIʻUOKALANI TRUST, *Community Profile: Molokaʻi* (July 11, 2018), https://onipaa.org/media/W1siZiIsIjIwMTgvMDkvMDYvMjFfMjlfMzNfNDYyX0NvbW11bml0eV9Qcm9maWxlX01vbG9rYWlfUmV2aXNlZC5wZGYiXV0/Community%20Profile%20Molokai%20Revised.pdf?sha=e2db5540.

[146] Wade Graham, *Why Molokai Is The Least Developed Hawaiian Island*, HONOLULU CIVIL BEAT (Sept. 4, 2019), https://www.civilbeat.org/2019/09/why-molokai-is-the-least-developed-hawaiian-island.

[147] *See CDC Ranks Molokaʻi Among the Most Vulnerable Communities in Maui County*, MAUI NOW (Mar. 31, 2020), https://mauinow.com/2020/03/31/cdc-ranks-molokai-among-the-most-vulnerable-communities-in-maui-county.

[148] *Hawaiʻi Sea Level Rise Vulnerability and Adaptation Report*, HAWAIʻI CLIMATE CHANGE MITIGATION & ADAPTATION COMMʼN 115–16, 122, 126, 129, 131, 134–35 (2017), https://climateadaptation.hawaii.gov/wp-content/uploads/2017/12/SLR-Report_Dec2017.pdf.

[149] *Id.* at 126.

coastal portions of the Hawaiian Home Lands, areas intended to provide economic self-sufficiency for Native Hawaiians, thereby displacing Native Hawaiian families in communities such as Keʻanae and Wailua in East Maui and Kalamaʻula on Molokaʻi.[150] In addition, communities in the Hawaiian Home Lands of Kalamaʻula, Kamiloloa, Makakupaʻia, and Hoʻolehua-Pālāʻau on Molokaʻi, as well as Waiehu, Leialiʻi, and Kahikinui on Maui, are at high risk of displacement from sea level rise, tsunamis, and waves.[151]

186. Coastal and beach erosion also jeopardize Native Hawaiian cultural and historical sites, including burial grounds, home sites, and fishponds, as well as fishing and cultural practices.[152] On Molokaʻi alone there are 26 cultural sites within the Sea Level Rise Exposure Area. This includes cultural sights on Lāʻau Point that may be flooded as a result of sea level rise.

187. Those who face housing insecurity or lack access to reliable transportation lack resources to protect themselves from extreme temperatures, storms, and flooding, and are therefore likely to disproportionately rely on County resources to obtain protection during climate emergencies. Residents who live further from central Maui, where healthcare resources are concentrated, are particularly vulnerable to weather-related emergencies.

188. The climate crisis exacerbates poor air quality since increased temperatures worsen smog, and extreme weather and flooding can trigger higher levels of allergenic air pollutants like mold and pollen. This will have an outsized impact on the County's low-income residents, Indigenous communities, and communities of color, since these communities generally experience higher exposure to poor air quality and suffer higher instances of many negative health outcomes associated with it, like respiratory and cardiovascular-related illnesses. For instance, Native

[150] *Id.* at 105, 129.

[151] *Id.* at 129.

[152] *Id.* at 105, 129.

Hawaiians suffer disproportionality from cardiovascular disease.[153] These disproportionate impacts will worsen as the climate crisis accelerates.

189. Climate change is expected to exacerbate food and energy insecurity, which will affect those who are already struggling first and most intensely.[154]

190. The County's tourism industry, which is the County's leading economic sector,[155] is also at risk from climate change, jeopardizing the livelihoods of County residents who work in tourism service jobs. Low-wage workers, including those from Native Hawaiian communities and communities of color, experience disproportionately greater impacts when the tourism sector declines.

Planning Costs

191. County officials, planners, and natural resource managers are incorporating climate adaptation into land management. But new planning and implementation actions come at significant cost to the County.

192. In December 2017, the Hawai'i Climate Change Mitigation and Adaptation Commission released a 304-page report detailing the expected effects and costs of climate change in the State of Hawai'i. On March 2, 2018, the Maui County mayor signed a proclamation officially accepting that report. That proclamation acknowledges that climate change is real and directs "County departments to use the Report in their plans, programs and capital improvement decisions,

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[153] *Report: Native Hawaiians Face A 'Public Health Crisis'*, HONOLULU CIVIL BEAT (Jan. 17, 2017), https://www.civilbeat.org/2017/01/report-native-hawaiians-face-a-public-health-crisis.

[154] *See Climate Impacts on Agriculture and Food Supply*, U.S. ENVTL. PROT. AGENCY (last visited July 31, 2020), https://archive.epa.gov/epa/climate-impacts/climate-impacts-agriculture-and-food-supply.html#:~:text=Climate%20change%20can%20disrupt%20food,result%20in%20reduced%20agricultural%20productivity; *Climate Impacts on Energy*, U.S. ENVTL. PROT. AGENCY (last visited July 31, 2020), https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-energy_.html#:~:text=Increases%20in%20temperature%20will%20likely,oil%2C%20and%20wood%20for%20heating.

[155] *Visitor Industry*, MAUI COUNTY (last visited Oct. 8, 2020), https://www.mauicounty.gov/1133/Visitor-Industry.

to mitigate impacts to infrastructure and critical facilities triggered by sea level rise." The Maui County mayor also called on the County Planning Department to propose rule changes to the Maui, Molokaʻi and Lānaʻi Planning Commissions to include sea level rise in their shoreline setback calculations.

193. The County is undertaking extensive planning efforts across County agencies, as well as funding independent efforts, to assess the County's vulnerability to a broad range of climate change-related impacts and to develop adaptation and resilience strategies. Earlier this year the Maui County Council established a Climate Action and Resilience Committee in order to accelerate adaptation and resilience strategies in preparations for intensifying climate-change impacts. In addition, the Maui County Planning Department has led a planning process to develop a set of guidelines and protocols to build back after a damaging coastal event to help make communities more resilient to sea level rise.

Damages Already Incurred

194. The County has already incurred damages as a direct and proximate result of Defendants' conduct, including, but not limited to:

195. The County has spent over $5.5 million designing and constructing an 1,100-foot rock mound revetment to protect the Wailuku-Kahului Wastewater Reclamation Facility in Kahului from increasing shoreline erosion, rising sea levels, and increased risk of damage from tsunamis.

196. The County has incurred significant costs responding to increasingly severe wildfires, including two fires in July 2019 that burned 9,200 acres and for which the Mayor declared a state of emergency, and a 4,100-acre blaze that required forced evacuations and road closures in October 2019. The County provides firefighting personnel for such fires, which are

becoming increasingly frequent and intense as the Earth warms. Additionally, the County has provided emergency shelter for displaced residents at significant expense.

197. Erosion, storm surges, flooding, wave run-up, and increased wave energy have damaged the County's shoreline and adjacent infrastructure, including, but not limited to roads and utility lines. For instance, in November 2018, the County temporarily repaired a 30-foot section of Lower Honoapi'ilani Road, which had been damaged by excessive runoff from upstream in the watershed, and sea-level-rise induced erosion in Ka'opala Bay, which threatened water and sewage lines under the Road. The coastline there had already been degraded by sea-level rise and increasingly severe wave activity. The County has incurred costs to study shoreline erosion mitigation measures at that site, including construction of a seawall or managed retreat. Over 11 miles of County roads are at risk of flooding with the 3.2 feet of sea-level rise expected by 2100.

Figure 11: Temporary Repair of a Section of Lower Road at Ka'opala, July 2020

Figure 12: Damage to Lower Honoapiʻilani Road, 2018

198. The County's property and resources[156] have been and will continue to be inundated and/or flooded by sea water and extreme precipitation, among other climate-change related intrusions, causing injury and damages thereto and to improvements thereon, and preventing free passage on, use of, and normal enjoyment of that real property, or permanently destroying them. For instance, sea level rise is both inundating and accelerating beach loss at County's network of beach parks, effectively eliminating portions of those vital community resources which are also critical drivers of the County's ocean- and tourism-based economy.

[156] The County disclaims injuries arising on federal property in the County.

Figure 13: King Tide Flooding at Ukumehama Beach Park, West Maui, July 2019

199. The County has planned and is planning, at significant expense, adaptation and mitigation strategies to address climate change related impacts in order to preemptively mitigate and/or prevent injuries to itself and its citizens. Those efforts include, but are not limited to, preparation of a Multi-Hazard Mitigation Plan, which will assess sea level rise, increasingly frequent and intense wildfires, and other effects of Defendants' conduct on critical County infrastructure, and propose measures to mitigate adverse impacts on that infrastructure; evaluation of coastal roads within the County, prioritization of roads and shoreline areas requiring mitigation measures, and evaluation of the appropriate mitigation measures to protect against sea level rise, increased flooding and runoff, and other climate change impacts on that critical infrastructure; dedication of County staff time and resources to planning for, permitting, and implementing sea level rise-response actions at both public and private property, including to protect thousands of residents from the imminent impacts of sea level rise-driven coastal erosion; and preparation of a

countywide wastewater pump station inundation study, by which the County's Wastewater Reclamation Division is analyzing and preparing for seal level rise, increased severity of storm surges, and other climate change impacts on the County wastewater system, as well as propose improvement and adaption options to mitigate the identified impacts. Additionally, the County has incurred and will incur significant expense in educating and engaging the public on climate change issues, and to promote and implement policies to mitigate and adapt to climate change impacts, including promoting energy and water efficiency and renewable energy. For instance, the County has formed a County Council Committee on Climate Action and Resilience; and a Community Working Group on Climate Emergency and a Just Transition to Restore a Safe Climate, consisting of County staff and community members. Implementation of those planning and outreach processes has and will come at a substantial cost to the County.

Figure 14: County-Authorized Erosion Protection for Imminently Threatened High-Density Condominiums, January 2020

200. The County, at significant expense, has initiated adaptation measures at many of its public resources to mitigate, and to the extent possible, prevent further injury to its property and facilities. For instance, the County has begun a sand dune restoration project at the Kamaole I Beach Park to mitigate the impact of sea level rise-related erosion.

201. The County Department of Parks and Recreation is in the process of closing and removing an 80-year-old pavilion and Baldwin Beach Park in Pāʻia which was destroyed due to rising sea levels and erosion. Baldwin Beach Park is one of the largest beach parks in the County's system of parks and recreational facilities and is one of three major parks along Maui's north shore that attract high levels of use. The County is constructing a new pavilion behind the shoreline setback to protect it from severe fluctuations in beach sand and flood risk caused by sea level rise caused by climate change.

Figure 15: Damage to Baldwin Park Pavilion, August 2020

202. But for Defendants' conduct, the County would have suffered no or far less serious injuries and harms than it has endured, and foreseeably will endure, due to the climate crisis and its physical, environmental, social, and economic consequences.

203. Defendants' conduct as described herein is therefore an actual, substantial, and proximate cause of the County's climate crisis-related injuries.

VI. CAUSES OF ACTION

FIRST CAUSE OF ACTION

(Public Nuisance)

(Against All Defendants)

204. The County realleges each and every allegation contained above, as though set forth herein in full.

205. Defendants, individually and in concert with each other, by their affirmative acts and omissions, have unlawfully annoyed and/or done damage to the County; worked hurt, inconvenience, and damage upon the County; annoyed and disturbed the County's free use and enjoyment of its property and rendered its ordinary use uncomfortable; and injured the County in its enjoyment of its legal rights. The annoyance, harm, damage, and injury to the County's rights and property has occurred and will continue to occur on and in public places within the County such that members of the public are likely to come within the range of its influence, and has injured public infrastructure and appurtenances within the County, which therefore affect the public at large.

206. The nuisance created and/or substantially contributed to by Defendants is substantial and unreasonable. It has caused, continues to cause, and will continue to cause far into the future, significant harm to the County and to the community as alleged herein, and that harm

outweighs any offsetting benefit. County residents' health and safety are matters of great public interest and of legitimate concern to the County, and to the entire State of Hawai‘i.

207. Defendants specifically created, contributed to, and/or assisted, and/or were a substantial contributing factor in the creation of the public nuisance by, *inter alia*:

a. Affirmatively and knowingly promoting the sale and use of fossil fuel products in Hawai‘i and elsewhere which Defendants knew to be hazardous and knew would cause or exacerbate global warming and related consequences, including, but not limited to, sea level rise, drought, wildfire, extreme precipitation events, extreme heat events, and ocean acidification;

b. Affirmatively and knowingly concealing the hazards that Defendants knew would result from the normal use of their fossil fuel products by misrepresenting and casting doubt on the integrity of scientific information related to climate change;

c. Disseminating and funding the dissemination in and outside of Hawai‘i of information intended to mislead customers, consumers, and regulators regarding the known and foreseeable risk of climate change and its consequences, which follow from the normal, intended use of Defendants' fossil fuel products;

d. Affirmatively and knowingly campaigning in and outside of Hawai‘i against the regulation of their fossil fuel products, despite knowing the hazards associated with the normal use of those products, in order to continue profiting from use of those products by externalizing those known costs onto people, the environment, and communities, including the County; and failing to warn the public, including, but not limited to, the County and its residents, about the hazards associated with the use of fossil fuel products.

208. Because of their superior knowledge of fossil fuel products, Defendants were in the best position to prevent the nuisance, but failed to do so, including by failing to warn customers,

retailers, and the County of the risks posed by their fossil fuel products, and failing to take any other precautionary measures to prevent or mitigate those known harms.

209. The public nuisance caused, contributed to, maintained, and/or participated in by Defendants has caused and/or imminently threatens to cause special injury to the County. The public nuisance has also caused and/or imminently threatens to cause substantial injury to real and personal property directly owned and/or operated by the County for the cultural, historic, economic, and public health benefit of the County's residents, and for their health, safety, and general welfare.

210. The seriousness of rising sea levels, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, increased frequency and severity of wildfire, restricted availability of fresh drinking water, and the associated consequences of those and other climate crisis-related physical and environmental changes affecting the County, is extremely grave and outweighs the social utility of Defendants' conduct because, *inter alia*,

a. the resulting interference with the public's rights is expected to become so regular and severe that it will cause material deprivation of and/or interference with the use and enjoyment of the County's public and private property;

b. the ultimate nature of the harm is the destruction of real and personal property, loss of public cultural, historic, natural, and economic resources, and damage to the public health, safety, and general welfare, rather than mere annoyance;

c. the interference borne is the loss of property, infrastructure, and public resources owned and/or operated by the County, which will actually be borne by the County's residents, businesses, and visitors as loss of use of public and private property and infrastructure;

loss of cultural, historic, and economic resources; damage to the public health, safety, and general welfare; diversion of tax dollars away from other public services to the mitigation of and/or adaptation to climate change impacts; and other adverse impacts;

d. the County's property, which serves myriad uses including residential, infrastructural, commercial, historic, cultural, and ecological, is not suitable for regular inundation, flooding, and/or other physical or environmental consequences of the climate crisis;

e. Defendants, and each of them, knew of the external costs of placing their fossil fuel products into the stream of commerce, and rather than striving to mitigate those externalities, Defendants instead acted affirmatively to obscure them from public consciousness; and

f. it was practical for Defendants, and each of them, considering their extensive knowledge of the hazards of placing fossil fuel products into the stream of commerce and extensive scientific engineering expertise, to develop better technologies and to pursue and adopt known, practical, and available technologies, energy sources, and business practices that would have mitigated greenhouse gas pollution and eased the transition to a lower carbon economy.

211. Defendants' conduct in and outside of Hawai‘i was a substantial contributing factor in the unreasonable violation of public rights enjoyed by the County and its residents as set forth above, because Defendants knew or should have known that their conduct would create a continuing problem with long-lasting significant negative effects on the rights of the public, and absent Defendants' conduct the violations of public rights described herein would not have occurred, or would have been less severe.

212. Defendants' wrongful conduct as set forth herein was committed with actual malice. Defendants had actual knowledge that their products were defective and dangerous and were and are causing and contributing to the nuisance complained of, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the County and its residents. Therefore, the County requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish those Defendants for the good of society and deter Defendants from ever committing the same or similar acts.

213. Wherefore, the County prays for relief as set forth below.

SECOND CAUSE OF ACTION

(Private Nuisance)

(Against All Defendants)

214. The County realleges each and every allegation contained above, as though set forth herein in full.

215. The County owns, occupies, and manages extensive real property within the County's borders that has been and will continue to be injured by rising sea levels, higher sea level, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, increased frequency and severity of wildfire, and the associated consequences of those physical and environmental changes.

216. Defendants, individually and in concert with each other, by their affirmative acts and omissions both in and outside Hawai‘i, have unlawfully annoyed and/or done damage to the County; worked hurt, inconvenience, and damage upon the County; annoyed and disturbed the County's free use and enjoyment of its property and rendered its ordinary use uncomfortable; and injured the County in its enjoyment of its legal rights.

217. The County has not consented to Defendants' conduct in creating the unreasonably injurious conditions on its real property or to the associated harms of that conduct.

218. The seriousness of rising sea levels, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, increased frequency and severity of wildfire, restricted availability of fresh drinking water, other adverse environmental impacts of Defendants' conduct, and the associated consequences of those physical and environmental changes, is extremely grave and outweighs the social utility of Defendants' conduct because, *inter alia,*

a. the resulting interference is expected to become so regular and severe that it will cause material deprivation of and/or interference with the use and enjoyment of public and private property in the County;

b. the ultimate nature of the harm is the destruction of real and personal property, loss of public cultural, historic, natural, and economic resources, and damage to the public health, safety, and general welfare, rather than mere annoyance;

c. the interference borne is the loss of property, infrastructure, and public resources within the County, which will actually be borne by the County's residents as loss of use of public and private property and infrastructure; loss of cultural, historic, and economic resources; damage to the public health, safety, and general welfare; reduction of fresh drinking water supply; diversion of tax dollars away from other public services to the mitigation of and/or adaptation to climate change impacts; and other adverse impacts;

d. the County's property, which serves myriad uses including residential, infrastructural, commercial, historic, cultural, and ecological, is not suitable for regular inundation, flooding, and/or other physical or environmental consequences of anthropogenic global warming;

e. Defendants, and each of them, knew of the external costs of placing their fossil fuel products into the stream of commerce, and rather than striving to mitigate those externalities, Defendants instead acted affirmatively to obscure them from public consciousness; and

f. it was practical for Defendants, and each of them, considering their extensive knowledge of the hazards of placing fossil fuel products into the stream of commerce and extensive scientific engineering expertise, to develop better technologies and to pursue and adopt known, practical, and available technologies, energy sources, and business practices that would have mitigated greenhouse gas pollution and eased the transition to a lower carbon economy.

219. Defendants' conduct in and outside of Hawai'i was a direct and proximate cause of the County's injuries, and a substantial factor in bringing about the harms suffered by the County as described in this Complaint.

220. Defendants' acts and omissions as alleged herein are indivisible causes of the County's injuries and damages as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO_2 in the atmosphere attributable to anthropogenic sources because such greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

221. Wherefore, the County prays for relief as set forth below.

THIRD CAUSE OF ACTION

(Strict Liability Failure to Warn)

(Against All Defendants)

222. The County realleges each and every allegation contained above, as though set forth herein in full.

223. Defendants, and each of them, at all times had a duty to issue adequate warnings to the County, the public, consumers, and public officials of the reasonably foreseeable or knowable severe risks posed by their fossil fuel products.

224. Defendants, and each of them, are and were at all relevant times sellers engaged in the business of marketing, promoting, and selling fossil fuel products in and outside of Hawai‘i, and their products were expected to and in fact did reach the end user without any substantial or relevant change in their condition.

225. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, from the non-party trade associations and entities, and/or from the international scientific community, of the climate effects inherently caused by the normal use and operation of their fossil fuel products, including, but not limited to, the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, increased frequency and severity of wildfire, and the associated consequences of those physical and environmental changes, including the County’s harms and injuries described herein.

226. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, from the non-party trade associations and entities, and/or from the international scientific community, that the climatic effects described herein

rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner.

227. Throughout the times at issue, Defendants breached their duty of care by failing to adequately warn any consumers or any other party of the climate effects that inevitably flow from the intended use and foreseeable misuse of their fossil fuel products.

228. Throughout the times at issue, Defendants individually and in concert widely disseminated marketing materials, refuted the scientific knowledge generally accepted at the time, advanced and promoted pseudo-scientific theories of their own, and developed public relations materials that prevented reasonable consumers from recognizing or discovering the latent risk that Defendants' fossil fuel products would cause grave climate changes, undermining and rendering ineffective any warnings that Defendants may have also disseminated.

229. Given the grave dangers presented by the climate effects that inevitably flow from the normal and foreseeable use of fossil fuel products, a reasonable extractor, manufacturer, formulator, seller, marketer, promoter, or other participant responsible for introducing fossil fuel products into the stream of commerce, would have warned of those known, inevitable climate effects.

230. Defendants' conduct in and outside of Hawai‘i was a direct and proximate cause of the County's injuries and a substantial factor in bringing about the harms suffered by the County as alleged herein.

231. As a direct and proximate result of Defendants' and each of their acts and omissions, the County has sustained and will sustain substantial expenses and damages set forth in this Complaint, including damage to publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the County, and of its residents.

232. Defendants' acts and omissions as alleged herein are indivisible causes of the County's injuries and damage as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO_2 in the atmosphere attributable to anthropogenic sources because such greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

233. Defendants' wrongful conduct as set forth herein was committed with actual malice. Defendants had actual knowledge that their products were defective and dangerous and that they had not provided reasonable and adequate warnings against those known dangers, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the County. Therefore, the County requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish those Defendants for the good of society and deter Defendants from ever committing the same or similar acts.

234. Wherefore, the County prays for relief as set forth below.

FOURTH CAUSE OF ACTION

(Negligent Failure to Warn)

(Against All Defendants)

235. The County realleges each and every allegation contained above, as though set forth herein in full.

236. Defendants, and each of them, at all times had a duty to issue adequate warnings to the County, the public, consumers, and public officials of the reasonably foreseeable or knowable severe risks posed by their fossil fuel products.

237. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, of the climate effects inherently caused by the normal use and operation of their fossil fuel products, including, but not limited to, the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, increased frequency and severity of wildfire, other adverse environmental changes, and the associated consequences of those physical and environmental changes, including the County's harms and injuries described herein.

238. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, that the climate effects described herein rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner.

239. Throughout the times at issue, Defendants breached their duty of care by failing to adequately warn any consumers, including, but not limited to, the County, its residents, and any other party, of the climate effects that inevitably flow from the intended or foreseeable use of their fossil fuel products.

240. Throughout the times at issue, Defendants individually and in concert widely disseminated marketing materials in and outside of Hawai‘i, refuted the scientific knowledge generally accepted at the time, advanced pseudo-scientific theories of their own, and developed public relations materials that prevented reasonable consumers, including, but not limited to, the County and its residents, from recognizing the risk that fossil fuel products would cause grave

climate changes, undermining and rendering ineffective any warnings that Defendants may have also disseminated.

241. Given the grave dangers presented by the climate effects that inevitably flow from the normal or foreseeable use of fossil fuel products, a reasonable manufacturer, seller, or other participant responsible for introducing fossil fuel products into the stream of commerce, would have warned of those known, inevitable climate effects.

242. Defendants' conduct in and outside of Hawai‘i was a direct and proximate cause of the County's injuries and a substantial factor in bringing about the harms suffered by the County as alleged herein.

243. As a direct and proximate result of Defendants' and each of their acts and omissions, the County has sustained and will sustain substantial expenses and damages as set forth in this Complaint, including damage to publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the County and its residents.

244. Defendants' acts and omissions as alleged herein are indivisible causes of the County's injuries and damage as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO_2 in the atmosphere attributable to anthropogenic sources because such greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

245. Defendants' wrongful conduct as set forth herein was committed with actual malice. Defendants had actual knowledge that their products were defective and dangerous and that they had not provided reasonable and adequate warnings against those known dangers, and acted with conscious disregard for the probable dangerous consequences of their conduct's and

products' foreseeable impact upon the rights of others, including the County's. Therefore, the County requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish these Defendants for the good of society and deter Defendants from ever committing the same or similar acts.

246. Wherefore, the County prays for relief as set forth below.

FIFTH CAUSE OF ACTION

(Trespass)

(Against All Defendants)

247. The County realleges each and every allegation contained above, as though set forth herein in full.

248. The County owns, leases, occupies, and/or controls real property throughout the County.

249. Defendants, and each of them, have intentionally, recklessly, or negligently caused flood waters, extreme precipitation, saltwater, and other materials, to enter the County's real property, by distributing, analyzing, recommending, merchandising, advertising, promoting, marketing, and/or selling fossil fuel products, knowing those products in their normal or foreseeable operation and use would cause global and local sea levels to rise and more frequent and extreme precipitation events to occur, among other adverse environmental changes, and the associated consequences of those physical and environmental changes.

250. The County did not give permission for Defendants, or any of them, to cause floodwaters, extreme precipitation, saltwater, and other materials to enter its property as a result of Defendants' fossil fuel products.

251. The County has been and will continue to be actually injured and continues to suffer damages as a result of Defendants, and each of them, having caused flood waters, extreme

precipitation, saltwater, and other materials, to enter its real property, by *inter alia* submerging real property owned by the County, causing flooding and an increased water table which has invaded and threatens to invade real property owned by the County and rendered it unusable, causing storm surges and heightened waves which have invaded and threatened to invade real property owned by the County, and in so doing rendering the County's property unusable.

252. Defendants' and each Defendant's introduction of their fossil fuel products into the stream of commerce in and outside of Hawai‘i, coupled with their tortious conduct described herein, was a substantial factor in bringing about the harms and injuries to the County's public and private real property as alleged herein.

253. Defendants' acts and omissions, as alleged herein, are indivisible causes of the County's injuries and damage as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO_2 in the atmosphere attributable to anthropogenic sources because such greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

254. Defendants' wrongful conduct as set forth herein was committed with actual malice. Defendants had actual knowledge that their products were defective and dangerous, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the County and its residents. Therefore, the County requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish these Defendants for the good of society and deter Defendants from ever committing the same or similar acts.

255. Wherefore, the County prays for relief as set forth below.

VII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff, the **COUNTY OF MAUI**, demands judgment be entered in its favor against Defendants, jointly and severally, as follows:

1. Compensatory damages in an amount according to proof;

2. Equitable relief, including abatement of the nuisances complained of herein in and near the County;

3. Reasonable attorneys' fees as permitted by law;

4. Punitive damages;

5. Disgorgement of profits;

6. Costs of suit; and

7. For such and other relief as the court may deem proper.

DATED: Wailuku, Maui, Hawaii, October 12, 2020.

MOANA M. LUTEY
Corporation Counsel

By: /s/ MOANA M. LUTEY
RICHELLE M. THOMSON
KEOLA R. WHITTAKER
Deputies Corporation Counsel

VICTOR M. SHER (*pro hac vice* forthcoming)
MATTHEW K. EDLING (*pro hac vice* forthcoming)
CORRIE J. YACKULIC (*pro hac vice* forthcoming)
TIMOTHY R. SLOANE (*pro hac vice* forthcoming)

Attorneys for Plaintiff
COUNTY OF MAUI

DEMAND FOR JURY TRIAL

The County hereby demands a jury trial on all causes of action for which a jury is available under the law.

DATED: Wailuku, Maui, Hawaii, October 12, 2020.

MOANA M. LUTEY
Corporation Counsel

By: /s/ MOANA M. LUTEY
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Attorneys for Plaintiff
COUNTY OF MAUI