EXHIBIT B

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14	SUPERIOR				
15	UNITED STATES DISTRICT COURT-OF THE STATE				
16	NORTHERN DISTRICT OF CALIFORNIA				
17	COUNTY OF SAN FRANCISCO DIVISION				
18	CITY AND COUNTY OF SAN FRANCISCO, a Municipal Corporation, and THE PEOPLE	No.			
19	OF THE STATE OF CALIFORNIA, acting by and through the San Francisco City Attorney				
20	DENNIS J. HERRERA,	Case No.: 3:17-cv-06012-WHA			
21	Plaintiff and Real Party in Interest,	Substitution S.17 eV 00012 William			
22	Plaintiffs,	FIRST AMENDED COMPLAINT FOR			
23	VS.	PUBLIC NUISANCE			
	BP P.L.C., a public limited company of England and Wales, CHEVRON	y.			
24	CORPORATION, a Delaware corporation,				
25	CONOCOPHILLIPS COMPANY, a Delaware corporation, EXXON MOBIL	<u> </u>			
26	CORPORATION, a New Jersey corporation, ROYAL DUTCH SHELL PLC, a public limited				
27					

AMENDED COMPLAINT FOR PUBLIC NUISANCE

Case 3:17-cv-06011-WHA Document 202-2 Filed 04/04/18 Page 3 of 75 company of England and Wales, and DOES 1 through 10, Defendant 010694-11 986485 VI

COMPLAINT FOR PUBLIC NUISANCE

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COMPLAINT FOR PUBLIC NUISANCE

Plaintiffs, the City and County of San Francisco ("San Francisco" or "City") and the People of the State of California ("the People") (collectively, "Plaintiffs"), by and through San Francisco City Attorney Dennis J. Herrera, bringsbring this action against Defendants BP p.l.c. ("BP"), Chevron Corporation ("Chevron"), ConocoPhillips—Company ("ConocoPhillips"), Exxon Mobil Corporation ("Exxon"), and Royal Dutch Shell plc ("Shell") (collectively, "Defendants"), and allegesallege as follows:

I. INTRODUCTION

¹ Griggs et al., Rising Seas in California: an update on sea-level rise science, California Ocean Science Trust, at 8 (Apr. 2017) ("Rising Seas in California"), *available at* http://www.ope.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-or-sea-level-rise-science.pdf.

² San Francisco Sea Level Rise Action Plan at 6 (Mar. 2016), available at http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-rise/160309 SLRAP Executive Summary EDreduced.pdf.

³ Rising Seas in California at 16-17 (Apr. 2017); Climate Change Impacts in the United States: The Third National Climate Assessment, southwest chapter at 469-70 (2014), *available at* <a href="http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.

adaptation infrastructure. Exhibits 1 and 2⁴ to this Complaint, showing flood events' projected intrusion into San Francisco as a result of global warming, demonstrate just how stark the threat is.

4. 4.—The global warming-induced sea level rise from <u>past</u> fossil fuel usage is an irreversible condition on any relevant time scale: it will last hundreds or even thousands of years.

⁴ San Francisco Sea Level Action Plan, at 2-7 & 2-9 (March 2016), available at <a href="http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-rise/160309_SLRAP_Final_ED.pdf.http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-rise/160309_SLRAP_Final_ED.pdf.

⁵ See, e.g., Carbon Dioxide and Climate: A Scientific Assessment, Report of an Ad Hoc Study Group on Carbon Dioxide and Climate to the Climate Research Board, Assembly of Mathematical and Physical Sciences, National Research Council (1979), at vii, 4-6, available at https://www.nap.edu/catalog/12181/carbon-dioxide-and-climate-a-scientific-assessment.

Defendants' planned production of fossil fuels into the <u>future</u> will exacerbate global warming, accelerate sea level rise even further, and require greater and more costly abatement actions to protect San Francisco.

- 5. Defendants, notably, did not simply produce fossil fuels. They engaged in large-scale, sophisticated advertising and public relations communications campaigns to promote pervasive fossil fuel usage and to portray fossil fuels as environmentally responsible and essential to human well-being even as they knew that their fossil fuels would contribute, and subsequently were contributing, to dangerous global warming and associated accelerated sea level rise. These promotional efforts continue through today even in the face of overwhelming scientific evidence that fossil fuels are altering the climate and global warming has become an existential threat to modern life.
- 6. Defendants' promotion of fossil fuels has also entailed denying mainstream climate science or downplaying the risks of global warming. During the 1990s and early 2000s, Defendants stole a page from the Big Tobacco playbook and sponsored public relations communications campaigns, either directly or through the API or other groups, to deny and discredit the mainstream scientific consensus on global warming, downplay the risks of global warming, and even to launch unfounded attacks on the integrity of leading climate scientists. "Uncertainty" of the science became the constantly repeated mantra of this Big Oil PRcommunications campaign just as "Doubt is our product" was the Big Tobacco PRcommunications theme. Emphasizing "uncertainty" in climate science, directly or through the API, has remained still a focus of Defendants' efforts to promote their fuelsproducts even though they Defendants are well aware that the fundamental scientific facts of global warming are not in dispute and are a cause of grave danger through sea level rise.
- 7. The purpose of all this promotion of fossil fuels and efforts to undermine mainstream climate science was, like all marketing, to increase sales and protect market share. It succeeded.
- 8. And now it will cost billions of dollars to build sea walls and other infrastructure to protect human safety and public and private property in San Francisco from global

warming-induced sea level rise. A recent report by the California government has rung the alarm bell as loudly as possible: "Previously underappreciated glaciological processes, examined in the research of the last five years, have the potential to greatly increase the probability of extreme global sea-level rise (6 feet or more) within this century" under business-as usual fossil fuel production and usage. Translation: the planet's enormous ice caps on Greenland and Antarctica are beginning to melt, like their much smaller but more numerous cousins, the mountain glaciers, have been doing for many years, and slide into the ocean. This new dynamic is fundamentally increasing the risk of catastrophic sea level rise. TheThe Rising Seas in California report projects a risk of as much as ten feet of additional sea level rise along San Francisco's coastline by 2100, which would be catastrophic. Nearer-term risks include 0.3 to as much as 0.8 feet of additional sea level rise by 2030, which itself will require the building of sea walls and other costly infrastructure given the dynamics of storm surge and regular high tide flooding.

⁶ Rising Seas in California at 16.

⁷ *Id.* at 26.

⁸ Id.

⁹ San Francisco Sea Level Rise Action Plan (Mar. 2016), *available at* http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-rise/160309 SLRAP Final ED.pdf.

adaptation plans to protect them by raising infrastructure, building flood barriers and other infrastructure, and taking other measures. San Francisco is in the process of doing so for identified vulnerable areas such as Ocean Beach, San Francisco International Airport ("SFO"), and the San Francisco Port. As set forth in the action plan Action Plan, continuing Bayside sea level rise from global warming places at risk at least \$1035 billion dollars of public property within San Francisco and as much as \$39 billion of private property. The magnitude of the actions needed to abate harms from sea level rise, and the amount of property at risk, will increase in light of the rapidly accelerating sea level rise and the increased scientific understanding of sea level rise processes as set forth in the 2017 Rising Seas in California report.

11. The PeoplePlaintiffs seek an order requiring Defendants to abate the global warming-induced sea level rise nuisance to which they have contributed by funding an abatement program to build sea walls and other infrastructure that is urgently needed to protect human safety and public and private property in San Francisco. The PeoplePlaintiffs do not seek to impose liability on Defendants for their direct emissions of greenhouse gases and do not seek to restrain

Defendants from engaging in their business operations. Nor do Plaintiffs seek to impose any liability for lobbying activity; to the extent any particular promotional activity might have had dual goals of both promoting a commercial product in the marketplace and influencing policy, Plaintiffs invoke such activities for the purpose of the former, not the latter, and/or as evidence relevant to show Defendants' knowledge of the dangerous nature of their products. This case is, fundamentally, about shifting the costs of abating sea level rise harm – one of global warming's gravest harms – back onto the companies. After all, it is Defendants who have profited and will continue to profit by knowingly contributing to global warming, thereby doing all they can to help create and maintain a profound public nuisance.

II. JURISDICTION AND VENUE

- 13. Venue is proper in this county in accordance with section 392(a)(1) of the California Code of Civil Procedure because the People allege injuries to real property located in this county.
- 13. Assuming jurisdiction is proper, venue is proper in this judicial district because the action was removed to this district court located where the state action was pending. 28 U.S.C. §§ 1390(c), 1441(a). Alternatively, venue is proper in this judicial district pursuant to: 1) 28 U.S.C. § 1391(b)(1) because all defendants reside in this judicial district as that term is defined in 28 U.S.C. § 1391(c) and other law, and 2) 28 U.S.C. § 1391(b)(2) because a substantial part of the events and omissions giving rise to the claims occurred in this district, and because a substantial part of the property that is the subject of the action is situated in this district.

A. Plaintiff

III. PARTIES

. Plaintiffs

14. Plaintiff City and County of San Francisco is a municipal corporation organized and existing under and by virtue of the laws of the State of California, and is a city and county. San Francisco owns and manages property and structures that are threatened by global warming and sea level rise. San Francisco brings this suit pursuant to federal common law and its authority to file civil actions in order to protect public rights and interests, including to abate the public nuisance caused by Defendants.

15. Plaintiff, the People of the State of California, by and through the San Francisco City Attorney Dennis J. Herrera, brings this suit pursuant to <u>federal common law, California</u> Code of Civil Procedure section 731, and <u>California</u> Civil Code sections 3479, 3480, 3491, and 3494, to abate the public nuisance caused by Defendants.

A.B. Defendants

16. 1. Defendant BP is a public limited company registered in England and Wales with its headquarters in London, England, doing business in California. BP was created in 1998 as a result of a merger between the Amoco Corporation ("Amoco"), a former U.S. corporation, and the British Petroleum Company p.l.c. BP is a <u>publicly traded</u>, multinational, <u>vertically</u> integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas and fossil fuel products.

17. 2.—BP controls company-wide climate change policies and fossil fuel production. BP, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. BP also exercises control over company-wide decisions on production and use of

¹⁰ BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1, *available at* https://www.cdp.net/en/companies.

fossil fuel reserves considering climate change impacts. BP's management, direction, conduct and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically. BP states in its annual report for 2017 that the BP "group explores for oil and natural gas under a wide range of licensing, joint arrangement and other contractual agreements," and that "[a]ll subsidiary undertakings are controlled by the group." 11

18. 3. As a result of its management, direction, conduct and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant BP is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

19. 4. —Defendant Chevron is a Delaware Corporation with its principal place of business located in San Ramon, California. Chevron and its predecessors had their headquarters in San Francisco from 1879 to 2001. Chevron is a <u>publicly traded</u>, multinational, <u>vertically</u> integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas and fossil fuel products.

¹¹ BP Annual Report and Form 20-F 2017 at 29, 231, *available at* https://www.bp.com/content/dam/bp/en/corporate/pdf/investors/bp-annual-report-and-form-20f-2017.pdf.

¹² Chevron Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, *available at* https://www.cdp.net/en/companies.

- 21. 6. As a result of its management, direction, conduct and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Chevron is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.
- 22. 7. Defendant ConocoPhillips is a Delaware Corporation with its principal place of business located in Houston, Texas, doing business in California. ConocoPhillips is a <u>publicly</u> traded multinational oil and gas company that produces, markets, and sells oil and natural gas and for many years <u>was a multinational</u>, <u>vertically integrated oil and gas company that</u> also refined and sold finished oil products.
- 23. ___8. ___ConocoPhillips controls company-wide climate change policies and fossil fuel production. ConocoPhillips, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. ConocoPhillips also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. ConocoPhillips's management, direction, conduct and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.
- 24. 9. As a result of its management, direction, conduct and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant ConocoPhillips is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.
- 25. 10. Defendant Exxon is a New Jersey corporation with its principal place of business located in Irving, Texas, doing business in the State of California. Exxon is a <u>publicly</u> traded, multinational, <u>vertically</u> integrated oil and gas company that explores for, produces, refines,

¹³ ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, *available at* https://www.cdp.net/en/companies.

 markets, and sells oil, natural gas and fossil fuel products and, as recently as 2009 produced, marketed and sold coal.

26. __11. __Exxon controls company-wide climate change policies and fossil fuel production. 14 Exxon, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Exxon also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. Exxon's management, direction, conduct and/or control is exercised through a variety of means, including through its employees and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

27. _____As a result of its management, direction, conduct and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Exxon is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

28. __13. __Defendant Shell is a public limited company registered in England and Wales with its headquarters in The Hague, Netherlands, doing business in California. Shell is a publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas and fossil fuel products.

29. __14. __Shell controls company-wide climate change policies and fossil fuel production. 15_ Shell, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Shell also exercises control over company-wide decisions on production and

¹⁴ Exxon Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1, *available at* https://www.cdp.net/en/companies.

¹⁵ Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, *available at* https://www.cdp.net/en/companies.

use of fossil fuel reserves considering climate change impacts. Shell's management, direction, conduct and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

- 30. __15. __As a result of its management, direction, conduct and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Shell is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.
- 31. 16. Defendants DOES ONE through TEN are sued herein under fictitious names. Plaintiff does Plaintiffs do not at this time know the true names or capacities of said defendants, but prayspray that the same may be alleged when ascertained.

B.C. Defendants' eonnections to Connections To California.

- 32. 17. Defendants have contributed to the creation of a public nuisance global warming-induced sea level rise causing severe harms and threatening catastrophic harms in San Francisco.
- 18. Each Defendant, directly and through its subsidiaries and agents, substantially participates in the process by which raw crude oil is extracted from the ground, refined into fossil fuel products, including finished gasoline products, and delivered, marketed, and sold to California residents for use.
- 33. 19. BP, For example, and as described in more detail below, Defendants intentionally created a fungible and commingled gasoline product in order to be able to utilize a common distribution system that moves gasoline from refineries through its subsidiaries, owns and/pipelines to terminals (large storage tanks). Pipelines and trucks then transport gasoline from terminals to underground storage tanks at retail stations where it is sold to consumers. A petroleum products terminal facility consists of one or operates port facilities in California for receipt of crude oil. BP,more very large aboveground storage tanks for fossil fuel products, including gasoline, and is part of the distribution chain to supply fossil fuel products, including gasoline, from a refinery to end consumers, including consumers in California. Defendants created this distribution system

because it was more efficient and cost effective for them to distribute gasoline from refineries to retail gasoline stations. As described below, Defendants substantially participated in this gasoline distribution process by producing raw crude oil, supplying raw crude oil to refineries, refining raw crude oil into finished gasoline at refineries, supplying gasoline into pipelines, removing gasoline from pipelines at certain storage facilities or placing gasoline into trucks for transport to retail sites, and/or storing gasoline in underground storage tanks at retail gasoline stations.

- 34. All of the Defendants' long-standing and extensive contacts with California, described below, have furthered and supported their production, marketing, and sale of massive quantities of fossil fuels and fossil fuel products, which has injured, and continues to injure, San Francisco.
- BP does business in California, including through its subsidiaries and agents. BP's 35. agent and subsidiary BP America Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 2000. BP's agent and subsidiary BP America Production Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1975. BP's agent and subsidiary BP Amoco Chemical Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1955. BP's agent and subsidiary BP Corporation North America does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1987. BP's agent and subsidiary BP Exploration (Alaska) Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1974. BP's agent and subsidiary BP Pipelines (North America) Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 2002. BP's agent and subsidiary BP Products North America Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1960. BP's agent and subsidiary Atlantic Richfield Company does business in California, has designated an agent for service of process in California, and has been registered to

do business in California since 1985. Atlantic Richfield Company was headquartered in Los Angeles, California from 1972 through 1999.

- 36. BP, including through its subsidiaries, also produces oil in Alaska, and upon information and belief, BP, acting as its agents, BP Exploration U.S.A. Inc. and BP Exploration Inc., was the named operator for approximately 34 oil and gas, and dry gas wells in California. Dry gas primarily contains only methane, and no hydrocarbons. Between 1975 and 1999, BP subsidiary and agent Atlantic Richfield Company extracted oil and natural gas in California, and transported, marketed and sold fuel and other refined products in California, including to and through ARCO-branded gasoline stations.
- 37. BP, including through its subsidiaries, transports some of this crude oil to California. and agents, including BP Exploration (Alaska) Inc., produces oil in Alaska. Since 1977, BP, including through its subsidiaries and agents, has produced and shipped Alaskan crude oil to various port locations, including to locations in California and the Pacific Northwest Coast. BP, including through its subsidiary and agent BP Shipping (USA), shipped approximately 2.56 billion barrels of crude oil into California, from 1975 to 2010. In addition, in or around the 1960s, when BP p.l.c. found oil in Alaska, it had no infrastructure in the United States to process it into finished fossil fuel products for sale to consumers. BP p.l.c. thus acquired a 25% stake in Standard Oil Company of Ohio ("Sohio"), which had retail gasoline stations and refining capacity in the United States at that time. In 1978, BP became the majority Sohio shareholder, and in 1987 bought Sohio outright. Between 1975 and 1986, BP, through its subsidiary and agent Sohio, extracted oil in Alaska for shipment to locations including California.
- 38. BP, including through its subsidiaries acting as its agents, including Atlantic

 Richfield Company and BP West Coast Products, owned and operated the Carson refinery near Los

 Angeles from approximately 1966 through 2013 with a refining capacity of approximately 266,000

 barrels of crude oil per day. BP described the Carson refinery as "one of the largest on the US

West Coast."¹⁶ The refinery began operations in 1938 and is located on 650 acres in Los Angeles County, near the Long Beach and Los Angeles Harbors. BP owned "integrated terminals and pipelines" related to the Carson refinery, including the LA basin pipelines system that moved crude oil, fossil fuel products and intermediates to and from the Carson refinery, and also had marketing agreements with retail gasoline station sites in Southern California.¹⁷ Through approximately 2013, BP, including through its subsidiaries and agents, including BP Pipelines North America, Inc., owned and/or operated port facilities in California for receipt of crude oil, including Long Beach Port berths 121 and 78 that supplied crude oil to the Carson refinery. In a June 3, 2013 press release posted on BP Global's website announcing the completion of the sale of the Carson refinery, Jeff Pitzer, BP's Northwest Fuels Value Chain President stated: "California remains an important state for us and we remain committed to supplying our customers in Northern California and the rest of the Pacific Northwest with the quality fuels they depend on." ¹⁸

39. BP operates at least 275 ARCO-licensed and-branded gasoline stations in California, including stations located in San Francisco. A webpage accessed from BP Global's website states that "ARCO-branded gas stations and ampm convenience stores are part of BP's extensive fuels and retail network in California." BP operated additional ARCO-branded gasoline stations in California prior to 2013 when it sold its ARCO retail brand rights to Tesoro Corporation; at the same time, it exclusively licensed those rights back from Tesoro for Northern California. BP exercises control over gasoline product quality and specifications at these ARCO-branded retail stations. BP previously owned and/or operated numerous BP-branded gasoline stations in California. BP-branded retail stations can only sell gasoline that contains BP's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at BP-branded retail stations. Upon information and belief, BP has entered into

¹⁶ https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html.

¹⁷ Id.

¹⁸ *Id*.

¹⁹ https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/(FINAL)%20BP%20in%20California.pdf.

contracts with operators of BP-branded retail stations in California, and/or distributors, which, among other things, have required these operators to sell only gasoline with BP proprietary additives, and for supply of certain volumes of such gasoline to BP-branded stations. BP offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations. BP's web site maintains a page of "BP Amoeo Stations Near Me" for California listing virtually every municipality in California and hundreds of such gas stations., including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in California. BP promotes gasoline sales by offering, consumers, through its interactive web site, twenty five cents off every website, "cent-per-gallon of BP-branded gasoline for every \$100 rewards" for using BP credit cards that effectively discount gasoline sold at BP stations, including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in California.

40. BP Global's website currently states: "BP has a significant presence in hundreds of communities across California through gas stations and convenience stores" and that its "footprint includes more than 280 ARCO-licensed and -branded stations." BP Global's website further states that "BP's marketing and trading business has provided energy products and services to California since 1984" and that "[t]oday, the business markets enough natural gas in California to meet the needs of every home in the state's four largest metropolitan areas: Los Angeles, San Francisco, Riverside and San Diego." BP's website further states: "BP markets enough natural gas in California to meet the energy needs of 6.9 million households."

²⁰ https://www.bp.com/en_us/bp-us/where-we-operate/bp-california.html.

²¹ *Id*.

²² *Id*.

41. A webpage accessed from BP Global's website states that there are over 140 BP employees in California and that it paid over \$9.5 million in "[p]roperty, environmental and state income/franchise taxes" for the year ended December 1, 2016.²³

42. BP does business in the United States, including through its subsidiaries and agents. BP's website states: "BP's oil and gas exploration and production division is one of its core businesses, globally and in the United States."24 BP's website further states: "Nearly three decades after BP began exploring the deepwater Gulf of Mexico, the company remains one of the region's leading oil and gas producers, with lease blocks covering an area more than twice the size of Delaware. In fact, BP has been the largest energy investor in the deepwater Gulf over the past decade."25 BP's average daily oil production in the Gulf of Mexico region is now more than 300,000 barrels of oil equivalent per day. BP's website also describes its extensive production activities in Alaska: "BP has spent on a BP Visa® Credit Card or BP Credit Card for the first ninety days a consumer's more than half a century exploring and developing Alaska's oil and gas resources, and its operations in and around the giant Prudhoe Bay field, located on the North Slope, account is open. for around 55 percent of the state's oil and gas production."²⁶ BP further reports that "[s]ince Prudhoe Bay began production in 1977, it has generated more than 12.5 billion barrels of oil" and that "[f]our decades after starting up, Prudhoe Bay remains one of North America's largest oil fields."27 BP's website states that "Prudhoe Bay is the most prolific oilfield in U.S. history."28 BP further describes its oil and gas production in Alaska as follows: "BP has a significant business interest in Alaska's North Slope. The company operates the entire Greater Prudhoe Bay area, which consists of the Prudhoe Bay field and a number of smaller fields. This

²³ https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/(FINAL)%20BP%20in%20California.pdf.

²⁴ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production.html.

²⁵ *Id*.

²⁶ *Id*.

²⁷ *Id*.

²⁸ https://www.bp.com/en_us/bp-us/where-we-operate/bp-in-alaska.html.

area produces around 55 % of Alaska's oil and gas, and in 2016 it averaged nearly 281,000 barrels of oil equivalent each day. BP also owns interests in seven other North Slope oil fields, including Alaska's newest oil and gas field, Point Thomson."²⁹ BP has 1,700 employees in Alaska, and an operating budget of \$1.1 billion there.

- 43. 20. Chevron, through its subsidiariesBP holds a 32% working interest in the Point Thomson natural gas production system, which is estimated to hold 25% of known North Slope natural gas in Alaska. BP states the "development of Point Thomson included a multi-billion dollar investment to drill wells, and construct processing facilities, gravel pads, pipelines, and supporting infrastructure including an airstrip, base camp, and sea barge docks and piers."³⁰
- 44. BP, through its subsidiaries and agents, also explores for and produces fossil fuels in Colorado, New Mexico, Oklahoma, and Wyoming. Notably, BP touts its "decades of experience in the San Juan Basin located mainly in New Mexico and Colorado" and a new drilling technology there using multilateral wells that allows producers to "access more of the oil and gas in a given reservoir."³¹
- 45. In a June 3, 2013 press release posted on BP Global's website, BP stated: "Over the past five years, BP has invested more than \$55 billion in the US more than any other energy company." BP's press release further stated that "BP is the nation's second-largest producer of oil and gas" and "[d]irectly employ[s] more than 20,000 people in all 50 states." BP Lower 48 CEO Dave Lawler has described BP's United States production operations in the lower 48 states as the "premier U.S. onshore oil and gas business." 33
- 46. BP, through its subsidiary and agent BP Pipelines (Alaska) Inc. is a 48.44% owner in the 800-mile long Trans Alaska Pipeline System (TAPS), one of the largest pipeline systems in

²⁹ *Id*.

³⁰ https://www.bp.com/content/dam/bp-country/en_us/PDF/2016EIR/BP_in_AK_2016.pdf.

³¹ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

 $[\]frac{^{32}}{^{12}}$ https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html.

³³ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

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the world. The TAPS average daily throughput in 2015 was 508,446 barrels of crude oil per day, and its total throughput for 2015 was over 185 million barrels of crude oil. Since start-up, TAPS has transported more than 17.2 billion barrels of crude oil.

47. BP, including through its subsidiaries acting as its agents, owns and operates three gasoline refineries in the United States – Cherry Point in Blaine, Washington; Whiting near Chicago, Illinois; and the Toledo refinery in Oregon, Ohio, in which it has a 50% interest. BP has owned the Cherry Point refinery since 1971 and as of 2017 it processed 236,000 barrels of crude oil per day to produce predominantly transportation fuels, including gasoline. BP has owned the Whiting refinery since 1889 and as of 2017 it processed 430,000 barrels per day of crude oil to produce gasoline and other fossil fuels products. BP describes the Whiting Refinery as a "sprawling, 1,400- acre complex" near downtown Chicago that "can produce enough gasoline each day to fuel 6 million cars." BP further describes the Whiting refinery as the "largest refinery in the Midwest — as well as BP's largest refinery in the world." The Toledo refinery began operations in 1919 and as of 2017 it processed 160,000 barrels of crude oil per day into finished fossil fuel products, including gasoline. BP touts that the refinery "produces enough gasoline each day for an average car to drive back and forth from Toledo to Miami more than 30,000 times." ³⁶

48. BP, through its subsidiaries and agents, owns numerous fossil fuel product pipelines in the United States. The Olympic Pipeline is a 400-mile interstate pipeline system that transports gasoline, diesel, and jet fuel. BP, through its subsidiary and agent BP Pipelines (North America), owns and operates the 203-mile long Chicap Pipeline System in Illinois which transports crude oil. BP also has interests in the following joint-venture pipelines in the United States that transport crude oil: the Caesar Pipeline, Capline Pipeline, Endymion Oil Pipeline, Mars Oil Pipeline, Proteus Oil Pipeline, and Ursa Pipeline.

³⁶ https://www.bp.com/en_us/bp-us/what-we-do/refining/toledo.html.

³⁴ https://www.bp.com/en_us/bp-us/what-we-do/refining/whiting.html.

 $^{^{35}}$ *Id*.

49. There are 7,200 BP-branded retail gasoline stations in the United States. Upon information and belief, BP has entered into contracts with operators of BP-branded retail stations in the United States, and/or distributors, that, among other things, have required these operators to sell only BP-branded gasoline, and for supply of certain volumes of BP-branded gasoline to BP-branded stations. In 2017, BP announced that it was reintroducing its Amoco retail fuel brand, and publicly touted its "commitment to helping our branded marketers grow their businesses," and Rick Altizer, senior vice president of sales and marketing for BP Fuels North America, stated "BP has a very strong brand presence in the U.S." BP announced that the Amoco-branded stations "will offer all of the same consumer loyalty programs as BP-branded retail sites, including BP Driver Rewards" and "also will sell all grades of gasoline with BP's proprietary additive." This was all in line with BP's "global fuels marketing strategy."

50. BP p.l.c. is the registered owner of the BP trademark which has been registered with the United States Patent and Trademark Office since 2008. According to the registration, the BP trademark is used in connection with motor vehicle fuels, including gasoline and diesel fuel, and for retail gasoline stations.

Chevron does business in California, including through its subsidiaries and agents.

Chevron, through its subsidiaries and agents, produces oil in California, owns and/or operates port facilities in California for receipt of crude oil, owns and operates two refineries where crude oil is refined into finished fossil fuel products including gasoline, and owns and operates approximately nine gasoline terminals in California. A gasoline terminal consists of enormous aboveground storage tanks that hold gasoline for distribution to retail gasoline stations and consumers. Chevron owns and operates the Richmond gasoline refinery and related terminals in the San Francisco Bay Area. Chevron, through its subsidiaries and agents, also produces oil in Alaska, and upon information and belief, some of this crude oil is supplied to California. There also are numerous

³⁷ https://www.bp.com/en_us/bp-us/media-room/press-releases/bp-brings-back-amoco-brand-for-us-fuel-network.html.

 $^{^{38}}$ *Id*.

 $^{^{39}}$ *Id*.

Chevron-branded gasoline stations in California, including in San Francisco. Chevron exercises control over gasoline product quality and specifications at Chevron-branded retail stations.

Chevron-branded retail stations display the trademark of Chevron and can only sell gasoline that contains Chevron's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Chevron-branded retail stations. Chevron offers credit cards to consumers through its interactive website, to promote sales of gasoline and other products at its branded gasoline stations, including Chevron-branded retail stations in California. Chevron promotes gasoline sales by offering consumers three cents per gallon in fuel credits "every fill-up, every time at Chevron and Texaco stations." including Chevron-branded retail stations in California.

- 52. 21. —ConocoPhillips, does business in California, including through its subsidiaries, owns and/or operates port facilities in California for receipt of crude oil, and and agents. ConocoPhillips's agent and subsidiary ConocoPhillips Alaska, Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1980. ConocoPhillips's agent and subsidiary ConocoPhillips Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1947. ConocoPhillips's agent and subsidiary ConocoPhillips Transportation Alaska, Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1978. ConocoPhillips's agent and subsidiary Polar Tankers, Inc. does business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California.
- 53. ConocoPhillips, including through its subsidiaries acting as its agents, previously owned and operated a refineries in California where crude oil was refined into finished fossil fuel products including gasoline. ConocoPhillips, including through its predecessors, subsidiaries and agents Tosco Corp., and Phillips, previously owned and operated the Rodeo refinery based in both Rodeo and Arroyo Grande, California, from 2001 to approximately 1997 through 2012, where which could process approximately 78,400 barrels of crude oil was refined into finished

1 fossil fuel products including gasoline. ConocoPhillips, through its subsidiariesper day into 2 finished fossil fuel products including gasoline. ConocoPhillips, including through its 3 predecessors, subsidiaries and agents Tosco Corp., and Phillips, previously owned and operated the 4 Santa Maria refinery from approximately 1997 through 2012, which could process approximately 5 41,800 barrels of crude oil per day into finished fossil fuel products including gasoline. 6 ConocoPhillips, including through its predecessors, subsidiaries and agents Tosco Corp., and 7 Phillips, previously owned and operated the Wilmington refinery from approximately 1997 through 8 2012, which could process approximately 139,000 barrels of crude oil per day into finished fossil fuel products including gasoline. ConocoPhillips, including through its predecessors, subsidiaries 9 0 and agents Phillips Petroleum, and Tosco Corp., previously owned and operated the Golden Eagle 11 refinery in Martinez/Avon from approximately 1966 through 2000, which could process approximately 166,000 barrels of crude oil per day into finished fossil fuel products, including 12 13 gasoline. 14 ConocoPhillips, through its subsidiaries and agents, also produces oil in Alaska, and 15 transports some of this crude oil to California, including San Francisco. ConocoPhillips stated in 2016 that it is "Alaska's largest oil producer" and "has been a leader in oil and gas exploration and 16 development in Alaska for more than 50 years."40 ConocoPhillips also stated in 2016 that it 17 18 transports Alaskan Crude Oil to markets in California: "ConocoPhillips owns and operates Polar 19 Tankers, one of the largest oil tanker fleets under U.S. flag. The fleet transports Alaska North 20 Slope crude oil primarily to refineries in Puget Sound, San Francisco, Long Beach and Hawaii each year. The Polar Tanker fleet consists of five Endeavour Class tankers - the Polar Endeavour, Polar 21 22 Resolution, Polar Discovery, Polar Adventure and Polar Enterprise – designed specifically for the 23 twice-monthly 2,500 to 5,000-mile round-trip from Valdez, Alaska, to Washington, California and

Hawaii."41 ConocoPhillips, through its subsidiaries and agents, owned and/or operated port

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⁴⁰ ConocoPhillips, Alaska Operations 2016 Snapshot, available at https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016 final.pdf; see also ConocoPhillips 2017 10-K at 4.

⁴¹ ConocoPhillips, Alaska Operations 2015 Snapshot, at 15, available at https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016_final.pdf.

facilities in California for receipt of crude oil, including in connection with the Wilmington refinery.

- 55. 22. ConocoPhillips, through its subsidiaries and agents including ConocoPhillips
 Company, previously owned and/or operated numerous Conoco, Phillips 66 and/or 76-branded
 (collectively, "Conoco") gasoline stations in California. Conoco-branded retail stations could only
 sell gasoline that contained Conoco's proprietary additives—the additives that distinguish
 otherwise fungible gasoline as gasoline that could be sold at Conoco-branded retail stations. Upon
 information and belief, ConocoPhillips entered into contracts with operators of Conoco-branded
 retail stations in California, and/or distributors, which, among other things, required these operators
 to sell only gasoline with Conoco proprietary additives, and for supply of certain volumes of such
 gasoline to Conoco-branded stations.
- 56. Exxon, through its subsidiaries does business in California, including through its subsidiaries and agents. Exxon Mobil Corporation does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1972. Exxon's agent and subsidiary ExxonMobil Oil Corporation does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1959. Exxon's agent and subsidiary ExxonMobil Pipeline Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1957.
- 57. Exxon, through its subsidiaries and agents, produces oil in California, and owns and/or operates port facilities in California for receipt of crude oil, and. Exxon previously owned and operated a, through its subsidiaries, agents and predecessors, including Socony Mobil Oil Co. and Mobil Oil Corp., the Torrance refinery in California from approximately 1955 until July 1, 2016, with a processing capacity of approximately 151,000 barrels of crude oil per day, where crude oil was refined into finished fossil fuel products, including gasoline. Exxon owned the Benicia gasoline refinery for over 30 years from approximately 1968 until 2000—, with a processing capacity of approximately 145,000 barrels of crude oil per day, where crude oil was refined into finished fossil fuel products including gasoline.

- 58. Exxon, through its subsidiaries and agents, also produces oil in Alaska, and upon information and belief, Exxon, through its subsidiaries and agents, transports some of this crude oil to California. There also are numerous Exxon-branded gasoline stations in California, including in San Francisco and the greater Bay Area. Exxon exercises control over gasoline product quality and specifications at Exxon-branded retail stations. Exxon-branded retail stations display the trademark of Exxon and can only sell gasoline that contains Exxon's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Exxon-branded retail stations. Exxon offers credit cards to consumers, through its interactive website, to promote sales of gasoline and other products at its branded gasoline stations; including Exxon-branded retail stations in California. Exxon promotes gasolines sales by offering consumers twenty-five cents off every gallon of SynergyTM gasoline at ExxonTM or MobilTM stations for the first two months and then six cents off every gallon of Synergy gasoline at Exxon- and Mobil-branded stations, including Exxon-branded retail stations in California.
- 59. 23. Shell, through its subsidiaries Defendant Exxon is responsible for the premerger conduct of Mobil Corporation with respect to all relevant issues herein, and the contacts of Mobil are attributable to Exxon.
- Shell's agent and subsidiary Shell Exploration & Production Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1995. Shell's agent and subsidiary Shell Marine Products (US) Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1999. Shell's agent and subsidiary Shell Oil Company does business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1949. Shell's agent and subsidiary Equilon Enterprises LLC does business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California, has designated an agent for service of process in California, and has been registered to do business in California since 1948.
- 61. Shell, including through its subsidiaries and agents, produces oil and gas in California, owns and/or operates port facilities in California for receipt of crude oil, owns and

1 operates a refinery in California where crude oil is refined into finished fossil fuel products, 2 including gasoline, transports crude oil through a pipeline within California, and owns and operates 3 approximately six gasoline terminals in California. Since 1915, Shell has owned a gasoline refinery in Martinez, California, thirty miles northeast of San Francisco. There are numerous 4 5 Shell-branded gasoline stations in California, including in San Francisco. Shell is involved in all facets of the petroleum production and distribution process by design, as "part of an integrated 6 7 value chain, including trading activities, that turns crude oil and other feedstocks into a range of products which are moved and marketed around the world for domestic, industrial and transport 8 use."42 Shell's website recognizes the importance of its common, worldwide brand: "For more 9 0 than 100 years the word Shell, our pecten emblem and distinctive red and yellow colours have 11 visualised the Shell brand and promoted our values and the quality of our products and services all 2 over the world."43 13 Shell, including through its subsidiaries and agents, including Shell California Prod. 62. Inc., Shell California Production Inc. and Shell Oil Company, was the named operator of over 200 4 5 oil and gas wells in California. Shell, including through its subsidiaries and agents, produces heavy oil in California. Shell, including through its subsidiaries and agents, has a 51.8% interest in Aera 6 7 Energy LLC, which operates approximately 15,000 wells in the San Joaquin Valley in California, 8 mostly producing heavy oil and associated gas. 9 20 21 22

Since 1915, Shell, including through its subsidiaries, predecessors and agents has owned a gasoline refinery in Martinez, California, thirty miles northeast of San Francisco. In 1913, the Royal Dutch/Shell Group built a shipping terminal that would become the Shell Oil Terminal Martinez for the purpose of importing and distributing gasoline along the United States Pacific Coast. Shell, including through its subsidiaries, agents and predecessors, including Shell Oil Products US, Shell Company of California, Shell Oil Company, Inc. and Shell Oil Co., previously owned and operated the Carson Refinery from approximately 1923 through 1992, where crude oil

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⁴² Shell annual report for 2017 at 46, available at https://reports.shell.com/annualreport/2017/servicepages/downloads/files/shell annual report 2017.pdf.

⁴³ https://www.shell.com/about-us/brand.html.

1 was refined into finished fossil fuel products including gasoline. In 1992, Shell decommissioned 2 the refinery and began operating the over 400-acre facility as a distribution facility for receipt and 3 distribution of fossil fuels throughout the Southern California region via pipeline and truck delivery. Shell states the "Shell Carson facility is connected to an extensive industry infrastructure 4 5 network of major local refiners, pipelines, terminals, a rail facility and the Shell Mormon Island Marine Terminal."44 Shell's "Southern California Products System is part of a network that 6 7 provides unequaled access to key refining centers and markets in North America."45 Shell, 8 including through its subsidiaries, agents and predecessors, including Equilon Enterprises and Shell Oil Company, previously owned and operated the Wilmington refinery from approximately 1998 9 0 through 2007, with a processing capacity of approximately 98,000 barrels of crude oil per day, and where crude oil was refined into finished fossil fuel products, including gasoline. Shell, including 1 2 through its subsidiaries, agents and predecessors, including Equilon and Shell Oil Company, 3 previously owned and operated the Bakersfield refinery from approximately 2000 through 2005, 14 where crude oil was refined into finished fossil fuel products including gasoline. As of 2005, the 15 Bakersfield refinery had a capacity of 70,000 barrels per day, and after its sale, Shell continued to 6 own and operate certain pipelines serving the refinery, the nearby Bakersfield Products Terminal 17 and entered into an offtake agreement to receive finished fossil fuel products from the new refinery 18 owner. 19 Shell, including through its subsidiary and agent Shell Oil Products Company, owns 20 Long Beach port for receipt of crude oil. 21 22 Shell, including through its subsidiary and agent Shell Oil Products US, owns and

and/or operates port facilities at the Wilmington port facility in Los Angeles County and at the

operates at least eight gasoline terminals in California that store fossil fuel products, including

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⁴⁴ https://www.shell.us/about-us/projects-and-locations/shell-in-carson-southerncalifornia/carson-refinery-products-and-services.html.

⁴⁵ https://www.shell.us/about-us/projects-and-locations/shell-in-carson-southerncalifornia/carson-refinery-products-and-services.html.

gasoline, and are located in Carson, Colton, Signal Hill, Martinez, West Sacramento, Stockton, San Jose, and Van Nuys.

Francisco. Shell exercises control over gasoline product quality and specifications at Shell-branded retail stations. Shell-branded retail stations display the trademark of Shell and can only sell gasoline that contains Shell's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Shell-branded retail stations. Shell offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations. including Shell-branded retail stations in California, and the United States. Shell promotes gasolines sales by offering consumers, through its interactive web sitewebsite, twenty-five cents off every gallon of Shell Fuel for the first two months after they open an account, including Shell-branded retail stations in California, and the United States.

67. Shell, including through its subsidiaries and agents, San Pablo Bay Pipeline

Company and Shell Oil Products US, owns a 400-mile pipeline which transports crude oil within

California, including to San Francisco Bay area refineries. The pipeline system includes at least

five storage tank systems – Coalinga, Beer Nose, Olig Station, Rio Bravo, and the Bakersfield

Tank Farm – that collectively can store millions of barrels of crude oil and other fossil fuel

products.

68. There is a close relationship between Shell and its subsidiaries and agents, including Shell Oil Company. For example, Linda Szymanski, currently General Corporate Counsel and Company Secretary for Shell, joined the Shell family in 1995 and has served, among other things, as "General Counsel of the Upstream Americas business and Head of Legal U.S. based in the U.S.A. from 2014 to 2016." Ms. Szymanski has held "a variety of legal positions within Shell Oil Company in the U.S.A., including Chemicals Legal Managing Counsel and other senior roles in

⁴⁶ Royal Dutch Shell plc, 2017 Annual Report, 71, *available at* http://reports.shell.com/annual-report/2017/servicepages/downloads/files/download2.php?file=shell_annual_report_2017.pdf (emphasis added).

employment, litigation, and commercial practice."⁴⁷ Ms. Szymanski is a former longtime senior employee of Shell Oil Company and just recently joined Shell's board.⁴⁸ Shell's 2017 Annual Report refers those interested in "investor relations" both to Royal Dutch Shell plc and Shell Oil Company.⁴⁹

- 69. Shell does business in the United States, including through its subsidiaries and agents. Shell operates in all 50 states and employs more than 20,000 people in the United States.
- 70. Shell had 854 million barrels of oil equivalent proved reserves for crude oil and natural gas in the United States as of December 31, 2017, and an additional 488 million barrels of oil equivalent of proved undeveloped reserves in the United States. Shell, including through its subsidiaries and agents, has approximately 30,000 mineral leases with nearly 1.5 million net mineral acres for shales, and has interests in more than 2,300 productive wells and operates four central processing facilities. Nearly 70% of Shell's proven shale reserves worldwide are in the United States, and 88% of its shales liquids proved reserves are in the United States. Shell's share of shales production averaged 137,000 barrels of oil equivalent per day in 2017.
- The Puget Sound Refinery since 2001 in Anacortes, Washington, which processes up to 145,000 barrels of crude oil per day into finished fossil fuel products including gasoline. Shell, including through its subsidiaries and agents, produces natural gas in the Marcellus and Utica formations in Pennsylvania and Ohio, and owns approximately 850,000 acres in Pennsylvania, Ohio and New York.
- 72. Shell, through its subsidiaries and agents, including Shell Pipeline Company LP, has owned and/or operated fossil fuel pipelines in the United States for 95 years. Shell currently owns and operates seven tank farms across the U.S., and transports more than 1.5 billion barrels of crude oil and refined products annually through 3,800 pipeline miles across the Gulf of Mexico and five

⁴⁷ *Id*.

⁴⁸ See Royal Dutch Shell, Board of Directors, available at https://www.shell.com/about-us/leadership/board-of-directors.html.

⁴⁹ Royal Dutch Shell plc, 2017 Annual Report at 259.

states. In addition, Shell has non-operated ownership interests in an additional 8,000 pipeline miles. The pipelines carry more than 40 different kinds of crude oil and more than 20 different grades of gasoline, as well as diesel fuel and jet fuel.

There are more than 10,000 Shell-branded retail gasoline stations in the United States. Shell exercises control over gasoline product quality and specifications at Shell-branded retail stations. Shell-branded retail stations display the trademark of Shell and can only sell gasoline that contains Shell's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Shell-branded retail stations.

IV. FOSSIL FUELS ARE THE PRIMARY CAUSE OF GLOBAL WARMING.

74. Production of fossil fuels for combustion causes global warming. When used as intended, fossil fuels release greenhouse gases, including carbon dioxide (CO₂) and methane, which trap atmospheric heat and increase global temperatures. Carbon dioxide is by far the most important greenhouse gas because of the combustion of massive amounts of fossil fuels.

75. Scientists have known for many years that the use of fossil fuels emits carbon dioxide and that carbon dioxide is a greenhouse gas.

76. In 1896, Svante Arrhenius, a Nobel-prize winning scientist, published calculations projecting temperature increases that would be caused by increased carbon dioxide concentrations in the atmosphere due to the burning of fossil fuels.⁵⁰

77. 26. By 1957, scientists at the Scripps Institute published a warning in the peer-reviewed literature that global warming "may become significant during future decades if industrial fuel combustion continues to rise exponentially" and that "[h]uman beings are now carrying out a large scale geophysical experiment" on the entire planet.⁵¹

⁵⁰ Arrhenius, Svante (1896). "On the Influence of Carbonic Acid in the Air Upon the Temperature of the Ground." *Philosophical Magazine and Journal of Science* 41: 237-76, *available at* http://www.rsc.org/images/Arrhenius1896 tcm18-173546.pdf.

⁵¹ Revelle, Roger, and Hans E. Suess (1957). "Carbon Dioxide Exchange between Atmosphere and Ocean and the Question of an Increase of Atmospheric CO₂ During the Past Decades." *Tellus* 9: 18-27, *available at* http://onlinelibrary.wiley.com/doi/10.1111/j.2153

to assess the scientific and technical information relevant to global warming, and to provide advice to all parties to the U.N. Framework Convention on Climate Change, including the United States. The IPCC issues periodic assessment reports, which have become the standard scientific references on global warming. As Defendant Exxon has put it, recognized that the IPCC is "the leading international scientific authority on climate change.".

83. __31. ___In 1990, the IPCC issued its First Assessment Report ("FAR"). It stated that "we are certain" that "emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases," including carbon dioxide and methane, and that "these increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface." The IPCC's FAR also predicted that a "Business-as-Usual" scenario (i.e., a future in which fossil fuel production and associated emissions continue to increase) would cause global mean temperature during the next century to increase at a rate "greater than that seen over the past 10,000 years," and "will result in a likely increase in global mean temperature of about 1 °C [1.8 °F] above the present value by 2025 and 3 °C [5.4 °F] before the end of the next century" – higher than temperatures have been in the last 150,000 years. The FAR also predicted that business-as-usual would result in substantial sea level rise by 2100. The

84. 32. The FAR further stated "with confidence" that continued emissions of carbon dioxide "at present rates would commit us to increased concentrations for centuries ahead," and that immediate reductions were required to stabilize carbon dioxide concentrations.

85. __33. __In 1995, in its Second Assessment Report ("SAR"), the IPCC concluded that the "balance of evidence suggests a discernible human influence on global climate." This causal finding was profoundly important as confirmation that human-caused global warming had now been detected. By 2001, the IPCC strengthened its causal conclusion, stating that it was "likely"

https://www.ipec.ch/ipecreports/far/wg_I/ipec_far_wg_I_spm.pdf,https://www.ipec.ch/ipecreports/far/wg_I/ipec_far_wg_I_spm.pdf,at Executive Summary xi.

⁵⁷ Id. at Executive Summary xi and xxviii.

⁵⁸ *Id.* at Executive Summary xi.

(an IPCC term of art meaning a 66% to 90% chance of being true) that temperature increases already observed were attributable to human activity.⁵⁹ The U.S. National Academy of Sciences reviewed this finding and concluded that it was accurate.⁶⁰

86. 34. The IPCC issued its most recent report, the Fifth Assessment, in 2013-14. It states that it is "extremely likely" (95 to 100 percent likely) that "human influence has been the dominant cause of the observed warming since the mid-20th century."61 And the federal government's Fourth National Climate Assessment Report, issued in the fall of 2017 states: "This assessment concludes, based on extensive evidence, that it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence."62

87. Upon information and belief, Defendants have maintained scientific staffs for decades who have kept track of the climate science as these warnings and conclusions have been issued.

88. The increase in atmospheric carbon dioxide caused by the combustion of fossil fuels has been clearly documented – and measured. Carbon dioxide from fossil fuels has a chemical fingerprint and is the culprit; natural sources of carbon dioxide were in balance prior to the use of fossil fuels and are not a cause of the global warming problem. Today, due primarily to the

⁵⁹ IPCC, Third Assessment Report, Working Group I, Summary for Policymakers at 10, available at https://www.ipec.eh/ipecreports/tar/wg1/pdf/WG1_TAR-FRONT.PDF.

⁶⁰ National Academy of Sciences, Commission on Geosciences, Environment and Resources, Climate Change Science: An Analysis of Some Key Questions, summary at 1 (2001), *available at* <a href="https://download.nap.edu/cart/download.egi?record_id=10139.https://download.nap.edu/cart/download.egi?record_id=10139.https://download.nap.edu/cart/download.egi?record_id=10139.https://download.nap.edu/cart/download.egi?record_id=10139.https://download.nap.edu/cart/download.egi?record_id=10139.https://download.egi?record_id=10139.http

⁶¹ IPCC, Climate Change 2013, The Physical Science Basis, Summary for Policymakers at 17, available at https://www.ipce.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf. FINAL.pdf.

⁶² Donald J. Wuebbles et al., 2017: Executive Summary, in Climate Science Special Report: Fourth National Climate Assessment, Volume I (2017), available at https://science2017.globalchange.gov/chapter/executive-summary/.

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combustion of fossil fuels produced by Defendants and others, the atmospheric level of carbon dioxide is 410 ppm, higher than at any time during human civilization and likely higher than any level in millions of years. 63 The result has been dramatic planetary warming: sixteen of earth's seventeen warmest years in the 136-year period of global temperature measurements have occurred since 2001, and 2016 was the warmest year on record.⁶⁴ As of July 2017February 2018, there were 391398 months in a row that were warmer than the 20thtwentieth century average.65 The years 2014, 2015, and 2016 were the three hottest years ever recorded in California since modern temperature records were first taken in 1895.66 California has warmed over 2 °F since 1895.67

89. 36. Scientists typically use "double CO₂," or twice the pre-industrial level of atmospheric carbon dioxide concentration, as a standard reference for considering the warming impact of increased greenhouse gases. Double CO₂ is 550 ppm. According to the IPCC, double CO₂ will cause the global average surface air temperature to increase by 1.5 to 4.5 °C [2.7 to 8.1 °F] over the pre-industrial level, a rate of warming that is unprecedented in the history of human civilization. By comparison, at the depths of the last ice age, 20,000 years ago, the global average temperature of the Earth was only seven to eleven degrees Fahrenheit cooler than today. Globally,

⁶³ Brian Kahn, We Just Breached the 410 PPM Threshold for CO₂, Scientific American (Apr. 21, 2017), available at https://www.scientificamerican.com/article/we-just-breached-the-410-ppmthreshold-for-eo2/.https://www.scientificamerican.com/article/we-just-breached-the-410-ppm-

⁶⁴ Rising Seas in California at 14.

⁶⁵ NOAA, Global Climate Report, July 2017, available at https://www.ncdc.noaa.gov/sotc/global/201707.https://www.ncdc.noaa.gov/sotc/global/201707.

⁶⁶ NOAA, National Centers for Environmental Information, available at https://www.nede.noaa.gov/temp-and-precip/elimatologicalrankings/index.php?periods%5B%5D=12¶meter=tavg&state=4&div=0&month=12&vear=20 16#ranks-form.https://www.ncdc.noaa.gov/temp-and-precip/climatological-%5B%5D=12¶meter=tavg&state=4&div=0&month=12&year=2016#ranks-form.

⁶⁷ NOAA, National Climatic Data Center, available at https://www.ncdc.noaa.gov/temp-andprecip/state-temps/; see also https://www.nytimes.com/2015/08/21/science/climate-changeintensifies california drought-scientists-say.html?mcubz=0. NOAA, National Climatic Data Center, available at https://www.ncdc.noaa.gov/temp-and-precip/state-temps/; see also https://www.nytimes.com/2015/08/21/science/climate-change-intensifies-california-droughtscientists-say.html?mcubz=0.

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approximately 1 °C [1.8 °F] of the temperature rise already has occurred, due primarily to carbon dioxide and methane emissions from the combustion and use of fossil fuels.

quantities of fossil fuels will cause increasingly severe harm to San Francisco through accelerating sea level rise. In 2013, the IPCC projected that between 2081 and 2100, the global average surface temperature will have increased by 4.7 °F to 8.6 °F under business-as-usual, *i.e.*, with continued massive levels of fossil fuel production. Global warming causes sea level rise by melting glaciers and sea ice, and by causing seawater to expand. 68 This acceleration of sea level rise has more than doubled and it continues to accelerate. The rate of ice loss from the Greenland and Antarctic Ice Sheets is increasing, and these ice sheets soon will become the primary contributor to global sea level rise. With production of fossil fuels continuing on its business-as-usual trajectory, the resulting warming presents a risk of "rapidly accelerating and effectively irreversible ice loss."

The melting of even a portion of the West Antarctic Ice Sheet, the "most vulnerable major ice sheet in a warming global climate," will cause especially severe impacts in California. Rapid ice sheet loss on Antarctica due to global warming risks a sea level rise in California of ten feet by 2100.69 This would be catastrophic for San Francisco.

91. 38. The Earth's climate can undergo an abrupt and dramatic change when a radiative forcing agent, such as carbon dioxide, causes the climate system to reach a tipping point. Defendants' massive production of fossil fuels increases the risk of reaching that tipping point, triggering a sudden and potentially catastrophic change in climate. The rapidity of an abrupt climate shift would magnify all the adverse effects of global warming. Crossing a tipping point threshold also could lead to rapid disintegration of ice sheets on Greenland and/or Antarctica, resulting in large and rapid increases in sea level rise.

⁶⁸ IPCC, Climate Change 2013, The Physical Science Basis, Summary for Policymakers at 11, available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf. FINAL.pdf.

⁶⁹ Rising Seas in California at 3-4, 13.

V. DEFENDANTS HAVE PRODUCED MASSIVE QUANTITIES OF FOSSIL FUELS AND HAVE CONTINUED TO DO SO EVEN AS GLOBAL WARMING HAS BECOME GRAVELY DANGEROUS.

92. 39. For many years, Defendants have produced massive quantities of fossil fuels that, when combusted, emit carbon dioxide, the most important greenhouse gas. Each of the Defendants, including through their predecessor companies, subsidiaries and agents, upon information and belief, have been producing fossil fuels continuously for over a hundred years. Additionally, one of Defendants' primary fossil fuel products, natural gas, is composed of methane, which is the second most important greenhouse gas and which, as Defendants know, routinely escapes into the atmosphere from facilities operated by Defendants' customers and also consumers. The greenhouse gases from the usage of defendants' Defendants' fossil fuels remain in the atmosphere for long periods of time: a substantial portion of carbon dioxide emissions remains in the atmosphere for over 1,000 years after they are emitted. As noted above, Defendants have produced such vast quantities of fossil fuels that they are five of the ten largest producers in all of history, with most of the carbon dioxide that has built up in the atmosphere from the use of their products dating from 1980 or later. The cumulative greenhouse gases in the atmosphere attributable to each Defendant has increased the global temperature and contributed to sea level rise, including in San Francisco.

- 93. Once Defendants produce fossil fuels by, for example, extracting oil from the ground, those fossil fuels are used exactly as intended and emit carbon dioxide.
- 94. Defendants are quantitatively and qualitatively different from other contributors to global warming:
- a) Recent research demonstrates that just 100 fossil fuel producers are responsible for 62% of all greenhouse gas emissions from industrial sources since the dawn of the Industrial Revolution and for 71% of emissions since 1988, that over 90% of these emissions are

⁷⁰ IPCC, Climate Change 2013, The Physical Science Basis, Summary for Policymakers at 28, https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf.available.at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5 SPM_FINAL.pdf.

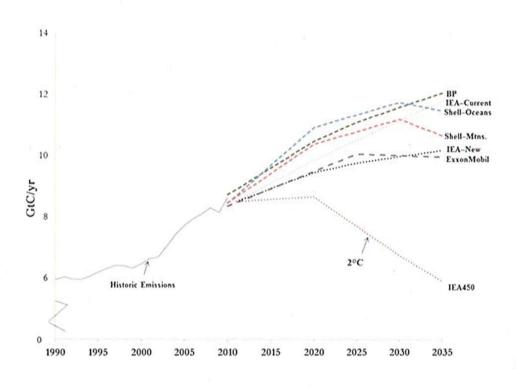
sources that has accumulated in the atmosphere since the dawn of the Industrial Revolution.⁷² 1. Despite their internal warnings, an overwhelming scientific consensus on the unfolding imminent catastrophe, and actual gravely dangerous impacts from global warming, Defendants to this day maintain high levels of fossil fuel production. 40. Once Defendants produce fossil fuels by, for example, extracting oil from the ground, those fossil fuels are used 41. Despite their internal warnings, an overwhelming scientifie consensus on the unfolding imminent catastrophe, and actual gravely dangerous impacts from global warming, Defendants to this day maintain high levels of fossil fuel production. For

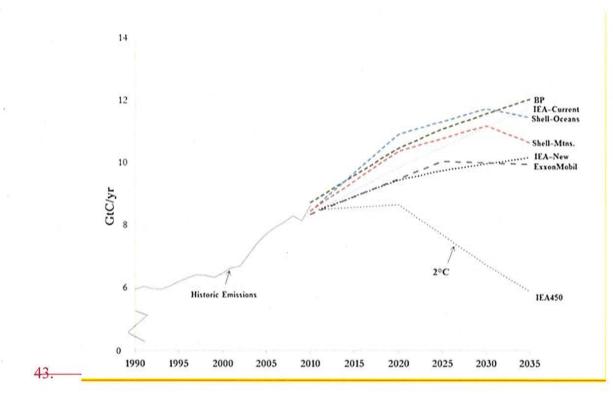
to protect their fossil fuel marke

f) Defendar

promotions of fossil fuels as beneficent even in light of their knowledge to the contrary, and efforts to protect their fossil fuel market by downplaying the risks of global warming.42.

Defendants' conduct will continue to cause ongoing and increasingly severe sea level rise harms to San Francisco because Defendants are committed to a business model of massive fossil fuel production that they know causes a gravely dangerous rate of global warming. The following graph from a 2015 study published in the peer-reviewed scientific literature demonstrates the grave indifference Defendants BP, Shell, and Exxon have for human safety and welfare.





The graph compares BP, Exxon and Shell's projections of worldwide total future emissions⁷³ – projections upon which they make long-term business plans – to the IEA ("International Energy Agency ("IEA") 450 emissions trajectory necessary to prevent global warming from exceeding a 2 °C increase over the pre-industrial temperature. The 2 °C level of global warming is widely considered to be a red line of highly dangerous global warming. Upon information and belief, all Defendants base their long-term business plans upon similar projections.

VI. DEFENDANTS HAVE PRODUCED MASSIVE AMOUNTS OF FOSSIL FUELS DESPITE HAVING FULL KNOWLEDGE FROM THEIR IN-HOUSE SCIENTIFIC STAFF, OR FROM THE API, THAT FOSSIL FUELS WOULD CAUSE GLOBAL WARMING.

95. 44. For decades, Defendants have known that their fossil fuel products pose risks of "severe" and even "catastrophic" impacts on the global climate through the work and warnings of their own scientists or through their trade association.and/or through their trade

⁷³ In gigatons of carbon per year.

⁷⁴ Frumhoff, et al., The climate responsibilities of industrial carbon producers, Climatic Change, at 167 (2015), *available at* https://link.springer.com/article/10.1007/s10584-015-1472-5,

association, the American Petroleum Institute ("API"). Defendants, large and sophisticated companies devoted to researching significant issues relevant to fossil fuels, also were aware of significant scientific reports on climate change science and impacts at the time they were issued. Yet each Defendant decided to continue its conduct and commit itself to massive fossil fuel production. This was a deliberate decision to place company profits ahead of human safety and well-being and property, and to foist onto the public the costs of abating and adapting to the public nuisance of global warming.

96. 45. The American Petroleum Institute ("API")The API is a national trade association that represents the interests of America's oil and natural gas industry. At all relevant times, Defendants, their corporate predecessors and/or their operating subsidiaries over which they exercise substantial control, have been members of the API. On information and belief, the API has acted as Defendants' agent with respect to global warming, received funding from Defendants for the API's global warming initiatives, and shared with Defendants the information on global warming described herein.

97. 46. Beginning in the 1950s, the API repeatedly warned its members that fossil fuels posed a grave threat to the global climate. These warnings have included, for example, an admission in 1968 in an API report predicting that carbon dioxide emissions were "almost certain" to produce "significant" temperature increases by 2000, and that these emissions were almost certainly attributable to fossil fuels. The report warned of "major changes in the earth's environment" and a "rise in sea levels," and concluded: "there seems to be no doubt that the potential damage to our environment could be severe."75 Similar warnings followed in the ensuing decades, including reports commissioned by the API in the 1980s that there was "scientific consensus" that catastrophic climate change would ensue unless API members changed their

cuments/document16.

⁷⁵ E. Robinson & R.C. Robbins, Final Report, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants, SRI Project PR-6755, prepared for American Petroleum Institute, at 109-110, available at <a href="https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/document16.https://www.smokeandf

business models, and predictions that sea levels would rise considerably, with grave consequences, if atmospheric concentrations of CO₂ continued to increase.

98. 47. The API's warnings to Defendants included:

and In 1951, the API launched a project to research air pollution from petroleum products, and attributed atmospheric carbon to fossil fuel sources. By 1968, the API's scientific consultant reported to the API that carbon dioxide emissions were "almost certain" to produce "significant" temperature increases by 2000, and that these emissions were almost certainly attributable to fossil fuels. The report warned of "major changes in the earth's environment" and a "rise in sea levels," and concluded: "there seems to be no doubt that the potential damage to our environment could be severe."

API and Defendants, their predecessors, and/or agents formed a task force to monitor and share climate research, initially called the "CO2 and Climate Task Force" and later renamed the "Climate and Energy Task Force" ("Task Force"). The API kept and distributed meeting minutes to Task Force members. Task Force members included, in addition to API representatives, scientists from Amoco (a predecessor to BP); Standard Oil of California, Texaco, and Gulf Oil Corp. (predecessors to Chevron); Exxon Research and Engineering and Mobil (predecessors to or subsidiaries of current Exxon); Shell; and others. In 1980, the Task Force invited Dr. J.A. Laurman, a "recognized expert in the field of CO2 and climate," to make a presentation to the API CO2 and Climate Task Force. Attendees to the presentation included scientists and executives from Texaco (a predecessor to Chevron), Exxon, and SOHIO (a predecessor to BP). Dr.

⁷⁶ Charles A. Jones (1958) A Review of the Air Pollution Research Program of the Smoke and Fumes Committee of the American Petroleum Institute, Journal of the Air Pollution Control Association, 8:3, 268-272, DOI: 10.1080/00966665.1958.10467854, *available at* https://www.smokeandfumes.org/#/documents/document9.

⁷⁷ E. Robinson & R.C. Robbins, Final Report, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants, SRI Project PR-6755, prepared for American Petroleum Institute, at 109-110, available at <a href="https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/documents/document16.https://www.smokeandfumes.org/#/document16.https://www.sm

LaurmanLaurman's written presentation informed the API task force Task Force that there was a "Scientific Consensus on the Potential for Large Future Climatic Response to Increased CO₂ Levels." He further informed the API task force Task Force in his presentation that, though the exact temperature increases were difficult to predict, the "physical facts agree on the probability of large effects 50 years away." His own temperature forecast was He warned the Task Force of a 2.5 °C [4.5 °F] global temperature rise by 2038, which would likely have "MAJOR ECONOMIC CONSEQUENCES," and a 5 °C [9 °F] rise by 2067, which would likely produce "GLOBALLY CATASTROPHIC EFFECTS." He also suggested that, despite uncertainty, "THERE IS NO LEEWAY" in the time for acting. API minutes show that the task force Task Force discussed topics including "the technical implications of energy source changeover," "ground rules for energy release of fuels and the cleanup of fuels as they relate to CO₂ creation," and researching "the Market Penetration Requirements of Introducing a New Energy Source into World Wide Use." The Task Force even asked the question "what is the 50 year future of fossil fuels?"

[c] In March 1982, an API-commissioned report showed the average increase in global temperature from a doubling of atmospheric concentrations of CO₂ and projected, based upon computer modeling, global warming of between 2 °C and 3.5 °C [3.6 °F to 6.3 °F]. The report projected potentially "serious consequences for man's comfort and survival," and noted that "the height of the sea level can increase considerably."

99. 48. On information and belief, Defendants were aware of the industry Task

Force and API findings described above, which were distributed by the API to its members. Each

Defendant (or its predecessor) was a member of the API at relevant times, or had a subsidiary that

was a member of the API at relevant times. Each subsidiary passed on information it learned from

⁷⁸ CO₂ and Climate Task Force, Minutes of Meeting, at 1-2 & Attachment B, *available at* <a href="http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf.http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf.

⁷⁹http://insideclimatenews.org/sites/default/files/documents/API%201982%20Climate %20models%20and%20CO2%20warming.pdf at 5. http://insideclimatenews.org/sites/default/files/documents/API%201982%20Climate%20 models%20and%20CO2%20warming.pdf at 5.

the API on climate change to its parent Defendant (or Defendant's predecessor) and acted as the agent for its parent company, which remained in charge of setting overall production levels in light of climate change and other factors.

were made) of public statements on climate change described above, including the 1979 National Academy of Science findings and Dr. Hansen's 1988 testimony. Because these statements were centrally relevant to Defendants' ongoing investment of billions of dollars in fossil fuel production and billions of dollars in profits, and because Defendants employed experts charged with evaluating climate change and other energy and regulatory trends, Defendants were in a superior position to appreciate the threat described in these statements. Defendants' representatives attended congressional hearings on climate change beginning as early as the late 1970s.

101. In addition to the API information, some of the Defendants produced their own internal analyses of global warming. For example, newly disclosed documents demonstrate that Exxon internally acknowledged in the late 1970s and early 1980s that its products posed a "catastrophic" threat to the global climate, and that fossil fuel use would have to be strictly limited to avoid severe harm.

e.a) Exxon management was informed by its scientists in 1977 that there was an "overwhelming[]" consensus that fossil fuels were responsible for atmospheric carbon dioxide increases. The presentation summarized a warning from a recent international scientific conference that "IT IS PREMATURE TO LIMIT USE OF FOSSIL FUELS BUT THEY SHOULD NOT BE ENCOURAGED." The scientist warned management in a summary of his talk: "Present thinking holds that man has a time window of five to ten years before the need for hard decisions regarding changes in energy strategies might become critical."

^{**}Solution: **Notice Comparison of Compariso

d.d) A year later, the same scientist wrote another memo to Exxon headquarters, which reported on a "clear scientific consensus" that "a doubling of atmospheric CO2 from its preindustrial revolution value would result in an average global temperature rise of (3.0 ± 1.5) °C [2.7] °F to 8.1 °F1."83 The clear scientific consensus was based upon computer modeling, which Exxon would later attack as unreliable and uncertain in an effort to undermine public confidence in climate science.84 The memo continued: "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 in the biosphere." e.e) In November 1982, an Exxon internal report to management warned that "substantial climatic changes" could occur if the average global temperature rose "at least 1 °C [1.8 °F] above [1982] levels," and that "[m]itigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion." The report then warns Exxon management that "there are 81-http://insideclimatenews.org/sites/default/files/documents/CO2%20and%20 http://insideclimatenews.org/sites/default/files/documents/CO2%20and%20Fuel%20Use%20 82 http://insideclimatenews.org/sites/default/files/documents/%2522Catastrophie% http://insideclimatenews.org/sites/default/files/documents/%2522Catastrophic%2522%20 http://insideclimatenews.org/documents/consensus-co2-impacts-1982.http://insideclimatenews.org/

some potentially catastrophic events that must be considered," including the risk that "if the Antarctic ice sheet which is anchored on land should melt, then this could cause a rise in sea level on the order of 5 meters." The report includes a graph demonstrating the expected future global warming from the "CO₂ effect" demonstrating a sharp departure from the "[r]ange of natural fluctuations." This graph is attached hereto as Exhibit 3.85

By 1983, Exxon had created its own climate models, which confirmed the main conclusions from the earlier memos. Starting by at least the mid-1980s, Exxon used its own climate models and governmental ones to gauge the impact that climate change would have on its own business operations and subsequently took actions to protect its own business assets based upon these modeling results.⁸⁶

102. 49. Exxon's early research and understanding of the global warming impacts of its business was not unique among Defendants. For example, at least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions. For example, at least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions. For example, at least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions. For example, at least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions. For example, at least as far back as 1970, Defendants in 1991, in England to examine the possible future climate changes from greenhouse gas emissions. For example, at least as far back as 1970, Defendants in England to examine the possible future climate scheme from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example, at least as far back as 1970, Defendants from greenhouse gas emissions. For example,

⁸⁵ M. B. Glaser, Memo to R.W. Cohen et al. on "CO₂ Greenhouse Effect," Nov. 12, 1982, at 2, 12-13, 28, available at http://insideclimatenews.org/sites/default/files/documents/1982%20 Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf. http://insideclimatenews.org/sites/default/files/documents/1982%20
Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf.

⁸⁶⁻http://graphies.latimes.com/exxon-arctic/. http://graphics.latimes.com/exxon-arctic/.

⁸⁷ Sir Solly Zuckerman, Chief Scientist, Letter to Vice Chancellor, University of Bath, 9th May 1970, PRO ref CAB 163/272 #122885, "Long-term climate changes and their effects."

⁸⁸ https://www.youtube.com/watch?v=0VOWi8oVXmo.https://www.youtube.com/watch?v=0VOWi8oVXmo.

faster than at any time since the end of the ice age, change too fast, perhaps, for life to adapt without severe dislocation."

VII. DESPITE THEIR EARLY KNOWLEDGE THAT GLOBAL WARMING WAS REAL AND POSED GRAVE THREATS, DEFENDANTS PROMOTED FOSSIL FUELS FOR PERVASIVE USE WHILE DOWNPLAYING THE REALITY AND RISKS OF GLOBAL WARMING.

A. Defendants borrowed the Borrowed The Big Tobacco playbook in order to promote their products. Playbook In Order To Promote Their Products.

104. 51.—Notwithstanding Defendants' early knowledge of climate change,
Defendants have engaged in advertising and public relationscommunications campaigns intended to promote their fossil fuel products by downplaying the harms and risks of global warming.

Initially, the campaign tried to show that global warming was not occurring. More recently, the campaign has sought to minimize the risks and harms from global warming. The campaign's

⁸⁹ ConocoPhillips, the changing energy landscape, *available at* <a href="http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-ehanging-energy-landscape.aspx;http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx; Chevron TV ad (2009), https://www.youtube.com/watch?v=-KyjTGMVTkA.available at https://www.youtube.com/watch?v=-KyjTGMVTkA.

purpose and effect has been to help Defendants continue to produce fossil fuels and sell their products on a massive scale. This campaign was executed in large part by front groups funded by Defendants, either directly or through the API, and through statements made by Defendants directly.

105. 52. One front group was the Global Climate Coalition ("GCC"). The GCC operated between 1989 and 2002. Its members included the API, and predecessors or subsidiaries of Defendants. William O'Keefe, former president of the GCC, was also a former executive of the API.90

106. 53. The GCC spent millions of dollars on campaigns to discredit climate science, including \$13 million on one ad campaign alone. The GCC distributed a video to hundreds of journalists, which claimed that carbon dioxide emissions would increase crop production and feed the hungry people of the world.⁹¹

107. __54. —However, internal GCC documents admitted that their "contrarian" climate theories were unfounded. In December 1995, the GCC's Science and Technology Advisory Committee ("GCC-STAC"), whose members included employees of Mobil Oil Corporation (an Exxon predecessor) and the API, drafted a primer on the science of global warming for GCC members. The primer concluded that the GCC's contrarian theories "do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change." Due to this inconvenient conclusion, at its next meeting, in January 1996, the GCC-STAC decided simply to drop this seven-page section of the report. Nonetheless, for years afterward, the GCC and its members continued to tout their contrarian theories about global warming, even though the GCC had admitted internally these arguments were invalid.

⁹⁰ Jeff Nesmith, Industry Promotes Skeptical View of Global Warming, Cox News Service, May 28, 2003, available at

⁹¹ http://www.sourcewatch.org/index.php/Global_Climate_Coalition.http://www.sourcewatch.org/index.php/Global_Climate_Coalition.

108. _55. In February 1996, an internal GCC presentation summarized findings from the 1995 IPCC Second Assessment report and stated that a doubling of carbon dioxide levels over pre-industrial concentrations would occurthe projected temperature change by 2100 and eausewould constitute "an average rate of warming [that] would probably be greater than any seen in the past 10,000 years." The presentation noted "potentially irreversible" impacts that could include "significant loss of life." and stated that predicted health impacts were "mostly adverse impacts, with significant loss of life." The document simultaneously reported the IPCC's scientific conclusions regarding climate change and laid out points for questioning those conclusions, including the IPCC's 1995 finding that human-induced global warming had now been detected even though the GCC-STAC had concluded just two months before that the contrarian theories of causation were scientifically unconvincing.

Climate Science Communications Team ("GCSCT"). GCSCT members included Exxon, Chevron, and the API. 92 A 1998 GCSCT task force memo outlined an explicit strategy to invest millions of dollars to manufacture uncertainty on the issue of global warming, directly emulating a similar disinformation campaign by the tobacco industry. The memo stated: "Victory Will Be Achieved When," among other things, "Average citizens 'understand' (recognize) uncertainties in climate science," public "recognition of uncertainty becomes part of the 'conventional wisdom," and the "Media 'understands' (recognizes) uncertainties in climate science." The plan stated that progress would be measured by the percentage of new articles that raise questions about climate change.

109. 57. Over at least the last nineteen years, Exxon in particular has paid researchers and front groups to create uncertainties about basic climate change science and used denialist

⁹² https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf.

⁹³ Global Climate Science Communications: Action Plan, Apr. 3, 1998, available at https://assets.documenteloud.org/documents/784572/api-global-elimate-science-communications-plan.pdf.

groups to attack well-respected scientists. These were calculated business decisions by Exxon to undermine climate change science and bolster production of fossil fuels.-94

110. __58. ___Between 1998 and 2014, Exxon paid millions of dollars to organizations to promote disinformation on global warming.-_During the early- to mid-1990s, Exxon directed some of this funding to Dr. Fred Seitz, Dr. Fred Singer, and/or Seitz and Singer's Science and Environmental Policy Project ("SEPP") in order to launch repeated attacks on mainstream climate science and IPCC conclusions, even as Exxon scientists participated in the IPCC. Seitz, Singer, and SEPP had previously been paid by the tobacco industry to create doubt in the public mind about the hazards of smoking. Seitz and Singer were not climate scientists.

111. _59. —Exxon's promotion of fossil fuels also entailed the funding of denialist groups that attacked well-respected scientists Dr. Benjamin Santer and Dr. Michael Mann, maligning their characters and seeking to discredit their scientific conclusions with media attacks and bogus studies in order to undermine the IPCC's 1995 and 2001 conclusions that human-driven global warming is now occurring.

112. 60. One of Defendants' most frequently used denialists has been an aerospace engineer named Wei Hock Soon. Between 2001 and 2012, various fossil fuel interests, including Exxon and the API, paid Soon over \$1.2 million. 97 Soon was the lead author of a 2003 article

⁹⁴ http://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming; Jeffrey Ball, Exxon Chief Makes A Cold Calculation on Global Warming, The Wall Street Journal, June 14, 2005, available at https://www.wsj.com/articles/SB111870440192558569. https://www.wsj.com/articles/SB111870440192558569.

⁹⁵ Union of Concerned Scientists, *Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big Tobacco's Tactics to Manufacture Uncertainty on Climate Science*, Jan. 2007, *available at* http://www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf; http://www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf;

http://www.sourcewatch.org/index.php/S. Fred Singer; http://www.sourcewatch.org/index.php/Frederick Seitz. http://www.sourcewatch.org/index.php/S. Fred Singer; http://www.sourcewatch.org/index.php/Frederick Seitz.

⁹⁷ Justin Gillis & John Schwartz, Deeper Ties to Corporate Cash for Doubtful Climate Researcher, New York Times (Feb. 21, 2015), available at https://www.nytimes.com/2015/02/22/us/ties-to-corporate-eash-for-climate-change-researcher-

which argued that the climate had not changed significantly. The article was widely promoted by other denial groups funded by Exxon, including via "Tech Central Station," a website supported by Exxon. Soon published other bogus "research" in 2009, attributing global warming to solar activity, for which Exxon paid him \$76,106. This 2009 grant was made several years after Exxon had publicly committed not to fund global warming deniers.

113. 61. Until recentlyapproximately early 2016, the API's website referred to global warming as "possible man-made warming" and claimed that the human contribution is "uncertain." The API removed this statement from its web sitewebsite in 2016 when journalistic investigations called attention to the API's misleading statements on global warming and its 1970s/1980s task force on global warmingparticipation in the climate change Task Force during the late 1970s and early 1980s.

114. 62. In 2000, Exxon took out an advertisement on the Op-Ed page of the *New York Times* entitled "Unsettled Science." The advertisement claimed that "scientists remain unable to confirm" the proposition that "humans are causing global warming." This was six years after the IPCC had confirmed the causal link between planetary warming and anthropogenic greenhouse gas emissions – a historic moment in climate science – and some 18 years after Exxon itself had admitted in a 1982 internal memoranda to corporate headquarters that there was "a clear scientific consensus" that greenhouse gas emissions would cause temperatures to rise.

<u>Wei-Hock-Soon.html?meubz=1.</u>https://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html?mcubz=1.

⁹⁸ Smoke, Mirrors & Hot Air at 13-14.

⁹⁹ https://www.documentcloud.org/documents/682765-willie-soon-foia-grants-chart-02-08-2011.html. https://www.documentcloud.org/documents/682765-willie-soon-foia-grants-chart-02-08-2011.html.

¹⁰⁰ http://www.socialfunds.com/shared/reports/1211896380 ExxonMobil 2007 Corporate Citizenship Report.pdf.
http://www.socialfunds.com/shared/reports/1211896380 ExxonMobil 2007 Corporate Citizenship Report.pdf.

https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf. https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf.

115. __63. __On May 27, 2015, at Exxon's annual shareholder meeting, then-CEO Rex Tillerson misleadingly downplayed global warming's risks by stating that climate models used to predict future impacts were unreliable: "What if everything we do it turns out our models were really lousy and we achieved all of our objectives and it turned out the planet behaved differently because the models just weren't good enough to predict it?" But as noted above, in 1982 Exxon's scientific staff stated, based upon the climate models, that there was a "clear scientific consensus" with respect to the level of projected future global warming and starting shortly thereafter Exxon relied upon the projections of climate models, including its own climate models, in order to protect its own business assets. Tillerson's statement reached consumers because it was reported in the press, including in California, 102 as is common when fossil fuel company CEOs make statements regarding climate change and as Exxon had reason to know would occur.

116. 64. Until recentlyapproximately early 2017, Exxon's website continued to emphasize the "uncertainty" of global warming science and impacts: "current scientific understanding provides limited guidance on the likelihood, magnitude, or time frame" of events like temperature extremes and sea level rise. 103 Exxon's insistence on crystal-ball certainty was clear misdirection, since Exxon knew that the fundamentals of climate science were well settled and showed global warming to present a clear and present danger. 104

¹⁰² See, e.g., David Koenig, Exxon shareholders to vote on climate change, fracking, San Diego Union-Tribune, May 27, 2015, available at http://www.sandiegouniontribune.com/news/2015/may/27/exxon-shareholders-to-vote-on-climate-change/.

¹⁰³ Formerly found at http://corporate.exxonmobil.com/en/current-issues/climate-policy/meeting-global-needs/managing-climate-change-business-risks.

¹⁰⁴ See IPCC, Climate Change 2014, Impacts, Adaptation, and Vulnerability, Summary for Policymakers, available at http://www.ipec.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf.

B. Defendants' direct promotion Direct Promotion of fossil fuels Fossil Fuels.

117. __65. ___Defendants continue to promote massive fossil fuel use by the public notwithstanding that global warming is happening, that global warming is primarily caused by their fossil fuels, and that global warming is causing severe injuries. Defendants promote the massive use of fossil fuels through advertisements lauding fossil fuels as "responsible" and "respectful" to the environment, identifying fossil fuels as the only way to sustain modern standards of living, and promoting sales of their fossil fuels without qualification. Defendants and/or their U.S. subsidiaries are members of the API. The API also promotes the benefits of fossil fuel products on behalf of Defendants and its other members. Defendants' message to consumers is that fossil fuels may continue to be burned in massive quantities without risking significant injuries.

118. 66. Defendants bombard the public and consumers with the following advertisements, although these are a mere sliver of Defendants' extensive campaigns. Defendants' advertisements must be understood in their proper context – as following Defendants' substantial early knowledge on global warming risks and impacts, and following a decades-long campaign of misleading statements on global warming that primed the pump for massive use of their fossil fuel products:

a.a) Exxon's "Lights Across America" website advertisement states that natural gas is "helping dramatically reduce America's emissions" even though natural gas is a fossil fuel causing widespread planetary warming and harm to coastal cities like San Francisco and the use of natural gas competes with wind and solar, which have no greenhouse gas emissions.

¹⁰⁵ API, Consumer Information, available at http://www.api.org/oil-and-natural-gas/consumer-information.

¹⁰⁶ https://www.youtube.com/watch?v=tMu1CBjXfq4&list=PLIrXlHj7zayYGaExfTp_B4t6gqTtkGf9A&index=6 (at 0:46). https://www.youtube.com/watch?v=tMu1CBjXfq4&list=PLIrXlHj7zayYGaExfTp_B4t6gqTtkGf9A&index=6 (at 0:46).

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1	b.b) In 2017, Shell's CEO promoted massive fossil fuel use by stating that the
2	fossil fuel industry could play a "crucial role" in lifting people out of poverty. 107 A Shell website
3	promotion states: "We are helping to meet the world's growing energy demand while limiting
4	CO ₂ emissions, by delivering more cleaner-burning natural gas." ¹⁰⁸
5	e.c) BP touts natural gas on its website as "a vital lower carbon energy source"
6	and as playing a "crucial role" in a transition to a lower carbon future. 109 BP promotes continued
7	massive fossil fuel use as enabling two billion people to be lifted out of poverty. 110
8	d-d) Chevron's website implores the public that "we produce safe, reliable energy
9	products for people around the world." ¹¹¹ Chevron also promotes massive use of fossil fuels as the
10	key to lifting people out of poverty: "Reliable and affordable energy is necessary for improving
11	standards of living, expanding the middle class and lifting people out of poverty. Oil and natural
12	gas will continue to fulfill a significant portion of global energy demand for decades to come -
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18 19	107 Shell CEO speech, Mar. 9, 2017, available at http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-tomorrow.html . articles/2017/deliver-today-prepare-for-tomorrow.html.
20 21	108 Shell United States, Transforming Natural Gas, available at http://www.shell.us/energy-and-innovation/transforming-natural-gas.html . http://www.shell.us/energy-and-innovation/transforming-natural-gas.html.
22	109-https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf; http://www.bp.com/energytransition/shifting-towards-
23	gas.html. https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf; http://www.bp.com/energytransition/shifting-towards-gas.html.
24	110 BP energy outlook, available at http://www.bp.com/en/global/corporate/energy-
25	economics/energy-outlook.html.http://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html.
26	https://www.chevron.com/operations/products-
27	services.https://www.chevron.com/operations/products-services.
28	

even in a carbon-constrained scenario."¹¹² A prior Chevron advertisement still available on the web promotes Chevron fossil fuels on a massive scale by stating that "our lives demand oil."¹¹³

e.e) ConocoPhillips promotes its fossil fuel products by stating that it "responsibly suppl[ies] the energy that powers modern life." Similarly, ConocoPhillips has the following advertising slogan on its website: "Providing energy to improve quality of life." 115

119. __67. __Contrary to Defendants' claims that the use of massive amounts of fossil fuels is required to lift people out of poverty, the IPCC has concluded: "Climate change will exacerbate multidimensional poverty in most developing countries [and] will also create new poverty pockets in countries with increasing inequality, in both developed and developing countries." 116

120. 68. Defendants BP and Exxon have also used long-term energy forecasts and similar reports to promote their products under the guise of expert, objective analysis. These forecasts have repeatedly sought to justify heavy reliance on fossil fuels by overstating the cost of renewable energy.

121. 69. Defendants' energy forecasts are aimed in substantial part at consumers and are promoted to the public through their respective websites and other direct media. Exxon continues to promote its annual "Outlook for Energy" reports in videos currently available on the

¹¹² Chevron, managing climate change risks, *available at* https://www.chevron.com/corporate-responsibility/climate-change/managing-climate-risk.

¹¹⁴ ConocoPhillips, the changing energy landscape, *available at* http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx.

¹¹⁵ ConocoPhillips, Producing energy, *available at* <a href="http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx.http://www.conocophillips.com/what-we-do/producing-energy

¹¹⁶ IPCC, Climate Change 2014: Impacts, Adaptation, and Vulnerability, at 797, available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap13_FINAL.pdf. FINAL.pdf.

internetInternet. But Defendants' Exxon's energy "analyses" are self-serving means of promoting fossil fuels and undercutting non-dangerous renewable energy and clean technologies. For example, Exxon has claimed in a recent forecast that natural gas is a cheaper way to reduce carbon dioxide emissions than wind or solar power while BP has claimed that solar and wind power will be more expensive in 2050 than natural gas or coal even though wind and solar are already cheaper than natural gas or coal in some circumstances. Exxon and BP also have understated in recent "forecasts" the expected market share of electric vehicles even as electric vehicle technology has taken off, prices have dropped and GM announced (in 2015) that it was investing billions in electric cars because the "future is electric."

122. 70. Defendants' reports also promote their fossil fuel products by warning consumers of supposed downsides to reducing fossil fuel use and carbon dioxide emissions. For example, Exxon's most recent report claims that the costs of carbon dioxide reductions are "ultimately borne by consumers and taxpayers."

123. 71. These reports by BP and Exxon, and a similar one by Shell, predict massive increases in fossil fuel use over roughly the next 15 years. This is part of a larger strategy of

¹¹⁷ http://edn.exxonmobil.com/~/media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf, at 31; http://www.bp.com/content/dam/bp/pdf/technology/bp-technology-outlook.pdf, at 18. http://cdn.exxonmobil.com/~/media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf, at 31; http://www.bp.com/content/dam/bp/pdf/technology/bp-technology-outlook.pdf, at 18.

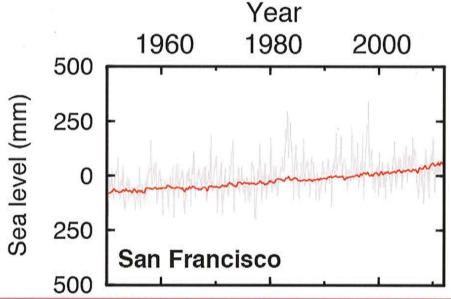
¹¹⁸⁻http://edn.exxonmobil.com/~/media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf, at 18; https://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf, at 47; General Motors, Press Release, *GM Employees on Mission to Transform Transportation* (May 7, 2015), available at http://media.gm.com/media/us/en/gm/company_info/facilities/assembly/orion.detail.html/content/Pages/news/us/en/2015/may/0507-sustainability-report.html http://cdn.exxonmobil.com/~/media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf, at 18; https://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf, at 47; General Motors, Press Release, *GM Employees on Mission to Transform Transportation* (May 7, 2015), available at http://media.gm.com/media/us/en/gm/company_info/facilities/assembly/orion.detail.html/content/Pages/news/us/en/2015/may/0507-sustainability-report.html.

¹¹⁹ http://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-the-future/_jer_content/par/relatedtopics.stream/1448477051486/08032d761ef7d81a4d3b1b6df8620e1e9a64e564a9548e1f2db02e575b00b765/scenarios-newdoc-english.pdf
http://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-the

1 "mak[ing] the case for the necessary role of fossil fuels," as BP's chief executive stated in a moment of candor in 2015. 120 2 3 C.VIII. SAN FRANCISCO WILL INCUR SERIOUS CLIMATE CHANGE INJURIES THAT WILL REQUIRE BILLIONS IN EXPENDITURES TO ABATE THE 4 GLOBAL WARMING NUISANCE. 5 124. 72. According to a 2012 California governmental report, by 2050, California is projected to warm by approximately 2.7° F above the average temperature in 2000, regardless of 6 7 the level of future emissions, a rate of warming three times greater than over the last century. 121 By 8 2100, California's average temperatures could increase by 8.6 °F, if not more. ¹²² San Francisco's 9 average annual temperatures are currently projected to increase by up to 5.5 °F by 2100. 123 San 10 Francisco's average summertime high temperature (based upon 1986-2005 data) is projected to 11 increase from 68.61 °F to 76.17 °F by 2100, making San Francisco's summers similar to those now 12 experienced in Rancho Palos Verdes, California, approximately 400 miles south of San 13 Francisco. 124 Continued production of massive amounts of fossil fuels will exacerbate global 14 warming, increase sea level rise and result in grave harm to San Francisco. 15 125. 73.—Global warming has caused and continues to cause accelerated sea level rise 16 in San Francisco Bay and the adjacent ocean with severe, and potentially catastrophic, 17 future/ jcr content/par/relatedtopics.stream/1448477051486/08032d761ef7d81a4d3b1b6df8620c1 18 e9a64e564a9548e1f2db02e575b00b765/scenarios-newdoc-english.pdf. 120-http://www.bp.com/en/global/corporate/media/speeches/2015-annual-general-meeting-19 group-chief-executive.html. http://www.bp.com/en/global/corporate/media/speeches/2015-annualgeneral-meeting-group-chief-executive.html. 20 ¹²¹ Our Changing Climate 2012, Vulnerability & Adaptation to the Increasing Risks from 21 Climate Change in California, at 2, available at http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf.http://www.energy.ca.gov/2012publications/CEC-500-22 2012-007/CEC-500-2012-007.pdf. 122 Id. 23 ¹²³-S.F. Dept. of Public Health, San Francisco's Climate and Health Adaptation Framework at 8 24 (2017), available at https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH ClimateHealth/A 25 daptFramework2017a.pdf. Scripps Institute of Oceanography, Cal-Adapt and California Nevada Applications Program. Temperature: Extreme Heat Tool. 26 124 Climate Central, available at http://www.climatecentral.org/news/summer-temperatureseo2-emissions-1001-cities-16583http://www.climatecentral.org/news/summer-temperatures-co2-27 emissions-1001-cities-16583 (Aug. 1, 2014). 28

consequences for San Francisco. The IPCC's most recent assessment report concludes that the long-term sea level rise in San Francisco as measured by tide gauges is similar to the global trend of rising sea levels: "Over many coastal regions, vertical land motion is small, and so the long-term rate of sea level change recorded by coastal and island tide gauges is similar to the global mean value (see records at San Francisco)."

The IPCC demonstrated the correlation between the long-term tide gauge record at San Francisco and the global sea level rise with the following graph in its most recent (2013) assessment report:



Tide gauge record for San Francisco 1950-2012 in grey with estimated global mean sea level shown in red line. From IPCC Fifth Assessment Report. 126

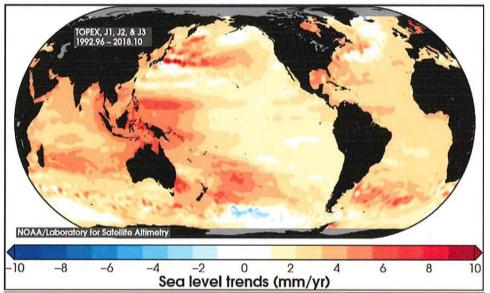
126. In addition to the tide gauge measurements, satellites also have taken measurements of sea level since late 1992. Because sea level is a long-term phenomenon, it takes approximately 25 years to establish a sea level rise trend from a dataset such as those in the satellite measurements. Thus, temporary phenomena such as El Niño and La Niña events can, over a shorter period of time, mask the true long-term effect of climate change on sea level and be misleading, as the IPCC pointed out in is 2012 assessment report. This is precisely what

¹²⁵ https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5 Chapter13 FINAL.pdf (FAQ 13.1 Fig. 1, pp. 1148-49).

 $^{^{126}}$ *Id*.

¹²⁷ Id.

occurred in the eastern Pacific ocean due to a period of La Niña events during three of the four winters from 2008-2013, which biased the results of the relatively short span of satellite data that was available in 2013 when the IPCC published its most recent assessment report and made it appear that sea level was falling in this area. However, the *complete* satellite data from 1993 to present demonstrate that the eastern Pacific ocean is experiencing sea level rise as depicted below in the global map from the U.S. National Oceanic and Atmospheric Administration:



Global sea level rise map from satellite measurements from late 1992 to present. 128

127. Analysis of the *full* 25-year satellite record published in February, 2018 also demonstrates that the rate of sea level rise is accelerating, primarily from the melting of the large ice sheets in Greenland and Antarctica and therefore that previous projections of future sea level that had assumed a constant rate of sea level rise were too low. This acceleration means that future coastal impacts from sea level rise will be more severe than previously projected. 129

128. Scientists recently concluded that coastal California is already experiencing impacts from accelerated sea level rise, including "more extensive coastal flooding during storms, periodic

¹²⁸ https://www.star.nesdis.noaa.gov/sod/lsa/SeaLevelRise/slr/map_txj1j2_blue2red.pdf.

¹²⁹ R.S. Nerem, et al., Climate-Change-Driven Accelerated Sea Level Rise Detected in the Altimeter Era, 115 Proceedings of the National Academy of Sciences 2022 (Feb. 27, 2018), http://www.pnas.org/content/115/9/2022; see also https://www.sciencedaily.com/releases/2018/02/180212150739.htm.

tidal flooding, and increased coastal erosion."¹³⁰ In the last 100 years, the California coast has experienced sea level rise of 6.7 to 7.9 inches.¹³¹

129. __74. ___Storms with their attendant surges and flooding occur on top of and superimposed on sea level rise, causing storm surges to be greater, extend farther inland, and cause more extensive damage – including greater inundation and flooding of public and private property in San Francisco. By 2050, for example, a "100-year flood" in San Francisco is expected to occur on average once every year and by 2100 to occur 92 times per year – or almost twice per week. A 100-year flood event normally – that is, without global warming – has a 1% chance of happening every year. Under this same scenario, the 500-year storm surge flood would occur, by 2050, once every four years and, by 2100, 42 times per year – or almost once per week. Even with lower levels of future fossil fuel production, there will be substantial increases in flood frequencies in San Francisco due to past and ongoing fossil fuel combustion. 135

130. 75. Accelerated sea level rise in California is causing and will continue to cause inundation of bothSan Francisco's public property and private property located within San Francisco. San Francisco is extremely vulnerable to accelerated sea level rise, storm surges, and inundation because it is surrounded by water on three sides – the Pacific Ocean to the west and San

rise/160309 SLRAP Executive Summary EDreduced.pdf.

¹³⁰ Rising Seas in California at 3.

¹³¹ Climate Change Impacts in the United States: The Third National Climate Assessment, southwest chapter at 469 (2014), available at <a href="http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?download=1.http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?downloads/low/NCA3_Full_Report_20_Southwest_LowRes.pdf?downloads/lowRes.pdf.

¹³² San Francisco Sea Level Rise Action Plan, Executive Summary at 4 (2016) ("SLR Plan Executive Summary"), *available at* <a href="http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-rise/160309_SLRAP_Executive_Summary_EDreduced.pdf.http://default.sfplanning.org/plans-and-programs/planning-for-the-city/sea-level-

¹³³ Buchanan, et al., Amplification of flood frequencies with local sea level rise and emerging flood regimes, Environmental Research Letters (2017), supplementary material table 6.

¹³⁴ Id.

¹³⁵ *Id.* at supplementary material table 5.

Francisco Bay to the north and east. 136 Rising bay and coastal water levels are already affecting 2 San Francisco through coastal flooding of low-lying shorelines, increased shoreline erosion, and salt water impacts on its wastewater treatment systems. 137 Sea levels in and around San Francisco 3 4 rose approximately eight inches during the past century and accelerated due to global warming. 138 But with accelerated sea level rise, they are currently projected to increase by up to 24 inches by 6 2050 and 66 inches by 2100, if not higher. 139 Storm surge added on top of these greatly elevated sea levels could produce a combined rise of up to 66 inches by 2050 and 108 inches by 2100. 140 As sea level rises, average daily high tides will extend further inland and cause more extensive flooding.¹⁴¹ Without adaptation measures, daily tides could permanently inundate six percent of San Francisco's land by 2100. 142 And all of these projections are an understatement in light of a new, 2017 report that sea level is likely to rise faster than projected and could reach as much as a catastrophic ten feet by the end of the century. 143 131. 76. San Francisco must adapt now to ongoing sea level rise to abate ongoing damage to property, facilities, and equipment, with risks of increasingly severe damage in the

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¹³⁶ See S.F. Dept. of Public Health, San Francisco's Climate and Health Adaptation Framework at 8 (2017), available at https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH_ClimateHealthA daptFramework2017a.pdf.https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20 Research/SFDPH ClimateHealthAdaptFramework2017a.pdf.

¹³⁷ SLR Plan Executive Summary at 9.

¹³⁸ S.F. Dept. of Public Health, San Francisco's Climate and Health Adaptation Framework at 8 (2017), available at https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH_ClimateHealthA daptFramework2017a.pdf.https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Researc h /SFDPH ClimateHealthAdaptFramework2017a.pdf.

¹³⁹ Id. at 9.

¹⁴⁰ *Id*.

¹⁴¹ San Francisco Sea Level Rise Action Plan, at 2-3 (2016), http://default.sfplanning.org/plans- and-programs/planning-for-the-city/sea-levelrise/160309 SLRAP Final ED.pdf.http://default.sfplanning.org/plans-and-programs/planning-forthe-city/sea-level-rise/160309 SLRAP Final ED.pdf.

¹⁴² Id.

¹⁴³ Rising Seas in California at 4.

future. In particular, San Francisco must improve, protect, move, and build infrastructure to adapt now to past and ongoing sea level rise. For example:

e.a) San Francisco is planning to fortify its Seawall to protect itself from sea level rise. The Seawall is the foundation of over three miles of San Francisco waterfront stretching from Fisherman's Wharf to Mission Creek. In 2016, San Francisco Mayor Edwin M. Lee announced an initial investment of \$8 million over the next two years to initiate City efforts to fortify the Seawall. Short-term seawall upgrades are expected to cost more than \$500 million. Long-term upgrades to the seawall are projected to cost \$5 billion.

b-b) A significant portion of the combined sewer and storm water infrastructure on the west side of San Francisco is at severe risk of shoreline erosion caused by sea level rise. This infrastructure, including the Westside Transport Box, Westside Pump Station, Lake Merced Tunnel, and the Oceanside Water Pollution Control Plant, is located along Ocean Beach on San Francisco's western shore. Most of this infrastructure, including much of the Oceanside plant, is located underground. Because San Francisco has a eity-widecitywide combined sewer system – designed to handle both storm water and sewer water – this infrastructure is large in size and scale. Sea level rise and corresponding shoreline erosion threatens to damage this infrastructure. As a result, San Francisco has helped to develop plans to protect this infrastructure at an estimated cost of approximately \$350 million. The costs and logistics of relocating this infrastructure would be far greater.

http://sfmayor.org/article/mayor-lee-invests-seawall-protect-city.http://sfmayor.org/article/mayor-lee-invests-seawall-protect-city.

^{— 145} https://sfseawall.files.wordpress.com/2017/01/seawall-fact-sheet.pdf; http://onesanfranciseo.org/sites/default/files/2017-06/Agenda%20Item%206%20-%20Seawall%20Presentation.pdf.

https://sfseawall.files.wordpress.com/2017/01/seawall-fact-sheet.pdf; http://onesanfrancisco.org/sites/default/files/2017-06/Agenda%20Item%206%20-%20Seawall%20Presentation.pdf.

¹⁴⁶ LOffice of the Mayor (2012), Mayor Lee Celebrates SPUR Ocean Beach Master Plan, available at http://sfmayor.org/article/mayor-lee-celebrates-spur-ocean-beach-master-plan_.

e.c) Shoreline erosion along Ocean Beach also threatens roads, pathways, private properties, and buildings along the shore – all of which San Francisco's citizens have long used and enjoyed. Protecting these properties through construction of a seawall and/or other shoreline armoring infrastructure will be extremely expensive. San Francisco's plan for protecting its combined sewer infrastructure along Ocean Beach calls for closing a portion of the Great Highway south of Sloat Boulevard. 147

d.d) Sea level rise also interferes with San Francisco's stormwater infrastructure through inundation of the City's stormwater outfalls along the ocean and San Francisco Bay. 148 As a result of sea level rise, 27 of San Francisco's 29 stormwater discharge locations between the Golden Gate Bridge and the City's southern border on San Francisco Bay will be underwater daily by 2050 or before. 149 As those outfalls are more frequently submerged by sea water, they cannot be used to discharge stormwater as intended, causing backups in the system and flooding elsewhere in San Francisco. Saltwater intrusion into San Francisco's water treatment facilities also interferes with effective treatment function at those facilities, reducing their capacity and causing further backups. Stormwater system outfalls cannot simply be elevated because that would interfere with the hydraulic gradient of the entire system. As a result, San Francisco is developing costly plans to protect its stormwater outfalls and water treatment facilities with backflow preventers and pumping equipment. To address current and short-term impacts of sea level rise on its Bayside stormwater system outfalls, for example, San Francisco has developed an interim backflow prevention plan projected to cost a minimum of \$10 million. Long-term backflow prevention at these outfalls, and at others, will cost more.

e) 77. Sea level rise also poses a severe threat to SFO, including its runways and other infrastructure worth \$25 billion. The airport is located at only 5.4 feet above

¹⁴⁷ See Ocean Beach Master Plan, at III-19 and executive summary at 6.

¹⁴⁸ SLR Plan at 2-5.

¹⁴⁹ CSD Backflow Prevention and Monitoring, 263.

¹⁵⁰ SLR Plan at 2-10, 6-10.

sea level – more than a foot lower than La Guardia Airport, ¹⁵¹ which flooded during Hurricane Sandy. Sea level rise, absent adaptation, will cause severe disruption to the public's use of SFO, a major commercial hub for San Francisco and its residents. The airport is developing a Shoreline Protection Program that includes plans to protect its shoreline from a projected sea level rise of up to 24 inches by 2050. Nearly the entire airport will be threatened with flooding during a 100-year storm if sea levels rise by even half that amount. Even with a sea level rise of 11 inches by 2050, a substantial portion of the airport's shoreline will require additional infrastructure to protect the airport from sea level rise, projected to cost more than \$235 million. But sea levels are projected to rise by up to 66 inches by 2100, and this will require additional and costly infrastructure improvements.

132. It is standard practice for new buildings and other infrastructure, especially critical facilities, to be designed to withstand low frequency, but high-impact events. Buildings in areas at risk from flooding are typically designed to withstand at least a 1-in-100-year flood, while critical facilities are typically designed to withstand at least a 1-in-200-year flood.

133. San Francisco faces other ongoing and likely injuries as a result of sea level rise, including threats to Port infrastructure and operations, a risk of saltwater intrusion into the City's groundwater wells used for drinking water, and both direct and indirect impacts to public health, housing and city services. Sea level rise, storm surges, and flood inundation induced by global warming will disproportionately impact some of San Francisco's most vulnerable residents, including those in the Bayview/Hunters Point neighborhood. The same sea level rise also threatens some of San Francisco's most iconic and valuable buildings. For example, the Ferry Building would be temporarily flooded during a 100-year extreme tide today, but could be flooded

¹⁵¹ The Third National Climate Assessment, transportation chapter at 134 (2014), available at http://nca2014.globalchange.gov/report/sectors/transportation#narrative-page-10201.

¹⁵² S.F. Dept. of Public Health, San Francisco's Climate and Health Adaptation Framework at 12 (2017), *available at* <a href="https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH_ClimateHealthAdaptFramework2017a.pdf.https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH_ClimateHealthAdaptFramework2017a.pdf.https://extxfer.sfdph.org/gis/ClimateHealth/Reports%20and%20Research/SFDPH_ClimateHealthAdaptFramework2017a.pdf.

¹⁵³ Id. at 14.

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every day after 36 inches of sea level rise. 154 Each of these ongoing and likely injuries, and others, requires San Francisco to plan for and implement costly protections.

134. San Francisco is already experiencing, and working to abate, current harms caused by sea level rise. But while harms to San Francisco and its residents have commenced, additional far more severe injuries will occur in the future if prompt action is not taken to protect San Francisco and its residents from rising sea levels. Indeed, the sea level rise harms inflicted on San Francisco by global warming are insidious partly because they are projected to continue, and to worsen, far into the future. Pervasive fossil fuel combustion and greenhouse gas emissions to date will cause ongoing and future harms regardless of future fossil fuel combustion or future greenhouse gas emissions. Future production and use of fossil fuels will exacerbate sea level rise and require even greater expenditures to abate the injuries. San Francisco must plan for and adapt to sea level rise future harms now to ensure that abatement of ongoing and future sea level rise harms is done most efficiently and effectively and in order to protect human well-being and public and private property before it is too late. Additionally, the significant infrastructure needed to abate global warming requires long lead times for planning, financing, and implementation. Planning to abate the known and projected adverse effects of global warming on San Francisco and its citizens remains underway, and will continue. Sea level rise impacts in the future are imminent in the context of planning for and carrying out large-scale, complex infrastructure projects to protect San Francisco from sea level rise.

135. 79.—Sea level rise, storm surges, and flooding caused by global warming threaten not only the physical infrastructure and property of San Francisco and its citizens, but also the safety, lives, daily way of life, sense of community, and security of San Francisco residents. A severe storm surge coupled with higher sea levels caused by global warming could occur at any time, potentially resulting in the loss of life and extensive damage to public and private property. The risk of catastrophic sea level rise harm to San Francisco and its citizens will increase, just as

¹⁵⁴ SLR Plan Executive Summary at 2-5.

¹⁵⁵ Rising Seas in California at 6.

rising sea levels will continue to cause regular damage, the longer concrete action is not taken to abate the harms and effects of sea level rise.

136. 80. Building infrastructure to protect San Francisco and its residents, will, upon information and belief, cost billions of dollars.

VIII.IX. CAUSE CAUSES OF ACTION: PUBLIC NUISANCE ON BEHALF OF THE PEOPLE

81.—COUNT ONE

FEDERAL COMMON LAW OF PUBLIC NUISANCE

(PLAINTIFFS PEOPLE AND THE CITY AGAINST ALL DEFENDANTS)

- 137. The People and the City repeat and incorporate by reference the preceding paragraphs as if fully set forth herein.
- 138. 82. The People of the State of California, acting by and through the San

 Francisco City Attorney, bring this claim seeking abatement pursuant to federal common law to

 conform to the Court's ruling and as authorized by California law, including section 731 of the

 Code of Civil Procedure, and sections 3479, 3480, 3491, and 3494 of the Civil Code.
- 139. The City owns and manages extensive property and structures that are threatened by global warming and sea level rise. San Francisco brings this claim pursuant to federal common law to conform to the Court's ruling and its authority to file civil actions in order to protect public rights and interests, including to abate the public nuisance caused by Defendants.
- 140. Defendants' production of massive quantities of fossil fuels has caused, created, assisted in the creation of, contributed to, and/or maintained and continues to cause, create, assist in the creation of, contribute to and/or maintain global warming-induced sea level rise, a public nuisance in San Francisco. Defendants, both individually and collectively, are substantial contributors to the global warming-induced sea level rise and Plaintiffs' attendant injuries and threatened injuries. Plaintiffs' injuries and threatened injuries from each Defendant's contributions to global warming are indivisible injuries. Each Defendant's past and ongoing conduct is a direct and proximate cause of Plaintiffs' injuries and threatened injuries. Defendants each should have known that this dangerous global warming with its attendant harms on coastal cities like San

Francisco would occur before it even did occur, and each Defendant in fact did have such knowledge. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combines with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to result in dangerous levels of global warming with grave harms for coastal cities like San Francisco. Defendants were aware of this dangerous global warming, and of its attendant harms on coastal cities like San Francisco, even before those harms began to occur. Defendants' conduct constitutes a substantial and unreasonable interference with and obstruction of public rights and property, including, *inter alia*, the public rights to health, safety and welfare of San Francisco residents and other citizens whose safety and lives are at risk from increased storm surge flooding and whose public and private property, is threatened with widespread damage from global warming-induced sea level rise, greater storm surges, and flooding.

warming and to the injuries and threatened injuries suffered by Plaintiffs. Defendants have caused or contributed to accelerated sea level rise from global warming, which has and will continue to injure public property and structures owned and managed by the City of San Francisco, through increased inundation, storm surges, and flooding, and which threatens the safety and lives of San Francisco residents. Defendants have inflicted and continue to inflict injuries upon Plaintiffs that require Plaintiffs to incur extensive costs to protect public and private property, against increased sea level rise, inundation, storm surges, and flooding.

142. Defendants are jointly and severally liable to Plaintiffs for committing a public nuisance. Plaintiffs seek an order of abatement requiring Defendants to fund a climate change adaptation program for San Francisco consisting of the building of sea walls, raising the elevation of low-lying property and buildings and building such other infrastructure as is necessary for San Francisco to adapt to climate change. 156

¹⁵⁶ Plaintiffs also do not seek abatement with respect to any federal land.

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COUNT TWO

CALIFORNIA PUBLIC NUISANCE

(PLAINTIFF PEOPLE AGAINST ALL DEFENDANTS)

143. The People repeat and incorporate by reference the preceding paragraphs as if fully set forth herein.

144. The People of the State of California, acting by and through the San Francisco City Attorney, bring this claim seeking abatement pursuant to California public nuisance law, including section 731 of the California Code of Civil Procedure, and Civil Code sections 3479, 3480, 3491, and 3494 of the California Civil Code.

145. 83. Defendants' production and promotion of massive quantities of fossil fuels, and their promotion of those fossil fuels' pervasive use, has caused, created, assisted in the creation of, contributed to, and/or maintained and continues to cause, create, assist in the creation of, contribute to and/or maintain to-global warming-induced sea level rise, a public nuisance in San Francisco. Defendants, both individually and collectively, are substantial contributors to the global warming-induced sea level rise and the People's attendant injuries and threatened injuries. The People's injuries and threatened injuries from each Defendant's contributions to global warming are indivisible injuries. Each Defendant's past and ongoing conduct is a direct and proximate cause of the People's injuries and threatened injuries. Defendants each should have known that this dangerous global warming with its attendant harms on coastal cities like San Francisco would occur before it even did occur, and each Defendant in fact did have such knowledge. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combines with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to result in dangerous levels of global warming with grave harms for coastal cities like San Francisco. Defendants were aware of this dangerous global warming, and of its attendant harms on coastal cities like San Francisco, even before those harms began to occur. Defendants' conduct constitutes a substantial and unreasonable interference with and obstruction of public rights and property, including, inter alia, the public rights to health, safety and welfare of San Francisco residents and other citizens

whose safety and lives are at risk from increased storm surge flooding and whose public and private property, is threatened with widespread damage from global warming-induced sea level rise, greater storm surges, and flooding.

146. 84. Defendants, individually and collectively, are substantial contributors to global warming and to the injuries and threatened injuries suffered by the People. Defendants have caused or contributed to accelerated sea level rise from global warming, which has and will continue to injure public property and land located instructures owned and managed by the City of San Francisco, through increased inundation, storm surges, and flooding, and which threatens the safety and lives of San Francisco residents. Defendants have inflicted and continue to inflict injuries upon the People that require the People to incur extensive costs to protect public and private property, against increased sea level rise, inundation, storm surges, and flooding.

147. Defendants have promoted the use of fossil fuels at unsafe levels even though they should have known and in fact have known for many years that global warming threatened severe and even catastrophic harms to coastal cities like San Francisco. Defendants promoted fossil fuels and fossil fuel products for unlimited use in massive quantities with knowledge of the hazard that such use would create.

148. 85. Defendants are jointly and severally liable to the People for committing a public nuisance. The People seek an order of abatement requiring Defendants to fund a climate change adaptation program for San Francisco consisting of the building of sea walls, raising the elevation of low-lying property and buildings and building such other infrastructure as is necessary for San Francisco to adapt to climate change. 157

IX.X. RELIEF REQUESTED

WHEREFORE, the PeoplePlaintiffs pray for judgment and an order against each Defendant, jointly and severally, as follows:

¹⁵⁷ The People also do not seek abatement with respect to any federal land.

- 1._ Finding Defendants BP, Chevron, ConocoPhillips, Exxon, and Shell jointly and severally liable for causing, creating, assisting in the creation, of, contributing to, and/or maintaining a public nuisance;
- 2. Ordering an abatement fund remedy to be paid for by Defendants to provide for infrastructure in San Francisco necessary for the PeopleSan Francisco to adapt to global warming impacts such as sea level rise;
 - 3. Awarding attorneys' fees as permitted by law;
 - 4. Awarding costs and expenses as permitted by law;
 - 5. Awarding pre- and post-judgment interest as permitted by law; and
 - 6. Awarding such other relief as this Court deems just and proper.

1	DATED this 19th day of September, 2017 Dated: April 3, 2018 Respectfully submitted,
2	respectfully submitted,
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