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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

CITY OF OAKLAND, a Municipal Corporation,
and THE PEOPLE OF THE STATE OF
CALIFORNIA, acting by and through the
Oakland City Attorney,

Plaintiffs,

v.

BP P.L.C., a public limited company of England
and Wales, CHEVRON CORPORATION, a
Delaware corporation, CONOCOPHILLIPS, a
Delaware corporation, EXXON MOBIL
CORPORATION, a New Jersey corporation,
ROYAL DUTCH SHELL PLC, a public limited
company of England and Wales, and DOES 1
through 10,

Defendants.

No.: 3:17-cv-06011-WHA

**FIRST AMENDED COMPLAINT FOR
PUBLIC NUISANCE**

TABLE OF CONTENTS

		<u>Page</u>
1		
2		
3	I. INTRODUCTION.....	1
4	II. JURISDICTION AND VENUE.....	5
5	III. PARTIES.....	6
6	A. Plaintiffs	6
7	B. Defendants.....	6
8	C. Defendants’ connections to California.	9
9	IV. FOSSIL FUELS ARE THE PRIMARY CAUSE OF GLOBAL	
10	WARMING.	25
11	V. DEFENDANTS HAVE PRODUCED MASSIVE QUANTITIES OF	
12	FOSSIL FUELS AND HAVE CONTINUED TO DO SO EVEN AS	
13	GLOBAL WARMING HAS BECOME GRAVELY DANGEROUS.	30
14	VI. DEFENDANTS HAVE PRODUCED MASSIVE AMOUNTS OF	
15	FOSSIL FUELS DESPITE HAVING FULL KNOWLEDGE FROM	
16	THEIR IN-HOUSE SCIENTIFIC STAFF, OR FROM API, THAT	
17	FOSSIL FUELS WOULD CAUSE GLOBAL WARMING.	33
18	VII. DESPITE THEIR EARLY KNOWLEDGE THAT GLOBAL	
19	WARMING WAS REAL AND POSED GRAVE THREATS,	
20	DEFENDANTS PROMOTED FOSSIL FUELS FOR PERVASIVE USE	
21	WHILE DOWNPLAYING THE REALITY AND RISKS OF GLOBAL	
22	WARMING.	38
23	A. Defendants borrowed the Big Tobacco playbook in order to	
24	promote their products.....	39
25	B. Defendants’ Direct Promotion of Fossil Fuels.	42
26	VIII. OAKLAND WILL INCUR SERIOUS CLIMATE CHANGE INJURIES	
27	THAT WILL REQUIRE BILLIONS IN EXPENDITURES TO ABATE	
28	THE GLOBAL WARMING NUISANCE.....	45
	IX. CAUSES OF ACTION.....	51
	COUNT ONE FEDERAL COMMON LAW OF PUBLIC NUISANCE	
	(PLAINTIFFS PEOPLE AND THE CITY AGAINST ALL	
	DEFENDANTS).....	51
	COUNT TWO CALIFORNIA PUBLIC NUISANCE (PLAINTIFF PEOPLE	
	AGAINST ALL DEFENDANTS)	53
	X. RELIEF REQUESTED	55

1 Plaintiffs, the City of Oakland (“Oakland” or “City”) and the People of the State of
 2 California (“the People”) (collectively, “Plaintiffs”), by and through the Oakland City Attorney,
 3 bring this action against Defendants BP p.l.c. (“BP”), Chevron Corporation (“Chevron”),
 4 ConocoPhillips (“ConocoPhillips”), Exxon Mobil Corporation (“Exxon”), and Royal Dutch Shell
 5 plc (“Shell”) (collectively, “Defendants”), and allege as follows:

6 I. INTRODUCTION

7 1. Global warming is here and it is harming Oakland now. Global warming causes
 8 accelerated sea level rise through thermal expansion of ocean water and melting of land-based ice.
 9 Sea levels are rising at rates unprecedented in the history of human civilization due to global
 10 warming. Global warming-induced sea level rise already is causing flooding of low-lying areas of
 11 Oakland that border the San Francisco Bay, increased shoreline erosion, and salt water impacts to
 12 water treatment systems. Many of the Oakland residents who are likely to be most affected by
 13 climate change are low-income and/or people of color. As the U.S. government has pointed out,
 14 people of color, low-income groups, and certain immigrant groups are (*e.g.*, because of poverty,
 15 chronic health conditions, and social isolation) potentially more “vulnerable” to climate change
 16 impacts, including heat waves, flooding, and degraded air quality. This is true in Oakland, where
 17 “socially vulnerable” individuals such as African Americans and Hispanics tend to live at lower
 18 elevations most affected by sea level rise and higher storm surges. The rapidly rising sea level
 19 along the Pacific coast and in San Francisco Bay, moreover, poses an imminent threat of
 20 catastrophic storm surge flooding because any storm would be superimposed on a higher sea level.
 21 This threat to human safety and to public and private property is becoming more dire every day as
 22 global warming reaches ever more dangerous levels and sea level rise accelerates. Oakland must
 23 take abatement action now to protect public and private property from this looming threat by
 24 building sea walls and other sea level rise adaptation infrastructure. Exhibits 1 and 2 to this
 25 Complaint, showing flood events’ projected intrusion into Oakland as a result of global warming,
 26 demonstrate just how stark the threat is.¹

27
 28 ¹ City of Oakland, 2016-2021 Local Hazard Mitigation Plan (June 7, 2016), at 84-85, *available at*
<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak058455.pdf>.

2. This egregious state of affairs is no accident. Rather, it is an unlawful public nuisance of the first order. Defendants are the five largest investor-owned fossil fuel corporations in the world as measured by their historic production of fossil fuels. The use of fossil fuels – oil, natural gas and coal – is the primary source of the greenhouse gas pollution that causes global warming, a point that science established years ago. Defendants have produced massive amounts of fossil fuels for many years. And recent disclosures of internal industry documents demonstrate that they have done so despite knowing – since at least the late 1970s and early 1980s if not earlier – that massive fossil fuel usage would cause dangerous global warming. It was at that time that scientists on their staffs or with whom they consulted through their trade association, the American Petroleum Institute (“API”), investigated the science and warned them in stark terms that fossil fuel usage would cause global warming at a rate unprecedented in the history of human civilization and present risks of “catastrophic” harm in coming decades.

3. Undeterred by these stark warnings, Defendants proceeded to double-down on fossil fuels. Most of the carbon dioxide now in the atmosphere as a result of combustion of Defendants’ fossil fuels is likely attributable to their recent production – *i.e.*, to fossil fuels produced by Defendants since 1980. Even today, with the global warming danger level at a critical phase, Defendants continue to engage in massive fossil fuel production and execute long-term business plans to continue and even expand their fossil fuel production for decades into the future.

4. The global warming-induced sea level rise from past fossil fuel usage is an irreversible condition on any relevant time scale: it will last hundreds or even thousands of years. Defendants’ planned production of fossil fuels into the future will exacerbate global warming, accelerate sea level rise even further, and require greater and more costly abatement actions to protect Oakland.

5. Defendants, notably, did not simply produce fossil fuels. They engaged in large-scale, sophisticated advertising and communications campaigns to promote pervasive fossil fuel usage and to portray fossil fuels as environmentally responsible and essential to human well-being – although 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

1 continue through today even in the face of overwhelming and incontrovertible scientific evidence
2 that fossil fuels are altering the climate and global warming has become an existential threat to
3 modern life.

4 6. Defendants' promotion of fossil fuels has also entailed denying mainstream climate
5 science or downplaying the risks of global warming. During the 1990s and early 2000s,
6 Defendants stole a page from the Big Tobacco playbook and sponsored communications
7 campaigns, either directly or through the API or other groups, to deny and discredit the mainstream
8 scientific consensus on global warming, downplay the risks of global warming, and even to launch
9 unfounded attacks on the integrity of leading climate scientists. "Uncertainty" of the science
10 became the constantly repeated mantra of this Big Oil communications campaign just as "Doubt is
11 our product" was the Big Tobacco communications theme. Emphasizing "uncertainty" in climate
12 science, directly or through the API, has remained a focus of Defendants' efforts to promote their
13 fuels even though they are well aware that the fundamental scientific facts of global warming are
14 not in dispute and are a cause of grave danger through sea level rise.

15 7. The purpose of all this promotion of fossil fuels and efforts to undermine
16 mainstream climate science, like all marketing, was to increase sales and protect market share. It
17 succeeded.

18 8. And now it will cost billions of dollars to build sea walls and other infrastructure to
19 protect human safety and public and private property in Oakland from global warming-induced sea
20 level rise. A recent report by the State of California has rung the alarm bell as loudly as possible:
21 "Previously underappreciated glaciological processes, examined in the research of the last five
22 years, have the potential to greatly increase the probability of extreme global sea-level rise (6 feet
23 or more) within the century" under business as usual fossil fuel production and usage.²

24 Translation: the planet's enormous ice caps on Greenland and Antarctica are beginning to melt,
25 like their much smaller but more numerous cousins, the mountain glaciers, have been doing for
26

27 ² Griggs et al., Rising Seas in California: an update on sea-level rise science, California Ocean
28 Science Trust, at 16 (Apr. 2017) ("Rising Seas in California"), *available at*
<http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf>.

1 many years, and slide into the ocean; and this new dynamic is fundamentally increasing the risk of
2 catastrophic sea level rise. The report projects a risk of as much as ten feet of additional sea level
3 rise along the coastline of San Francisco Bay by 2100, which would be catastrophic.³ Nearer-term
4 risks include 0.3 to as much as 0.8 feet of additional sea level rise by 2030,⁴ which itself will
5 require the building of sea walls and other costly infrastructure given the dynamics of storm surge
6 and regular high tide flooding.

7 9. This new information shows that the costs of dealing with global warming-induced
8 sea level rise – already immense – will be staggering for the public entities that must protect their
9 people and their coastlines. The City of Oakland already is taking action to adapt to accelerating
10 sea level rise. In the fall of 2017, Oakland issued the Oakland Preliminary Sea-Level Rise Road
11 Map to help develop a citywide sea level rise adaptation plan. The Road Map warned that “[r]ising
12 sea levels represent new challenges to Oakland’s future.” In 2016, Oakland adopted a five-year
13 Local Hazard Mitigation Plan that analyzes risks from sea level rise, identifies mitigation measures
14 and presents an implementation plan for the next five years. The plan warns that projected sea
15 level rise in Oakland, absent adaptation, could “substantially impact coastal areas” including low-
16 lying coastal residences, the Port and Oakland International Airport. As set forth in the Plan,
17 projected sea level rise in Oakland puts at risk property with a total replacement cost of between
18 \$22 and \$38 billion. The magnitude of the actions needed to abate harms from sea level rise, and
19 the amount of property at risk, will increase in light of the rapidly accelerating sea level rise and
20 the increased scientific understanding of sea level rise processes as set forth in the 2017 Rising
21 Seas in California report.

22 10. Defendants are substantial contributors to the public nuisance of global warming
23 that is causing injury to Plaintiffs and thus are jointly and severally liable. Defendants’ cumulative
24 production of fossil fuels over many years places each of them among the top sources of global
25 warming pollution in the world. And each Defendant is committed to massive fossil fuel
26

27 _____
28 ³ *Id.* at 26.

⁴ *Id.*

1 production well into the future. These contributions to atmospheric greenhouse gas loading from
2 Defendants' products contributes measurably to global warming and to sea level rise.

3 11. Plaintiffs seek an order requiring Defendants to abate the global warming-induced
4 sea level rise nuisance to which they have contributed by funding an abatement program to build
5 sea walls and other infrastructure that are urgently needed to protect human safety and public and
6 private property in Oakland. Plaintiffs do not seek to impose liability on Defendants for their
7 direct emissions of greenhouse gases and do not seek to restrain Defendants from engaging in their
8 business operations. Nor do Plaintiffs seek to impose any liability for lobbying activity; to the
9 extent any particular promotional activity might have had dual goals of both promoting a
10 commercial product in the marketplace and influencing policy, Plaintiffs invoke such activities for
11 the purpose of the former, not the latter, and/or as evidence relevant to show Defendants'
12 knowledge of the dangerous nature of their products. This case is, fundamentally, about shifting
13 the costs of abating sea level rise harm – one of global warming's gravest harms – back onto the
14 companies. After all, it is Defendants who have profited and will continue to profit by knowingly
15 contributing to global warming, thereby doing all they can to help create and maintain a profound
16 public nuisance.

17 II. JURISDICTION AND VENUE

18 12. Jurisdiction is proper in California Superior Court, Alameda County, where this
19 case was originally filed, because Defendants have contributed to the creation of a public nuisance
20 in Oakland, and the Oakland City Attorney has the right and authority to seek abatement of that
21 nuisance on behalf of the People of the State of California. Defendants have removed to this Court
22 and the Court has ruled that it has jurisdiction under 28 U.S.C. § 1331. The People have amended
23 this Complaint to conform to the Court's ruling and reserve all rights with respect to whether
24 jurisdiction is proper in federal court.

25 13. Assuming jurisdiction is proper, venue is proper in this judicial district because the
26 action was removed to this district court located where the state action was pending. 28 U.S.C. §§
27 1390(c), 1441(a). Alternatively, venue is proper in this judicial district pursuant to: 1) 28 U.S.C. §
28 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.

III. PARTIES

A. Plaintiffs

14. Plaintiff City of Oakland is a municipal corporation organized and existing under and by virtue of the laws of the State of California. Oakland owns and manages property and structures that are threatened by global warming and sea level rise. Oakland 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 Oakland City Attorney, brings this suit pursuant to federal common law, California Code of Civil Procedure section 731, and California Civil Code sections 3479, 3480, 3491, and 3494, to abate the public nuisance caused by Defendants.

B. Defendants

16. 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 publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets and sells oil, natural gas and fossil fuel products.

17. 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 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’

1 implementation of policies, procedures, and programs relating to climate change generally and to
2 production of fossil fuels specifically. BP states in its annual report for 2017 that the BP “group
3 explores for oil and natural gas under a wide range of licensing, joint arrangement and other
4 contractual agreements,” and that “[a]ll subsidiary undertakings are controlled by the group.”⁵

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

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

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

22 21. As a result of its management, direction, conduct and/or control of operations
23 relating to company-wide climate change policies and fossil fuel production, Defendant Chevron is
24 responsible for its subsidiaries’ past and current production and promotion of fossil fuel products.

25 22. Defendant ConocoPhillips is a Delaware Corporation with its principal place of
26 business located in Houston, Texas, doing business in California. ConocoPhillips is a publicly

27 ⁵ BP Annual Report and Form 20-F 2017 at 29, 231, *available at*
28 <https://www.bp.com/content/dam/bp/en/corporate/pdf/investors/bp-annual-report-and-form-20f-2017.pdf>.

1 traded, multinational oil and gas company that produces, markets and sells oil and natural gas and
2 for many years was a multinational, vertically integrated oil and gas company that also refined and
3 sold finished oil products.

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

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

17 25. Defendant Exxon is a New Jersey corporation with its principal place of business
18 located in Irving, Texas, doing business in the State of California. Exxon is a publicly traded,
19 multinational, vertically integrated oil and gas company that explores for, produces, refines,
20 markets and sells oil, natural gas and fossil fuel products and, as recently as 2009 produced,
21 marketed and sold coal.

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

1 implementation of policies, procedures, and programs relating to climate change generally and to
2 production of fossil fuels specifically.

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

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

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

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

22 31. Defendants DOES ONE through TEN are sued herein under fictitious names.
23 Plaintiffs do not at this time know the true names or capacities of said defendants, but pray that the
24 same may be alleged when ascertained.

25 **C. Defendants' connections to California.**

26 32. Defendants have contributed to the creation of a public nuisance – global warming-
27 induced sea level rise – causing severe harms and threatening catastrophic harms in Oakland.
28

1 33. Each Defendant, directly and through its subsidiaries and agents, substantially
2 participates in the process by which raw crude oil is extracted from the ground, refined into fossil
3 fuel products, including finished gasoline products, and delivered, marketed, and sold to California
4 residents for use. For example, and as described in more detail below, Defendants intentionally
5 created a fungible and commingled gasoline product in order to be able to utilize a common
6 distribution system that moves gasoline from refineries through pipelines to terminals (large
7 storage tanks). Pipelines and trucks then transport gasoline from terminals to underground storage
8 tanks at retail stations where it is sold to consumers. A petroleum products terminal facility
9 consists of one or more very large aboveground storage tanks for fossil fuel products, including
10 gasoline, and is part of the distribution chain to supply fossil fuel products, including gasoline,
11 from a refinery to end consumers, including consumers in California. Defendants created this
12 distribution system because it was more efficient and cost effective for them to distribute gasoline
13 from refineries to retail gasoline stations. As described below, Defendants substantially
14 participated in this gasoline distribution process by producing raw crude oil, supplying raw crude
15 oil to refineries, refining raw crude oil into finished gasoline at refineries, supplying gasoline into
16 pipelines, removing gasoline from pipelines at certain storage facilities or placing gasoline into
17 trucks for transport to retail sites, and/or storing gasoline in underground storage tanks at retail
18 gasoline stations.

19 34. All of the Defendants' long-standing and extensive contacts with California,
20 described below, have furthered and supported their production, marketing, and sale of massive
21 quantities of fossil fuels and fossil fuel products, which has injured, and continues to injure,
22 Oakland.

23 35. BP does business in California, including through its subsidiaries and agents. BP's
24 agent and subsidiary BP America Inc. does business in California, has designated an agent for
25 service of process in California, and has been registered to do business in California since 2000.
26 BP's agent and subsidiary BP America Production Company does business in California, has
27 designated an agent for service of process in California, and has been registered to do business in
28 California since 1975. BP's agent and subsidiary BP Amoco Chemical Company does business in

1 California, has designated an agent for service of process in California, and has been registered to
2 do business in California since 1955. BP's agent and subsidiary BP Corporation North America
3 does business in California, has designated an agent for service of process in California, and has
4 been registered to do business in California since 1987. BP's agent and subsidiary BP Exploration
5 (Alaska) Inc. does business in California, has designated an agent for service of process in
6 California, and has been registered to do business in California since 1974. BP's agent and
7 subsidiary BP Pipelines (North America) Inc. does business in California, has designated an agent
8 for service of process in California, and has been registered to do business in California since 2002.
9 BP's agent and subsidiary BP Products North America Inc. does business in California, has
10 designated an agent for service of process in California, and has been registered to do business in
11 California since 1960. BP's agent and subsidiary Atlantic Richfield Company does business in
12 California, has designated an agent for service of process in California, and has been registered to
13 do business in California since 1985. Atlantic Richfield Company was headquartered in Los
14 Angeles, California from 1972 through 1999.

15 36. BP, including through its subsidiaries acting as its agents, BP Exploration U.S.A.
16 Inc. and BP Exploration Inc., was the named operator for approximately 34 oil and gas, and dry gas
17 wells in California. Dry gas primarily contains only methane, and no hydrocarbons. Between
18 1975 and 1999, BP subsidiary and agent Atlantic Richfield Company extracted oil and natural gas
19 in California, and transported, marketed and sold fuel and other refined products in California,
20 including to and through ARCO-branded gasoline stations.

21 37. BP, including through its subsidiaries and agents, including BP Exploration
22 (Alaska) Inc., produces oil in Alaska. Since 1977, BP, including through its subsidiaries and
23 agents, has produced and shipped Alaskan crude oil to various port locations, including to locations
24 in California and the Pacific Northwest Coast. BP, including through its subsidiary and agent BP
25 Shipping (USA), shipped approximately 2.56 billion barrels of crude oil into California, from 1975
26 to 2010. In addition, in or around the 1960s, when BP p.l.c. found oil in Alaska, it had no
27 infrastructure in the United States to process it into finished fossil fuel products for sale to
28 consumers. BP p.l.c. thus acquired a 25% stake in Standard Oil Company of Ohio ("Sohio"),

1 which had retail gasoline stations and refining capacity in the United States at that time. In 1978,
2 BP became the majority Sohio shareholder, and in 1987 bought Sohio outright. Between 1975 and
3 1986, BP, through its subsidiary and agent Sohio, extracted oil in Alaska for shipment to locations
4 including California.

5 38. BP, including through its subsidiaries acting as its agents, including Atlantic
6 Richfield Company and BP West Coast Products, owned and operated the Carson refinery near Los
7 Angeles from approximately 1966 through 2013 with a refining capacity of approximately 266,000
8 barrels of crude oil per day. BP described the Carson refinery as “one of the largest on the US
9 West Coast.”⁶ The refinery began operations in 1938 and is located on 650 acres in Los Angeles
10 County, near the Long Beach and Los Angeles Harbors. BP owned “integrated terminals and
11 pipelines” related to the Carson refinery, including the LA basin pipelines system that moved crude
12 oil, fossil fuel products and intermediates to and from the Carson refinery, and also had marketing
13 agreements with retail gasoline station sites in Southern California.⁷ Through approximately 2013,
14 BP, including through its subsidiaries and agents, including BP Pipelines North America, Inc.,
15 owned and/or operated port facilities in California for receipt of crude oil, including Long Beach
16 Port berths 121 and 78 that supplied crude oil to the Carson refinery. In a June 3, 2013 press
17 release posted on BP Global’s website announcing the completion of the sale of the Carson
18 refinery, Jeff Pitzer, BP’s Northwest Fuels Value Chain President stated: “California remains an
19 important state for us and we remain committed to supplying our customers in Northern California
20 and the rest of the Pacific Northwest with the quality fuels they depend on.”⁸

21 39. BP operates at least 275 ARCO-licensed and-branded gasoline stations in
22 California, including stations located in Oakland. A webpage accessed from BP Global’s website
23 states that “ARCO-branded gas stations and ampm convenience stores are part of BP’s extensive
24
25

26 ⁶ [https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-](https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html)
27 [refinery-and-southwest-u-s--retail-a.html](https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html).

28 ⁷ *Id.*

⁸ *Id.*

1 fuels and retail network in California.”⁹ BP operated additional ARCO-branded gasoline stations
2 in California prior to 2013 when it sold its ARCO retail brand rights to Tesoro Corporation; at the
3 same time, it exclusively licensed those rights back from Tesoro for Northern California. BP
4 exercises control over gasoline product quality and specifications at these ARCO-branded retail
5 stations. BP previously owned and/or operated numerous BP-branded gasoline stations in
6 California. BP-branded retail stations can only sell gasoline that contains BP’s proprietary
7 additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at
8 BP-branded retail stations. Upon information and belief, BP has entered into contracts with
9 operators of BP-branded retail stations in California, and/or distributors, which, among other
10 things, have required these operators to sell only gasoline with BP proprietary additives, and for
11 supply of certain volumes of such gasoline to BP-branded stations. BP offers credit cards to
12 consumers on its interactive website to promote sales of gasoline and other products at its branded
13 gasoline stations, including BP-branded retail stations in the United States, and upon information
14 and belief, formerly did so for BP-branded retail stations in California. BP promotes gasoline sales
15 by offering consumers, through its interactive website, “cent-per-gallon rewards” for using BP
16 credit cards that effectively discount gasoline sold at BP stations, including BP-branded retail
17 stations in the United States, and upon information and belief, formerly did so for BP-branded
18 retail stations in California.

19 40. BP Global’s website currently states: “BP has a significant presence in hundreds of
20 communities across California through gas stations and convenience stores” and that its “footprint
21 includes more than 280 ARCO-licensed and -branded stations.”¹⁰ BP Global’s website further
22 states that “BP’s marketing and trading business has provided energy products and services to
23 California since 1984” and that “[t]oday, the business markets enough natural gas in California to
24 meet the needs of every home in the state’s four largest metropolitan areas: Los Angeles, San
25
26

27 ⁹ [https://www.bp.com/content/dam/bp-](https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/(FINAL)%20BP%20in%20California.pdf)
28 [country/en_us/PDF/2017EIR/\(FINAL\)%20BP%20in%20California.pdf](https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/(FINAL)%20BP%20in%20California.pdf).

¹⁰ https://www.bp.com/en_us/bp-us/where-we-operate/bp-california.html.

1 Francisco, Riverside and San Diego.”¹¹ BP’s website further states: “BP markets enough natural
2 gas in California to meet the energy needs of 6.9 million households.”¹²

3 41. A webpage accessed from BP Global’s website states that there are over 140 BP
4 employees in California and that it paid over \$9.5 million in “[p]roperty, environmental and state
5 income/franchise taxes” for the year ended December 1, 2016.¹³

6 42. BP does business in the United States, including through its subsidiaries and agents.
7 BP’s website states: “BP’s oil and gas exploration and production division is one of its core
8 businesses, globally and in the United States.”¹⁴ BP’s website further states: “Nearly three decades
9 after BP began exploring the deepwater Gulf of Mexico, the company remains one of the region’s
10 leading oil and gas producers, with lease blocks covering an area more than twice the size of
11 Delaware. In fact, BP has been the largest energy investor in the deepwater Gulf over the past
12 decade.”¹⁵ BP’s average daily oil production in the Gulf of Mexico region is now more than
13 300,000 barrels of oil equivalent per day. BP’s website also describes its extensive production
14 activities in Alaska: “BP has spent more than half a century exploring and developing Alaska’s oil
15 and gas resources, and its operations in and around the giant Prudhoe Bay field, located on the
16 North Slope, account for around 55 percent of the state’s oil and gas production.”¹⁶ BP further
17 reports that “[s]ince Prudhoe Bay began production in 1977, it has generated more than 12.5 billion
18 barrels of oil” and that “[f]our decades after starting up, Prudhoe Bay remains one of North
19 America’s largest oil fields.”¹⁷ BP’s website states “Prudhoe Bay is the most prolific oilfield in
20 U.S. history.”¹⁸ BP further describes its oil and gas production in Alaska as follows: “BP has a
21 significant business interest in Alaska’s North Slope. The company operates the entire Greater
22

23 ¹¹ *Id.*

24 ¹² *Id.*

25 ¹³ [https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/\(FINAL\)%20BP%20in%20California.pdf](https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/(FINAL)%20BP%20in%20California.pdf).

26 ¹⁴ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production.html.

27 ¹⁵ *Id.*

28 ¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ https://www.bp.com/en_us/bp-us/where-we-operate/bp-in-alaska.html.

1 Prudhoe Bay area, which consists of the Prudhoe Bay field and a number of smaller fields. This
 2 area produces around 55 percent of Alaska’s oil and gas, and in 2016 it averaged nearly 281,000
 3 barrels of oil equivalent each day. BP also owns interests in seven other North Slope oil fields,
 4 including Alaska’s newest oil and gas field, Point Thomson.”¹⁹ BP has 1,700 employees in Alaska,
 5 and an operating budget of \$1.1 billion there.

6 43. BP holds a 32% working interest in the Point Thomson natural gas production
 7 system which is estimated to hold 25% of known North Slope natural gas in Alaska. BP states that
 8 the “development of Point Thomson included a multi-billion dollar investment to drill wells, and
 9 construct processing facilities, gravel pads, pipelines, and supporting infrastructure including an
 10 airstrip, base camp, and sea barge docks and piers.”²⁰

11 44. BP, through its subsidiaries and agents, also explores for and produces fossil fuels in
 12 Colorado, New Mexico, Oklahoma, and Wyoming. Notably, BP touts its “decades of experience
 13 in the San Juan Basin — located mainly in New Mexico and Colorado” and a new drilling
 14 technology there using multilateral wells that allows producers to “access more of the oil and gas in
 15 a given reservoir.”²¹

16 45. In a June 3, 2013 press release posted on BP Global’s website, BP stated: “Over the
 17 past five years, BP has invested more than \$55 billion in the US – more than any other energy
 18 company.” BP’s press release further stated that “BP is the nation’s second-largest producer of oil
 19 and gas” and “[d]irectly employ[s] more than 20,000 people in all 50 states.”²² BP Lower 48 CEO
 20 Dave Lawler has described BP’s United States production operations in the lower 48 states as the
 21 “premier U.S. onshore oil and gas business.”²³

22 46. BP, through its subsidiary and agent BP Pipelines (Alaska) Inc. is a 48.44% owner
 23 in the 800-mile long Trans Alaska Pipeline System (TAPS), one of the largest pipeline systems in
 24

25 ¹⁹ *Id.*

26 ²⁰ https://www.bp.com/content/dam/bp-country/en_us/PDF/2016EIR/BP_in_AK_2016.pdf.

27 ²¹ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

28 ²² <https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html>.

²³ https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

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

4 47. BP, including through its subsidiaries acting as its agents, owns and operates three
5 gasoline refineries in the United States – Cherry Point in Blaine, Washington; Whiting near
6 Chicago, Illinois; and the Toledo refinery in Oregon, Ohio, in which it has a 50% interest. BP has
7 owned the Cherry Point refinery since 1971 and as of 2017 it processed 236,000 barrels of crude
8 oil per day to produce predominantly transportation fuels, including gasoline. BP has owned the
9 Whiting refinery since 1889 and as of 2017 it processed 430,000 barrels per day of crude oil to
10 produce gasoline and other fossil fuels products. BP describes the Whiting Refinery as a
11 “sprawling, 1,400- acre complex” near downtown Chicago that “can produce enough gasoline each
12 day to fuel 6 million cars.”²⁴ BP further describes the Whiting refinery as the “largest refinery in
13 the Midwest — as well as BP’s largest refinery in the world.”²⁵ The Toledo refinery began
14 operations in 1919 and as of 2017 it processed 160,000 barrels of crude oil per day into finished
15 fossil fuel products including gasoline. BP touts that the refinery “produces enough gasoline each
16 day for an average car to drive back and forth from Toledo to Miami more than 30,000 times.”²⁶

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

24 49. There are 7,200 BP-branded retail gasoline stations in the United States. Upon
25 information and belief, BP has entered into contracts with operators of BP-branded retail stations in
26

27 ²⁴ https://www.bp.com/en_us/bp-us/what-we-do/refining/whiting.html.

28 ²⁵ *Id.*

²⁶ https://www.bp.com/en_us/bp-us/what-we-do/refining/toledo.html.

1 the United States, and/or distributors, that, among other things, have required these operators to sell
 2 only BP-branded gasoline, and for supply of certain volumes of BP-branded gasoline to BP-
 3 branded stations. In 2017, BP announced that it was reintroducing its Amoco retail fuel brand, and
 4 publicly touted its “commitment to helping our branded marketers grow their businesses,” and Rick
 5 Altizer, senior vice president of sales and marketing for BP Fuels North America, stated that “BP
 6 has a very strong brand presence in the U.S.”²⁷ BP announced that the Amoco-branded stations
 7 “will offer all of the same consumer loyalty programs as BP-branded retail sites, including BP
 8 Driver Rewards” and “also will sell all grades of gasoline with BP’s proprietary additive.”²⁸ This
 9 was all in line with BP’s “global fuels marketing strategy.”²⁹

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

14 51. Chevron does business in California, including through its subsidiaries and agents.
 15 Chevron, through its subsidiaries and agents, produces oil in California, owns and/or operates port
 16 facilities in California for receipt of crude oil, owns and operates two refineries where crude oil is
 17 refined into finished fossil fuel products including gasoline, and owns and operates approximately
 18 nine gasoline terminals in California. A gasoline terminal consists of enormous aboveground
 19 storage tanks that hold gasoline for distribution to retail gasoline stations and consumers. Chevron
 20 owns and operates the Richmond gasoline refinery and related terminals in the San Francisco Bay
 21 Area. Chevron, through its subsidiaries and agents, also produces oil in Alaska, and upon
 22 information and belief, some of this crude oil is supplied to California. There also are numerous
 23 Chevron-branded gasoline stations in California, including in Oakland. Chevron exercises control
 24 over gasoline product quality and specifications at Chevron-branded retail stations. Chevron-
 25 branded retail stations display the trademark of Chevron and can only sell gasoline that contains

26 ²⁷ [https://www.bp.com/en_us/bp-us/media-room/press-releases/bp-brings-back-amoco-brand-](https://www.bp.com/en_us/bp-us/media-room/press-releases/bp-brings-back-amoco-brand-for-us-fuel-network.html)
 27 [for-us-fuel-network.html](https://www.bp.com/en_us/bp-us/media-room/press-releases/bp-brings-back-amoco-brand-for-us-fuel-network.html).

28 ²⁸ *Id.*

29 ²⁹ *Id.*

1 Chevron's proprietary additives—the additives that distinguish otherwise fungible gasoline as
2 gasoline that can be sold at Chevron-branded retail stations. Chevron offers credit cards to
3 consumers through its interactive website, to promote sales of gasoline and other products at its
4 branded gasoline stations, including Chevron-branded retail stations in California. Chevron
5 promotes gasoline sales by offering consumers three cents per gallon in fuel credits “every fill-up,
6 every time at Chevron and Texaco stations,” including Chevron-branded retail stations in
7 California.

8 52. ConocoPhillips does business in California, including through its subsidiaries and
9 agents. ConocoPhillips's agent and subsidiary ConocoPhillips Alaska, Inc. does business in
10 California, has designated an agent for service of process in California, and has been registered to
11 do business in California since 1980. ConocoPhillips's agent and subsidiary ConocoPhillips
12 Company does business in California, has designated an agent for service of process in California,
13 and has been registered to do business in California since 1947. ConocoPhillips's agent and
14 subsidiary ConocoPhillips Transportation Alaska, Inc. does business in California, has designated
15 an agent for service of process in California, and has been registered to do business in California
16 since 1978. ConocoPhillips's agent and subsidiary Polar Tankers, Inc. does business in California,
17 has designated an agent for service of process in California, and has been registered to do business
18 in California since 1979.

19 53. ConocoPhillips, including through its subsidiaries acting as its agents, previously
20 owned and operated refineries in California where crude oil was refined into finished fossil fuel
21 products including gasoline. ConocoPhillips, including through its predecessors, subsidiaries and
22 agents Tosco Corp., and Phillips, previously owned and operated the Rodeo refinery from
23 approximately 1997 through 2012, which could process approximately 78,400 barrels of crude oil
24 per day into finished fossil fuel products, including gasoline. ConocoPhillips, including through its
25 predecessors, subsidiaries and agents Tosco Corp., and Phillips, previously owned and operated the
26 Santa Maria refinery from approximately 1997 through 2012, which could process approximately
27 41,800 barrels of crude oil per day into finished fossil fuel products including gasoline.
28 ConocoPhillips, including through its predecessors, subsidiaries and agents Tosco Corp., and

1 Phillips, previously owned and operated the Wilmington refinery from approximately 1997 through
 2 2012, which could process approximately 139,000 barrels of crude oil per day into finished fossil
 3 fuel products, including gasoline. ConocoPhillips, including through its predecessors, subsidiaries
 4 and agents Phillips Petroleum, and Tosco Corp., previously owned and operated the Golden Eagle
 5 refinery in Martinez/Avon from approximately 1966 through 2000, which could process
 6 approximately 166,000 barrels of crude oil per day into finished fossil fuel products, including
 7 gasoline.

8 54. ConocoPhillips, through its subsidiaries and agents, also produces oil in Alaska, and
 9 transports some of this crude oil to California. ConocoPhillips stated in 2016 that it is “Alaska’s
 10 largest oil producer” and “has been a leader in oil and gas exploration and development in Alaska
 11 for more than 50 years.”³⁰ ConocoPhillips also stated in 2016 that it transports Alaskan Crude Oil
 12 to markets in California: “ConocoPhillips owns and operates Polar Tankers, one of the largest oil
 13 tanker fleets under U.S. flag. The fleet transports Alaska North Slope crude oil primarily to
 14 refineries in Puget Sound, San Francisco, Long Beach and Hawaii each year. The Polar Tanker
 15 fleet consists of five Endeavour Class tankers – the Polar Endeavour, Polar Resolution, Polar
 16 Discovery, Polar Adventure and Polar Enterprise – designed specifically for the twice-monthly
 17 2,500 to 5,000-mile round-trip from Valdez, Alaska, to Washington, California and Hawaii.”³¹
 18 ConocoPhillips, through its subsidiaries and agents, owned and/or operated port facilities in
 19 California for receipt of crude oil, including in connection with the Wilmington refinery.

20 55. ConocoPhillips, through its subsidiaries and agents including ConocoPhillips
 21 Company, previously owned and/or operated numerous Conoco, Phillips 66 and/or 76-branded
 22 (collectively, “Conoco”) gasoline stations in California. Conoco-branded retail stations could only
 23 sell gasoline that contained Conoco’s proprietary additives—the additives that distinguish
 24 otherwise fungible gasoline as gasoline that could be sold at Conoco-branded retail stations. Upon

25 ³⁰ ConocoPhillips, Alaska Operations 2016 Snapshot, *available at*
 26 https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016_final.pdf; *see*
 also ConocoPhillips 2017 10-K at 4.

27 ³¹ ConocoPhillips, Alaska Operations 2015 Snapshot, at 15, *available at*
 28 https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016_final.pdf.

1 information and belief, ConocoPhillips entered into contracts with operators of Conoco-branded
2 retail stations in California, and/or distributors, which, among other things, required these operators
3 to sell only gasoline with Conoco proprietary additives, and for supply of certain volumes of such
4 gasoline to Conoco-branded stations.

5 56. Exxon does business in California, including through its subsidiaries and agents.
6 Exxon Mobil Corporation does business in California, has designated an agent for service of
7 process in California, and has been registered to do business in California since 1972. Exxon's
8 agent and subsidiary ExxonMobil Oil Corporation does business in California, has designated an
9 agent for service of process in California, and has been registered to do business in California since
10 1959. Exxon's agent and subsidiary ExxonMobil Pipeline Company does business in California,
11 has designated an agent for service of process in California, and has been registered to do business
12 in California since 1957.

13 57. Exxon, through its subsidiaries and agents, produces oil in California, and owns
14 and/or operates port facilities in California for receipt of crude oil. Exxon previously owned and
15 operated, through its subsidiaries, agents and predecessors, including Socony Mobil Oil Co. and
16 Mobil Oil Corp., the Torrance refinery in California from approximately 1955 until July 1, 2016,
17 with a processing capacity of approximately 151,000 barrels of crude oil per day, where crude oil
18 was refined into finished fossil fuel products, including gasoline. Exxon owned the Benicia
19 gasoline refinery for over 30 years from approximately 1968 until 2000, with a processing capacity
20 of approximately 145,000 barrels of crude oil per day, where crude oil was refined into finished
21 fossil fuel products, including gasoline.

22 58. Exxon, through its subsidiaries and agents, also produces oil in Alaska, and upon
23 information and belief, Exxon, through its subsidiaries and agents, transports some of this crude oil
24 to California. There also are numerous Exxon-branded gasoline stations in California, including in
25 Oakland and the greater Bay Area. Exxon exercises control over gasoline product quality and
26 specifications at Exxon-branded retail stations. Exxon-branded retail stations display the
27 trademark of Exxon and can only sell gasoline that contains Exxon's proprietary additives—the
28 additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Exxon-branded

1 retail stations. Exxon offers credit cards to consumers, through its interactive website, to promote
2 sales of gasoline and other products at its branded gasoline stations, including Exxon-branded retail
3 stations in California. Exxon promotes gasoline sales by offering consumers twenty-five cents off
4 every gallon of Synergy™ gasoline at Exxon™ or Mobil™ stations for the first two months and
5 then six cents off every gallon of Synergy gasoline at Exxon- and Mobil-branded stations,
6 including Exxon-branded retail stations in California.

7 59. Defendant Exxon is responsible for the pre-merger conduct of Mobil Corporation
8 with respect to all relevant issues herein, and the contacts of Mobil are attributable to Exxon.

9 60. Shell does business in California, including through its subsidiaries and agents.
10 Shell's agent and subsidiary Shell Exploration & Production Company does business in California,
11 has designated an agent for service of process in California, and has been registered to do business
12 in California since 1995. Shell's agent and subsidiary Shell Marine Products (US) Company does
13 business in California, has designated an agent for service of process in California, and has been
14 registered to do business in California since 1999. Shell's agent and subsidiary Shell Oil Company
15 does business in California, has designated an agent for service of process in California, and has
16 been registered to do business in California since 1949. Shell's agent and subsidiary Equilon
17 Enterprises LLC does business in California, has designated an agent for service of process in
18 California, and has been registered to do business in California since 1998.

19 61. Shell, including through its subsidiaries and agents, produces oil and gas in
20 California, owns and/or operates port facilities in California for receipt of crude oil, owns and
21 operates a refinery in California where crude oil is refined into finished fossil fuel products
22 including gasoline, transports crude oil through a pipeline within California, and owns and operates
23 approximately six gasoline terminals in California. Shell is involved in all facets of the petroleum
24 production and distribution process by design, as "part of an integrated value chain, including
25 trading activities, that turns crude oil and other feedstocks into a range of products which are
26 moved and marketed around the world for domestic, industrial and transport use."³² Shell's
27

28 ³² Shell annual report for 2017 at 46, *available at* https://reports.shell.com/annual-report/2017/servicepages/downloads/files/shell_annual_report_2017.pdf

1 website recognizes the importance of its common, worldwide brand: “For more than 100 years the
2 word Shell, our pecten emblem and distinctive red and yellow colours have visualised the Shell
3 brand and promoted our values and the quality of our products and services all over the world.”³³

4 62. Shell, including through its subsidiaries and agents, including Shell California Prod.
5 Inc., Shell California Production Inc. and Shell Oil Company, was the named operator of over 200
6 oil and gas wells in California. Shell, including through its subsidiaries and agents, produces heavy
7 oil in California. Shell, including through its subsidiaries and agents, has a 51.8% interest in Aera
8 Energy LLC which operates approximately 15,000 wells in the San Joaquin Valley in California,
9 mostly producing heavy oil and associated gas.

10 63. Since 1915, Shell, including through its subsidiaries, predecessors and agents has
11 owned a gasoline refinery in Martinez, California, twenty-five miles northeast of Oakland. In
12 1913, the Royal Dutch/Shell Group built a shipping terminal that would become the Shell Oil
13 Terminal Martinez for the purpose of importing and distributing gasoline along the United States
14 Pacific Coast. Shell, including through its subsidiaries, agents and predecessors, including Shell
15 Oil Products US, Shell Company of California, Shell Oil Company, Inc. and Shell Oil Co.,
16 previously owned and operated the Carson Refinery from approximately 1923 through 1992, where
17 crude oil was refined into finished fossil fuel products including gasoline. In 1992, Shell
18 decommissioned the refinery and began operating the over 400-acre facility as a distribution
19 facility for receipt and distribution of fossil fuels throughout the Southern California region via
20 pipeline and truck delivery. Shell states that the “Shell Carson facility is connected to an extensive
21 industry infrastructure network of major local refiners, pipelines, terminals, a rail facility and the
22 Shell Mormon Island Marine Terminal.”³⁴ Shell’s “Southern California Products System is part of
23 a network that provides unequaled access to key refining centers and markets in North America.”³⁵
24 Shell, including through its subsidiaries, agents and predecessors, including Equilon Enterprises
25 and Shell Oil Company, previously owned and operated the Wilmington refinery from

26 ³³ <https://www.shell.com/about-us/brand.html>.

27 ³⁴ <https://www.shell.us/about-us/projects-and-locations/shell-in-carson-southern-california/carson-refinery-products-and-services.html>.

28 ³⁵ *Id.*

1 approximately 1998 through 2007, with a processing capacity of approximately 98,000 barrels of
2 crude oil per day, and where crude oil was refined into finished fossil fuel products including
3 gasoline. Shell, including through its subsidiaries, agents and predecessors, including Equilon and
4 Shell Oil Company, previously owned and operated the Bakersfield refinery from approximately
5 2000 through 2005, where crude oil was refined into finished fossil fuel products including
6 gasoline. As of 2005, the Bakersfield refinery had a capacity of 70,000 barrels per day, and after
7 its sale, Shell continued to own and operate certain pipelines serving the refinery, the nearby
8 Bakersfield Products Terminal and entered into an offtake agreement to receive finished fossil fuel
9 products from the new refinery owner.

10 64. Shell, including through its subsidiary and agent Shell Oil Products Company, owns
11 and/or operates port facilities at the Wilmington port facility in Los Angeles County, and at the
12 Long Beach port for receipt of crude oil.

13 65. Shell, including through its subsidiary and agent Shell Oil Products US, owns and
14 operates at least eight gasoline terminals in California that store fossil fuel products, including
15 gasoline, and are located in Carson, Colton, Signal Hill, Martinez, West Sacramento, Stockton, San
16 Jose, and Van Nuys.

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

27 67. Shell, including through its subsidiaries and agents, San Pablo Bay Pipeline
28 Company and Shell Oil Products US, owns a 400-mile pipeline which transports crude oil within

1 California, including to San Francisco Bay area refineries. The pipeline system includes at least
 2 five storage tank systems – Coalinga, Beer Nose, Olig Station, Rio Bravo, and the Bakersfield
 3 Tank Farm – that collectively can store millions of barrels of crude oil and other fossil fuel
 4 products.

5 68. There is a close relationship between Shell and its subsidiaries and agents, including
 6 Shell Oil Company. For example, Linda Szymanski, currently General Corporate Counsel and
 7 Company Secretary for Shell, joined the Shell family in 1995 and has served, among other things,
 8 as “General Counsel of the Upstream Americas business and Head of Legal U.S. based in the
 9 U.S.A. from 2014 to 2016.”³⁶ Ms. Szymanski has held “a variety of legal positions within Shell Oil
 10 Company in the U.S.A., including Chemicals Legal Managing Counsel and other senior roles in
 11 employment, litigation, and commercial practice.”³⁷ Ms. Szymanski is a former longtime senior
 12 employee of Shell Oil Company and just recently joined Shell’s board.³⁸ Shell’s 2017 Annual
 13 Report refers those interested in “investor relations” both to Royal Dutch Shell plc and Shell Oil
 14 Company.³⁹

15 69. Shell does business in the United States, including through its subsidiaries and
 16 agents. Shell operates in all 50 states and employs more than 20,000 people in the United States.

17 70. Shell had 854 million barrels of oil equivalent proved reserves for crude oil and
 18 natural gas in the United States as of December 31, 2017, and an additional 488 million barrels of
 19 oil equivalent of proved undeveloped reserves in the United States. Shell, including through its
 20 subsidiaries and agents, has approximately 30,000 mineral leases with nearly 1.5 million net
 21 mineral acres for shales, and has interests in more than 2,300 productive wells and operates four
 22 central processing facilities. Nearly 70% of Shell’s proven shale reserves worldwide are in the
 23

24
 25 ³⁶ 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
 26 (emphasis added).

27 ³⁷ *Id.*

28 ³⁸ *See* Royal Dutch Shell, Board of Directors, *available at* <https://www.shell.com/about-us/leadership/board-of-directors.html>.

³⁹ Royal Dutch Shell plc, 2017 Annual Report at 259.

1 United States, and 88% of its shales liquids proved reserves are in the United States. Shell's share
2 of shales production averaged 137,000 barrels of oil equivalent per day in 2017.

3 71. Shell, including through its subsidiary and agent Shell Oil Products US, has owned
4 the Puget Sound Refinery since 2001 in Anacortes, Washington, which processes up to 145,000
5 barrels of crude oil per day into finished fossil fuel products, including gasoline. Shell, including
6 through its subsidiaries and agents, produces natural gas in the Marcellus and Utica formations in
7 Pennsylvania and Ohio, and owns approximately 850,000 acres in Pennsylvania, Ohio and New
8 York.

9 72. Shell, through its subsidiaries and agents, including Shell Pipeline Company LP, has
10 owned and/or operated fossil fuel pipelines in the United States for 95 years. Shell currently owns
11 and operates seven tank farms across the U.S., and transports more than 1.5 billion barrels of crude
12 oil and refined products annually through 3,800 pipeline miles across the Gulf of Mexico and five
13 states. In addition, Shell has non-operated ownership interests in an additional 8,000 pipeline
14 miles. The pipelines carry more than 40 different kinds of crude oil and more than 20 different
15 grades of gasoline, as well as diesel fuel and jet fuel.

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

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

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

26 75. Scientists have known for many years that the use of fossil fuels emits carbon
27 dioxide and that carbon dioxide is a greenhouse gas.
28

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

4 77. By 1957, scientists at the Scripps Institute published a warning in the peer-reviewed
5 literature that global warming “may become significant during future decades if industrial fuel
6 combustion continues to rise exponentially” and that “[h]uman beings are now carrying out a large
7 scale geophysical experiment” on the entire planet.⁴⁰

8 78. In 1960, scientist Charles D. Keeling published results establishing that atmospheric
9 carbon dioxide concentrations were in fact rising.⁴¹

10 79. By 1979, the National Academy of Sciences, which is charged with providing
11 independent, objective scientific advice to the United States government, concluded that there was
12 “incontrovertible evidence” that carbon dioxide levels were increasing in the atmosphere as a result
13 of fossil fuel use, and predicted that a doubling of atmospheric carbon dioxide would cause an
14 increase in global surface temperatures of between 1.5 °C and 4.5 °C [2.7 °F and 8.1 °F], with a
15 probable increase of 3 °C [5.4 °F].

16 80. In 1983, the United States Environmental Protection Agency (“EPA”) issued a
17 landmark report, which confirmed both that “increases in atmospheric CO₂ primarily result from
18 the use of fossil fuels” and that such “increases in atmospheric carbon dioxide (CO₂) and other
19 “greenhouse” gases will substantially raise global temperatures.”⁴²

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24 ⁴⁰ Revelle, Roger, and Hans E. Suess (1957). “Carbon Dioxide Exchange between Atmosphere
25 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.2153-3490.1957.tb01849.x/epdf>.

26 ⁴¹ Keeling, Charles D. (1960). “The Concentration and Isotopic Abundances of Carbon Dioxide
27 in the Atmosphere.” *Tellus* 12: 200-203, available at
<http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1960.tb01300.x/epdf>.

28 ⁴² United States EPA (1983). “Can We Delay a Greenhouse Warming?”, available at
<https://bit.ly/2gRItn1>.

1 81. In 1988, NASA scientist Dr. James E. Hansen testified to the U.S. Senate’s Energy
2 and Natural Resources Committee that “[t]he greenhouse effect has been detected, and it is
3 changing our climate now.”

4 82. More recent research has confirmed and expanded on these earlier findings. In
5 1988, the United Nations established the Intergovernmental Panel on Climate Change (“IPCC”) to
6 assess the scientific and technical information relevant to global warming, and to provide advice to
7 all parties to the U.N. Framework Convention on Climate Change, including the United States.
8 The IPCC issues periodic assessment reports, which have become the standard scientific references
9 on global warming. Defendant Exxon has recognized that the IPCC is the leading scientific
10 authority on climate change.

11 83. In 1990, the IPCC issued its First Assessment Report (“FAR”). It stated that “we
12 are certain” that “emissions resulting from human activities are substantially increasing the
13 atmospheric concentrations of the greenhouse gases,” including carbon dioxide and methane, and
14 that “these increases will enhance the greenhouse effect, resulting on average in an additional
15 warming of the Earth’s surface.”⁴³ The IPCC’s FAR also predicted that a “business as usual”
16 scenario (*i.e.* a future in which fossil fuel production and associated emissions continue to increase)
17 would cause global mean temperature during the next century to increase at a rate “greater than that
18 seen over the past 10,000 years,” and “will result in a likely increase in global mean temperature of
19 about 1 C [1.8 °F] above the present value by 2025 and 3 °C [5.4 °F] before the end of the next
20 century” – higher than temperatures have been in the last 150,000 years.⁴⁴ The FAR also predicted
21 that business as usual would result in substantial sea level rise by 2100.⁴⁵

22 84. The FAR further stated “with confidence” that continued emissions of carbon
23 dioxide “at present rates would commit us to increased concentrations for centuries ahead,” and
24 that immediate reductions were required to stabilize carbon dioxide concentrations.
25

26
27 ⁴³ https://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_spm.pdf, at Executive Summary xi.

28 ⁴⁴ *Id.* at xi and xxviii.

⁴⁵ *Id.* at Executive Summary xi.

85. 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” (an IPCC term of art meaning a 66% to 90% chance of being true) that temperature increases already observed were attributable to human activity.⁴⁶ The U.S. National Academy of Sciences reviewed this finding and concluded that it was accurate.

86. The IPCC issued its most recent report, the Fifth Assessment, in 2013-14. It states that it is “extremely likely” (95% to 100% likely) that “human influence has been the dominant cause of the observed warming since the mid-20th century.”⁴⁷ 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.”⁴⁸

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 combustion of fossil fuels produced by Defendants and others, the atmospheric level of carbon

⁴⁶ IPCC, Third Assessment Report, Working Group I, Summary for Policymakers at 10, available at http://www.grida.no/climate/ipcc_tar/wg1/pdf/WG1_TAR-FRONT.pdf.

⁴⁷ IPCC, Climate Change 2013, The Physical Science Basis, Summary for Policymakers at 17, available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf.

⁴⁸ 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/>.

1 dioxide is 410 ppm, higher than at any time during human civilization and likely higher than any
2 level in millions of years. The result has been dramatic planetary warming: sixteen of earth's
3 seventeen warmest years in the 136-year period of global temperature measurements have occurred
4 since 2001, and 2016 was the warmest year on record. As of February 2018, there were 398
5 months in a row that were warmer than the twentieth century average. The years 2014, 2015 and
6 2016 were the three hottest years ever recorded in California since modern temperature records
7 were first taken in 1895. California has warmed over 2 °F since 1895.

8 89. Scientists typically use “double CO₂,” or twice the pre-industrial level of
9 atmospheric carbon dioxide concentration, as a standard reference for considering the warming
10 impact of increased greenhouse gases. Double CO₂ is 550 ppm. According to the IPCC, double
11 CO₂ will cause the global average surface air temperature to increase by 1.5 to 4.5 °C [2.7 to 8.1
12 °F] over the pre-industrial level, a rate of warming that is unprecedented in the history of human
13 civilization. By comparison, at the depths of the last ice age, 20,000 years ago, the global average
14 temperature of the Earth was only seven to eleven degrees Fahrenheit cooler than today. Globally,
15 approximately 1 °C [1.8 °F] of the temperature rise already has occurred, due primarily to carbon
16 dioxide and methane emissions from the combustion and use of fossil fuels.

17 90. Ongoing and future warming caused by past and ongoing use of massive quantities
18 of fossil fuels will cause increasingly severe harm to Oakland through accelerating sea level rise.
19 In 2013, the IPCC projected that between 2081 and 2100, the global average surface temperature
20 will have increased by 4.7 °F to 8.6 °F under business-as-usual, *i.e.*, with continued massive levels
21 of fossil fuel production. Global warming causes sea level rise by melting glaciers and sea ice, and
22 by causing seawater to expand. This acceleration of sea level rise is unprecedented in the history
23 of human civilization. Since 1990, the rate of sea level rise has more than doubled and it continues
24 to accelerate. The rate of ice loss from the Greenland and Antarctic Ice Sheets is increasing, and
25 these ice sheets soon will become the primary contributor to global sea level rise. With production
26 of fossil fuels continuing on its business-as-usual trajectory, the resulting warming presents a risk
27 of “rapidly accelerating and effectively irreversible ice loss.” The melting of even a portion of the
28 West Antarctic Ice Sheet, the “most vulnerable major ice sheet in a warming global climate,” will

1 cause especially severe impacts in California. Rapid ice sheet loss on Antarctica due to global
 2 warming risks a sea level rise in California of ten feet by 2100. This would be catastrophic for
 3 Oakland.

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

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

13 92. For many years, Defendants have produced massive quantities of fossil fuels that,
 14 when combusted, emit carbon dioxide, the most important greenhouse gas. Each of the
 15 Defendants, including through their predecessor companies, subsidiaries and agents, upon
 16 information and belief, have been producing fossil fuels continuously for over a hundred years.
 17 Additionally, one of Defendants' primary fossil fuel products, natural gas, is composed of methane,
 18 which is the second most important greenhouse gas and which, as Defendants know, routinely
 19 escapes into the atmosphere from facilities operated by Defendants' customers and also consumers.
 20 The greenhouse gases from the usage of Defendants' fossil fuels remain in the atmosphere for long
 21 periods of time: a substantial portion of carbon dioxide emissions remains in the atmosphere for
 22 over 1,000 years after they are emitted.⁴⁹ As noted above, Defendants have produced such vast
 23 quantities of fossil fuels that they are five of the ten largest producers in all of history, with most of
 24 the CO₂ that has built up in the atmosphere from the use of their products dating from 1980 or later.
 25 The cumulative greenhouse gases in the atmosphere attributable to each Defendant has increased
 26 the global temperature and contributed to sea level rise, including in Oakland.

27
 28 ⁴⁹ IPCC, Climate Change 2013, The Physical Science Basis, Summary for Policymakers at 28,
available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf.

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 attributable to the fossil fuels that they produce and sell (rather than emit from their own operations), and that most of these emissions have occurred since 1988.

b) Among these 100 producers, Defendants are the five largest, investor-owned producers of fossil fuels in the world, as measured by the cumulative carbon and methane pollution generated from the use of their fossil fuels, according to published, peer-reviewed research.⁵⁰ Upon information and belief, Defendants are, respectively, the first (Chevron), second (Exxon), fourth (BP), sixth (Shell) and ninth (ConocoPhillips) largest cumulative producers of fossil fuels worldwide from the mid Nineteenth Century to present

c) Defendants are collectively responsible, through their production, marketing, and sale of fossil fuels, for over 11% of all the carbon and methane pollution from industrial sources that has accumulated in the atmosphere since the dawn of the Industrial Revolution.⁵¹

d) 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. For example, in 2017, each of the five Defendants produced between 1.4 million and 4.0 million barrels of oil equivalents *per day*. This production will intensify future warming and exacerbate Oakland's injuries from sea level rise.

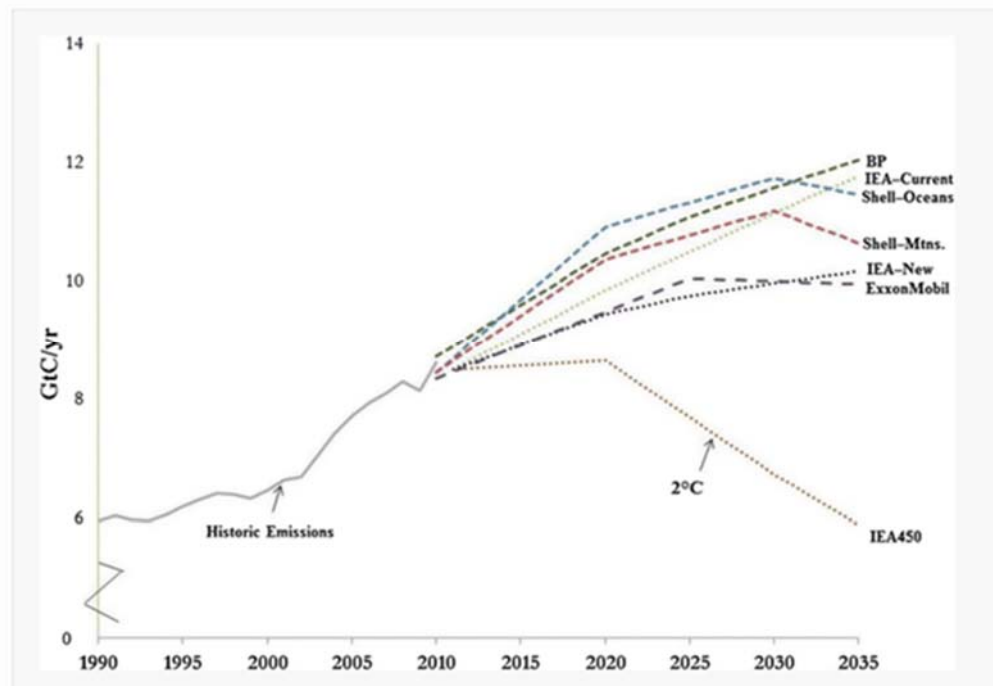
e) Defendants, moreover, are qualitatively different from other contributors to the harm given their in-house scientific resources, early knowledge of global warming, commercial

⁵⁰ Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010*, Climatic Change, Jan. 2014.

⁵¹ *Ibid.*

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.

f) Defendants' conduct will continue to cause ongoing and increasingly severe sea level rise harms to Oakland 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 the greenhouse gas emissions trajectory necessary to prevent global warming from exceeding a 2 °C increase over the pre-industrial temperature (IEA 450 from International Energy Agency) to BP, Exxon and Shell's projections of total worldwide future emissions that they use to make long-term business plans.⁵² 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.

⁵² 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>.

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

95. 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 and/or through their trade 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. 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. 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.”⁵³ 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

⁵³ 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* <https://www.smokeandfumes.org/#/documents/document16>.

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

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

4 a) In 1951, the API launched a project to research air pollution from petroleum
5 products, and attributed atmospheric carbon to fossil fuel sources. By 1968, the API's scientific
6 consultant reported to the API that carbon dioxide emissions were "almost certain" to produce
7 "significant" temperature increases by 2000, and that these emissions were almost certainly
8 attributable to fossil fuels. The report warned of "major changes in the earth's environment" and a
9 "rise in sea levels," and concluded: "there seems to be no doubt that the potential damage to our
10 environment could be severe."⁵⁴

11 b) Between 1979 and 1983, the API and Defendants, their predecessors, and/or agents
12 formed a task force to monitor and share climate research, initially called the "CO₂ and Climate
13 Task Force" and later renamed the "Climate and Energy Task Force" ("Task Force"). The API
14 kept and distributed meeting minutes to Task Force members. Task Force members included, in
15 addition to API representatives, scientists from Amoco (a predecessor to BP); Standard Oil of
16 California, Texaco, and Gulf Oil Corp. (predecessors to Chevron); Exxon Research and
17 Engineering and Mobil (predecessors to or subsidiaries of current Exxon); Shell; and others. In
18 1980, the Task Force invited Dr. J.A. Laurman, a "recognized expert in the field of CO₂ and
19 climate," to make a presentation. Attendees to the presentation included scientists and executives
20 from Texaco (a predecessor to Chevron), Exxon, and SOHIO (a predecessor to BP). Dr.
21 Laurman's written presentation informed the Task Force that there was a "Scientific Consensus on
22 the Potential for Large Future Climatic Response to Increased CO₂ Levels." He further informed
23 the Task Force in his presentation that, though the exact temperature increases were difficult to
24 predict, the "physical facts agree on the probability of large effects 50 years away." He warned the
25 Task Force of a 2.5 °C [4.5 °F] global temperature rise by 2038, which would likely have "MAJOR
26 ECONOMIC CONSEQUENCES," and a 5 °C [9 °F] rise by 2067, which would likely produce
27 "GLOBALLY CATASTROPHIC EFFECTS." He also suggested that, despite uncertainty,
28

⁵⁴ *Id.*

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

6 (c) In March 1982, an API-commissioned report showed the average increase in global
7 temperature from a doubling of atmospheric concentrations of CO₂ and projected, based upon
8 computer modeling, global warming of between 2 and 3.5 °C [3.6 to 6.3 °F]. The report projected
9 potentially “serious consequences for man’s comfort and survival,” and noted that “the height of
10 the sea level can increase considerably.”⁵⁵

11 99. On information and belief, Defendants were aware of the industry Task Force and
12 API findings described above, which were distributed by the API to its members. Each Defendant
13 (or its predecessor) was a member of the API at relevant times, or had a subsidiary that was a
14 member of the API at relevant times. Each subsidiary passed on information it learned from the
15 API on climate change to its parent Defendant (or Defendant’s predecessor) and acted as the agent
16 for its parent company, which remained in charge of setting overall production levels in light of
17 climate change and other factors.

18 100. On information and belief, each Defendant was also actually aware (at the time they
19 were made) of public statements on climate change described above, including the 1979 National
20 Academy of Science findings and Dr. Hansen’s 1988 testimony. Because these statements were
21 centrally relevant to Defendants’ ongoing investment of billions of dollars in fossil fuel production
22 and billions of dollars in profits, and because Defendants employed experts charged with
23 evaluating climate change and other energy and regulatory trends, Defendants were in a superior
24 position to appreciate the threat described in these statements. Defendants’ representatives
25 attended congressional hearings on climate change beginning as early as the late 1970s.
26

27 _____
55

28 <http://insideclimatenews.org/sites/default/files/documents/API%201982%20Climate%20models%20and%20CO2%20warming.pdf> at 3, 5.

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:

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.”⁵⁶

b) In a 1979 Exxon internal memo, an Exxon scientist calculated that 80% of fossil fuel reserves would need to remain in the ground and unburned to avoid greater than a doubling of atmospheric carbon dioxide.⁵⁷

c) In a 1981 internal Exxon memo, a scientist and director at the Exxon Research and Engineering Company warned that “it is distinctly possible” that CO₂ emissions “will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth’s population).”⁵⁸

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 pre-industrial revolution value would result in an average global temperature rise of $(3.0 \pm 1.5)^\circ\text{C}$ [2.7

⁵⁶

https://insideclimatenews.org/system/files_force/documents/James%20Black%201977%20Presentation.pdf?download=1 at 2.

⁵⁷

<http://insideclimatenews.org/sites/default/files/documents/CO2%20and%20Fuel%20Use%20Projections.pdf> at 3.

⁵⁸

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

1 °F to 8.1 °F].”⁵⁹ The clear scientific consensus was based upon computer modeling, which Exxon
 2 would later attack as unreliable and uncertain in an effort to undermine public confidence in
 3 climate science.⁶⁰ The memo continued: “There is unanimous agreement in the scientific
 4 community that a temperature increase of this magnitude would bring about significant changes in
 5 the earth’s climate, including rainfall distribution and alterations in the biosphere.”

6 e) In November 1982, an Exxon internal report to management warned that
 7 “substantial climatic changes” could occur if the average global temperature rose “at least 1°C [1.8
 8 °F] above [1982] levels,” and that “[m]itigation of the ‘greenhouse effect’ would require major
 9 reductions in fossil fuel combustion.” The report then warns Exxon management that “there are
 10 some potentially catastrophic events that must be considered,” including the risk that “if the
 11 Antarctic ice sheet which is anchored on land should melt, then this could cause a rise in sea level
 12 on the order of 5 meters.” The report includes a graph demonstrating the expected future global
 13 warming from the “CO2 effect” demonstrating a sharp departure from the “[r]ange of natural
 14 fluctuations.” This graph is attached hereto as Exhibit 3.⁶¹

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

20 102. Exxon’s early research and understanding of the global warming impacts of its
 21 business was not unique among Defendants. For example, at least as far back as 1970, Defendants
 22 Shell and BP began funding scientific research in England to examine the possible future climate
 23 changes from greenhouse gas emissions. Shell produced a film on global warming in 1991, in

24 ⁵⁹ Cohen memo to Natkin at 1 (Sept. 2, 1982), *available at*
 25 <http://insideclimatenews.org/documents/consensus-co2-impacts-1982>.

26 ⁶⁰ *See infra* ¶ 115.

27 ⁶¹ M. B. Glaser, Memo to R.W. Cohen et al. on “CO2 Greenhouse Effect,” Nov. 12, 1982, at 2, 12-
 28 13, 28, *available at*
<http://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf>.

which it admitted that there had been a “marked increase [in global temperatures] in the 1980s” and that the increase “does accord with computer models based on the known atmospheric processes and predicted buildup of greenhouse gases.”⁶² It acknowledged a “serious warning” that had been “endorsed by a uniquely broad consensus of scientists” in 1990. In the film, Shell further admits that by 2050 continued emissions of greenhouse gases at high levels would cause a global average temperature increase of 1.5 to 4 °C (2.7 to 7.2 °F); that one meter of sea level rise was likely in the next century; that “this could be disastrous;” and that there is a “possibility of change faster than at any time since the end of the ice age, change too fast, perhaps, for life to adapt without severe dislocation.”

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.

103. Defendants have extensively promoted fossil fuel use in massive quantities through affirmative advertising for fossil fuels and downplaying global warming risks. First, Defendants promoted massive use of fossil fuels by misleading the public about global warming by emphasizing the uncertainties of climate science and through the use of paid denialist groups and individuals – a striking resemblance to Big Tobacco’s propaganda campaign to deceive the public about the adverse health effects of smoking. Defendants’ campaign inevitably encouraged fossil fuel consumption at levels that were (as Defendants knew) certain to severely harm the public. Second, Defendants’ fossil fuel promotions through frequent advertising for their fossil fuel products, including promotions claiming that consumption at current and even expanded levels is “responsible” or even “respectful” of the environment, have encouraged continued fossil fuel consumption at massive levels that Defendants knew would harm the public.⁶³

⁶² <https://www.youtube.com/watch?v=0VOWi8oVXmo>.

⁶³ 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>; Chevron TV ad (2009), *available at* <https://www.youtube.com/watch?v=-KyjTGMVTkA>.

A. Defendants borrowed the Big Tobacco playbook in order to promote their products.

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

106. 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.

107. 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 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.

1 108. In February 1996, an internal GCC presentation summarized findings from the 1995
2 IPCC Second Assessment report and stated that the projected temperature change by 2100 would
3 constitute “an average rate of warming [that] would probably be greater than any seen in the past
4 10,000 years.” The presentation noted “potentially irreversible” impacts and stated that predicted
5 health impacts were “mostly adverse impacts, with significant loss of life.” The document
6 simultaneously reported the IPCC’s scientific conclusions regarding climate change and laid out
7 points for questioning those conclusions, including the IPCC’s 1995 finding that human-induced
8 global warming had now been detected even though the GCC-STAC had concluded just two
9 months before that the contrarian theories of causation were scientifically unconvincing.

10 109. Over at least the last nineteen years, Exxon in particular has paid researchers and
11 front groups to create uncertainties about basic climate change science and used denialist groups to
12 attack well-respected scientists. These were calculated business decisions by Exxon to undermine
13 climate change science and bolster production of fossil fuels.

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

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

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

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

6 113. Until approximately early 2016, API’s website referred to global warming as
7 “possible man-made warming” and claimed that the human contribution is “uncertain.” The API
8 removed this statement from its website in 2016 when journalistic investigations called attention to
9 the API’s misleading statements on global warming and its participation in the climate change Task
10 Force during the late 1970s and early 1980s.

11 114. In 2000, Exxon took out an advertisement on the Op-Ed page of the *New York*
12 *Times* entitled “Unsettled Science.” The advertisement claimed that “scientists remain unable to
13 confirm” the proposition that “humans are causing global warming.”⁶⁴ This was six years after the
14 IPCC had confirmed the causal link between planetary warming and anthropogenic greenhouse gas
15 emissions – a historic moment in climate science – and some eighteen years after Exxon itself had
16 admitted in a 1982 internal memoranda to corporate headquarters that there was “a clear scientific
17 consensus” that greenhouse gas emissions would cause temperatures to rise.

18 115. On May 27, 2015, at Exxon’s annual shareholder meeting, then-CEO Rex Tillerson
19 misleadingly downplayed global warming’s risks by stating that climate models used to predict
20 future impacts were unreliable: “What if everything we do it turns out our models were really lousy
21 and we achieved all of our objectives and it turned out the planet behaved differently because the
22 models just weren’t good enough to predict it?” But as noted above, in 1982 Exxon’s scientific
23 staff stated, based upon the climate models, that there was a “clear scientific consensus” with
24 respect to the level of projected future global warming and starting shortly thereafter Exxon relied
25 upon the projections of climate models, including its own climate models, in order to protect its
26 own business assets. Tillerson’s statement reached consumers because it was reported in the press,
27

28 ⁶⁴ <https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf>.

1 including in California,⁶⁵ as is common when fossil fuel company CEOs make statements
2 regarding climate change and as Exxon had reason to know would occur.

3 116. Until approximately early 2017, Exxon's website continued to emphasize the
4 "uncertainty" of global warming science and impacts: "current scientific understanding provides
5 limited guidance on the likelihood, magnitude, or time frame" of events like temperature extremes
6 and sea level rise.⁶⁶ Exxon's insistence on crystal ball certainty was clear misdirection, since
7 Exxon knew that the fundamentals of climate science were well settled and showed global
8 warming to present a clear and present danger.

9 **B. Defendants' Direct Promotion of Fossil Fuels.**

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

19 118. Defendants bombard the public and consumers with the following advertisements,
20 although these are a mere sliver of Defendants' extensive campaigns. Defendants' advertisements
21 must be understood in their proper context – as following Defendants' substantial early knowledge
22 on global warming risks and impacts, and following a decades-long campaign of misleading
23 statements on global warming that primed the pump for massive use of their fossil fuel products:
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25

26 ⁶⁵ See, e.g., David Koenig, Exxon shareholders to vote on climate change, fracking, San Diego
27 Union-Tribune, May 27, 2015, <http://www.sandiegouniontribune.com/news/2015/may/27/exxon-shareholders-to-vote-on-climate-change/>.

28 ⁶⁶ Formerly found at <http://corporate.exxonmobil.com/en/current-issues/climate-policy/meeting-global-needs/managing-climate-change-business-risks>.

1 a) Exxon's "Lights Across America" website advertisement states that natural gas is
 2 "helping dramatically reduce America's emissions"⁶⁷ even though natural gas is a fossil fuel
 3 causing widespread planetary warming and harm to coastal cities like Oakland and the use of
 4 natural gas competes with wind and solar, which have no greenhouse gas emissions.

5 b) In 2017, Shell's CEO promoted massive fossil fuel use by stating that the fossil fuel
 6 industry could play a "crucial role" in lifting people out of poverty.⁶⁸ A Shell website promotion
 7 states: "We are helping to meet the world's growing energy demand while limiting CO2 emissions,
 8 by delivering more cleaner-burning natural gas."⁶⁹

9 c) BP touts natural gas on its website as "a vital lower carbon energy source" and as
 10 playing a "crucial role" in a transition to a lower carbon future.⁷⁰ BP promotes continued massive
 11 fossil fuel use as enabling two billion people to be lifted out of poverty.

12 d) Chevron's website implores the public that "we produce safe, reliable energy
 13 products for people around the world."⁷¹ Chevron also promotes massive use of fossil fuels as the
 14 key to lifting people out of poverty: "Reliable and affordable energy is necessary for improving
 15 standards of living, expanding the middle class and lifting people out of poverty. Oil and natural
 16 gas will continue to fulfill a significant portion of global energy demand for decades to come –
 17 even in a carbon-constrained scenario." A prior Chevron advertisement still available on the web
 18 promotes Chevron fossil fuels on a massive scale by stating that "our lives demand oil."⁷²

21 ⁶⁷

22 https://www.youtube.com/watch?v=tMu1CBjXfq4&list=PLlrXlHj7zayYGaExfTp_B4t6gqTtkGf9A&index=6 (at 0:46).

23 ⁶⁸ Shell CEO speech, Mar. 9, 2017, *available at* <http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-tomorrow.html>.

24 ⁶⁹ Shell United States, Transforming Natural Gas, *available at* <http://www.shell.us/energy-and-innovation/transforming-natural-gas.html>.

25 ⁷⁰ <http://www.bp.com/en/global/corporate/energy-economics/energy-outlook/energy-overview-the-base-case.html>.

26 ⁷¹ Chevron, Products and Services, *available at* <https://www.chevron.com/operations/products-services>.

27 ⁷² Chevron TV ad (2009), *available at* <https://www.youtube.com/watch?v=-KyjTGMVTkA>.

e) ConocoPhillips promotes its fossil fuel products by stating that it “responsibly suppl[ies] the energy that powers modern life.”⁷³ Similarly, ConocoPhillips has the following advertising slogan on its website: “Providing energy to improve quality of life.”⁷⁴

119. 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 impacts are expected to exacerbate poverty in most developing countries and create new poverty pockets in countries with increasing inequality, in both developed and developing countries.”⁷⁵

120. 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. 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 internet. But Defendants’ 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

⁷³ 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>.

⁷⁴ ConocoPhillips, Producing energy, *available at* <http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx>.

⁷⁵ IPCC, Climate Change 2014: Mitigation of Climate Change, Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers at 20, *available at* https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_full.pdf.

1 have dropped and GM announced (in 2015) that it was investing billions in electric cars because
2 the “future is electric.”

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

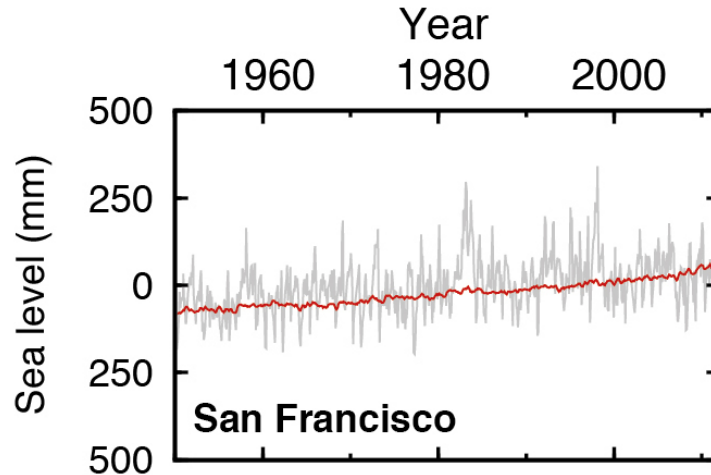
7 123. These reports by BP and Exxon, and a similar one by Shell, predict massive
8 increases in fossil fuel use over roughly the next 15 years. This is part of a larger strategy of
9 “mak[ing] the case for the necessary role of fossil fuels,” as BP’s chief executive stated in a
10 moment of candor in 2015.

11 **VIII. OAKLAND WILL INCUR SERIOUS CLIMATE CHANGE INJURIES THAT WILL**
12 **REQUIRE BILLIONS IN EXPENDITURES TO ABATE THE GLOBAL WARMING**
13 **NUISANCE.**

14 124. According to a 2012 California governmental report, by 2050, California is
15 projected to warm by approximately 2.7 °F above the average temperature in 2000, regardless of
16 the level of future emissions, a rate of warming three times greater than over the last century. By
17 2100, California’s average temperatures could increase by 8.6 °F, if not more. Oakland’s average
18 summertime high temperature is projected to increase from 72.36 °F to 79.61 °F by 2100, making
19 Oakland’s summers similar to those now experienced in Vista, CA, some 400 miles to the south.
20 Continued production of massive amounts of fossil fuels will exacerbate global warming, increase
21 sea level rise and result in grave harms to Oakland.

22 125. Global warming has caused and continues to cause accelerated sea level rise in San
23 Francisco Bay and the adjacent ocean with severe, and potentially catastrophic, consequences for
24 Oakland. The IPCC’s most recent assessment report concludes that the long-term sea level rise in
25 San Francisco as measured by tide gauges is similar to the global trend of rising sea levels: “Over
26 many coastal regions, vertical land motion is small, and so the long-term rate of sea level change
27 recorded by coastal and island tide gauges is similar to the global mean value (see records at San
28

Francisco . . .).”⁷⁶ 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:



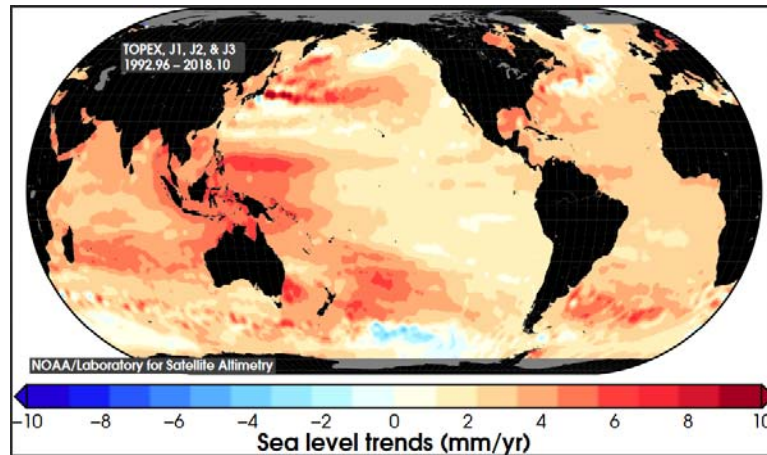
Tide gauge record for San Francisco 1950-2012 in grey with estimated global mean sea level shown in red line. From IPCC Fifth Assessment Report.⁷⁷

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 its 2012 assessment report.⁷⁸ This is precisely what 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:

⁷⁶ https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter13_FINAL.pdf (FAQ 13.1 Fig. 1, pp. 1148-49).

⁷⁷ *Id.*

⁷⁸ *Id.*



Global sea level rise map from satellite measurements from late 1992 to present.⁷⁹

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.⁸⁰

128. Scientists recently concluded that coastal California is already experiencing impacts from accelerated sea level rise, including “more extensive coastal flooding during storms, periodic tidal flooding, and increased coastal erosion.” In the last 100 years, the California coast has experienced sea level rise of 6.7 to 7.9 inches.

129. 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 Oakland. A 100-year flood event is, an event that – without global warming – normally has a 1% chance of happening every year. But by 2050, a “100-year flood” in the Oakland vicinity is expected to occur on average once every 2.3 years and by 2100 to occur 44 times per year – or almost once per *week*. Similarly, the 500-year storm surge flood would occur 13 times per year by

⁷⁹ https://www.star.nesdis.noaa.gov/sod/lisa/SeaLevelRise/slr/map_txjlj2_blue2red.pdf.

⁸⁰ 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), available at <http://www.pnas.org/content/115/9/2022>; see also <https://www.sciencedaily.com/releases/2018/02/180212150739.htm>.

1 2100. Even with lower levels of future fossil fuel production, there will be substantial increases in
2 flood frequencies in Oakland due to past and ongoing fossil fuel combustion.

3 130. Accelerated sea level rise in California is causing and will continue to cause
4 inundation of both Oakland's public property and private property located within Oakland.
5 Oakland is projected to experience up to 66 inches of sea level rise by 2100, putting at risk
6 thousands of city residents. Sea level rise of even 16 inches will put at risk numerous city
7 facilities, including schools, fire stations, health care facilities, and homeless shelters located in
8 low-lying areas of Oakland. Projected sea level rise in Oakland threatens property with a total
9 replacement cost of between \$22 and \$38 billion. The Oakland International Airport is located at
10 only 5.6 feet above sea level and is one of the four lowest-lying airports in the country. The 2014
11 National Climate Assessment, produced by over 300 experts and the National Academy of
12 Sciences, specifically identified Oakland's airport as threatened by sea level rise; it is more than a
13 foot lower than New York-LaGuardia, which was flooded during Hurricane Sandy, a one-in-260
14 year event. Sea level rise and related flooding also imminently threaten Oakland's sewer system.
15 Rising sea levels imminently threaten to prevent water from discharging properly from the sewer
16 system, which will cause sewage to back up and flood certain sections of the city. Oakland has
17 already begun to feel injury from sea level rise, although its most severe injuries by far are the
18 injuries that will occur in the future if prompt action is not taken to protect Oakland and its
19 residents from rising sea levels caused by global warming. The sea level rise projection is an
20 understatement in light of a 2017 report that sea level is likely to rise faster than projected and
21 could reach as much as a catastrophic ten feet by the end of the century.⁸¹

22 131. Oakland must adapt now to ongoing sea level rise to abate ongoing damage to
23 property, facilities, and equipment, with risks of increasingly severe damage in the future. Oakland
24 is actively planning to protect itself from sea level rise because it recognizes that the ongoing
25 harms will imminently become more severe absent adaptation. The City of Oakland already is
26 taking action to adapt to accelerated sea level rise. In 2017, for example, Oakland issued the
27 Oakland Preliminary Sea-Level Rise Road Map to help develop a citywide sea level rise adaptation
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⁸¹ Rising Seas in California.

1 plan. In 2016, Oakland adopted a five-year Local Hazard Mitigation Plan that analyzes risks from
2 sea level rise, identifies mitigation measures to reduce those risks, and contains a five-year
3 implementation plan. Oakland has been working to identify specific infrastructure necessary for
4 adaptation, including upgrades to sewer and storm water infrastructure, protecting Oakland
5 International Airport, and armoring Oakland's coast. For example, significant flood protection
6 infrastructure is planned for the airport, including the Old Earhart Road Floodwall Improvement
7 (estimated to cost \$800,000) and improvements to the existing, 4.5-mile Airport Perimeter Dike
8 (estimated to cost \$55 million). Oakland also plans to complete a \$2 million Sea Level
9 Vulnerability and Assessment Improvement Plan for the Port of Oakland, and it is working with
10 the San Francisco Bay Conservation and Development Commission on a regional study of sea level
11 rise risk. The magnitude of the actions needed to abate harms from sea level rise and the amount of
12 property at risk will increase in light of the rapidly accelerating sea level rise.

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

17 133. Oakland is already experiencing, and working to abate, current harms caused by sea
18 level rise. But while harms to Oakland and its residents have commenced, additional far more
19 severe injuries will occur in the future if prompt action is not taken to protect Oakland and its
20 residents from rising sea levels. Indeed, the sea level rise harms inflicted on Oakland by global
21 warming are insidious partly because they are projected to continue, and to worsen, far into the
22 future. Pervasive fossil fuel combustion and greenhouse gas emissions to date will cause ongoing
23 and future harms regardless of future fossil fuel combustion or future greenhouse gas emissions.
24 Future production and use of fossil fuels will exacerbate sea level rise and require even greater
25 expenditures to abate the injuries. Oakland must plan for and adapt to sea level rise future harms
26 now to ensure that abatement of ongoing and future sea level rise harms is done as efficiently and
27 effectively as possible and in order to protect human well-being and public and private property
28 before it is too late. Additionally, the significant infrastructure needed to abate global warming

1 requires long lead times for planning, financing, and implementation. Planning to abate the known
2 and projected adverse effects of global warming on Oakland and its citizens remains underway,
3 and will continue. Sea level rise impacts in the future are imminent in the context of planning for
4 and carrying out large-scale, complex infrastructure projects to protect Oakland from sea level rise.

5 134. Sea level rise, storm surges, and flooding caused by global warming threaten not
6 only the physical infrastructure and property of Oakland and its citizens, but also the safety, lives,
7 daily way of life, sense of community, and security of Oakland residents. A severe storm surge
8 coupled with higher sea levels caused by global warming could occur at any time, potentially
9 resulting in the loss of life and extensive damage to public and private property. The risk of
10 catastrophic sea level rise harm to Oakland and its citizens will increase, just as rising sea levels
11 will continue to cause regular damage, the longer concrete action is not taken to abate the harms
12 and effects of sea level rise.

13 135. Many of the Oakland residents who are likely to be most affected by climate change
14 are low-income and/or people of color. As the U.S. government has pointed out, people of color,
15 low-income groups, and certain immigrant groups are (*e.g.*, because of poverty, chronic health
16 conditions, and social isolation) potentially more “vulnerable” to climate change impacts, including
17 heat waves, flooding, and degraded air quality. This is true in Oakland, where “socially
18 vulnerable” individuals such as African Americans, Hispanics and other people of color tend to
19 live at lower elevations most affected by sea level rise and higher storm surges. These populations
20 also face challenges due to the legacies of slavery, such as redlining, predatory mortgage and other
21 lending, systemic racism and discrimination in securing insurance and other assets that would
22 protect them from the consequences of global warming and the ensuing climate change. More
23 affluent residents live farther from the Bay and at higher elevations. For example, of the City of
24 Oakland population that lives on land within three vertical feet of the current local high tide line,
25 more than 70% have been categorized as having high “social vulnerability.” This makes it all the
26 more imperative for the People to act now to prevent harm, as those most vulnerable have the
27 fewest resources to protect themselves.

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

IX. CAUSES OF ACTION

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. The People of the State of California, acting by and through the Oakland 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. Oakland 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 Oakland. 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 Oakland 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

1 from fossil fuels produced by the other Defendants, among others, to result in dangerous levels of
2 global warming with grave harms for coastal cities like Oakland. Defendants were aware of this
3 dangerous global warming, and of its attendant harms on coastal cities like Oakland, even before
4 those harms began to occur. Defendants' conduct constitutes a substantial and unreasonable
5 interference with and obstruction of public rights and property, including, *inter alia*, the public
6 rights to health, safety and welfare of Oakland residents and other citizens whose safety and lives
7 are at risk from increased storm surge flooding and whose public and private property, including
8 key infrastructure properties such as Oakland International Airport, is threatened with widespread
9 damage from global warming-induced sea level rise, greater storm surges, and flooding.

10 141. Defendants, individually and collectively, are substantial contributors to global
11 warming and to the injuries and threatened injuries suffered by Plaintiffs. Defendants have caused
12 or contributed to accelerated sea level rise from global warming, which has and will continue to
13 injure public property and structures owned and managed by the City of Oakland, including
14 Oakland International Airport, through increased inundation, storm surges, and flooding, and
15 which threatens the safety and lives of Oakland residents. Defendants have inflicted and continue
16 to inflict injuries upon Plaintiffs that require Plaintiffs to incur extensive costs to protect public and
17 private property, including Oakland International Airport, against increased sea level rise,
18 inundation, storm surges, and flooding.

19 142. Defendants are jointly and severally liable to Plaintiffs for committing a public
20 nuisance. Plaintiffs seek an order of abatement requiring Defendants to fund a climate change
21 adaptation program for Oakland consisting of the building of sea walls, raising the elevation of
22 low-lying property and buildings and building such other infrastructure as is necessary for Oakland
23 to adapt to climate change.⁸²

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⁸² Plaintiffs also do not seek abatement with respect to any federal land.

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 Oakland City Attorney, bring this claim seeking abatement pursuant to California public nuisance law, including section 731 of the California Code of Civil Procedure, and sections 3479, 3480, 3491, and 3494 of the California Civil Code.

145. 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 global warming-induced sea level rise, a public nuisance in Oakland. 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 Oakland 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 Oakland. Defendants were aware of this dangerous global warming, and of its attendant harms on coastal cities like Oakland, 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 Oakland residents and other citizens whose safety and lives

1 are at risk from increased storm surge flooding and whose public and private property, including
2 key infrastructure properties such as Oakland International Airport, is threatened with widespread
3 damage from global warming-induced sea level rise, greater storm surges, and flooding.

4 146. Defendants, individually and collectively, are substantial contributors to global
5 warming and to the injuries and threatened injuries suffered by the People. Defendants have
6 caused or contributed to accelerated sea level rise from global warming, which has and will
7 continue to injure public property and structures owned and managed by the City of Oakland,
8 including Oakland International Airport, through increased inundation, storm surges, and flooding,
9 and which threatens the safety and lives of Oakland residents. Defendants have inflicted and
10 continue to inflict injuries upon the People that require the People to incur extensive costs to
11 protect public and private property, including Oakland International Airport, against increased sea
12 level rise, inundation, storm surges, and flooding.

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

18 148. Defendants are jointly and severally liable to the People for committing a public
19 nuisance. The People seek an order of abatement requiring Defendants to fund a climate change
20 adaptation program for Oakland consisting of the building of sea walls, raising the elevation of
21 low-lying property and buildings and building such other infrastructure as is necessary for Oakland
22 to adapt to climate change.⁸³

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⁸³ The People do not seek abatement with respect to any federal land.

X. RELIEF REQUESTED

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

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 Oakland necessary for Oakland 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.

Dated: April 3, 2018

Respectfully submitted,

/s/ Barbara J. Parker

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BARBARA J. PARKER

Exhibit 1: Map showing projected sea level rise, 48-inch scenario, West Oakland detail

Source: City of Oakland 2016-2021 Local Hazard Mitigation Plan (June 2016), p. 84

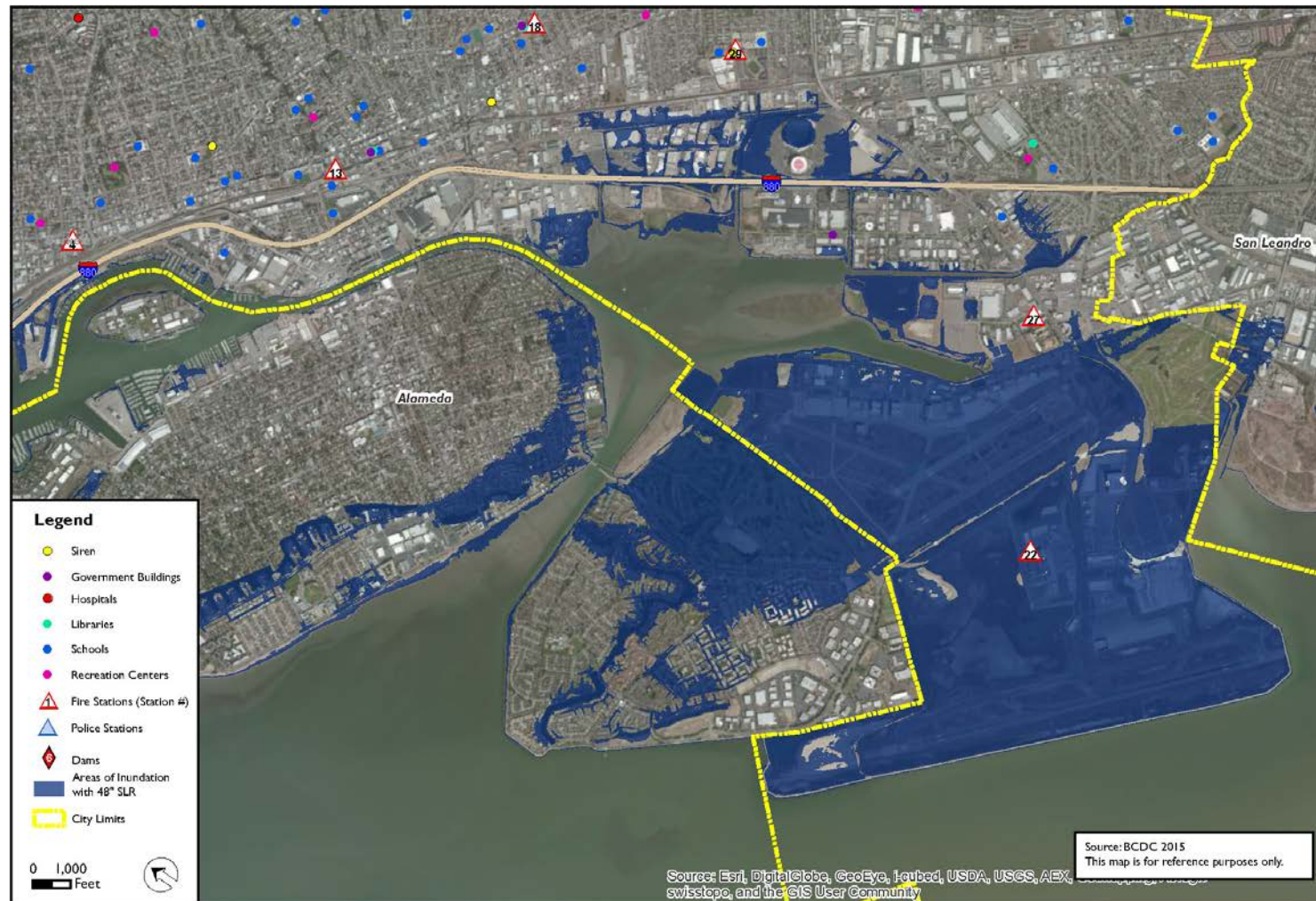
Figure 9.1 Projected Sea-Level Rise 48-Inch scenario, West Oakland Detail



Exhibit 2: Map showing projected sea level rise, 48-inch scenario, East Oakland detail

Source: City of Oakland 2016-2021 Local Hazard Mitigation Plan (June 2016), p. 85

Figure 9.2 Projected Sea-Level Rise 48-Inch scenario, East Oakland Detail



Local Hazard Mitigation Plan 2016

Projected Sea Level Rise - 2050 Scenario, East Oakland

Planning and Building Department
March 2016

Exhibit 3: “Range of Global Mean Temperature From 1850 to the Present with the Projected Instantaneous Climatic Response to Increasing CO₂ Concentrations”

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

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November 12, 1982

CO₂ "Greenhouse" Effect

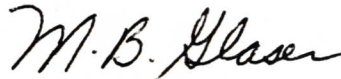
82EAP 266

TO: See Distribution List Attached

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

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

Very truly yours,



M. B. GLASER

MBG:rva

Attachments

H. N. WEINBERG

NOV 15 1982

Figure 9

Range of Global Mean Temperature From 1850 to the Present
with the Projected Instantaneous Climatic Response to
Increasing CO₂ Concentrations.

