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Attorneys for Plaintiffs  
Friends of the Earth, Inc., Greenpeace, Inc.  
City of Boulder, CO, City of Oakland, CA  
City of Arcata, CA, Santa Monica, CA

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

FRIENDS OF THE EARTH, INC., et al.,	)	
	)	
Plaintiffs,	)	Civ. No. C 02-4106 JSW
v.	)	
	)	Date: February 11, 2005
PETER WATSON, et al.,	)	Time: 9 A.M.
	)	Courtroom 2, 17 <sup>th</sup> Floor
Defendants.	)	

DECLARATION OF MARK ANDRE

I, Mark Andre, declare as follows:

1. I am currently employed as the Deputy Director of  
Environmental Services for the City of Arcata and have been so employed  
since July 1, 1992.

Plaintiffs' Exhibit #10

1           2.     In my capacity as Deputy Director of Environmental Services I  
2 am directly responsible for the Natural Resources Division and aspects of the  
3 Water Wastewater Division within the Environmental Services Department.  
4 This includes programs such as open space and agriculture, stormwater/flood  
5 control, City forest management, fish and wildlife habitat projects and  
6 management of City wildlife areas, energy management, environmental  
7 planning drainage maintenance and improvement, public trust protection and  
8 water/ wastewater treatment.

9           3.     I am a Natural Resources Planning graduate of Humboldt State  
10 University where I also attended graduate school in Watershed Management.  
11 I am a California Licensed Professional Forester and have a background and  
12 training in hydrology, hazardous materials management.

13           4.     I have personal knowledge of the matters set forth herein,  
14 except for those items stated to be based upon information and belief. For  
15 those items based upon information and belief, I have relied upon  
16 information reasonably relied on by professionals in my field to inform our  
17 professional judgment and opinion, and as to those matters I am informed  
18 and believe them to be true as expressly stated herein, and if called to testify  
19 I could and would competently testify thereto.

20           5.     I have been informed and believe and on that basis assert that  
21 over the period 1887-2000, temperatures monitored at the nearest long-term  
22 site to Arcata located approximately five miles to the south in the city of

1 Eureka have increased by about 2.1°F. Annual rainfall amounts have  
2 decreased by about 10% over the period 1857-2000. Climate models indicate  
3 warming of 5°F (range 2 – 9°F) in the winter and summer, and slightly less in  
4 spring and fall. Precipitation is projected to increase, particularly in winter  
5 (possibly up to 25%), with little change in summer. The amount of  
6 precipitation on extreme wet days is most likely to increase, especially in  
7 winter and fall. Models show the 1 in 20 year extreme daily rainfall  
8 increasing by 11%, with a decrease in the return period of a 1 in 20 year  
9 event to 1 in 10 years for a 5°F temperature increase.

10 6. I have been informed and believe and on that basis assert, since  
11 1850, sea level has risen by about 4 inches along the coast of California. Sea  
12 level is projected to rise further up to 3.5-35 inches between 1990 and 2100.  
13 A 12-inch rise in sea level would mean that the current 100-year high tide  
14 peak would become instead the 10-year high, thus a rare event would become  
15 common. El Niño Southern Oscillation (ENSO) events also elevate sea levels  
16 by up to 12 inches or more off coastal California. High tides coupled with  
17 ENSO events and storm surges will increase significantly the hourly  
18 maximum high tide peak.

19 7. The City of Arcata owns approximately 225 acres of marsh land,  
20 known as the Arcata Marsh and Wildlife Sanctuary, which serves as wildlife  
21 habitat and is an integral and required component of the City's adjacently  
22 located wastewater treatment facility as it provides tertiary treatment to all

1 of the City's wastewater. This Marsh is located on the north end of the  
2 Humboldt Bay, the "Arcata Bay", the tidelands of which have been  
3 legislatively conveyed to ownership by the City of Arcata. The Marsh and  
4 Wildlife Sanctuary and wastewater treatment facility could be overwhelmed  
5 from increased high tide peaks and storm events. Such flooding would  
6 interfere with and prevent the proper treatment of the City's wastewater.

7 8. Adjacent to the Arcata Marsh and Wildlife Sanctuary, and also  
8 fringing the Arcata Bay, the City of Arcata operates its only corporation yard.  
9 This corporation yard contains the City's wastewater treatment facility  
10 including chlorine needed for wastewater treatment, and is the location  
11 where the City stores and maintains the City owned motor vehicle pool as  
12 well as the City buses used for the City's transit system. All of this property  
13 would be negatively affected by increased sea levels, high tide peaks and  
14 storm events.

15 9. The City owns nearly 550 acres of low lying agricultural land  
16 that is used for grazing, wildlife habitat, storm water management and open  
17 space. This property would become salt water marsh and thus unsuitable for  
18 agricultural purposes with a sea level increase of 12 inches and increase in  
19 rainfall intensity.

20 10. I have been informed and believe and on that basis assert that  
21 with global warming, higher snowlines will increase the fraction of  
22 precipitation as rain in the mountain, rather than snow. This will lead to

1 increased winter runoff, and in summer decreased stream flows into Arcata's  
2 drinking water supply (Mad River), coastal area and increased drought.  
3 ENSO events will also increase rainfall amounts in winter and fall, and  
4 increase the extremeness of the rainfall events, resulting in increased flood  
5 risk.

6 11. Other low-lying parts of Arcata, including public roads, not  
7 protected from storm surges face possible inundation. High intensity rainfall  
8 in winter may cause local flooding in the City of Arcata, damaging the City's  
9 wastewater and stormwater infrastructure and causing sewer system  
10 overflows. City services including staff time and use of equipment necessary  
11 to correct these infrastructure failures will be extensive.

12 12. The City leases its tidelands in the Arcata Bay to commercial  
13 oyster growers, and the Humboldt Bay, including the Arcata Bay, is the  
14 largest producer of commercial oysters in the State of California. Sewer  
15 system overflows, as described in paragraph 10 of this declaration, may cause  
16 the deposit of untreated wastewater into the Bay which in turn would cause a  
17 closure of the commercial fishery by the state regulatory authority, the  
18 California Department of Health Services. The economic losses suffered by  
19 the commercial growers would be passed on to the City of Arcata through  
20 claims and litigation for monetary damage against the City.

21 13. Increased ocean temperatures may threaten marine wildlife and  
22 consequently human marine activities in the area. Warmer waters will alter

the distribution of coastal fishes, requiring commercial and recreational fishing to travel farther or change to different fisheries. California supports the southern-most populations of some salmon and steelhead species that require cold water. As waters warm and stream flows fluctuate, these species could decline drastically or become extinct.


14. The City of Arcata owns and operates under contract with the California State University System, Humboldt State University, an anadromous fish aquaculture facility in the Arcata Bay, which would be negatively impacted by changes in ocean temperature and toxic algal blooms encouraged by ENSO events.

15. Arcata is presently suffering, and will continue to suffer, these consequences.

16. OPIC's and ExIm's actions increase the risk that Arcata's interests are and will continue to be harmed by climate change.

I declare under the penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 16<sup>th</sup> day of December, 2004, at Arcata, California.

  
MARK ANDRE