

'The Day After Tomorrow' heats up a political debate

Industrial Light & Magic, 20th Century Fox

Catastrophe in a New York minute: In *The Day After Tomorrow*, there's hell to pay for the people of Earth after years of global warming finally catch up with us. The consequences are very, very bad.

Storm of opinion rains down on merits of disaster movie

By Scott Bowles
USA TODAY

New York is expecting rain this weekend. About 150 feet of it. And Los Angeles could get high winds — enough to rip the Hollywood sign right out of the ground.

Summer has officially arrived in theaters. How can you tell? The Earth is in peril.

Only this time the threat doesn't come from aliens or giant angry lizards or asteroids plummeting toward the planet. Instead, global warming threatens our big blue marble.

And some real-life scientists couldn't be happier. While Hollywood has never seen a disaster it

didn't try to exploit, this summer's latest entry mixes a chilly political message with its popcorn effects. *The Day After Tomorrow*, which opens Friday, warns that greenhouse gases will bring a new ice age — soon.

Although environmentalists say the theory is bunk, most applaud the film for bringing the global warming debate into a forum that could grab Americans' attention.

"It's the *Towering Inferno* of climate science movies," says climatologist Andrew Weaver of Canada's University of Victoria. "But I'm not losing any sleep over a new ice age, because it's impossible."

However, Washington, which typically decries or dismisses Hollywood fare, is watching how well the \$125 million film is received.

**Cover
story**

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Is it entertainment, bad science or a jab at the Bush administration?

Continued from 1A

Former vice president Al Gore has rallied behind the film and plans a series of town hall meetings to discuss global warming. The activist group Move On.org is dispatching thousands of volunteers to hand out leaflets about climate change to moviegoers.

And the White House briefly ordered NASA officials not to discuss the film, which takes some intentional jabs at the administration. After reporters got hold of the gag order, the administration rescinded the memo.

All of which seems to make for a can't-miss hit among moviegoers who can't get enough of weather calamities.

"I was trying to think of the next movie I wanted to do," says writer/director/producer Roland Emmerich, who has threatened mankind before with films such as *Independence Day* and *Godzilla*. "And I remembered this book I once read, *The Coming Global Superstorm*. And it just hit me. That's my movie. I don't need a monster or a villain. Just the weather.

"What we're doing to the planet is scary. And what the planet might do back is even scarier."

Weather junkies have it made in the shade

Studios have plundered weather catastrophes for decades, for good reason. We are a nation of weather junkies.

From the 1970s disaster hits such as *Earthquake* to more recent movies including *The Perfect Storm* and *Twister*, Hollywood has used Mother Nature to collect millions at the box office. Last month's dreadfully reviewed earthquake drama, NBC's *10.5*, was the most-watched TV movie in two years. The Weather Channel has seen its viewership steadily increase to more than 105 million viewers a month since its inception 22 years ago.

And forecasts call for more stormy weather.

► The Weather Channel this week launched *Extreme Weather Week*. *Storm Stories: Extreme Weather Theories*, which airs at 8 p.m. ET/PT Thursday, examines the more scientifically grounded theories of global warming.

► *Forces of Nature*, an Imax film on extreme weather events, hits select theaters Memorial Day before expanding nationwide.

"People connect with weather unlike any other topic," says Debora Wilson, the incoming president of The Weather Channel companies. "It's relevant to everyone and has an everyday effect on people's lives." Wilson says weather also is "a powerful way to connect people to the broader universe. Weather is almost a primal force.

"Think about lying on the grass with the sun beating down on you. Or listening to the sound of a hard rain and watching a terrific lightning storm. There's a connection to a force that's bigger than us."

Tomorrow star Dennis Quaid says the sheer force of weather disasters makes for compelling viewing.

"Everybody's got a rubber neck, including me. Whether it's a fire or a train wreck, we all stop and look. Disasters — and disaster movies in general — seem to churn up human emotions. I think audiences enjoy ... having their imagination sparked by a 'what if' kind of situation.

There are plenty of "what ifs" in *Tomorrow*. In Emmerich's not-too-distant world, Quaid's paleoclimatologist, Jack Hall, warns that global warming could trigger an abrupt shift in the planet's climate. Within days of his warning, the polar ice caps are melting and pouring huge amounts of fresh water into the oceans. The influx of fresh water desalinates the oceans, shuts down the Gulf Stream and effectively throws the Atlantic currents out of whack. Suddenly, it's snowing in New Delhi, raining bowling-ball-size hail in Tokyo and darkening the skies as giant winter hurricanes, or "hypercanes," bring temperatures to 150 degrees below zero.

A little Hollywood license helps

For many scientists, that's not the fantastic part. What has them shaking their heads is the dawdling of a new ice age in the Northern Hemisphere within a matter of days.

"Some of these things are very likely to happen," says Dan Schrag, a paleoclimatologist and professor of Earth and planetary sciences at Harvard University. "We are indeed experimenting with the Earth in a way that hasn't been done for millions of years. But you're not going to see another ice age — at least not like that."

Wilson says climatologists with The Weather Channel working with Emmerich "tried to tell him that an ice age wasn't going to come in three days. But that doesn't make for a good movie."

Film-makers concede they have taken poetic license with science for the sake of entertainment.

"We weren't trying to make a documentary," visual effects producer Mike Chambers says. "We just wanted to make an entertaining summer movie with a message."

The validity of that message already is sparking debate. Emmerich does not deny that his depiction of a weak-willed president (played by Perry King) and a Dick Cheney look-alike as his vice president (Kenneth Welsh) was a jab at the Bush administration.

Emmerich, though, is quick to point out that by film's end the vice president becomes less of a corporate shill and more attuned to the environment.

"That may be the only science fiction in the movie," he says, winking.

Before he even saw the film, Gore announced that he would give speeches and hold town hall meetings to coincide with the film's release.

"The movie is fiction, of course," Gore tells USA TODAY. "And it's important we separate fact from fiction. But it raises an extremely serious issue. We do face a climate crisis. It should be seen as a genuine global emergency."

Gore says that he and environmental groups see *Tomorrow* as a chance to discuss an issue the public has long ignored.

"People are going to walk out of the movie, and they're going to talk about this issue one way or the other," he says. "I see it as an opportunity to join with the scientific community to set the record straight."

But which record? Some see both scientific and political agendas in *Tomorrow*.

The science is suspect

"I'm heartened that there's a movie addressing real climate issues," says Marshall Shepherd, a research meteorologist at NASA's Goddard Space Flight Center in Greenbelt, Md. "But as for the science of the movie, I'd give it a D minus or an F. And I'd be concerned if the movie was made to advance a political agenda."

Patrick Michaels, a senior fellow in environmental studies at the Cato Institute, a conservative think tank in Washington, says the film is meant to generate hysteria over the thorny global warming issue.

"It's a propaganda movie," he says. "This is blatant support by Hollywood for legislation to reduce emissions associated with global warming. And it takes cheap shots at the administration. There are thousands of actors, yet they chose one who looks like Dick Cheney. That's not an accident."

The White House did not respond to requests for comment on the film.

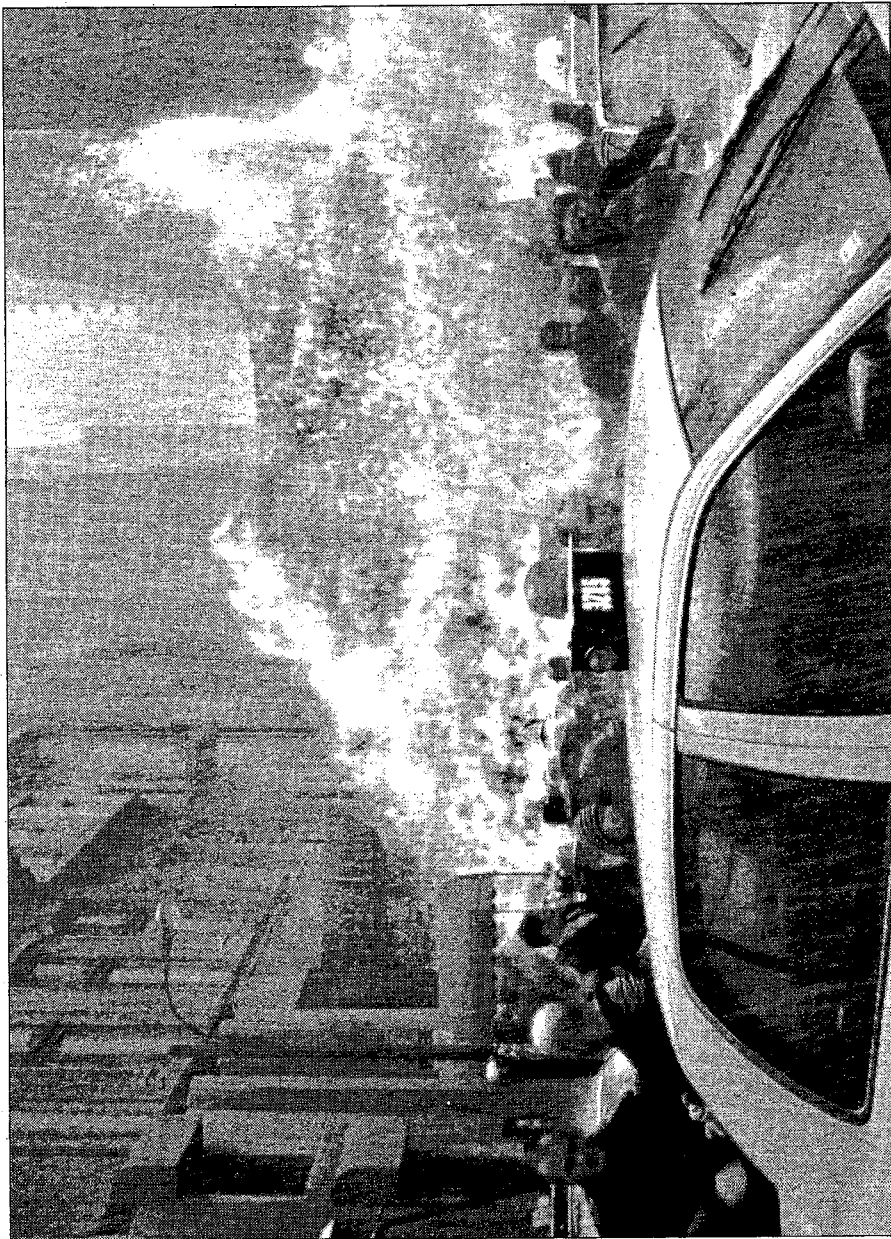
Even scientist Schrag says he is concerned about

Could it really happen?

Climate scientists hash out what's plausible and what's not, 8D

Weather watchers

USA See more TODAY photos from *The Day After Tomorrow* and watch the trailer at life.usatoday.com



20th Century Fox

Bad day for driving in Manhattan: Ocean waves engulf the city after decades of global warming come to a boil — all in a matter of days.

what the film is saying, though he is less worried about *Tomorrow's* political overtones.

"I have mixed feelings about this," he says. "On the one hand, I'm glad that there's a big-budget movie about something as critical as climate change. On the other, I'm concerned that people will see these over-the-top effects and think the whole thing is a joke."

Emmerich sounds amused by the furor.

"We have been working on this movie for more than two years," he says. "I didn't know that it would come out during an election year. We just wanted to make a movie people would enjoy."

Tomorrow star Jake Gyllenhaal, who plays Quaid's son, says he was relieved simply to work on a summer

film with a message.

"How many times do you see a summer movie that has nothing to say? At least people are talking about the issue. Whether or not you agree with the message, at least the movie is saying something."

Contributing: Dan Vergano

Killer weather, or not?

'The Day After Tomorrow' is 'nonsense,' but not impossible

By Dan Vergano and Scott Bowles
USA TODAY

Hollywood wiped out by tornadoes.

Uh-huh.

New York flooded and flash-frozen.

Yawn.

A paleoclimatologist as the hero of a blockbuster movie?

Now that's weird.

But that's show business.

Standing in the shadows of the big effects in *The Day After Tomorrow* is climate science. And the film's take on global warming has added to the buzz over this summer disaster flick that opens Friday.

"THERE'S MORE TRUTH THAN HYPE," proclaims the 20th Century Fox film's Web site, citing papers from prestigious journals such as *Nature*, *Geophysical Research Letters* and *Science* in making its case for a fiery future followed by a glacial invasion.

In the movie, climate scientist Jack Hall (Dennis Quaid) struggles to save the world while rescuing his son, who is trapped in a frozen New York City. Meanwhile, hordes of gringos flee across the Rio Grande to escape the new ice age.

"Basically, it's nonsense," says Andrew Weaver of Canada's University of Victoria. "Global warming will not cause another ice age."

At this month's American Geophysical Union meeting in Montreal, the movie was a hot topic for Weaver and other climate scientists. Most agree that man-made greenhouse gases, chiefly carbon dioxide, are warming the planet. Greenhouse gases are chemical compounds that trap heat in the atmosphere.

The movie takes this premise a few giant steps farther:

► Global warming will melt glaciers in Canada and Greenland, sending freshwater into the Atlantic Ocean.

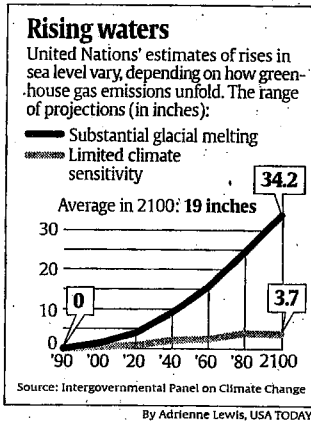
► The drop in ocean saltness will disrupt the Gulf Stream current that originates in the Caribbean and Gulf of Mexico and warms the North Atlantic and Europe.

► An ice age descends upon a suddenly chilled Northern Hemisphere.

► The flooded East Coast is flash-frozen.

Oddly enough, only the last two propositions seem completely unlikely, Weaver says. Some climate-change models a decade ago had suggested that global warming would eventually put North America and Europe into a deep freeze.

But evidence from past ice ages — the most recent one peaked 18,000 years ago — shows that a freshwater dump into the Atlantic would only shift the Gulf Stream slightly east. Canada's Labrador Sea may see lower



Big-screen ice age heats up a political debate, 1A

How hot is the summer movie season? Get a forecast at www.usatoday.com

temperatures, but the effects on the rest of the world appear negligible, Weaver says, mainly because global warming means hotter summers, not very conducive for an Ice Age.

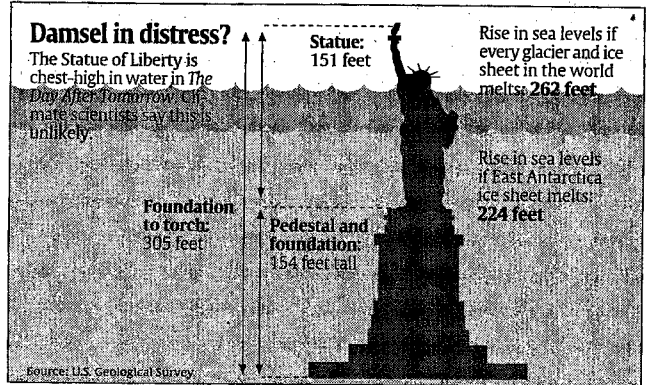
Also, experts note that the ocean currents driving the Gulf Stream rely on the Earth's spin and prevailing wind patterns. Neither would be affected by global warming.

"Luckily, the case for doing something about global warming is not driven by a movie," says David Hawkins of the Natural Resources Defense Council. "But it's good the public is talking about these risks."

Hawkins and others warn that some of the effects depicted in the film, like flooding and extreme weather, could happen, although not as quickly or dramatically. Tides could rise, cities could be flooded and countries could see dramatic shifts in temperatures — over the course of decades.

"Some of the events in the movie we're beginning to see already," says Weather Channel climate expert Heidi Cullen. "But of course everything is condensed and dramatized."

According to the Environmental



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Deluged: Emmy Rossum gets stuck in a downpour of biblical proportions in *The Day After Tomorrow*, which opens Friday in theaters nationwide.

"The real question in all of this is not how the weather will react. But how mankind will react to the weather. That's the true risk."

— Paleoclimatologist Dan Schrag

Protection Agency, the filmmakers are heading in the right direction on a few fronts:

► The Earth is getting warmer. Over the past 100 years, the global average temperature has risen about 1 degree. Over the next 50 years, temperatures are expected to rise another 1 to 5 degrees.

► Sea levels are rising. Over the same period, sea levels have risen between 4 to 8 inches.

► The Arctic is becoming less arctic. The thickness of late summer and early autumn sea ice has declined by about 40% over the past five decades.

Weather calamities — including the heat wave that killed thousands in Europe last summer and the wildfires in the western United States — suggest that Mother Nature needs no help in writing disaster stories.

"A big threat from global warming is that huge areas of North America are at risk for forest fires," says Pasha Groisman of the National Oceanic and Atmospheric Administration's National Climatic Data Center in Asheville, N.C. Less rain and warmer summers raise the risk of more national parks going up in flames. Paleoclimatologist Dan Schrag, a professor at Harvard University, says he could write a more fact-based weather disaster film.

"Simply place the heat wave that hit France (last summer) in India," he says. "That would have wiped out the monsoon season, which would have dried out crops and led to massive starvation." That, he says, would lead to revolts, escalating world tensions and a threat of nuclear war.

"The real question in all of this is not how the weather will react," he says. "But how mankind will react to the weather. That's the true risk."