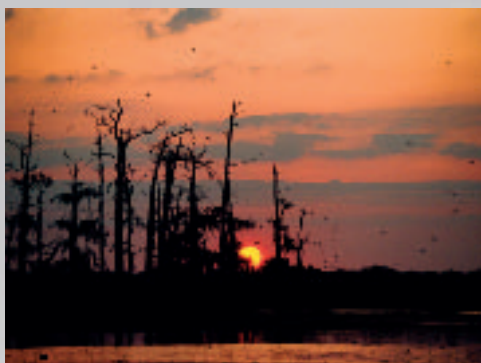


"All of my films are part of a mission to educate people about the need for conserving the natural wonders of the world. It's a contribution that I feel we can make, especially on IMAX® theater screens. Whenever I get a chance to work on a conservation-themed film I put my heart and soul into it."

Greg MacGillivray was editing an IMAX® theatre film about what would happen if a hypothetical storm breached the levees separating Lake Ponchartrain from New Orleans. *Hurricane Warning* was designed to focus attention on the urgent need to protect the city and wildlife living in the adjacent natural habitat from the predictable devastating effects of a flood caused by a major storm.

MacGillivray had shot some 90 percent of the film at practical locations in New Orleans and in the adjacent bayou. He planned to complete production by using computer graphics to simulate a hurricane and flood along with images of actors portraying desperate people trying to reach safety by breaking through the roofs of their homes.



Above: Sunset on the bayou in Louisiana in a scene from the film.

MacGillivray was deep into post-production on August 29, 2005, when a Category 5 hurricane targeted New Orleans. He immediately decided to return to the city to document the havoc wrought by Hurricane Katrina and the flood that followed in its wake.

The result is *Hurricane on the Bayou*, an extraordinarily powerful film that brings audiences into intimate contact with the cultural heritage of New Orleans, its people, and wildlife that lives in a natural habitat adjacent to the city. The film documents the aftermath of the storm and flood and the devastation and heartache they caused.

"I wanted *Hurricane on the Bayou* to go beyond our previous films emotionally," MacGillivray says. "It's such a huge tragedy with such heartbreak that I felt we had an obligation to tell this story right so people understand the dimensions of the tragedy. I love New Orleans and the

bayou. I think it's a unique region and city. If we lose it and the wetlands of Louisiana, we have lost part of America that is irreplaceable."

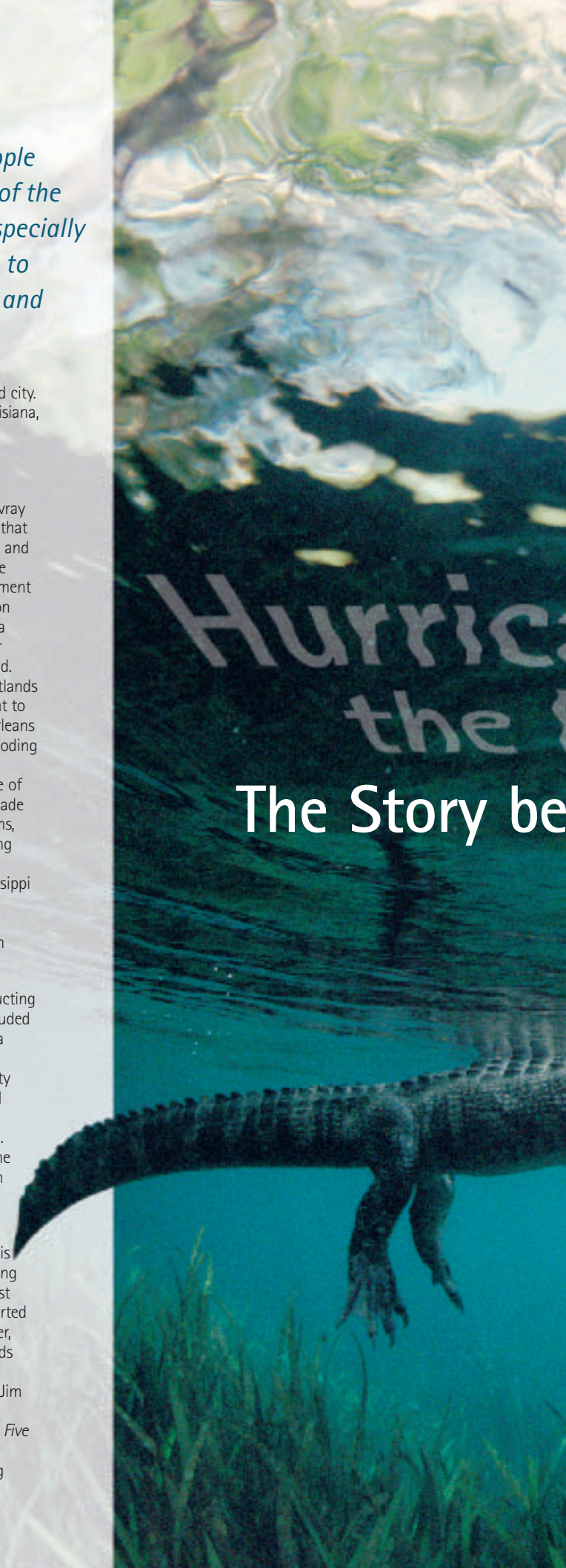
The Audubon Nature Institute in Louisiana initially contacted MacGillivray about three years ago. They believed that he could help to enlighten the public and spur the government to action before a disaster occurred. The wetlands adjacent to New Orleans were eroding mainly because of man-made problems, including the re-engineering of the flow of the Mississippi river. They also accurately predicted that a devastating flood with drastic consequences was inevitable if action wasn't taken.

MacGillivray followed up by conducting his own extensive research. He concluded that the ongoing erosion of the Delta made a massive flood inevitable. In addition to the dangers facing the city and people of New Orleans, a natural habitat where birds, alligators and other wildlife thrived was threatened. MacGillivray committed to making the film in partnership with the Audubon Nature Institute and Louisiana state.

His interest was no surprise to people who knew MacGillivray and his works. He began shooting 8mm surfing films off the Southern California coast when he was 14. The teenager converted his family's garage into a mini-theater, where he screened his films for friends and neighbors. After high school, MacGillivray and his boyhood friend Jim Freeman began collaborating on the production of 16mm films, including *Five Summer Stories*, which *Rolling Stone Magazine* called "the ultimate surfing movie."

Hurricane on the Bayou

The Story be



ane on Bayou

hind the film

Their partnership lasted for more than 10 years until 1976 when Freeman was killed tragically in a helicopter crash only days before the premiere of *To Fly!*, their first IMAX theatre film. MacGillivray has subsequently produced and directed 32 other IMAX films. He earned Oscar nominations in 1996 for *The Living Sea* and in 2000 for *Dolphins*, and critical acclaim for *The Living Sea*, *Coral Reef Adventure* and *Everest*, among other films. *Los Angeles Times* film critic Charles Champlin called them "poetry in motion."

MacGillivray recruited New Orleans filmmaker Glen Pitre, whom critic Roger Ebert dubbed "the father of Cajun filmmaking," to craft a proposed storyline for *Hurricane Warning*. Pitre also helped to orchestrate some 600 interviews with New Orleans residents talking about their lives and feelings about the city. After watching tapes of about 125 of those interviews, MacGillivray chose blues guitarist and songwriter Tab Benoit, teenage jazz fiddle player Amanda Shaw, zydeco specialist Chubby Carrier, and singer/songwriter and Rock and Roll Hall of Famer Allen Toussaint to introduce the audience to the city and its people.

"We chose musicians because music is the soul of New Orleans," MacGillivray explains. "We filmed scenes with Tab, Amanda, Chubby and Allen in clubs where they performed, in their homes, and at various other places in the city and bayou."

He decided to feature one species of animal in the wetlands. MacGillivray chose alligators because they are an interesting life form that fascinates human beings. His research revealed that alligators haven't been prominent in other IMAX theatre films.

There are breathtaking shots of alligators charging the camera, chewing their dinners two feet away from the lens, and swimming above the camera as seen from the perspective of an underwater tank. There is also an emotional scene where Amanda Shaw is watching about a dozen baby alligators crawling on their mother's belly and chest. You can feel the love they shared.

MacGillivray recalls that it seemed surrealistic when he heard TV news reports about Katrina hitting the city. It was one of the strongest storms in American history.

"Hurricane Katrina changed our plans," he says. "Within days of the hurricane breaching the levees some 80 percent of New Orleans flooded. An important part of our cultural heritage was being washed away and millions of lives were shattered. I felt that we had to document that tragedy."

MacGillivray couldn't contact anyone in New Orleans the day the storm hit because all telephone communications were down. He decided it was his responsibility to go back and film the aftermath of the storm. That same day, MacGillivray put a team together, planned logistics and tried to anticipate the unknown.



Above: Scene from filmmaker Greg MacGillivray's *Hurricane on the Bayou*.

They drove trucks across the country carrying three IMAX theatre cameras, an ample amount of film, and all the other gear and supplies needed, including gasoline, huge containers of water and

enough dry food for 10 days. They also carried sleeping bags, generators and iridium telephones that could be charged. They were self-sufficient.

"We didn't have permits or permission," he says. "We made signs saying what we were doing, and talked our way through police and National Guard roadblocks. It took a couple of 16-hour days to drive from California to New Orleans."

MacGillivray also contacted Spacecam inventor Ron Goodman who brought his gyroscope system and shot aerial views of the ravaged city from a helicopter they arranged to borrow from a movie crew that was shooting in Florida. The second camera was in a boat and the third one was on the ground, usually on a tripod.

"We shot dialogue scenes with a sync-sound camera," he says. "I found out early on that you can't loop or use ADR to replace dialog, because the audience will notice out-of-sync sound in an IMAX theater when the mouth is 10 feet tall. We developed a camera that's quiet that puts the audience right there with the characters."

Bright daylight scenes were recorded on EASTMAN EXR 100T 5248 color negative film and the relatively new KODAK VISION2 500T 5218 stock was used in other circumstances. He notes that the images were at least a third sharper with a 100 percent tighter grain structure than the color negative film used to produce his earlier IMAX theatre films.

"We filmed people being rescued and working to repair the levees, and documented damage caused by the flood," he says. "We also revisited people and places that we had filmed before to see how they fared. There are stories of survival and heartbreak, including Amanda visiting the mother alligator and discovering that only a few of her babies survived. No words were sufficient to express Amanda's sorrow."

There were no hotels or other amenities, so most of the crew camped at Pitre's darkened house. They coped with multiple hazards, but MacGillivray says that their biggest concern was the presence of poisonous snakes in the bayou.

MacGillivray went back to New Orleans a third time to film Toussaint, Shaw, blues vocalist Marva Wright, Carrier, and a 20-person choir singing a gospel ode at the historic St. Louis Cathedral. Steve Wood wrote the song, which he calls "God's Good Hands" as an expression of "hope and faith."

Sassoon Film Design created computer-generated images of a hurricane hitting the coast with the wind and water roaring through the bayou and city. Those images were seamlessly composited with background plates filmed by MacGillivray and his crew. Other CGI was done by Alan Markowitz and David Keighley Productions.

"It's kind of a hybrid documentary using some narrative film techniques to recreate what happened when the storm hit," he says. "We didn't make anything up. It's exactly what happened. The visual effects recreate the membrane roof of the Superdome being torn off and a water tower toppling and crashing into the bayou."

IMAX is a compression of the words image and maximization. Images are recorded on a 70mm wide frame that is 15 perforations long. David Keighley, president of Los Angeles-based DPK 70MM, estimates that it would take 18K resolution scanning to capture all of the nuanced image information recorded on a single frame of film shot in IMAX format. DPK 70MM is a subsidiary of IMAX Corporation.

The negative was processed by Technicolor. After workprints were synchronized with sound, MacGillivray saw them projected on a 15-foot wide screen in 35mm, while seated in a theater at the proper IMAX theatre viewing angle

of about 90 degrees. His notes provided a roadmap for editing the film. Meryl Streep narrated the script, and Wood and Steve Dorand compiled a blend of jazz, blues and gospel background music for the soundtrack.

Hurricane on the Bayou premiered at the Entergy IMAX Theater in New Orleans on the first anniversary of the storm. It is scheduled for worldwide distribution to IMAX theaters around the globe. The original negative, including outtakes, are archived by DPK 70MM in a humidity and temperature controlled environment along with all of MacGillivray's previous IMAX theatre films. Keighley observes, "Greg MacGillivray's IMAX theatre films are an irreplaceable record of contemporary history. Future generations will be able to look at *Hurricane on the Bayou* and his outtakes to get an honest picture of what happened when Katrina hit New Orleans and why that tragedy occurred.

"Greg's IMAX theatre films are also frequently re-released for new generations of moviegoers. *To Fly!*, his 30-year-old first film is currently featured at the Smithsonian. There are also new geographic markets where people have never seen these films before. Some 25 IMAX screens are slated to open in the People's Republic of China by the end of 2008." ■

"There are breathtaking shots of alligators charging the camera, chewing their dinners two feet away from the lens."

Below: Filmmaker Greg MacGillivray (center) and crew members on the bayou in Louisiana preparing to shoot a scene for *Hurricane on the Bayou*.

