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SECRETARY

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**Testimony of Jack C. Caldwell, Secretary, Louisiana Department of Natural
Resources
Before the U.S. Commission on Ocean Policy on March, 7, 2002**

The State of Louisiana is honored to be on the early visit list of the U.S. Commission on Ocean Policy. We also appreciate the Commission's wise choice of the Louisiana coast as a critical focal point of ocean policy in the Gulf of Mexico. The heart of the Gulf ecosystem lies at the mouth of the Mississippi River, the Atchafalaya River and the adjacent estuaries and coastal marshes. For example, of all the commercial fish in the Gulf, over 95% spend some part of their lives in Louisiana's coastal zone.

Since the 1930s, one million acres of the nation's coastal land has been lost in Louisiana – a piece of land the size of Rhode Island. Without taking action on a scale never before attempted in the U.S., Louisiana will lose another million acres in the next 40 years. Louisiana's dramatic land loss rates threaten nearly 40 percent of the nation's coastal wetlands.

There are several reasons for the land loss. One is the leveeing of the Mississippi River, cutting off the fresh water and sediment that the river deposited during its annual floods. The sediment built new land in the river's deltaic plain and in the Chenier Plain further west. Now the levees channel the Mississippi River's sediment directly into the Gulf of Mexico and off the continental shelf and the wetlands have lost their most important source of regenerative material. However, the nation reaps the benefits of the levees, not just for protecting local infrastructure, but for meeting national needs for navigation, flood control and security.

Canals dug in the wetlands have also played a role. Numerous navigation canals have had an enormous impact on surrounding wetlands. Oil and gas exploration and development canals have encouraged salt water intrusion and disrupted the natural flow of water that keeps the wetlands healthy. Again, the nation reaps great benefits from these canals, not just during peacetime, but more importantly, in times of national crisis. Only one state pays the price.

Sea level rise and the natural sinking of the landscape intensify the problem. As the land sinks and the sea rises, more salt water is able to invade coastal areas. All of this contributes to the land loss which means that every 30 minutes, land the size of a football field converts to open water along Louisiana's coast.

Our state and the nation are facing a true emergency of profound cost. The wetlands loss represents more than just the loss of land. It represents the loss of what sustains much of the state's economy, culture and national image. It represents the loss of our nation's fundamental requirements for energy, shipping, coastal fisheries and other resources.

No state has ever experienced, or has even been threatened by, a crisis on so broad a scale – a crisis measured in ecological, economic, cultural and human terms.

Recent data shows that Louisiana's coast can be restored to a sustainable level. We must rework the coast's hydrology by implementing an engineering program larger than any our nation has ever seen and at a cost of some \$14 billion over the next 20 years. Solving the problem, however, will be far less expensive than the cost of doing nothing.

There are economic as well as environmental resources at risk.

Storm protection. Louisiana's coastal wetlands protect all of south Louisiana from storms and floods. Every 2.7 miles of wetlands absorb one foot of storm surge, which creates a natural buffer zone. The levees work in tandem with the protective wetlands. As the wetlands continue to erode, our flood protection system is compromised.

Communities and infrastructure. The people and communities of coastal Louisiana are paying the most immediate costs. Communities like New Orleans, Houma, Golden Meadow and Cameron depend on the wetlands and barrier islands for protection from storm surges. As the coast disappears, so does the region's most basic means of flood protection. Already, we are seeing the tax base of communities disintegrate. Insurance is more difficult to get and far more costly. Salt water intrusion is tainting fresh water supplies. The landscape that has supported south Louisiana culture for hundreds of years is shrinking and taking the world renowned culture with it.

Oil and gas networks. Louisiana's wetlands and barrier islands protect the nation's energy infrastructure. More than 80% of America's offshore oil and gas is produced off Louisiana's coast, and 25% of all the nation's foreign and domestic oil comes across Louisiana's shore by tanker, barge or pipeline. Our coastal zone is home to the Louisiana Offshore Oil Port, two storage sites for the Strategic Petroleum Reserve, and the Henry Hub, one of the nation's major natural gas distribution centers. As the wetlands erode, this infrastructure becomes increasingly vulnerable to damage from hurricanes and other storms.

There are more than 30,000 oil and gas wells at risk in coastal Louisiana and thousands of miles of pipelines that depend on barrier islands, cheniers and wetlands for protection. All of this is designed for sheltered, inland conditions, but is now increasingly exposed to open water. This infrastructure cannot withstand the force of Gulf water conditions and will ultimately have to be abandoned, replaced or repaired at enormous cost. Damage will impact the price and consistent delivery of oil and gas products to the nation and will increase the likelihood of oil leaks and spills, some of which could be catastrophic.

Transportation networks. More than 150 miles of protected inland waterways will be exposed to open water by the year 2050. Nearly 3,000 miles of deep and shallow-draft channels are threatened by coastal land loss. This threat impinges on national security and threatens economic markets. The continued collapse will endanger vital navigation corridors and require

taxpayers to spend billions on increased maintenance for highways, bridges and other transportation networks.

Fresh water supplies. Salty gulf water now reaches further north than ever before, affecting water for drinking supplies, agriculture and other commercial uses. In 1999, saltwater intrusion in the Gulf Intracoastal Waterway forced Terrebonne Parish to switch its source of drinking water. High salinity in Bayou Lafourche has caused temporary shutdowns of industry.

Fisheries. Every year, Louisiana's commercial and recreational fishing industries contribute over \$3 billion to the state's economy alone. Nationally, one-third of the commercial fish harvested in the lower 48 states comes from Louisiana's coastal zone. Our coastal estuaries and wetlands serve as nursery grounds for many of the nation's fish and shellfish. As the coastal wetlands disappear, so will the fisheries. By the year 2050, the annual value of lost fisheries could top \$500 million.

The consequences of coastal land loss affect every American citizen. In Louisiana, our economy will shrink as industrial activities cease, cities and towns are abandoned, and our tax base washes away. From farmers in the Midwest, to city dwellers in the northeast, to manufacturers in California, the entire nation's quality of life and economy will be harmed by Louisiana's coastal crisis.

The Federal government's revenue streams will also be affected as the Corps of Engineers, the Federal Emergency Management Agency, the Environmental Protection Agency, and other agencies are forced to spend taxpayer funds to offset those disastrous effects of wetlands loss.

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