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Matt Irwin

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CATEGORY 3 WAKE-UP CALL:

RECOGNIZING THE IMPORTANCE OF MISSISSIPPI DELTA RESTORATION

by Matt Irwin*

Louisiana is losing its coastal wetlands and barrier islands at the fastest rate of any U.S. state: the Gulf of Mexico has claimed an area roughly the size of Delaware since the 1930s.¹ The main cause of wetland loss is human activity, specifically isolating the Mississippi River from the Mississippi Deltaic Plain (“MDP”) by building levees to control natural flooding and canals.² Congress and the Louisiana legislature have increased efforts to restore the MDP in the wake of the destruction caused to the Gulf Coast by Hurricanes Katrina and Rita.³

MDP restoration can have both indirect and direct positive effects in dampening flooding caused by future storms. Indirectly, the main cause of sediment loss to the MDP and flooding after Hurricane Katrina was the 15,000 km of canals dredged in the MDP.⁴ The canals, built since the 1950s, have “sliced the wetlands into a giant jigsaw puzzle, increasing erosion and allowing lethal doses of salt water to infiltrate brackish and freshwater marshes.”⁵ Computer models suggest that these same canals, mostly the Mississippi River Gulf Outlet canal (“MRGO”), helped channel the storm surge from Hurricanes Katrina and Rita into the sub-sea level parishes in the New Orleans area.⁶

Thus, it would seem that proposed efforts to reconstruct the MDP wetlands by reconnecting the Mississippi River to the MDP through backfilling canals and the MRGO would cut off the very channels that brought flood waters into New Orleans during Hurricanes Katrina and Rita.⁷

Restoration of the MDP can also have a more direct effect on decreasing the volume of flood waters that threaten the Louisiana coast during hurricanes and other tropical storms. There is no exact measurement of the amount of protection that wetlands provide against a hurricane’s storm surge.⁸ Data collected after Hurricane Andrew demonstrates that a kilometer of coastal wetland decreases storm surge by 5 cm.⁹ Computer models simulating a Category 3 hurricane hitting south-central Louisiana estimate that the past 40 years of wetlands decline results in a 2.5 to 3 meter increase in the height of storm surge.¹⁰ Although wetland restoration alone will not provide much protection from Gulf Coast hurricanes,¹¹ the buffer effect of wetlands combined

with restoration efforts that close sediment robbing canals might provide an environmentally sustainable complement to levees that can protect New Orleans and the surrounding parishes from flood damage on the level seen after Hurricanes Katrina and Rita.¹²

Perhaps the most important reason for Louisiana’s wetlands restoration is the abundance of natural resources provided by the MDP wetlands. Louisiana’s wetlands provide a third of the nation’s oil and a quarter of its natural gas,¹³ and the MDP provides habitats for \$3 billion worth of oysters, shrimp, and fish.¹⁴ This same area is also a priceless wildlife habitat.¹⁵ Congressional and state spending on wetlands restoration after Hurricanes Katrina and Rita also furthers other national priorities.

Congress first recognized the need to restore the MDP in 1990 with the Coastal Wetlands, Planning, Protection, and Restoration Act (“CWPPRA”). The CWPPRA provided \$50 million per year to the U.S. Army Corps of Engineers to implement projects to restore the MDP.¹⁶ In 1998 Congress recognized that restoration efforts must be increased and commissioned the Coast 2050—Toward a Sustainable Coastal Louisiana Plan and the associated U.S. Army Corps of Engineers Louisiana Coastal

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Area Ecosystem Restoration Study (“LCA Study”).¹⁷ The LCA Study stated that various restoration efforts to achieve ecosystem benefits would cost from \$5 billion to \$17 billion.¹⁸ The Office of Management and Budget instructed the Army Corps of Engineers to scale back this plan. However, the Army requested only \$1.12 billion from Congress in the Water Resources Development Act (“WRDA”) in 2005.¹⁹ The WRDA has recently been the subject of the first override of a President G.W. Bush veto. On November 6, 2007 Congress overrode President Bush’s veto of the WRDA, appropriating \$23 billion for over 900 water supply, flood control, navigation, and environmental restoration projects.²⁰ The WRDA includes billions of dollars to restore the Louisiana coast.²¹

*Matt Irwin is a JD candidate, May 2009, at American University Washington College of Law

State level efforts to prepare the Louisiana Gulf Coast after Hurricanes Katrina and Rita will have a mixed effect on MDP restoration. The Louisiana Coastal Protection and Restoration Project (“LCPRP”), directed by both Congress and the state of Louisiana, has thus far only dealt with manmade hurricane protection barriers, such as levees and floodgates, which could pose a threat to the sustainability of the MDP.²² At the same time, however, Louisiana has dedicated its share of newly opened oil and gas tracts provided by the federal Gulf of Mexico Energy Security Act (“GMESA”) to coastal restoration and protection.²³ It therefore remains to be seen how the money appropriated under the GMESA will coexist with the hurricane protection efforts proposed under the LCPRP.

Science, not politics, needs to determine U.S. policy toward wildlife.

There are several factors that justify restoration of the MDP, including storm protection, natural resource extraction, and natural habitat. Whatever motivation exists for MDP restoration, the monetary cost will be one so large that it will require a resolute federal government to provide funding. One can only hope that Hurricanes Katrina and Rita brought enough awareness to the issue of MDP restoration that politics will subside to sound scientific analysis and action.

The recent efforts by Congress to override a presidential veto and pass the WRDA is only a first step to a more comprehensive and sustainable approach to MDP restoration and development.



Endnotes:

¹ Joel K. Bourne, Jr., *Gone with the Water*, Nat’l Geographic, Oct. 2004, available at <http://magma.nationalgeographic.com/ngm/0410/feature5/index.html> (last visited Nov. 20, 2007).

² John W. Day, Jr., et al., *Restoration of the Mississippi Delta: Lessons from Hurricanes Katrina and Rita*, SCIENCE, Mar. 23, 2007, at 1679, 1680.

³ Jeffrey A. Zinn, *Coastal Louisiana Ecosystem Restoration After Hurricanes Katrina and Rita* (CRS Report, Report No. RS22276, 2006), available at <http://www.nationalaglawcenter.org/assets/crs/RS22276.pdf> (last visited Nov. 20, 2007) [hereinafter *Coastal Louisiana*].

⁴ Day, *supra* note 2, at 1680.

⁵ Bourne, *supra* note 1.

⁶ Erik Stokstad, *After Katrina: Louisiana’s Wetlands Struggle for Survival*, SCIENCE, Nov. 25, 2005, at 1264, 1265.

⁷ Day, *supra* note 2, at 1681.

⁸ Stokstad, *supra* note 6, at 1266.

⁹ Stokstad, *supra* note 6, at 1266.

¹⁰ Stokstad, *supra* note 6, at 1266.

¹¹ Stokstad, *supra* note 6, at 1266. See generally *Coastal Louisiana*, *supra* note 3.

¹² Day, *supra* note 2, at 1681.

¹³ Bourne, *supra* note 1.

¹⁴ Stokstad, *supra* note 6, at 1266.

¹⁵ Bourne, *supra* note 1.

¹⁶ Day, *supra* note 2, at 1682.

¹⁷ Day, *supra* note 2, at 1683.

¹⁸ Day, *supra* note 2, at 1683.

¹⁹ Day, *supra* note 2, at 1683.

²⁰ Environmental News Service, *Congress Overrides Bush Veto of Water Resources Development Act* (Nov. 8, 2007), available at <http://www.ens-news-wire.com/ens/nov2007/2007-11-08-02.asp> (last visited Nov. 20, 2007) [hereinafter *Congress Overrides Bush*].

²¹ *Congress Overrides Bush*, *id.*

²² Day, *supra* note 2, at 1683.

²³ Day, *supra* note 2, at 1683.