Building a Resilient Virginia
Virginia Coastal Policy Center
Dale Morris, Director of Strategic Partnerships
• The Water Institute of the Gulf is an independent, not-for-profit, research organization providing advanced understanding and technical expertise to support management of coastal, deltaic and riverine water systems, within Louisiana, the Gulf Coast and around the world.

• The Water Institute is Restore Act Center of Excellence for the Louisiana Coastal Master Plan.

• The work of the Institute helps ensure livable communities and a thriving economy and environment.
COASTAL LOUISIANA

1,880 square miles lost since the 1930s

Currently losing over 16 square miles per year
NEW APPROACH SOUGHT

- Louisiana leaders look for new approach to water management
- Multiple trips to Netherlands and Deltares
- Determined need to set up a research institute based on Deltares model
WATER INSTITUTE RESEARCH FOCUS AREAS

- INTEGRATED WATERSHED MANAGEMENT
- RESILIENT COMMUNITIES
- DYNAMICS OF RIVERS, DELTAS, AND COASTS
- ECOSYSTEM-BASED MANAGEMENT
- HUMAN AND NATURAL SYSTEMS MODELING
AN INTEGRATED APPROACH TO SOLVING THE CHALLENGES OF COASTAL LOUISIANA AND THE MISSISSIPPI RIVER DELTA

Modeling and Monitoring
Policy Research
Coastal Systems Ecology
Engineering Design and Innovation
Physical Processes and Sediment Systems
Human Dimensions
MID-BARATARIA DIVERSION
MID-BRETON DIVERSION
ADAPTIVE MANAGEMENT
NATURE-BASED SOLUTIONS
PORT FOURCHON
REAL TIME FORECASTING FLOOD WARNING SYSTEMS (CALCASIEU)

- Coupling with NWS & other NOAA Forecasting tools
- Expand streamflow forecasting with urban hydrology to capture continuous development

- Coupling watershed models with Coastal models
- Capture SLR & Surge

- Atmospheric Forecast Model

- River Forecast Model

- Gulf Forecast Model
FLOOD MODEL AND REAL TIME FORECASTING
CONSISTENCY & COORDINATION IS KEY TO EFFECTIVE STATEWIDE PLAN

HUC-8 Watersheds in Louisiana

- Parish boundaries
- HUC-8 watershed boundaries
- Parishes with ongoing studies or detailed models
- HUC-8 watersheds with updated 2D base level engineering models
BEYOND

--Secretariat of the Pacific Regional Environment Programme
--Office of Naval Research in the Mekong Delta
--Coastal Chile
--TX Coastal Studies
--Post-Harvey Houston, 100 Resilient Cities
--South Carolina
THANK YOU

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