



Louisiana Department of Transportation and Development: Coastal Flood Risk and Resilience

Presented by the Coastal Protection and Restoration Authority and the Louisiana State University Economics & Policy Research Group

Coastal Flood Risk in Louisiana

Every day, the lives and livelihoods of our residents are affected by the challenge of wetland loss along Louisiana’s Gulf Coast. **Whether you live along the coast or inland, the impacts of land loss and coastal storm surge-based flood risk ripple across our state.** While the cost of hurricane impacts may total in the billions of dollars, the effects are also uniquely personal. A family may be forced to leave a community they have called home for generations after their house is damaged by a storm; a local business may have trouble affording flood insurance; or flooded roadways may disconnect people from their homes, schools, workplaces, or other essential services on which they rely.

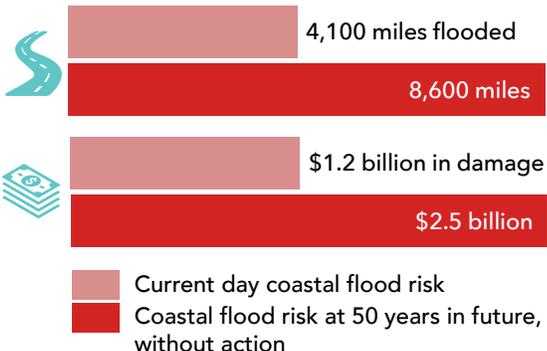
Coastal Flood Risk to Roadways

Current Day Risk

Roadways face increasing risk from coastal storm surge-based flooding over the next 50 years. Under **current day** conditions, a 1% annual chance flood event could impact approximately **4,100 miles of road in coastal Louisiana.** This flood event would cause approximately \$1.2 billion in repair and replacement costs.

Future Risk Without Action

However, impacts from the same 1% annual chance flood event **occurring 50 years in the future without additional protection or restoration actions** could have significantly more severe impacts on roadways. In fact, **109%-150% more miles of road would be impacted** from such a flood event in comparison to today. This includes **8,600-10,300 miles of roadway** that could be impacted by coastal flooding. This would also mean an increase of 106-146% in costs to repair or replace roadways, or approximately **\$2.5-3.0 billion.**



Flooding Across the Coast

Some roadways will be more vulnerable to future coastal flood risk than others. For example, in 50 years without the implementation of master plan projects, **Interstate 10 (I-10)** may face approximately **50-70 miles of flooded road**, which is up to **53% of the I-10 interstate highway located in coastal Louisiana.** This also amounts to **\$35-47 million in repair or replacement costs.** As I-10 is the state’s primary artery running from Texas to Mississippi, the interstate has one of the highest counts of daily average traffic in the region with **124,000 vehicles passing along the highway in some places.** Increased flood risk could disrupt the routes of many local, regional, and interstate commuters who drive along the highway.

Another major road at risk is **Highway 90 (Hwy 90)**, which also stretches from the Texas to Mississippi border. Hwy 90 may see **100-120 miles of flooded road**, which is up to **56% of the Hwy 90 roadway that is located in coastal Louisiana,** and which would amount to **\$51-64 million in repair and replacement costs.**

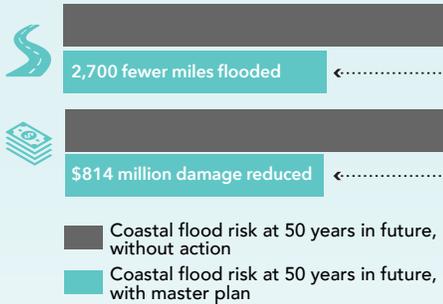


We encourage all Louisiana Department of Transportation and Development employees to learn more about Louisiana’s changing coastal landscape, the potential impacts to roadways, and the communities most affected by this risk. The Coastal Protection and Restoration Authority (CPRA) through the 2017 Coastal Master Plan is also working to create safer communities and a more sustainable landscape. Together, we can plan for more resilient and prepared transportation infrastructure system.

Learn more about how we can work to reduce the impacts of coastal flooding on transportation.

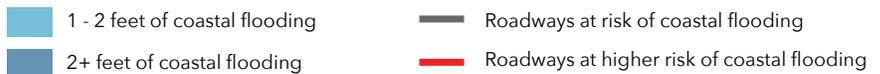
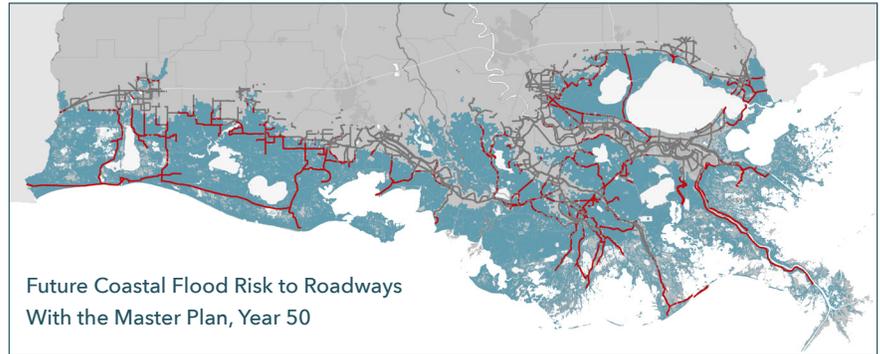
How Do We Look Toward the Future?

With the 2017 Coastal Master Plan, we can significantly reduce these risks. For instance, we can achieve a **69-75% reduction in the number of miles of road impacted by coastal flood risk**, in comparison to a future without the plan. This means that **2,500-2,700 fewer miles of roads would be impacted** by coastal flood risk, along with **\$782-814 million in reduced repair and replacement costs**.



While we have the opportunity to make great progress in reducing risk through the implementation of the master plan, the impacts of coastal flood risk to Louisiana's roadways will be greater in 50 years than they are today.

For instance, in the future, there may be **43%-89% more miles of roadway flooded than today**. This amounts to an increase of **1,800-3,700 miles of flooded roadway** and an increase in repair and replacement costs of **\$464-990 million**.



Louisiana's transportation infrastructure faces increasing impacts from coastal flood risk. The impacts of disconnected or damaged roadways can have devastating impacts to individuals and families, businesses, and communities.

The State of Louisiana is working to create a bright and resilient future, and the 2017 Coastal Master Plan recommends a diversity of projects to build land and reduce coastal flood risk to achieve that future. Still, it will take an unprecedented effort by government, the private sector, and coastal communities to improve the sustainability of our coast. We are proactively preparing for a bright future in an ever-changing landscape.

Louisiana's Coastal Master Plan



2017 Coastal Master Plan
<http://coastal.la.gov/our-plan/2017-coastal-master-plan>



Master Plan Data Viewer
<http://cims.coastal.louisiana.gov/masterplan>



Flood Risk and Resilience Program
<http://coastal.la.gov/our-plan/2017-coastal-master-plan/flood-risk-and-resilience-program>

Story Map

Louisiana's Working Coast
<https://arcg.is/9fjen>

