River Basin Flood Studies

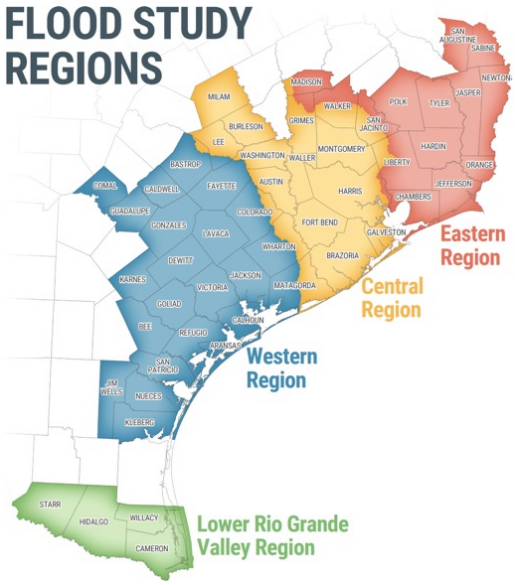
Understanding and Addressing Flood Risk

Technical Process Fact Sheet

At A Glance

Since 2020, the Texas General Land Office's River Basin Flood Study (RBFS) has sought to **improve flood resilience through a unified approach to understanding and mitigating flood risk.** All four RBFS regions implemented the same core process of assessing flood risk, prioritizing relatively high risk areas, and developing potential flood mitigation projects for those areas. Throughout this process, each region tailored their approach based on local data, vulnerabilities, and needs to support the development of flood mitigation projects in the most susceptible areas.

Below is the technical process that each RBFS region followed.



Data Collection and Stakeholder Engagement

- Gather community input through surveys, workshops, and town halls to guide region-specific priorities.
- Combine existing data and local knowledge to inform regional flood modeling.

Flood Risk Assessment

- Identify priority areas using modeling tools, community data, and stakeholder input.
- Apply detailed modeling in high-risk zones for a comprehensive understanding of flood risk.

Baseline Flood Modeling

- Create detailed models for prioritized areas to enhance understanding of flood risk.
- Use these models and other best-available data to refine flood risk hot spots.

Identification of Mitigation Projects

- Partner with stakeholders to advance projects to mitigate flood risk in defined hot spots.
- Consider both structural and non-structural strategies to improve resilience.

Determination of Funding Sources and Technical Assistance

- Help stakeholders access funding aligned with unique community needs.
- Provide technical guidance to support project implementation.

How were the High Risk Flood Areas Determined?

The RBFS relied on core datasets such as social vulnerability, critical infrastructure, repetitive loss properties, and flood insurance claims to determine high risk areas, as well as flood risk data from FEMA's National Risk Index. Each region then tailored their approach to their communities, emphasizing different factors in their risk assessment.

Regional Tailoring to Assess Flood Risk

WEST
Supported rural and fast-growing coastal communities to build resilience in a data-sparse region.

CENTRAL
Leveraged available data and model detail commensurate with flood risk for full model coverage of the region.

EAST
Organized risk assessments by river basin to address distinct basin-specific flood risks.

LRGV
Combined cumulative risk scoring with emphasis on urban density, coastal surge, agricultural lands, structures, and roads.

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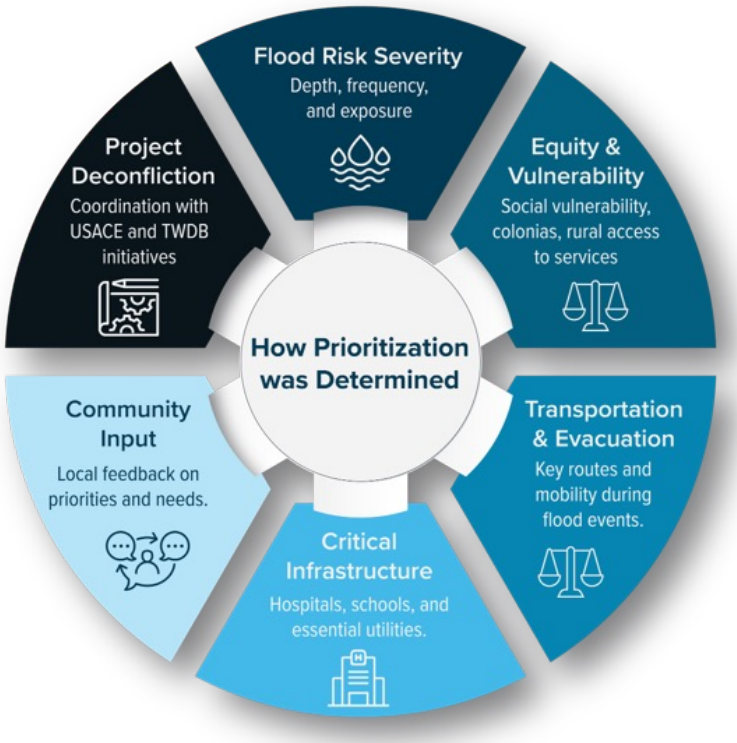
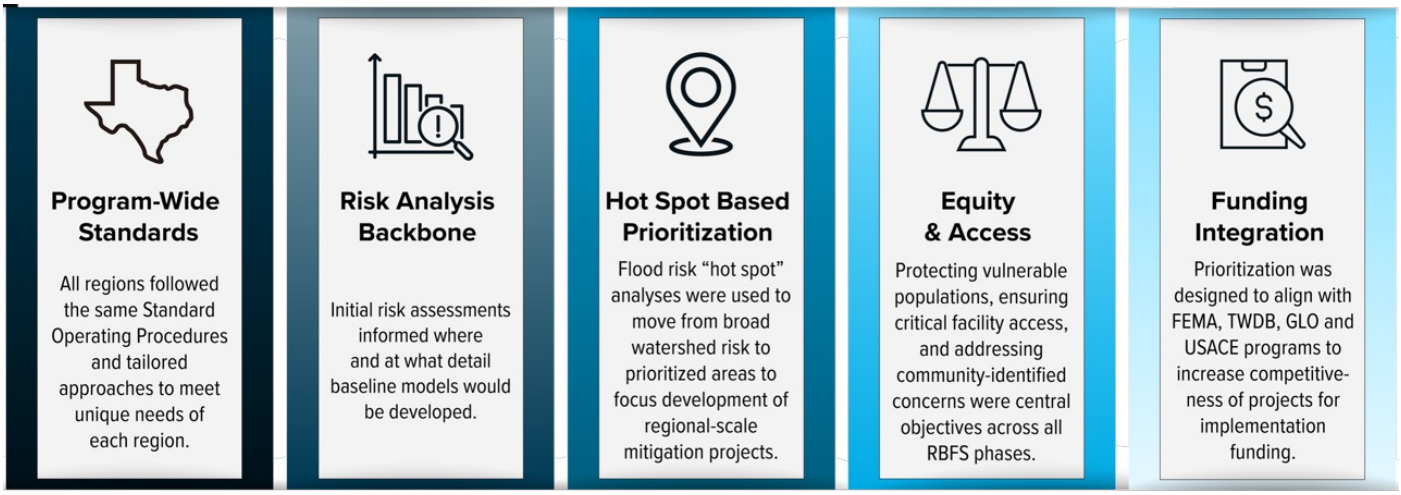
From Baseline Flood Modeling to Action

In determining flood risk **"hot spots"** where potential projects will be developed, risk assessments took numerous factors into account.



Key Factors Driving RBFS Decision-Making



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Questions?

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