Task 8: Administrative, Regulatory, and Legislative Recommendations

Source: Texas Water Development Board

As outlined in the Texas Water Development Board (TWDB) rules and guidelines for regional flood planning, the Regional Flood Planning Groups (RFPG) may adopt recommendations on policy issues related to floodplain management and flood mitigation planning and implementation. Specifically, the RFPGs may adopt:

1. Legislative recommendations are considered necessary to facilitate floodplain management and flood mitigation planning and implementation.
2. Other regulatory or administrative recommendations are considered necessary to facilitate floodplain management and flood mitigation planning and implementation.
3. Any other recommendations that the RFPG believes are needed and desirable to achieve its regional flood mitigation and floodplain management goals.
4. Recommendations regarding potential, new revenue-raising opportunities, including potential new municipal drainage utilities or regional flood authorities, that could fund the development, operation, and maintenance of floodplain management or flood mitigation activities in the Region.

Legislative, regulatory, and administrative recommendations adopted by the Lower Colorado-Lavaca Regional Flood Planning Group follow.

Legislative Recommendations

Some flood-related policy issues require approaches and solutions that require action by the Texas Legislature, either establishing new or amending authorities or programs through statute or new or increased appropriations through the state budget process. *Table 8.1* presents recommendations for flood planning, flood risk mitigation, and funding adopted by the Lower Colorado-Lavaca RFPG that will require legislative action.

Table 8.1 Legislative Recommendations

ID Number	Recommendation	Rationale for Recommendation
8.1.1	Extend Local Government Code, Title 13, Subtitle A, Chapter 552 to allow counties to establish drainage utilities and collect drainage utility fees in unincorporated areas.	Municipalities in Texas have the statutory authority to establish public utilities to provide various services to their residents, including drainage. Municipal public utilities can assess and collect user fees to fund operations and maintenance for land acquisition and implement drainage improvement and flood risk reduction problems. By comparison, counties in Texas have floodplain, drainage, and flood mitigation responsibilities but do not currently have the authority to establish drainage utilities. This limits the ability of counties to self-finance flood mitigation and drainage projects and provide adequate ongoing maintenance of drainage and flood mitigation infrastructure.
8.1.2	TWDB should investigate legal impediments and potential legislative or other remedies to the use of local government funds for the elevation and/or floodproofing of privately-owned structures at-risk of severe flooding.	Elevation and/or floodproofing of existing at-risk structures may be preferable to buyouts or other flood risk reduction measures in some situations (e.g., less cost, avoids displacement, no ongoing O&M). However, local entities in Texas cannot use local funds to improve private properties. Local entities can use local resources to assist with implementing FEMA-funded elevation/floodproofing projects, but they cannot directly contribute to local funding. By comparison, municipalities in Texas do have the legal authority to expend local funds to purchase and remove privately-owned structures at risk of flooding, the primary difference being that the local entity owns the property in question and therefore retains the public benefits in perpetuity.
8.1.3	Establish and provide state budget appropriations and/or assess fees to fund the implementation of a levee	Levees are typically designed and constructed to meet specific standards for FEMA certification under the NFIP. However, unlike dams, there is no state levee safety program even though levee failures may pose a significant flood risk to the assets they are intended to protect.

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	safety program similar to the TCEQ dam safety program.	
8.1.4	Enact legislation updating the state building code to a more recent edition (e.g., the 2018 edition of the International Building Code and International Residential Code).	Without a current mandatory state building code, local entities in Texas do not score competitively for some federal funding programs, such as FEMA's Building Resilient Infrastructure and Communities (BRIC) Grant.
8.1.5	Provide ongoing state appropriations to the TWDB for additional grant funding for Regional Flood Planning Groups to continue functioning during the interim between planning cycles.	It is important that momentum gained in the first regional flood planning cycle be maintained in the interim between planning cycles. Additional ongoing funding would enable the RFPGs to continue to meet and function; conduct ongoing public and stakeholder outreach and engagement thin their respective regions; consider additional FMEs, FMPs, and/or FMSs that may be identified; amend the Regional Flood Plan as needed, and allow RFPGs to implement RFPG-sponsored activities and programs (e.g., a targeted outreach, and technical assistance program to local entities for enhanced floodplain management and floodplain and land use regulation).
8.1.6	Increase state funding and technical assistance to develop accurate watershed models and FEMA Flood Insurance Rate Maps (FIRMs). The TWDB should consider mapping updates as a high priority for future flood planning grants through the Flood Infrastructure Fund.	Accurate floodplain models and maps are essential to effective floodplain management and are a prerequisite for thorough evaluations of flood risk and evaluating flood risk reduction measures. Many local entities that participate in the NFIP or are eligible to participate lack FEMA Flood Insurance Rate Maps (FIRM) or are using outdated maps. Grant funding and technical assistance are available through the FEMA Cooperating Technical Partners (CTP) Program, administered by the TWDB and the City of Austin within the Lower Colorado-Lavaca Region. The TWDB also funds watershed modeling and mapping studies through the Flood Infrastructure Fund (FIF). Additional funding is needed for these recommended Flood Management Evaluations, of which seven (7) are included in the Lower Colorado-Lavaca Regional Plan.
8.1.7	Establish and fund a state program to assist counties and cities with assessing and prioritizing	There are an estimated 1,352 low water roadway crossings (LWC) within the Lower Colorado-Lavaca Region. Many of these crossings experience frequent flooding but may have relatively minor flood risk in terms of public safety and/or the

ID Number	Recommendation	Rationale for Recommendation
	low water crossings. Funding should also be provided on a cost-sharing basis to implement structural and/or non-structural flood risk reduction measures at high-risk, low water crossings. The design of improvements to reduce roadway crossing risk should consider potential environmental impacts and measures to minimize impacts, particularly impact to aquatic ecosystems including the plant and animal species that depend on those ecosystems.	integrity of the roadway. Others, however, are at high-risk and experience flood depths and velocities that pose a significant risk. While there are some historical records of fatalities and other public safety issues at some LWCs, much of the available information is anecdotal, and the risk has not been fully assessed. Furthermore, the cost to mitigate flood risk at high-risk LWC with structural solutions (e.g., bridges) is typically very high and often prohibitive. Therefore, it is important that the flood risk at LWCs be systematically and fully evaluated to prioritize those LWCs needing mitigation, either through structural or non-structural (e.g., closures, reverse 911 notifications) measures. This program could be implemented by TxDOT, TDEM, and/or TWDB independently or in collaboration with one another. Note that this recommendation is a companion to a Flood Management Strategy included in the Lower Colorado-Lavaca Regional Plan. Additionally, there are 36 FMEs and 22 FMPs that are recommended in the Lower Colorado-Lavaca Regional Plan that address high-risk LWCs.
8.1.8	Consider establishing property tax incentives to protect stream corridors by private landowners.	The Lower Colorado-Lavaca RFPG has recommended a regional Flood Management Strategy (FMS) to encourage collaboration among governmental and non-governmental organizations and private property owners to undertake voluntary actions to protect, manage, and restore stream corridors, particularly in rural areas. This strategy complements another regional FMS focused on encouraging the adoption of higher or enhanced floodplain and land development standards and regulations, which could include the protection of stream corridors within urban areas. This recommendation is to establish a new special tax assessment category (a property tax exemption) to protect stream corridors on qualified agricultural land. This is envisioned to be similar to current state law, allowing the agricultural appraisal of land used to manage wildlife.

Regulatory and Administrative Recommendations

Other flood-related policy issues will not require legislative action but could be addressed through state agency regulations or administrative actions promulgated or taken under existing statutory authority and implemented with existing and/or increased state agency resources. *Table 8.2* presents recommendations adopted by the Lower Colorado-Lavaca RFPG that involve administrative and/or regulatory action by one or more state agencies.

Table 8.2 Regulatory and Administrative Recommendations

ID Number	Recommendation	Rationale for Recommendation
8.2.1	The TWDB should actively promote the establishment of local drainage utilities, where appropriate, to provide a stable and predictable funding source through assessing drainage fees and to support ongoing operations and maintenance (O&M) of existing flood mitigation and other drainage infrastructure. This should include the provision of technical assistance with the creation of local drainage utilities.	State law (Local Government Code, Title 13, Subtitle A, Chapter 552) allows municipalities to establish local drainage utilities. This included assessment of fees to support drainage utility operations, including administration of floodplain management and implementation and enforcement of floodplain and drainage regulation, and to self-finance investments in flood risk reduction infrastructure, structural and non-structural. Having a stable and predictable funding source is conducive to long-range planning and the timely development and implementation of flood risk reduction projects. Absent of the creation of a drainage utility, local governments typically fund floodplain management and regulatory programs, O&M of drainage, and flood risk reduction infrastructure with general tax revenues and/or municipal bonds secured and serviced with local tax revenues. At present, only three municipalities in the Lower Colorado-Lavaca Region have established a drainage utility, one of which, the City of Austin, encompasses a large portion of the population of the Lower Colorado-Lavaca Region. It is recognized, however, that not all municipalities require or are well-suited to establish drainage utilities as there is overhead associated with the administration of such utilities. Municipalities best suited to having drainage utilities are typically larger communities, communities with extensive networks of aging drainage infrastructure, and communities that are experiencing high levels of growth and development.

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8.2.2	TxDOT should employ roadway design criteria to require all new and reconstructed state roadways to be designed and constructed, to the extent practicable, at elevations at or above the 1% annual chance event water surface elevation. TxDOT should also consider future conditions, such as urbanization and climate variability, in its roadway design criteria for drainage and flood risk reduction.	TxDOT is not a participant in the NFIP and does not, in all cases, design roadways in a manner consistent with minimum NFIP requirements. It is recognized that, by their nature, it is often not feasible or practicable to design and construct roadways to provide a level of flood protection equivalent to or greater than the 1% annual chance storm event (100-year) event. However, concerning policy and practice, TxDOT should strive to meet this standard.
8.2.3	Revise the scoring criteria for funding associated with stormwater and flood-related projects that benefit agricultural and/or rural areas.	Commonly used benefit-cost analysis methods and tools skew towards protecting the high-value public and private assets, those typical of urbanized areas. In terms of benefit versus cost, projects that reduce flood risk to agricultural and/or rural assets do not compare/compete well with projects benefiting urban areas.
8.2.4	The TWDB should continue to include and refine its criteria for evaluating and ranking applications for financial assistance for flood risk mitigation studies and projects, considerations of social vulnerability (SVI scores), and other social, economic, and environmental resilience and sustainability measures. This should include modifying the benefit-cost methodology to account for such factors rather than relying solely on traditional measures of benefit (e.g., avoidance of flood losses to property, the value of infrastructure to be constructed, etc.).	In the first round of funding from the Flood Infrastructure Fund, The TWDB requested information and consideration about the social vulnerability and the socioeconomic attributes of the populations of areas for which funding is being sought. Other TWDB programs also consider such factors (e.g., the Economically Distressed Areas Program, commonly known as the colonias program). This is important as many local entities have a limited ability to self-finance flood risk reduction measures and serve economically disadvantaged populations with relatively low resilience in terms of the ability to recover from flood damages.

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8.2.5	Provide direct technical assistance to economically distressed communities and/or those with high social vulnerability with the preparation of funding applications for federal and/or state financial assistance for flood planning and implementation of flood risk reduction measures.	Currently available federal and state financial assistance programs for flood planning and the development and implementation of flood risk reduction measures often require significant effort and specialized technical capabilities to prepare applications for financial assistance. Smaller entities, those considered economically distressed, and those with high social vulnerability typically lack the staff resources, expertise, or funds to hire consultants to develop and compile the information required for funding applications.
8.2.6	Reduce or eliminate barriers to and provide incentives for the planning, funding, and implementation of inter-jurisdictional flood risk reduction measures, either structural and/or non-structural.	Flooding occurs within watersheds and does not recognize jurisdictional or political boundaries. Through interlocal agreements and other mechanisms, local entities can collaborate and share the costs of implementing flood management activities and flood risk reduction projects. This should be encouraged and perhaps incentivized by the state. The TWDB and other state agencies should evaluate and take action, as appropriate, to reduce or eliminate barriers to and/or implement measures to encourage and incentivize greater inter-jurisdictional collaboration (e.g., added points in TWDB's project scoring/ranking).

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8.2.7	In collaboration with FEMA, other state agencies, and professional organizations (e.g., ASCE, TFMA), the TWDB should expand its flood-related professional education, training, and technical assistance programs and activities. This should include targeted outreach and technical assistance to entities not currently participating in the NFIP and to participating NFIP communities with a need or interest in adopting higher floodplain management and floodplain, drainage, and land use regulations. In delivering such services, consideration should also be given to partnering with and providing funding support to RFPGs to deliver professional education, training, and technical assistance. Also, see Regulatory and Administrative recommendation 8.2.9.	The TWDB, FEMA, other state agencies, and other organizations (TFMA) each support professional education, training, and technical assistance programs. The audience for these programs is typically elected and professional local officials, particularly those lacking the knowledge, expertise, and resources required to implement effective floodplain management practices and other preventative measures. Communities that are not NFIP participants may not fully understand the benefits of joining the NFIP. Cities and counties may not fully understand their current authority to establish and enforce higher floodplain management and land development standards over and above NFIP minimums.

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8.2.8	Allow small communities to benefit from the TWDB Flood Infrastructure Fund (FIF) incentives for green and nature-based projects by 1) working with Texas Municipal League, Texas Association of Counties, and Texas Floodplain Management Association to train community officials on the basics of Low Impact Development (LID) and Green Stormwater Infrastructure (GSI); 2) developing model ordinances for use by small communities in establishing LID and GSI regulations, such as green street design standards; 3) publicizing and assisting RFPGs to publicize successfully implemented GSI projects; 4) adjusting cost-benefit analysis calculations as needed to include environmental values; and 5) by setting aside a percentage of FIF funds for smaller communities that may not be able to otherwise meet FIF incentives for green and nature-based projects.	There are various terms and concepts that are used to describe and characterize "green and nature-based" approaches to flood risk reduction. One such term is Low Impact Development (LID), which the U.S. EPA defines as "systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater to protect water quality and associated aquatic habitat." Further, LID is "...an approach to land development (or re-development) that works with nature to manage stormwater as close to the source as possible". EPA also uses the term Green Infrastructure (GI) "...to refer to the management of wet weather flows that use these processes, and to the patchwork of natural areas that provide habitat, flood protection, cleaner air, and cleaner water." Green Stormwater Infrastructure (GSI) is a related concept that typically refers to engineered systems that "...are designed to mimic nature and capture rainwater where it falls." LID, GI, and GSI practices are often focused on the protection of water quality but can also contribute flood risk reduction.

Flood Planning Recommendations

The first regional flood planning process has been a learning experience for all involved – the TWDB, RFPGs, sponsors, technical consultants, and the public. It is important that lessons learned be captured and, as appropriate, incorporated into the TWDB rules and guidance for regional flood planning to improve the process as we advance into the second planning cycle. *Table 8.3* below presents the Lower Colorado-Lavaca RFPG recommendations pertaining to potential improvements in the regional flood planning process. Additionally, the Lower Colorado-Lavaca RFPG recommends that the TWDB convene a series of lessons learned workshops, at or near the conclusion of the first regional flood planning cycle, in various areas of the state to obtain feedback from the RFPGs, sponsors, and technical consultants.

Table 8.3 State Flood Planning Recommendations

ID Number	Recommendation	Rationale for Recommendation
8.3.1	Use consistent Hydraulic Unit Code (HUC) reporting requirements throughout the TWDB-required tables.	The RFPG Guidance requires HUC-8 in some tables, HUC-10 in other tables, and HUC-12 in other tables. Some tables require multiple HUCs to be provided. The RFPG recommends that the TWDB require HUC-8 in all TWDB-required tables for consistency and to correspond to FEMA's base level watershed planning spatial granularity.
8.3.2	Use FEMA's Social Vulnerability Index (SVI) instead of the CDC SVI in future planning cycles. SVI should not be the primary component considered when allocating funding.	FEMA's SVI is reasoned to be more directly relevant to flood resiliency and flood risk reduction than the CDC's SVI.
8.3.3	Clarify the phrase "flood-related authorities or entities," what local and regional governmental entities are included, and which are not.	The phrase is used in the TWDB planning documents multiple times and is a central part of Tasks 1 and 10. The TWDB originally provided the RFPG with a list of entities that were thought to have flood-related responsibilities. During the outreach efforts, many of those entities communicated they did not have flood responsibilities and did not believe they should be included in the regional flood planning effort. Note, however, that some political subdivisions of the state, such as water control and improvement districts (WCID) or municipal utility districts (MUD), do have authority to develop and maintain drainage and other related infrastructure, such as stormwater conveyance systems and detention facilities.

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8.3.4	Clarify the distinction between flood mitigation and flood infrastructure and what is more commonly considered drainage infrastructure.	Many local entities, for example, municipal utility districts, have drainage responsibilities, particularly with respect to the development of land within their jurisdictions and the maintenance of drainage infrastructure, such as storm drain systems. These entities may or may not also develop what might be considered flood risk reduction infrastructure. Also, most local drainage problems and deficiencies in local drainage infrastructure are very localized and sometimes cause what can be characterized as "nuisance" flooding rather than posing significant risk and exposure to people and property. In future planning cycles, it would be helpful to delineate this distinction as best as possible. For example, the TWDB guidance regarding flood exposure and vulnerability could be refined to better emphasize identifying and mitigating significant risks to public safety, property, and public infrastructure.
8.3.5	Streamline the data collection requirements, specifically those identified in Task 1. Focus on collecting the most useful data for the regional flood plan development.	This first round of regional flood planning revealed that very few local entities collect and maintain data and information prescribed by the TWDB for use in the planning process. This is particularly the case with data available in a digital geospatial format. Also, some required data (e.g., drainage infrastructure) was not available, is of questionable value in the planning process, and is generally unavailable. As noted in the previous recommendation, most problems associated with drainage infrastructure do not present significant flood risk and are best characterized as nuisance flooding.
8.3.6	Update the scope of work, guidance documents, rules, checklists, etc., based on the clarifications, interpretations, and adjustments made during the first regional flood planning cycle.	During the first cycle of the State Flood Plan, multiple amendments, additions, interpretations, clarifications, and adjustments were made to the TWDB requirements and guidance. These adjustments should be incorporated, as appropriate, into TWDB requirements and guidance documents for the second regional flood planning cycle.

ID Number	Recommendation	Rationale for Recommendation
8.3.7	Reassess and relax, as appropriate, requirements for potentially feasible Flood Mitigation Projects (FMP) that present impediments to the inclusion of FMPs in regional flood plans.	A significant number of potentially feasible FMPs were required to be developed and included in the regional flood plans as Flood Management Evaluations (FMEs) due mostly to a lack of required data and information, such as cost estimates or benefit-cost analysis. Otherwise, many local entities that have requested or supported the inclusion of their projects in the regional flood plan have identified a "preferred" solution to a flooding problem and intend to proceed with implementation at some point in the future. In addition to resulting in the "downgrade" of some potential FMPs to FMEs, such deficiencies could result in lower scores and rankings when considered for TWDB financial assistance. Overall, the information required for FMPs is more detailed than one might expect for flood planning on a regional scale.
8.3.8	Provide applicable data sources and a methodology to determine infrastructure functionality and deficiencies for use in the next regional flood planning cycle. Consider the lack of readily available local data when developing the methodology.	Most entities do not have information regarding the functionality and deficiency of their flood and drainage infrastructure. Some fields in the tables required by the TWDB require data that is not generally readily available without extensive fieldwork (e.g., mapping, conditions assessments, risk/consequence of failure, etc.).
8.3.9	Include the reimbursement of costs for all pertinent and justified needs associated with conducting RFPG meetings and other meetings (e.g., RFPG committees, public meetings). An example is costs for audio and visual equipment purchases or rentals needed to conduct virtual and/ or hybrid meetings.	Some RFPGs have had to rent or purchase A/V equipment to conduct virtual/hybrid meetings in a manner that conforms with the requirements of the Texas Open Meetings Act. Given the large geographic areas spanned by the flood planning regions and the availability of technology for virtual/hybrid meetings, many RFPG members prefer not to travel to attend meetings. Virtual/hybrid meetings also increase public and entity participation opportunities in the regional flood planning process. Expenses incurred to conduct virtual/hybrid meetings in a manner compliant with the Open Meetings Act should not have to be absorbed by RFPG sponsors.