

TO: Board Members

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FROM: Reem Zoun, Director, Flood Planning

DATE: May 7, 2020

SUBJECT: Adoption and publication of new 31 Texas Administrative Code Chapters 361 and 362 relating to Regional and State Flood Planning

ACTION REQUESTED

Consider adopting and authorizing the publication of 31 Texas Administrative Code Chapters 361 and 362 relating to Regional and State Flood Planning to implement Senate Bill 8.

BACKGROUND

Senate Bill 8 of the 86th Legislature, Regular Session establishes the framework for the Texas Water Development Board (TWDB) to institute flood planning across the state. Texas Water Code §16.061 requires the TWDB to prepare and adopt a comprehensive state flood plan not later than September 1, 2024, and every five years after. Further, Texas Water Code §16.062 requires the Board to designate flood planning regions, designate representatives from each flood planning region to serve as the initial regional flood planning group (RFPG), provide technical and financial support for the RFPGs, and adopt guidance principles for regional and state flood planning. In addition, Senate Bill 500 provides funding for both regional flood planning activities as well as flood science initiatives, including Base Level Engineering, that will support development of the regional and state flood plans.

As a first step in the rulemaking process, TWDB went on a “listening tour” comprising workshops in 14 cities across Texas and two webinars to receive public input on how the TWDB should undertake its new responsibilities to best serve the needs of communities. In

addition to the workshops and webinars, written public comments were accepted via email throughout the month of August 2019.

This preliminary public feedback was considered when the Executive Administrator (EA) proposed the publishing of 31 Texas Administrative Code (TAC) Chapters 361 and 362 relating to regional and state flood planning to solicit further input through a public comment period. Chapter 361 proposes rules regarding RFPGs and regional flood plans. Chapter 362 proposes rules regarding the development of the state flood plan.

The Board approved the publication of the proposed rules at their December 5, 2019 meeting. The draft rules were posted on the TWDB website following the meeting, and in the Texas Register on December 20, 2019 to solicit public comments. Written public comments were received through February 3, 2020, and oral comments were received during a public hearing held at the January 30, 2020 Board meeting. The public comments received were compiled and reviewed to provide insight for possible revisions to the proposed rules. Comments were received from approximately 45 entities comprising well over 200 pages of written comments. In addition, 15 entities also addressed the Board, in person, at the January 30th public hearing. The vast majority of the comments were regarding the proposed regional flood planning rules under 31 TAC Chapter 361.

The input received from the public during the comment period was thoughtful and constructive, and resulted in beneficial changes to 31 TAC Chapters 361 and 362 pertaining to Regional and State Flood Planning.

The attached TAC Chapters 361 and 362 reflect the changes from the originally posted rules. Any deleted changes compared to the original posting are shown as strikethrough texts, and any new additions are underlined.

On April 09, 2020, the Board designated the Flood Planning Region boundaries that created fifteen flood planning regions in the State of Texas required to implement the flood planning requirements of Senate Bill 8 and these new 31 TAC Chapters 361 and 362.

KEY ISSUES

The Executive Administrator proposes adoption of new 31 TAC Chapters 361 and 362 to implement regional and state flood planning. The first regional flood plans must be delivered to the Board by January 10, 2023.

Texas Water Code §16.062 also requires the Board to make a determination whether the regional flood plans, as adopted and submitted by the RFPGs, satisfy the guidance principles, adequately provide for the preservation of life and property and affect a neighboring area.

If it is determined that an element of a regional flood plan negatively affects a neighboring area, the Board is required to coordinate with the affected area to adjust the plan to ensure that no neighboring area is negatively affected by the plan.

The statute requires the Board to approve a regional flood plan once it satisfies the guidance principles, adequately provides for the preservation of life and property, and does not negatively affect a neighboring area.

The rules include guidance principles that were developed in coordination with Texas Commission on Environmental Quality, the Texas Department of Agriculture, the Texas General Land Office, the Texas Parks and Wildlife Department, the Texas Division of Emergency Management, and the Texas State Soil and Water Conservation Board.

The rules related to the implementation of the flood planning closely follows the highly successful and well-established state *water* planning process administered by the TWDB. However, without the benefit of previous regional and state *flood* planning experience in Texas and in light of the various ongoing flood management efforts already occurring across the state, these rules were intentionally drafted with a certain amount of flexibility. That flexibility is intended to foster the incorporation of ongoing flood management efforts into the regional flood plans, to allow both TWDB and the RFPGs to identify and accommodate unique ways of addressing the general requirements herein, and to accommodate new or updated flood models, methods, and datasets as they become available. A guidance document will provide further clarification on the technical aspects of flood planning which is currently being developed by the TWDB.

Chapter 361 Subchapter A of these proposed rules provide the process for establishing flood planning regions, the initial establishment of planning group memberships, and outlines the deliverables that are expected of each RFPG.

Subchapter B of these proposed rules includes the guidance principles that RFPGs are expected to follow, the notice requirements that they must follow, and the types of information that they must consider when developing their plans.

Subchapter C of these proposed rules was developed and organized to correspond with sequential steps to evaluate flood risks and what can be done to manage flood risk that will also correspond to flood plan chapters required to develop meaningful regional flood plans. Subchapter C requires some basic background information about the region and major flooding risks and existing major flood infrastructure. It requires that each region perform the flood risk analysis process comprising of (1) flood hazard analyses that determines location, magnitude and frequency of flooding, (2) flood exposure analyses to identify who and what might be harmed within the region, and (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities both now and in the future if there are no new flood mitigation projects or changes to existing floodplain policies. It also requires RFPGs to evaluate its current floodplain management policies and consider recommending changes. Subchapter C further requires the RFPGs to identify solutions to address the flood risks to life and property and to identify flood-prone areas that do not yet have sufficient information to identify potential flood solutions and, accordingly, will require more detailed evaluations. This subchapter then requires that the RFPGs evaluate the impacts of its proposed flood management solutions and make recommendations.

Subchapter D of these proposed rules addresses the processes of adoption, submittal and amendments to regional flood plans. Statute requires the first regional flood plans to be submitted to the TWDB by January 10, 2023.

Subchapter E of these proposed rules addresses how negative effects on neighboring areas may be resolved by RFPGs and TWDB.

Subchapter F of these proposed rules addresses the process of administering regional flood planning grants including how those funds may be used by the RFPGs.

The Chapter 361 rules often refer to guidance that is currently being developed by the Executive Administrator. Once drafted, that guidance will primarily be in the form of a technical guidance document, which will be made available for stakeholder input and will subsequently become part of the regional flood planning grant contracts.

Chapter 362 of these proposed rules addresses development of the state flood plan.

The attached *Preamble, Summary of Public Comments Received, and TWDB Responses to Public Comments* provides further rule context and describes the public comments received and changes made in response to those comments. The changes that were made to the rules from the draft rules based on public comments received include, but are not limited to:

1. The addition to RFPGs of a single, additional voting position for interest category of "Flood Districts" thereby resulting in 12 total voting positions that must be maintained within the groups.
2. Clarification that RFPGs may increase its number of voting positions, including for other interest categories, upon a two-thirds vote.
3. An additional requirement that RFPGs consider adding a non-voting transportation authority representative.
4. A reduction in the public notice requirement for filling planning group position vacancies from 14 days to 7 days.
5. A realignment of the flood risk analysis process which involves a three-step process comprising of (1) flood hazard analyses that determines location, magnitude and frequency of flooding, (2) flood exposure analyses to identify who and what might be harmed within the region, and (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities.
6. A modification to plan requirements that, while still requiring identification of a solution to mitigate to at least 1% annual chance flood event, allows RFPGs to recommend projects in the plans to mitigate for an event of a greater frequency or a smaller event if mitigation to a 1% annual chance flood event is not attainable.
7. An allowance for reimbursement to the Planning Group Sponsors for personnel costs, for the staff hours that are directly spent providing, preparing for, and

posting public notice for RFPG meetings, including time and direct expenses for their support of and attendance at such RFPG meetings in accordance with, and as specifically limited by, the flood planning grant contract with the Board.

8. Addition of several definitions including 'Nature-based flood mitigation'.
9. A few, minor modifications made to the language of the Guidance Principles.

The regional flood planning rules will be revisited, as necessary, including after the first regional flood planning cycle when everyone has had an opportunity to identify best practices. Those best practices may, in turn, become the established standards by which future regional flood plans are developed.

Upon adoption of the final regional flood planning administrative rules, the EA will initiate a process to openly solicit potential members to serve on the initial flood planning group of each region. Based on these rules and the anticipated membership solicitation, the Board will designate up to 180 initial members to serve on the 15 RFPGs. That process will rely on the flood planning region boundaries designated on April 09, 2020 and the initial flood planning group membership requirements as set forth in these regional flood planning administrative rules.

RECOMMENDATION

The Executive Administrator recommends adopting and authorizing publication of new 31 Texas Administrative Code Chapters 361 and 362 relating to Regional and State Flood Planning to implement Senate Bill 8.

Attachments

1. Preamble, Summary of Public Comments Received, and TWDB Responses to Public Comments
2. Final rules for adoption in the Texas Register – 31 TAC Chapter 361
3. Final rules for adoption in the Texas Register – 31 TAC Chapter 362

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CHAPTER 361. REGIONAL FLOOD PLANNING.

SUBCHAPTER A. GENERAL INFORMATION.

§361.10. Definitions and Acronyms.

- (a) 1.0% annual chance flood event - Flood event having a 1.0% chance of being equaled or exceeded in any given year, also referred to as the base flood or 100-year flood.
- (b) 0.2% annual chance flood event - Flood event having a 0.2% chance of being equaled or exceeded in any given year, also referred to as the 500-year flood.
- (c) Board –the governing body of the Texas Water Development Board.
- ~~(d) Eligible Applicant—A political subdivision designated by the Regional Flood Planning Group as authorized to receive funds for developing or revising regional flood plans.~~
- (de) Executive Administrator (EA) – The Executive Administrator of the TWDB or a designated representative.
- (ef) FEMA – Federal Emergency Management Agency
- (fg) FIRM – Flood Insurance Rate Map
- (gh) Flood – A general and temporary condition of partial or complete inundation of normally dry land area from overflow of inland or tidal waters or from the unusual and rapid accumulation or runoff of surface waters from any source.
- (h) Flood-prone – Areas with known risk of flooding primarily during storm events either from existing inundation maps, studies, and/or historic knowledge of flood events. Flood-prone areas may include, but are not limited to, the floodplain, the floodway, the flood fringe, wetlands, riparian buffers, or other areas adjacent to the main channel.
- (i) Floodplain – That area of land subject to periodic inundation by floodwaters.
- (j) Floodplain management – The operation of an overall program of corrective and preventative measures for reducing flood damage.
- (k) Flood Mitigation – The implementation of actions, including both structural and non-structural solutions, to reduce flood risk to protect against the loss of life and property.
- (l) Flood Management Evaluation (FME) – A proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.
- (m) Flood Management Strategy (FMS) – A proposed plan to reduce flood risk or mitigate flood hazards to life or property. A flood management strategy may or may not require associated Flood Mitigation Management Projects to be implemented.
- (n) Flood Mitigation Management Project (FMP) – A proposed ~~flood~~ project, both structural and non-structural, that has a non-zero capital costs or other non-recurring cost and that when implemented will reduce flood risk, ~~or~~ mitigate flood hazards to life or property.
- (o) Flood Planning Region (FPR) – A geographic area designated by the Board pursuant to Texas Water Code §16.062.
- (p) Flood Risk – Generally describes the hazard from flood events to life and property, including the likelihood of a hazard occurring; the magnitude of the hazard; the number of people and properties exposed to the hazard; and the vulnerability of the people and properties exposed to the hazard.
- (q) Flood Risk Map – A map that shows flood risk for Texas communities at some level of detail using best available data.
- ~~(q) Flood Risk Analysis—An analysis that includes sufficient information to determine the economic efficiency of alternative flood management strategies to inform project decisions and~~

~~requires the availability and the extensive use of one or more detailed hydrologic and hydraulic models. It is typically expressed as a combination of the likelihood and consequence of an entire range of possible hydrologic events for a given area and produces, among other things, estimates of expected annual damage.~~

(r) GIS – Geographic Information System

(s) GLO – General Land Office

(t) HUC – Hydrologic Unit Code level (e.g., HUC8) as delineated by the United States Geological Survey.

(u) Hydrologic and Hydraulic Model - Mathematical model created utilizing computer software that simulates rainfall runoff flow to estimate the extent of water levels and flooding and to test potential ways to reduce flood risk.

(v) Nature-based flood mitigation - Mitigation approaches involving the use of natural features, materials, and processes to reduce the risk and impacts of flooding.

(~~w~~) Neighboring area - means any area, including but not limited to upstream and downstream areas, potentially affected by the proposed FMP flood management project.

(x) Negative Effect - An increase in flood-related risks to life and property, either upstream or downstream of the proposed project. The RFPG may adopt a standard that is more restrictive than the standard provided in TWDB guidance.

(y) Planning Group Sponsor – A political subdivision designated by the Regional Flood Planning Group as authorized to receive funds for developing or revising regional flood plans.

(~~z~~) Political Subdivision – County, city, or other body politic or corporate of the state, including any district or authority created under Art. 3 § 52 or Art. 16 § 59 of the constitution and including any interstate compact commission to which the state is a party and any nonprofit Water Supply Corporation created and operating under Ch. 67.

(aa) Potentially feasible flood management strategy or potentially feasible flood mitigation project – a FMS or FMP that is permissible, constructible, economically viable, and implementable.

(~~bb~~) Regional Flood Plan (RFP) – The plan adopted or amended by a Regional Flood Planning Group pursuant to Texas Water Code §16.062 (relating to Regional Flood Plans) and this chapter.

(~~cc~~) Regional Flood Planning Group (RFPG) – A group designated by the Board that develops a Regional Flood Plan, pursuant to Texas Water Code §16.062 §16.063.

(dd) Residual Risk - The remaining flood risk in an area after the completion of a FMS or FMP or set of FMSs or FMPs that reduce flood risk in that same area.

(~~ee~~) State Flood Plan (SFP) – The most recent State Flood Plan adopted or amended by the Board under Texas Water Code §16.061 (relating to State Flood Plan).

(~~ff~~) State Flood Planning Database – A database to be developed and maintained by the TWDB that stores data related to Flood Planning. It is used to collect, analyze, and disseminate regional and statewide Flood Planning data.

(~~gg~~) State Population Projections – Population projections contained in the most recently adopted State Water Plan as further assembled geographically based on HUC 8 watersheds or other appropriate flood-related geographic features determined by the TWDB.

(hh) TWC – Texas Water Code

(~~ii~~) TWDB - Texas Water Development Board

§361.11. Designations and Governance of Flood Planning Regions.

(a) Once initially designated, the Board may review and update the boundary designations of FPRs as necessary, on its own initiative or upon recommendation of the EA.

(b) If upon FPR boundary designation review the Board determines that revisions to the boundaries are necessary, the Board shall designate areas for which RFPs shall be developed, taking into consideration factors such as:

- (1) River basin and sub-watershed delineations;
- (2) Hydrologic features of river basins;
- (3) Coastal basins and features;
- (4) Existing FPRs;
- (5) Development patterns;
- ~~(6) Public comment; and~~
- ~~(7) Other factors the Board deems relevant.~~

(c) The Board shall designate an individual member for each of the twelve positions, required in subsection (e), for the initial RFPGs. ~~the initial members of each RFPG.~~

(d) After the Board names members of the initial RFPG, the EA will provide to each member of the initial RFPG a set of model bylaws. The initial RFPGs shall consider and adopt, by two-thirds vote, bylaws that are consistent with provisions of this chapter, Texas Water Code Section 16.062, and Government Code Chapter 551 and 552. The RFPG shall provide copies of its bylaws and any revisions thereto to the EA. The bylaws adopted by the RFPG shall at a minimum address the following elements:

- (1) methods of formation and governance of executive committee, or subcommittees or subgroups;
- (2) definition of a quorum necessary to conduct business;
- (3) methods to approve items of business including adoption of RFPs or amendments thereto;
- (4) methods to name additional voting and non-voting members;
- (5) terms, conditions, and limits of membership including the terms of member removal;
- (6) any additional notice provisions that the RFPG chooses to include;
- (7) methods to record and preserve minutes;
- (8) methods to resolve disputes between RFPG members on matters coming before the RFPG;
- (9) procedures for handling confidential information; and
- (10) other procedures deemed relevant by the RFPG.

(e) RFPGs shall at all times, maintain each of the required positions listed below. ~~at least one representative of each of the following interest categories as voting members of the RFPG.~~

However, if a FPR does not have an interest in the category below, then the RFPG shall so advise the Executive Administrator and an individual member ~~no membership designation may not be~~ is required.

- (1) Public, defined as those persons or entities having no economic or other direct interest in the interests represented by the remaining membership categories;
- (2) Counties, defined as the county governments for the 254 counties in Texas;
- (3) Municipalities, defined as governments of cities created or organized under the general, home-rule, or special laws of the state;
- (4) Industries, such as corporations, partnerships, sole proprietorships, or other legal entities that are formed for the purpose of making a profit and that are not small businesses;
- (5) Agricultural interests, defined as those persons or entities associated with the production or processing of plant or animal products;

(6) Environmental interests, defined as those persons or groups advocating for the protection or conservation of the state's natural resources, including but not limited to soil, water, air, and living resources;

(7) Small businesses, defined as corporations, partnerships, sole proprietorships, or other legal entities that are formed for the purpose of making a profit, are independently owned and operated, and have either fewer than 500 employees and or less than \$10 million in gross annual receipts;

(8) Electric generating utilities, defined as any persons, corporations, cooperative corporations, or any combination thereof, meeting each of the following three criteria: own or operate for compensation equipment or facilities which produce or generate electricity; produce or generate electricity for either wholesale or retail sale to others; and are neither a municipal corporation nor a river authority; this category may include a transmission and distribution utility;

(9) River authorities, defined as any districts or authorities created by the legislature that contain areas within their boundaries of one or more counties and that are governed by boards of directors appointed or designated in whole or part by the governor, including without limitation the San Antonio River Authority and the Palo Duro River Authority;

(10) Flood Districts, defined as any districts or authorities, created under authority of either Texas Constitution, Article III, §52(b)(1) and (2), or Article XVI, §59 including all Chapter 49 districts, particularly districts with flood management responsibilities, including drainage districts, levee improvement districts, but does not include river authorities;

(11) Water Districts, defined as any districts or authorities, created under authority of either Texas Constitution, Article III, §52(b)(1) and (2), or Article XVI, §59 including all Chapter 49 districts, particularly districts with regional flood management responsibilities, including municipal utility districts, freshwater supply districts, and regional water authorities, but does not include drainage districts, levee improvement districts, but does not include river authorities;

(12) Water Utilities, defined as any persons, corporations, cooperative corporations, or any combination thereof that provide water supplies for compensation except for municipalities, river authorities, or water districts; and

(13) At their the discretion, of the RFPGs may include, additional voting positions upon a two-thirds vote of all of the existing voting positions representative categories to ensure adequate representation from the interests in the FPR.

(f) The RFPG shall include the following non-voting members, as designated by the head of their agency for (f) (1-7), who shall receive meeting notifications and information in the same manner as voting members:

(1) Staff member of the TWDB;

(2) Staff member of the Texas Commission on Environmental Quality;

(3) Staff member of the General Land Office;

(4) Staff member of the Texas Parks and Wildlife Department;

(5) Staff member of the Texas Department of Agriculture;

(6) Staff member of the State Soil and Water Conservation Board;

(7) Staff member of the Texas Division of Emergency Management;

(8) Non-voting member liaisons designated by each RFPG, as necessary, to represent portions of major river basins that have been split into more than one FPR to coordinate between the upstream and downstream FPRs located within that same river basin. This non-voting member liason interest representation requirement may, at the discretion of the RFPG, be met by a

voting member that also meets another position representation requirement under subsection (e); and

(9) For FPRs that touch the Gulf Coast, member liaisons designated by each RFPG representing coastal portions of FPRs to coordinate with neighboring FPRs along the Gulf Coast. This non-voting position member liaison interest representation requirement may, at the discretion of the RFPG, be met by a voting member that also meets another position representation requirement under subsection (e).

(g) Each RFPG may consider including a non-voting position designated by each RFPG to represent regional or local transportation authorities.

~~(hg)~~ Each RFPG shall provide a current list of its voting and non-voting positions members to the EA; the list shall identify each position required under subsection (e) as well as any other positions added by the RFPG and the individual member name that fills each position. ~~the interest represented by each member including interests required in subsection (e) of this section.~~

~~(ih)~~ Each RFPG, at its discretion, may at any time add additional voting and non-voting positions representatives to serve on the RFPG including for any new interest category in accordance with (e)(1342), including any additional state or federal agencies, and additional representatives of those interests already listed in, and as limited by, subsection (e) of this section that the RFPG considers appropriate for development of its RFP. Adding any new voting position that increases the total number of voting positions may only occur upon a two-thirds vote of all voting positions.

~~(j)~~ Each RFPG, at its discretion, may remove individual voting or non-voting positions members, other than those listed under (f) (1-7), or eliminate ~~RFPG representative~~ positions in accordance with the RFPG bylaws as long as minimum requirements of RFPG membership are maintained in accordance with subsection (e) and (f) of this section.

~~(kj)~~ RFPGs may enter into formal and informal agreements to coordinate, avoid affecting neighboring areas, and share information with other RFPGs or any other interests within any FPR for any purpose the RFPGs consider appropriate including expediting or making more efficient planning efforts.

§361.12. General Regional Flood Planning Group Responsibilities and Procedures.

~~(a)~~ The following activities are required of each RFPG every planning ~~cycle~~ cycle:

(1) Designate a political subdivision as a Planning Group Sponsor representative of the RFPG eligible to apply for financial assistance to be used by the RFPG for planning activities. The Planning Group Sponsor designated political subdivision will prepare and submit funding applications on behalf of the RFPG pursuant to Chapter 361, Subchapter F of this title (related to Regional Flood Planning Grants). The RFPG may, at its discretion, designate a different Planning Group Sponsor at any time. The Planning Group Sponsor ~~The designated political subdivision~~ will be responsible for the following:

(A) General management of the contract between the Planning Group Sponsor designated political subdivision and the TWDB;

(B) The general management of the contract between the Planning Group Sponsor designated political subdivision and the consultant(s); and

(C) In accordance with the RFPG's bylaws and notice provisions, the preparation of a scope(s) of work for regional flood planning grant funding that identifies responsible parties for task

execution, including a task schedule, task and expense budgets, and describes interim draft reports or deliverables, and final reports for the planning process.

(2) Select a technical consultant(s) to be procured by the Planning Group Sponsor ~~designated political subdivision in (1)~~ in accordance with the procurement requirements that apply to that political subdivision and Texas Government Code Chapter 2254.

(3) Hold at least one public meeting, that may also be a regular RFPG meeting, and in accordance with the notice requirements in §361.21 of this title, to determine what, if any, additional public notice the RFPG determines is necessary to ensure adequate public notice in its own FPR, including in print form if desirable.

(4) Hold public meetings at central locations readily accessible to the public within the FPR to gather general suggestions and recommendations from the public as to issues, provisions, and types of FMSs, FMPs, and FMEs ~~flood management strategies and projects~~ that should be considered or addressed or provisions that should be considered and potentially included during that regional flood planning cycle in accordance with the public notice requirements in 361.21.

(5) Approve the contract(s) and any subsequent amendments thereto between the Planning Group Sponsor ~~designated political subdivision~~ and the technical consultant or TWDB Scope(s) of Work or budgets in open meetings as necessary and in accordance with §361.21.

(6) Hold regular RFPG meetings, at a minimum, annually.

(b) The RFPG must follow its bylaws to reconcile any work and consider recommendations of any subcommittee or subgroups, including any strategies or projects identified for the RFPG's consideration.

~~(c7)~~ Each RFPG may, at its discretion, designate committees or subcommittees or subgroups within its FPR to meet separately to work on certain assigned issues that the RFPG considers relevant to its plan such as topics relevant across the entire region or issues related to specific geographical areas within the FPR or coordination of shared issues across neighboring FPRs.

~~(8) The RFPG must follow its bylaws to reconcile any work and incorporate recommendations of any subcommittee or subgroups, including any strategies or projects identified for the RFPG's consideration.~~

~~(19)~~ If a RFPG creates a sub-regional committee or subcommittee or subgroup to address issues related to a specific geographical area smaller than the full FPR, it shall, to the extent practical, define such sub-regional geographic areas based on boundaries that are coterminous with full HUC8 watersheds ~~water sheds~~ located within the FPR.

(2) any sub-regional committee or subcommittee or subgroup must ~~It shall~~ include at least one voting member representing each of the interests under 361.11(e)(1-~~1244~~).

~~(340)~~ Any outcomes from the activities of such committees or subcommittees or subgroups shall be strictly for the purpose of providing information or recommendations as specifically directed by the full RFPG and for potential consideration by the full RFPG.

(4A) RFPGs may not authorize committees or subcommittees or subgroups or committees to take any actions regarding:

(A) ~~(B)~~ Modifying the budget or scope of the RFPG planning contract(s);

(B) ~~(C)~~ Directing the RFPG consultant's work or associated expenditure of funds; and

(C) ~~(D)~~ Other activities that are the responsibility of the full RFPG as determined by the flood planning contract with the TWDB and any associated guidance provided by the EA.

(11) Each RFPG or committee or subcommittee or subgroup of a RFPG is subject to Chapters 551 (relating to Open Meetings) and 552 (relating to Public Information), Government Code.

§361.13. Regional Flood Planning Group Deliverables.

(a) Each RFPG shall deliver a draft and final, adopted RFP in accordance with EA guidance. The RFPs must include the following:

- (1) written report content including various presentations of data, tables, charts, maps, and written summaries of certain results related to §361.30 - .45 in accordance with EA guidance and the TWDB grant contract;
 - (2) a single, standardized table that will include a list of all recommended FMSs and FMPs, and certain key information associated with each FMP, in accordance with guidance and template to be provided by the EA. This table will be the basis for prioritizing recommended FMPs flood management projects in the state flood plan;
 - (3) Geographic Information System (GIS) database deliverables and other information in accordance with the contract and guidance provided by and in a manner determined by the EA; and
 - (4) associated data organized in a format and manner determined by the EA.
- (b) Documentation of the public process in the plan development, including public comments received and responses to public comments on the draft RFP.
- (c) The order and chapter content of the published RFPs shall generally follow a standard outline as determined by the EA and based on the scope of the regional flood planning contracts.
- (d) The content and format of all associated data deliverables, including the data on which the RFPs are based, shall be in conformance with requirements in guidance documents and data templates to be developed and provided by the EA.
- (e) The RFPGs shall, in accordance with their regional flood planning contracts and schedule and TWDB guidance, deliver technical memorandums to the EA prior to the draft RFP and throughout the planning process to demonstrate progress in developing its RFP and to support the concurrent development of the state flood plan. The RFPGs shall approve technical memorandums in accordance with a schedule to be provided by the EA and after notice pursuant to §361.21 of this title. At the discretion of the EA, the technical memorandums shall include:
- (1) A list of existing political subdivisions within the FPR that have flood-related authorities or responsibilities;
 - (2) A list of previous flood studies considered by the RFPG to be relevant to development of the RFP;
 - (3) A geodatabase and associated maps in accordance with EA guidance that the RFPG considers to be best representation of the region-wide 1.0% annual chance flood event and 0.2% annual chance flood event inundation boundaries, and the source of flooding for each area, for use in its risk flood hazard exposure analysis, including indications of locations where such boundaries remain undefined;
 - (4) A geodatabase and associated maps in accordance with EA guidance that identifies additional flood-prone areas not described in (3) based on location of hydrologic features, historic flooding, and/or local knowledge;
 - (5) A geodatabase and associated maps in accordance with EA guidance that identifies areas where existing hydrologic and hydraulic models needed to evaluate FMSs and FMPs are available;

- (64) A list of available flood-related models that the RFPG considers of most value in developing its plan;
- ~~(5) A map of areas identified by the RFPG as the most prone to flooding, including the flooding type, and the existing conditions that most contribute to the flood prone nature of the area and geographical representation of flood prone areas that already have existing hydrologic and hydraulic models needed to evaluate flood management strategies and projects;~~
- (76) The flood mitigation and floodplain management goals adopted by the RFPG per §361.36;
- ~~(87) The documented process used by the RFPG to identify potentially feasible FMSs and FMPs;~~
- (98) A list of potential FMEs and potentially feasible FMSs and FMPs identified by the RFPG, if any; and
- ~~(109) A list of FMSs and FMPs that were identified but determined by the RFPG to be infeasible, including the primary reason for it being infeasible.~~
- (f) The information provided by the RFPG will provide the basis for much of the development and content of the state flood plan.

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STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

<rule>

SUBCHAPTER B. GUIDANCE PRINCIPLES, NOTICE REQUIREMENTS, AND GENERAL CONSIDERATIONS.

§361.20. Guidance Principles for State and Regional Flood Planning.

(a) Development of RFPs and the State Flood Plan shall be guided by the principles stated in §362.3 (relating to Guidance Principles).

(b) Each RFPG shall include a statement in their draft and final regional flood plans related to ~~regarding~~ the RFPG's conformance with §362.3. The statement must include an explanation of including how the RFP satisfies the requirements of each of the guidance principles including that that the plan will not negatively affect a neighboring area.

§361.21. General Notice Requirements.

(a) Each RFPG and any committee, subcommittee, or subgroup of an RFPG are subject to Chapters 551 and 552, Government Code.

(b) Each RFPG shall create and maintain a website that they will use to post public notices of all its full RFPG, subgroup, and subcommittee meetings and make available meeting agendas and related relevant meeting materials for the public, in accordance with the items listed below in paragraphs (h)(1) - (3). as applicable.

(c) Each RFPG shall provide a means by which it will accept written public comments prior to and after meetings. The RFPGs must also allow oral public comments during RFPG meetings.

(d) ~~Confidential~~ ~~Aside from any confidential~~ materials that fall under protection in accordance associated with the Homeland Security Act, may not be made available to the general public. a copy of all materials presented or discussed at an open meeting shall be made available for public inspection prior to and following the meetings and shall be made available online in accordance with the times listed below in paragraphs (h)(1) - (3).

(e) Each RFPG shall solicit interested parties from the public and maintain a list of emails of persons or entities who request to be notified electronically of RFPG activities.

(f) At a minimum, notices of all meetings, meeting materials, and meeting agendas shall be sent electronically, in accordance with the timelines provided in paragraphs (h) (1) - (3) below, to all voting and non-voting RFPG members; and any person or entity who has requested notice of RFPG activities.

(g) At a minimum, all notices must be posted to the RFPG website and on the secretary of state website and must include:

- (1) the date, time, and location of the meeting;
- (2) a summary of the proposed action(s) to be taken;
- (3) the name, telephone number, email address, and physical address of a contact person to whom questions or requests for additional information may be submitted; and
- (4) a statement of how and when comments will be received from the members and public.

(h) In addition to subsections (a) - (g) above, and the notice requirements of Chapter 551, Government Code, the following requirements apply:

(1) at a minimum, notice must be provided at least seven days prior to the meeting, and meeting materials must be made available online at least three days prior to and seven days following the meeting when the planning group will take the following actions:

- (A) regular RFPG meetings and any RFPG committee, subcommittee, or subgroup meetings;
- (B) approval of requests for funds from the Board;

- (C) amendments to the regional flood planning scope of work or budget;
 - (D) approval to submit established deliverables to the Board or EA including technical memorandums;
 - (E) approval of replacement RFPG members to fill voting and non-voting position vacancies changes to RFPG membership; and
 - (F) any other RFPG approvals required by TWDB contract or EA guidance not specifically addressed under (2) or (3).
- (2) at a minimum, notice must be provided at least 14 days prior to the meeting, written comments must be accepted for 14 days prior to the meeting and considered by the RFPG members prior to taking the associated action, and meeting materials must be made available online for a minimum of 7 days prior to and 14 days following the meeting, when the planning group will take the following actions:
- (A) holding pre-planning public meetings to obtain input on development of the next RFP per ~~Texas Water Code (TWC) 16.062(d)~~;
 - (B) determining flood mitigation and floodplain management goals per §361.36;
 - (C) approving process for identifying potential FMEs and potentially feasible FMSs and FMPs per §361.38;
 - (D) adoption of the final RFP per TWC 16.062(h); ~~and~~
 - (E) approval of amendments to RFPs per §361.51; and-
 - (F) approval of any changes to the number of and representation make-up of the RFPG membership. This includes the addition or removal of any voting or non-voting interest category or position, any changes to the representation categories of existing voting and non-voting positions, or the removal of any voting or non-voting positions, including for existing interest categories that may have more than one representative position.
- (3) for meetings at which the planning group will take public input action related to the RFPG's draft RFP per TWC 16.062(f) - (g), the following additional public notice provisions must be met:
- (A) The draft RFP must be made available for public inspection online for 30 days prior to the first meeting, if more than one meeting is held, and 30 days following the first meeting;
 - (B) At a minimum, notice must be provided at least 30 days prior to the first meeting;
 - (C) Notice must be provided to all adjacent RFPGs;
 - (D) Notice of the meeting must include a summary of the regional flood plan;
 - (E) Notice must include information on how the public may submit comments;
 - (F) A hard copy of the ~~The~~ draft RFP must be made available for public inspection in at least three publicly accessible locations within the FPR for at least 30 ~~thirty~~ days prior to the first meeting and 30 days following the first meeting; and
 - (G) Written comments must be accepted for consideration for at least 30 days prior to the first meeting and at least 30 days following the first meeting for consideration and response prior to adoption of the final plan under 361.50 and oral comments must be accepted during the meeting.
- (i) All notice periods given are based on calendar days.
 - (j) RFPGs shall also provide additional public notice, if any, in accordance with their decision under §361.11(d)(6) ~~§361.21(j)~~, including provision of print notices, if applicable.
 - (k) Each RFPG shall include a statement in their draft and final adopted regional flood plans regarding the RFPG's conformance with §361.21.

§361.22. General Considerations for Development of Regional Flood Plans.

RFPGs are expected to consider a wide variety of available, relevant information and tools when developing regional flood plans including:

- (1) Historic flood data including stream flows, and storm surge;
- (2) Historic rainfall, including Atlas 14 or subsequent data;
- (3) NFIP claims, repetitive loss properties, and severe repetitive loss properties;
- (4) Topographic data including subsidence trends;
- (5) Bathymetric data, including relative sea level change;
- (6) Existing and projected population;
- (7) Land use planning and regulation as it may affect flood risk;
- (8) Flood-related infrastructure;
- ~~(9)~~ Non-flood related infrastructure, ~~Infrastructure~~, critical facility, and property data;
- ~~(10)~~ Models including hydrologic, hydraulic, or any available screening-level models;
- ~~(11)~~ Flood risk maps;
- ~~(11)~~ ~~Flood hazard exposure analyses;~~
- (12) Existing flood Flood risk analyses, including location, likelihood and magnitude of the hazard, exposure analysis and vulnerability analyses;
- (13) Future flood risk analyses including location, likelihood and magnitude of the hazard, exposure analysis and vulnerability analyses;
- ~~(14)~~ Historic losses due to floods;
- ~~(15)~~ Flood disaster reports;
- ~~(16)~~ Other regional and local flood planning studies;
- ~~(17)~~ Other regional and local flood hazard mitigation plans;
- ~~(18)~~ State of Texas hazard mitigation plan;
- ~~(19)~~ Coastal resiliency master plan;
- ~~(20)~~ Critical transportation corridors, including consideration of both existing corridors and future corridors;
- ~~(21)~~ Floodplain management practices;
- ~~(22)~~ Planned and anticipated future Large-scale development and its potential impacts on the plan;
- ~~(23)~~ Flood management and mitigation best management practices;
- ~~(24)~~ Watershed protection plans;
- ~~(25)~~ Flood risk screening tools;
- ~~(26)~~ Flood-related federal agency information; and
- ~~(27)~~ Any other information deemed relevant by the RFPG.

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STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

<rule>

SUBCHAPTER C REGIONAL FLOOD PLAN REQUIREMENTS

Regional flood plans shall be based on the best available science, data, models, and flood mapping and the RFPGs shall perform various analyses related to flood risks to make recommendations regarding flood mitigation and floodplain management goals and flood mitigation management solutions in developing its RFP.

§361.30. Description of the Flood Planning Region.

Regional flood plans shall include brief, general descriptions of the following:

- (1) social and economic character of the region such as information on development, ~~and~~ population, economic activity and economic sectors most at risk of flood impacts;
- (2) the areas in the FPR that are flood-prone ~~generally prone to flood~~ and the types of major flood risks to life and property in the region;
- (3) key historical flood events within the region including associated fatalities and loss of property;
- (4) political subdivisions with flood-related authority and whether they ~~that~~ are currently actively engaged in flood planning, floodplain management, and flood mitigation management activities;
- (5) the general extent of local regulation and development codes relevant to existing and future flood risk;
- (6) agricultural and natural resources most impacted by flooding; and
- (7) existing local and regional flood plans within the FPR.

§361.31. Description of the Existing Natural Flood Mitigation Features and Constructed Major Flood Infrastructure in the Region.

(a) Regional flood plans shall include a general description of the location, condition, and functionality of natural features and constructed major flood infrastructure within ~~in~~ the FPR including, but not limited to:

~~(1) natural hydrologic and hydraulic features, including but not limited to:~~

~~(1A) rivers, tributaries, and functioning surrounding floodplains~~

~~(2B) wetlands;~~

~~(3C) playa lakes;~~

~~(4D) sinkholes; and~~

~~(5E) alluvial fans;~~

~~(6) vegetated dunes;~~

~~(2) functional flood infrastructure that exists within the FPR including but not limited to:~~

~~(7A) levees;~~

~~(8B) sea barriers, walls, and revetments;~~

~~(9C) stormwater tunnels;~~

~~(10D) tidal barriers and gates;~~

~~(11) stormwater tunnels;~~

~~(12E) stormwater canals;~~

~~(13F) dams that provide flood protection;~~

~~(14G) detention and retention ponds;~~

~~(15H) weirs; and~~

~~(16) storm drain systems; and~~

(17F) any other flood-related infrastructure.

(b3) for non-functional or deficient natural flood mitigation features or major flood infrastructure, explain, in general, the reasons for the features or infrastructure being non-functional or deficient, provide a description of the condition and functionality of the feature or infrastructure and whether and when the natural flood feature or major flood infrastructure may become fully functional, and provide the name of the owner and operator of the major flood infrastructure.

§361.32. Description of the Major Infrastructure and Flood Mitigation Projects Currently Under Development.

Regional flood plans shall include a general description of the location, source of funding, and anticipated benefits of proposed or ongoing flood mitigation projects ~~adequacy of major flood infrastructure~~ in the FPR including:

- (1) new structural flood mitigation projects ~~management infrastructure~~ currently under construction;
- (2) non-structural flood mitigation projects currently being implemented;
- (3) structural and non-structural flood mitigation projects with dedicated funding to construct and the expected year of completion.

§361.33. Existing Condition Flood Risk Analyses in the Region

(a) The RFPGs shall perform existing condition flood risk analyses for the region comprising:

- (1) flood hazard analyses that determines location, magnitude and frequency of flooding;
- (2) flood exposure analyses to identify who and what might be harmed within the region; and
- (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities.

(b) RFPGs shall perform existing condition flood hazard analysis to determine the location and magnitude of both 1.0% annual chance and 0.2% annual chance flood events as follows:

- (1) collect data and conduct analyses sufficient to characterize the existing conditions for the planning area;
- (2) identify areas within each FPR where hydrologic and hydraulic model results are already available and summarize the information;
- (3) utilize best available data, hydrologic and hydraulic models for each area;
- (4) prepare a map showing areas identified by the RFPG as having an annual likelihood of inundation of more than 1.0% and 0.2%, the areal extent of this inundation, and the sources of flooding for each area; and
- (5) prepare a map showing gaps in inundation boundary mapping and identify known flood-prone areas based on location of hydrologic features, historic flooding and/ or local knowledge.

(c) The RFPGs shall develop high-level, region-wide and largely GIS-based, existing condition flood exposure analyses, using the information identified in the flood hazard analysis to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events as follows:

- (1) analyses of existing development within the existing condition floodplain and the associated flood hazard exposure;
- (2) for the floodplain as defined by FEMA or as defined by an alternative analysis if the FEMA-defined floodplain is not considered best available; and
- (3) may include only those flood mitigation projects with dedicated construction funding and scheduled for completion prior to adoption of the next state flood plan.

(4) all existing condition flood exposure analyses shall consider the population and property located in areas where existing levees or dams do not meet FEMA accreditation as inundated by flooding without those structures in place. Provisionally accredited structures may be allowed to provide flood protection, unless best available information demonstrates otherwise.

(5) In accordance with guidance to be provided by the EA, the existing condition flood exposure analyses shall consider available datasets to estimate the potential flood hazard exposure including, but not limited to:

(A) number of residential properties and associated population;

(B) number of non-residential properties;

(C) other public infrastructure;

(D) major industrial and power generation facilities;

(E) number and types of critical facilities;

(F) number of roadway crossings;

(G) length of roadway segments; and

(H) agricultural area and value of crops exposed.

(6) The existing condition flood exposure analyses shall include a qualitative description of expected loss of function, which is the effect that a flood event could have on the function of inundated structures (residential, commercial, industrial, public, or others) and infrastructure, such as transportation, health and human services, water supply, wastewater treatment, utilities, energy generation, and emergency services.

(d) Existing condition vulnerability analysis

(1) RFPGs shall identify resilience of communities located in flood-prone areas identified as part of the existing condition flood exposure analyses, utilizing relevant data and tools.

(2) RFPGs shall identify vulnerabilities of critical facilities to flooding by looking at factors such as proximity to a floodplain or other bodies of water, past flooding issues, emergency management plans, and location of critical systems like primary and back-up power.

(e) All data produced as part of the existing condition flood exposure analysis and the existing condition vulnerability analysis shall be summarized in the RFP in accordance with guidance provided by the EA and shall include:

(1) underlying flood event return frequency;

(3) type of flood risk;

(4) county;

(5) HUC8;

(6) existing flood authority boundaries;

(7) Social Vulnerability Indices for counties and census tracts; and

(8) other categories as determined by RFPGs or to be designated by the EA.

(f) The information developed by the RFPG under this section shall be used to assist the RFPG establish priorities in subsequent planning tasks, to identify areas that need FMEs, and to efficiently deploy its resources.

§391.33. Regional Flood Hazard Exposure Analysis: Current and Future Floodplain Conditions:

~~(a) RFPGs shall develop underlying maps, including identifying best available information and gaps in inundation boundary mapping, and perform high-level, region-wide and largely GIS-based, flood exposure analyses to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events as follows:~~

- (1) analyses of existing development within the current floodplain and the associated flood hazard exposure
 - (A) for the floodplain as defined by FEMA or as defined by an alternative analysis if the FEMA defined floodplain is not considered best available; and
 - (B) to include only those flood mitigation projects with already dedicated construction funding and scheduled for completion prior to adoption of the next state flood plan.
- (2) analysis of potential future development and associated flood hazard exposure within the watershed based on a 'no action' scenario of approximately 30 years of continued development and population growth under current development trends and patterns, and existing flood regulations and policies based on
 - (A) current land use and development trends and practices and associated projected population based on the most recently adopted state water plan decade and population nearest the next RFP adoption date plus 30 years as determined by the EA;
 - (B) reasonable assumptions regarding locations of residential development and associated population growth;
 - (C) anticipated relative sea level change and subsidence;
 - (D) anticipated sedimentation in flood control structures and major geomorphic changes in riverine, playa, or coastal systems;
 - (E) assumed completion of flood mitigation projects currently under construction or that already have dedicated construction funding, and
 - (F) other factors deemed relevant by the RFPG.
- (b) All analyses in (a) shall consider the population and property located in areas where existing levees or dams do not meet FEMA accreditation shall be considered to be inundated when flooding without those structures is predicted. Provisionally accredited structures may be allowed to provide flood protection, unless best available information demonstrates otherwise.
- (c) Identification of flood prone areas associated with the hazard exposure analyses shall be based on analyses that rely primarily on the use and incorporation of existing and available:
 - (1) FIRMs or other flood inundation maps and GIS related data and analyses;
 - (2) Available hydraulic flood modeling results;
 - (3) model based or other types of geographic screening tools for identifying flood prone areas; and
 - (4) other best available data or relevant technical analyses that the RFPG determines to be the most updated or reliable.
- (d) In accordance with guidance to be provided by the EA, the analyses in (b) and (c) shall consider available datasets to estimate the potential flood hazard exposure including, but not limited to:
 - (1) number of residential properties and associated population;
 - (2) number of non residential properties;
 - (3) other public infrastructure;
 - (4) major industrial and power generation facilities;
 - (5) number and types of critical facilities;
 - (6) number of roadways interruptions; and
 - (7) agricultural area and value of crops exposed.
- (e) Analyses in (a) shall include a qualitative description of expected loss of function, which is the effect that a flood event could have on the function of inundated structures (residential, commercial, industrial, public, or others) and infrastructure, such as transportation, health and

human services, water supply, wastewater treatment, utilities, energy generation, and emergency services.

(f) All data produced as part of the analyses under (a) – (f) shall be summarized in the RFP in accordance with guidance provided by the EA and shall be provided in a format determined by the EA and including, but not limited to:

- (1) current or future scenario;
- (2) underlying flood event return frequency;
- (3) type of flood risk;
- (4) county;
- (5) HUC8;
- (6) existing flood authority boundaries; and
- (7) other categories to be designated by the EA.

(g) RFPGs may choose to consider additional scenarios and other factors such as fully built-out conditions (i.e., greater than 30-year future scenario using zoning or other means).

(h) This analysis will rely primarily on existing data and GIS tools and does not rely on detailed hydrologic or hydraulic modeling efforts.

(i) Analyses under §361.33 shall be performed in accordance with guidance requirements to be provided by the EA, and the RFPG shall organize, provide, and present the associated data in a manner determined by the EA.

(j) Population associated with living units shall be based on the most recent US Census and future population projections are to be based on the most recently adopted state water plan population projections as provided by the EA. RFPGs may request redistributions of TWDB-provided population projections between HUC8s within a single county if the request demonstrates that the sub-county HUC8 population projections no longer represent a reasonable estimate of anticipated conditions based on changed conditions and/or new information.

(k) RFPGs shall use screening-level tools and/or datasets developed by or made available by the TWDB in conformance with guidance to be provided by the EA.

(l) The information developed by the RFPG under this section shall be used to assist the RFPG in establishing priorities in subsequent planning tasks and to efficiently deploy its resources.

§361.34. Future Condition Flood Risk Analyses in the Region

(a) RFPGs shall perform future condition flood risk analyses for the region comprising:

- (1) flood hazard analyses that determines location, magnitude and frequency of flooding;
- (2) flood exposure analyses to identify who and what might be harmed within the region; and
- (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities.

(b) RFPGs shall perform a future condition flood hazard analysis to determine the location of both 1.0% annual chance and 0.2% annual chance flood events as follows:

(1) collect data and conduct analyses sufficient to characterize the future conditions for the planning area based on a ‘no-action’ scenario of approximately 30 years of continued development and population growth under current development trends and patterns, and existing flood regulations and policies based on:

(A) current land use and development trends and practices and associated projected population based on the most recently adopted state water plan decade and population nearest the next RFP adoption date plus approximately 30 years or as provided for in guidance;

(B) reasonable assumptions regarding locations of residential development and associated population growth;

(C) anticipated relative sea level change and subsidence based on existing information;
(D) anticipated changes to the functionality of the existing floodplain;
(E) anticipated sedimentation in flood control structures and major geomorphic changes in riverine, playa, or coastal systems based on existing information;
(F) assumed completion of flood mitigation projects currently under construction or that already have dedicated construction funding; and
(G) other factors deemed relevant by the RFPG.

(2) identify areas within each FPR where future condition hydrologic and hydraulic model results are already available and summarize the information;

(3) utilize best available data, hydrologic and hydraulic models for each area;

(4) where future condition results are not available, but existing condition hydrologic and hydraulic model results are already available, the RFPGs shall modify hydraulic models to identify future conditions flood risk for 1.0% and 0.2% annual chance storms based on simplified assumptions utilizing the information identified in subparagraph (1) (A) above.

(5) prepare a map showing areas of 1% and 0.2% annual chance of inundation for future conditions, the areal extent of this inundation, and the sources of flooding for each area.

(6) prepare a map showing gaps in inundation boundary mapping and identify known flood-prone areas based on location of hydrologic features, historic flooding, and/ or local knowledge.

(c) future condition flood exposure analysis.

The RFPGs shall use the information identified in the future condition flood hazard analysis to develop and perform high-level, region-wide and largely GIS-based, future condition flood exposure analyses to identify who and what might be harmed within the region for, at a minimum, both future condition 1.0% annual chance and future condition 0.2% annual chance flood events as follows:

(1) analyses of existing and future developments within the future condition floodplain and the associated flood hazard exposure; and

(2) to include only those flood mitigation projects with dedicated construction funding scheduled for completion prior to the next RFP adoption date plus 30 years or as provided for in guidance.

(3) Identification of flood prone areas associated with the hazard exposure analyses shall be based on analyses that rely primarily on the use and incorporation of existing and available:

(A) FIRMs or other flood inundation maps and GIS related data and analyses;

(B) available hydraulic flood modeling results;

(C) model-based or other types of geographic screening tools for identifying flood prone areas; and

(D) other best available data or relevant technical analyses that the RFPG determines to be the most updated or reliable.

(d) future condition vulnerability analysis.

(1) RFPGs shall identify resilience of communities located in flood-prone areas identified in the future condition flood exposure analysis utilizing relevant data and tools.

(2) RFPGs shall identify vulnerabilities of critical facilities to flooding by looking at factors such as proximity to a floodplain, proximity to other bodies of water, past flooding issues, emergency management plans, and location of critical systems like primary and back-up power.

(e) All data produced as part of the future condition flood hazard analysis and future condition flood exposure analysis shall be summarized in the RFP in accordance with guidance provided by the EA and shall include:

- (1) underlying flood event return frequency;
- (2) type of flood risk;
- (3) county;
- (4) HUC8;
- (5) existing flood authority boundaries;
- (6) Social Vulnerability Indices for counties and census tracts; and
- (7) other categories to be designated by the EA.
- (f) The information developed by the RFPG under this section shall be used to assist the RFPG establish priorities in subsequent planning tasks, to identify areas that need FMEs, and to efficiently deploy its resources.

~~§361.34. Existing Flood Risk Analyses in the Region.~~

~~To identify areas within each FPR where hydrologic and hydraulic model results are already available and summarize the information. To prepare this information, the RFPGs shall:~~

- ~~(1) collect and summarize information from existing flood risk analyses associated, at a minimum, with 1.0% annual chance flood events including the date of existing analyses;~~
- ~~(2) summarize, by location, the existing, available information in terms of hazard, performance, exposure, vulnerability, and consequences and shall include estimates of potential lives threatened, estimates of expected annual damage, and whether projects to address the flood risk were identified and evaluated;~~
- ~~(3) to the greatest extent practicable, organize the information in (1)–(2) geographically and otherwise in accordance with guidance to be provided by the EA;~~
- ~~(4) present associated maps and characterize the degree to which areas identified as potentially prone to flooding under §361.33 also have associated hydrologic and hydraulic flood risk modeling to support the evaluation of risks to life and property; and~~
- ~~(5) the information developed under this section shall be used to assist the RFPG to identify areas that need flood management evaluations and to efficiently deploy its resources.~~

§361.35. Evaluation of Previous and Current Floodplain Management and Recommendations for Changes to Floodplain Management.

(a) Recognizing the extent that previous and current practices may have increased flood risks, including residual risks, and considering broad floodplain management and land use approaches that will avoid increasing flood risks, and avoid negatively affecting neighboring areas, the RFPG shall:

- (1) consider the extent to which a lack of, insufficient, or ineffective current floodplain management and land use practices, regulations, policies, and trends related to land use, economic development, and population growth, allow, cause, or otherwise encourage increases to flood risks to both:
 - (A) existing population and property, and
 - (B) future population and property.
- (2) take into consideration the future flood hazard exposure analysis performed under §361.34 ~~§361.33~~, consider the extent to which the 1.0% annual chance floodplain, along with associated flood risks, may change over time in response to anticipated development and associated population growth and other relevant man-made causes, and assess how to best address these potential changes.

- (3) based on the analyses in (1) - (2), make recommendations regarding forward-looking floodplain management and land use recommendations, and economic development practices and strategies, that should be implemented by entities within the FPR. These region-specific recommendations may include minimum floodplain management and land use standards and should focus on how to best address the changes in (2) for entities within the region. These recommendations shall inform recommended strategies for inclusion in the RFP.
- (4) RFPGs may also choose to adopt region-specific, minimum floodplain management or land use or other standards that impact flood-risk, that may vary geographically across the region, that each entity in the FPR must adopt ~~and begin enforcing~~ prior to the RFPG including in the RFP any FMEs, FMSs, or FMPs that are sponsored by or that will otherwise be implemented by that entity.

§361.36. Flood Mitigation and Floodplain Management Goals.

Considering the Guidance Principles under §362.3, the existing condition flood risk flood hazard exposure analyses performed under §361.33, future condition existing flood risk analyses identified under §361.34, and past and the consideration of current floodplain management and land use approaches practices under §361.35, input from the public, and other relevant information and considerations, RFPGs shall:

- (1) identify specific and achievable flood mitigation and floodplain management goals along with target years by which to meet those goals for the FPR to include, at a minimum, goals specifically addressing risks to life and property.
- (2) recognize and clearly state the levels of residual risk that will remain in the FPR even after the stated flood mitigation goals in (1) are fully met.
- (3) structure and present the goals and the residual risks in an easily understandable format for the public including in conformance with guidance to be provided by the EA.
- (4) use these goals to guide the RFPG in carrying out the tasks required under §§361.37 - .39.
- (5) when appropriate, choose goals that apply to full single HUC8 watershed boundaries or coterminous groups of HUC8 boundaries within the FPR.
- (6) Identify both short-term goals (10 years) and long-term goals (30 years).

§361.37. Flood Mitigation Need Analysis.

(a) Based on the analyses and goals developed by the RFPG under §§361.33 - .36 and any additional analyses or information developed using available screening-level models or methods, the RFPG shall identify locations within the FPR that the RFPG considers to have the greatest flood mitigation and flood risk study needs by considering:

- (1) the areas in the FPR that the RFPG identified as the most prone to flooding that threatens life and property;
- (2) the relative locations, extent, and performance of current floodplain flood management and land use policies and infrastructure located within the FPR, particularly within the locations described in (1);
- (3) areas identified by the RFPG as prone to flooding that don't have adequate inundation maps;
- (4) areas identified by the RFPG as prone to flooding that don't have hydrologic and hydraulic models;
- (5) areas with an emergency need;
- (6) existing modeling analyses and flood risk mitigation plans within the FPR;

- (7) flood ~~management and/or~~ mitigation projects already identified and evaluated by other flood mitigation plans and studies;
 - (8) documentation of historic flooding events;
 - (9) flood mitigation ~~management~~ projects already being implemented; and
 - any other factors that the RFPG deems relevant to identifying the geographic locations where
 - (10) potential FMEs and potentially feasible FMSs and FMPs shall be identified and evaluated under §361.38.
- (b) The RFPG shall conduct the analysis in (a) in a manner that will ensure the most effective and efficient use of the resources available to the RFPG.

§361.38. Identification and Assessment of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects.

(a) Based on analyses and decisions under §361.33-.37 the RFPG shall identify and evaluate potential FMEs and potentially feasible FMSs and FMPs, including nature-based solutions, some of which may have already been identified by previous evaluations and analyses by others, ~~and that focus, at a minimum, on providing flood mitigation associated a with 1.0% annual chance flood event.~~ An FME is a proposed flood study of a specific, flood-prone area, that may include a flood risk analysis, that is needed in order to determine whether there are potentially feasible FMSs or FMPs. An FME may eventually result in detailed hydrologic and hydraulic analyses and identification of projects or strategies that could be amended into a RFP as FMSs or FMPs.

(b) When evaluating FMSs and FMPs the RFPG will, at a minimum, identify one solution that provides flood mitigation associated a with 1.0% annual chance flood event. In instances where mitigating for 1.0% annual chance events is not feasible, the RFPG shall document the reasons for its infeasibility, and at the discretion of the RFPG, other FMS and FMPs to mitigate more frequent events may also be identified and evaluated based on guidance to be provided by the EA.

~~(c)~~ A summary of the RFPG process for identifying potential FMEs and potentially feasible FMSs and FMPs in subsection (a) shall be established and included in the draft and final adopted RFP.

~~(d)~~ The RFPG shall then identify potentially feasible FMSs and FMPs in accordance with the RFPG process established under subsection (c).

~~(e)~~ For areas within the FPR that the RFPG does not yet have sufficient information or resources to identify potentially feasible FMSs and FMPs, the RFPG shall identify areas for potential FMEs that may eventually result in FMPs. ~~projects as set forth under (b).~~

~~(f)~~ The RFPG shall evaluate potentially feasible FMSs and FMPs understanding that, upon evaluation and further inspection, some FMSs or FMPs initially identified as potentially feasible may, after further inspection, be reclassified as infeasible.

~~(g)~~ FMPs will be ranked in the state flood plan and

- (1) shall represent discrete, ~~independent~~ projects;
- (2) shall not entail an entire capital program or drainage masterplan; and
- (3) may rely on other flood-related projects.

~~(h)~~ Evaluations of potentially feasible FMSs and FMPs will require associated, detailed hydrologic and hydraulic modeling results that quantify the reduced impacts from flood and the associated benefits and costs. Information may be based on previously performed evaluations of

projects and related information. Evaluations of potentially feasible FMS and FMPs shall include the following information and be based on the following analyses:

- (1) A reference to the specific flood mitigation or floodplain management goal addressed by the feasible FMS or FMP;
- (2) A determination of whether FMS or FMP meets an emergency need;
- (3) An indication regarding the potential use of federal funds, or other sources of funding, as a component of the total funding mechanism;
- (4) An equitable comparison between and consistent assessment of all FMSs and FMPs that the RFPGs determine to be potentially feasible;
- (5) A demonstration that the FMS or FMP will not negatively affect a neighboring area;
- (6) A quantitative reporting of the estimated benefits of the FMS or FMP, including reductions of flood impacts of the 1.0% annual chance flood event and other storm events identified and evaluated if the project mitigates to more frequent event, to include, but not limited to:
 - (A) Associated flood events that must, at a minimum, include the 1.0% annual chance flood event and other storm events identified and evaluated;
 - (B) Reduction in habitable, equivalent living units flood risk;
 - (C) Reduction in residential population flood risk;
 - (D) Reduction in critical facilities flood risk;
 - (E) Reduction in road closure occurrences; ~~occurrences~~;
 - (F) Reduction in acres of active farmland and ranchland flood risk;
 - (G) Estimated reduction in fatalities, when available;
 - (H) Estimated reduction in injuries, when available;
 - (I) Reduction in expected annual damages from residential, commercial, and public property; and
 - (J) Other benefits as deemed relevant by the RFPG including environmental benefits and other public benefits.
- (7) A quantitative reporting of the estimated capital cost of projects in accordance with guidance provided by the EA;
- (8) Calculated benefit-cost ratio for FMPs in accordance with guidance to be provided by the EA and based on current, observed conditions;
- (9) For projects that will contribute to water supply, all relevant evaluations required under §357.34(e), as determined by the EA based on the type of contribution, and a description of its consistency with the currently adopted State Water Plan;
- (10) A description of potential impacts and benefits from the FMS or FMP to the environment, agriculture, environmental, agricultural, recreational resources, navigation, water quality, erosion, sedimentation, and impacts to any other resources deemed relevant by the RFPG;
- (11) A description of residual, post-project, and future risks associated with FMPs including the risk of potential catastrophic failure and the potential for future increases to these risks due to lack of maintenance;
- (12) Implementation issues including those related to right-of-ways, permitting, acquisitions, relocations, utilities and transportation; and
- (13) Funding sources and options that exist or will be developed to pay for development, operation, and maintenance of the FMS or FMP.
- (i) Evaluations of potential FMEs will be at a reconnaissance or screening-level, unsupported by associated detailed hydrologic and hydraulic analyses. These will be identified for areas that the RFPG considers a priority for flood risk evaluation but that do not yet have the required

detailed hydrologic and hydraulic modeling or associated project evaluations available to evaluate specific FMSs or FMPs for recommendation in the RFP. These FMEs shall be based on recognition of the need to develop detailed hydrologic models or to perform associated hydraulic analyses and associated project evaluations in certain areas identified by the RFPG. Evaluations of potential FMEs shall include the following analyses:

(1) A reference to the specific flood mitigation or floodplain management goal to be addressed by the potential FME.

(2) A determination of whether FME may meet an emergency need.

(3) An indication regarding the potential use of federal funds, or other sources of funding as a component of the total funding mechanism.

(4) An equitable comparison between and consistent assessment of all FMEs.

(5) An indication of whether hydrologic and or hydraulic models are already being developed or are anticipated in the near future and that could be used in the FME.

(6) A quantitative reporting of the estimated benefits, including reductions of flood risks, to include:

(A) Estimated habitable, living unit equivalent and associated population in FME area;

(B) Estimated critical facilities in FME area;

(C) Estimated number of roads closures occurrences ~~occurrences~~ in FME area;

(D) Estimated acres of active farmland and rangeland in FME area; and

(E) A quantitative reporting of the estimated study cost of the FME and whether the cost includes use of existing or development of new hydrologic or hydraulic models.

(7) For FMEs, RFPGs do not need to demonstrate that an FME will not negatively affect a neighboring area.

(j) RFPGs shall evaluate and present potential FMEs and potentially feasible FMSs and FMPs with sufficient specificity to allow state agencies to make financial or regulatory decisions to determine consistency of the proposed action before the state agency with an approved RFP.

(k) Analyses under §361.38 shall be performed in accordance with guidance requirements to be provided by the EA.

(l) All data produced as part of the analyses under §361.38 shall be organized and summarized in the RFP in accordance with guidance provided by the EA and shall be provided in a format determined by the EA.

(m) Analyses shall clearly designate a representative location of the FME and beneficiaries including a map and designation of HUC8 and county location.

§361.39. Recommended Flood Management Evaluations, Flood Management Strategies, and Flood Mitigation Management Projects.

(a) RFPGs shall recommend FMSs and FMPs to reduce the potential impacts of flood based on the evaluations under §361.38 of this title and RFPG goals and that must, at a minimum, mitigate for flood events associated with at 1.0 percent annual chance (100-yr flood) where feasible. In instances where mitigating for 100-year events is not feasible, FMS and FMPs to mitigate more frequent events may be recommended based on guidance to be provided by the EA. Recommendations shall be based upon the identification, analysis, and comparison of alternatives that the RFPG determines will provide measurable reductions in flood impacts in support of the RFPG's specific flood mitigation and/or floodplain management management goals.

- (b) RFPGs shall provide additional information in conformance with guidance to be provided by the EA which will be used to rank ~~prioritize~~ recommended FMPs in the state flood plan.
- (c) RFPGs shall recommend FMEs that the RFPG determines are most likely to result in identification of potentially feasible FMSs and FMPs that would, at a minimum, identify and investigate one solution to mitigate for flood events associated with a 1.0% annual chance flood event and that support specific RFPG flood mitigation and/or floodplain management goals.
- (d) Recommended FMSs or FMPs may not negatively affect ~~impact~~ a neighboring area or an entity's water supply.
- (e) Recommended FMSs or FMPs that will contribute to water supply may not result in an overallocation of a water source based on the water availability allocations in the most recently adopted State Water Plan.
- (f) Specific types of FMEs, FMSs, or FMPs that should be included and that should not be included in RFPs must be in accordance with guidance to be provided by the EA.

§361.40. Impacts of Regional Flood Plan.

Regional flood plans shall include:

- (1) a region-wide summary of the relative reduction in flood risk that implementation of the regional flood plan would achieve within the region including with regard to life, injuries, and property.
- (2) a statement that the FMPs ~~flood management projects~~ in the plan, when implemented, will not negatively affect neighboring areas located within or outside of the FPR.
- (3) a general description of the types of potential positive and negative socioeconomic or recreational impacts of the recommended FMSs and FMPs within the FPR.
- (4) a general description of the overall impacts of the recommended FMPs and FMSs in the RFP on the environment, agriculture, recreational resources, water quality, erosion, sedimentation, and navigation.

§361.41. Contributions to and Impacts on Water Supply Development and the State Water Plan.

- (1) Regional flood plans shall include a region-wide summary and description of the contribution that the regional flood plan would have to water supply development including a list of the specific flood management strategies and/or flood mitigation projects that would contribute to water supply; and
- (2) a description of any anticipated impacts, including to water supply or water availability or projects in the State Water Plan, that the regional flood plan FMSs and FMPs may have.

§361.42. Flood Response Information and Activities.

RFPGs are to summarize the nature and types of flood response preparations within the FPR including providing where more detailed information is available regarding recovery. RFPGs shall not perform analyses or other activities related to planning for disaster response or recovery activities.

§361.43. Administrative, Regulatory, and Legislative Recommendations.

RFPGs shall develop and include in their flood plans

- (1) legislative recommendations that they consider necessary to facilitate floodplain management and flood mitigation planning and implementation;

- (2) other regulatory or administrative recommendations that they consider 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; and
- (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.

§361.44. Flood Infrastructure Financing Analysis.

RFPGs shall indicate how individual local governments, regional authorities, and other political subdivisions in their region propose to finance the region's recommended FMSs, FMPs, and FMEs included in their flood plan. The assessment shall also describe what role the RFPG proposes for the state in financing recommended FMSs, FMPs, and FMEs. As projects are implemented, those improvements and associated benefits shall be incorporated into and reflected in the subsequent RFPs.

§361.45. Implementation and Comparison to Previous Regional Flood Plan.

Each RFPG shall, in accordance with guidance from the EA,

- (1) collect information from local sponsors of FMPs on implementation of previously recommended FMPs and provide to the EA; and
- (2) include a general description of how the new RFP differs from the previous plan including with regard to the status of existing flood infrastructure, flood mitigation achieved, goals, and recommended projects.

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STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

<rule>

SUBCHAPTER D. ADOPTION, SUBMITTAL AND AMENDMENTS TO REGIONAL FLOOD PLANS.

§361.50. Adoption, Submittal, Notifications, and Approval of Regional Flood Plans.

- (a) The RFPGs shall approve each recommended FME, FMS, and FMP by a separate vote and shall adopt their draft and final RFPs by a vote and submit their final adopted RFPs to the Board every five years on a date to be determined by the EA, as modified by subsection (d)(2)(D) of this section, for approval and inclusion in the State Flood Plan.
- (b) The draft RFP submitted to the EA must be in the electronic and paper format specified by the EA. Each draft RFP must certify that the draft RFP is complete and adopted by the RFPG.

- (c) Prior to adopting a final RFP, the RFPGs shall consider the following comments in accordance with §361.21 to include:
- (1) any written or oral comments received from the public on the draft RFP; and
 - (2) the EA's written comments on the draft RFP.
- (d) RFPGs shall submit the draft RFP and the adopted RFPs and any subsequent amendments to approved RFPs to the EA in conformance with this section.
- (1) RFPs shall include:
- (A) The technical report and data prepared in accordance with this chapter and the EA's specifications;
 - (B) A list of recommended FMPs FMEs, and FMSs, ~~and FMPs~~ with accompanying data to be used by the EA to rank each associated non-zero capital costs or other non-recurring costs ~~one-time capital cost~~ in accordance with specifications and guidance to be provided by the EA;
 - (C) An executive summary that documents key RFP findings and recommendations; and
 - (D) In the adopted RFP, summaries ~~Summaries~~ of all written and oral comments received pursuant to subsection (c) of this section, with a response by the RFPG explaining how the plan was revised or why changes were not warranted in response to written comments received under subsection (c) of this section.
- (2) RFPGs shall submit RFPs to the EA according to the following schedule:
- (A) Draft RFPs are due every five years on a date disseminated by the EA unless an extension is approved, in writing, by the EA.
 - (B) Prior to submission of the draft RFP, the RFPGs shall provide and or upload data, metadata, and all other relevant digital information supporting the plan to the Board, including to the Board's State Flood Plan Database, when available. All changes and corrections to this information must be entered into or otherwise updated in RFPG's dataset including into the Board's State Flood Plan Database, when available, prior to submittal of a final adopted RFP.
 - (C) The RFPG shall make publicly available and transfer copies of all data, models, and reports generated by the planning process and used in developing the RFP to the EA. To the maximum extent possible, data shall be transferred in digital form according to specifications provided by the EA. One copy of all reports prepared by the RFPG shall be provided in digital format according to specifications provided by the EA. All digital mapping shall use a geographic information system according to specifications provided by the EA. The EA shall seek the input from the State Geographic Information Officer regarding specifications mentioned in this section.
 - (D) Adopted RFPs are due to the EA every five years on a date disseminated by the EA unless, at the discretion of the EA, a time extension is granted by the EA.
 - (E) Once approved by the Board, RFPs shall be made available on the Board website.
- (e) Upon receipt of an RFP adopted by the RFPG, the Board shall consider approval of such plan based on the following criteria:
- (1) verified adoption of the RFP by the RFPG;
 - (2) whether the RFP satisfies the requirements for regional flood plans adopted in the guidance principles at 361.20;
 - (3) whether the RFP adequately provides for the preservation of life and property and the development of water supply sources, where applicable; and
 - (4) the RFP does not negatively affect a neighboring area.
- (f) The Board may approve an RFP only after it has determined that the RFP complies with statute and rules.

- (g) RFPs approved by the Board pursuant to this chapter shall be incorporated into the State Flood Plan as outlined in §362.4 of this title (relating to Guidelines).
- (h) The initial RFP shall be delivered to the EA on or before January 10, 2023.

§361.51. Amendments to Regional Flood Plans.

(a) Local Flood Planning Amendment Requests. A Political Subdivision in the FPR may request an RFPG to consider an amendment to an adopted RFP based on changed conditions or new information. An RFPG must formally consider such request within 180 days after its receipt and shall amend its adopted RFP if it determines an amendment is warranted.

(b) If the Political Subdivision is not satisfied with the RFPG's decision on the issue, it may file a petition with the EA to request review of the RFPG's decision and consider the amendment to the approved RFP. The Political Subdivision shall send the petition to the EA and the chair of the affected RFPG.

(1) The petition must include:

(A) the changed condition or new information that affects the approved RFP;

(B) the specific sections and provisions of the approved RFP that may be affected by the changed condition or new information;

(C) the efforts made by the Political Subdivision to work with the RFPG to obtain an amendment; and

(D) any other information that may be useful to the EA in determining whether an amendment is necessary.

(2) If the EA determines that the changed condition or new information warrants a change in the approved RFP, the EA shall request the RFPG to consider making the appropriate change. If the RFPG does not amend its plan consistent with the request within 90 days, it shall provide a written explanation to the EA explaining the reason for not amending the RFP, after which the EA may present the issue to the Board for consideration at a public meeting. The Board may then direct the RFPG to amend its RFP.

(c) Amendments to RFPs and State Flood Plan. An RFPG may amend an adopted RFP at a regular RFPG meeting, after giving notice for an amendment and providing notice in accordance with §361.21 (relating to Notice). An RFPG must obtain Board approval of all amendments to RFPs under the standards and procedures of this section. The RFPG may initiate an amendment or an entity may request an RFPG to amend its adopted RFP.

(1) An RFPG's consideration for action to initiate an amendment may occur at a regular RFPG meeting.

(2) The RFPG shall hold a public meeting at which the RFPG may choose to take action on the amendment. The amendment shall be available for EA and public comment in accordance with §361.21.

(3) The RFPG may adopt the amendment at a regularly scheduled RFPG meeting held in accordance with §361.21. The amendment materials shall be submitted to the EA and shall:

(A) include the RFPG responses to all comments received on the amendment in associated with notice in §361.21; and

(B) demonstrate that the amended RFP complies with statute and rules including that it satisfies the requirements in the guidance principles §362.3 and does not negatively affect ~~impact~~ a neighboring area.

(4) After adoption of the amendment, the RFPG shall submit the amendment and its response to comments to the Board which shall consider approval of the amendment following EA review of the amendment.

(c) All amendments to an RFP must meet all the requirements related to development of an RFP.

(d) Following amendments of RFPs, the Board shall make any necessary amendments to the State Flood Plan as outlined in §362.4(b) of this title.

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STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

<rule>

SUBCHAPTER E. NEGATIVE EFFECTS ~~AFFECTS~~ ON NEIGHBORING AREAS, AND FAILURE TO MEET REQUIREMENTS.

§361.60. Addressing Negative Effects ~~Affects~~ on Neighboring Areas Within Flood Planning Regions.

RFPGs shall resolve issues related to projects in their plan that will negatively affect neighboring areas within the FPR. The EA will provide technical assistance, within available resources, to the RFPGs requesting such assistance and may assist in facilitating resolution of issues within FPRs.

§361.61. Addressing Negative Effects ~~Affects~~ on Neighboring Areas Between Flood Planning Regions.

(a) In the event an RFPG has asserted or the Board finds that there is an element of a draft RFP that will negatively affect a neighboring area in a different FPR, the involved regions shall make a good faith effort to voluntarily work together to resolve the issue.

(b) The EA may use the following process to address the issue:

(1) notify the affected RFPGs of the nature of the potential negative effect;

(2) request affected RFPGs appoint a representative or representatives authorized to negotiate on behalf of the RFPG and notify the EA in writing of the appointment; and

(3) assist in negotiating resolutions of the issue with RFPGs.

(c) In the event the negotiations are unsuccessful, the EA may:

(1) propose a recommendation for resolution of the issue to the Board; or

(2) hold a public meeting on the proposed recommendation for resolution of the issue at a time and place determined by the EA. At the meeting, the EA may take comments from the RFPGs, Political Subdivisions, and members of the public on the issues identified by the Board as unresolved issues; and

(3) after the public meeting, the EA may make a recommendation to the Board for resolution of the issue.

- (d) The Board shall consider the EA's recommendation and any written statements by a representative for each affected RFPG and determine the resolution of the issue.
- (e) The EA shall notify affected RFPGs of Board's decision and shall direct changes to the affected RFPs, to be incorporated in accordance with Texas Water Code §16.062(i).
- (f) The Board may also, at its discretion, consider approving a regional flood plan with the exception of the specific element that will negatively affect a neighboring area.

§361.62. Failure of a Regional Flood Plan to Meet Regional Flood Planning Requirements.

- (a) In the event the Board finds that the RFP does not meet the requirements of the Texas Water Code §16.062, this chapter, and Chapter 362 of this title (relating to State Flood Planning Guidelines), the Board shall direct the RFPG to make changes necessary for compliance with legal requirements.
- (b) In the event the Board directs the RFPG to make changes to its RFP, the RFPG may request a reasonable amount of time, within any statutory deadlines, to complete the required changes.

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STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

<rule>

SUBCHAPTER F. REGIONAL FLOOD PLANNING GRANTS.

§361.70. Notice of Funds and Submission and Review of Regional Flood Planning Applications.

- (a) The EA will notify the RFPGs that funds are available and that applications will be accepted from Planning Group Sponsors ~~eligible applicants~~ for grants to develop or negotiate a scope of work or to develop or revise regional flood plans. A RFPG may not receive grant funds unless the RFPG has provided the EA with a copy of the RFPG's adopted by-laws.
- (b) The RFPG shall provide a written designation to the EA naming the Planning Group Sponsor ~~political subdivision~~ that is authorized to apply for grant funds on behalf of the RFPG. The RFPG shall ensure that the Planning Group Sponsor ~~designated political subdivision~~ has the legal authority to conduct the procurement of professional services and enter into the contracts necessary for regional flood planning.
- (c) The RFPG meeting to consider its additional, region-specific, public notice requirements in accordance with §361.12(3) must occur prior to taking action regarding its request for funding under this subchapter and must be documented in its application for funding.
- (d) The designated Planning Group Sponsor ~~political subdivision~~ shall provide notice that an application for funding is being submitted in accordance with §361.21.
- (e) The EA may request clarification from the Planning Group Sponsor ~~political subdivision~~, if necessary, to evaluate the application. Incomplete applications may be rejected and returned to the applicant.

- (f) The applications will be evaluated on the following criteria:
- (1) degree to which proposed flood planning does not duplicate previous or ongoing flood or water planning;
 - (2) application organization, responsiveness, and reasonableness of budget;
 - (3) scope of work;
 - (4) eligibility of tasks for funding under this subchapter;
 - (5) the relative need of the Planning Group Sponsor ~~political subdivision~~ for the funding based upon an assessment of the necessary scope of work, amount of work, and cost to develop the regional flood plan as compared to statewide needs for development of all regional flood plans;
 - (6) the degree to which the scope of work associated with the funding and to be performed by the RFPG will address the flood risks in the FPR; and
 - (7) Conformance with the requirements in the Board request for applications including other information as may be required in the application.

§361.71. Board Consideration of Applications, Applicant's Responsibilities, and Contract.

- (a) The EA will provide a summary of regional flood planning funding applications with recommendations for approval to the Board for consideration at a regularly scheduled public meeting of the Board. The EA shall notify the applicants and other persons who have provided comments of the time and place of such meeting.
- (b) The Board may approve, deny, amend, or continue consideration of an application. If the Board approves an application for funding, the Planning Group Sponsor ~~eligible applicant~~ will be notified of the amount of funds available and the deadline for executing a contract with the Board. If the applicant does not enter into a contract by the specified deadline, then the Board's approval expires and no funds will be provided. The Planning Group Sponsor ~~applicant~~ may request an extension of time for good cause shown prior to the contract execution deadline.
- (c) The Planning Group Sponsor ~~eligible applicant~~ must demonstrate the availability of matching funds when applicable. However, the Board may in its discretion award up to 100% of the necessary and direct costs of the development or revision of a plan.
- (d) the contracts and sub-contracts for regional flood planning funds shall include:
 - (1) a detailed statement of the purpose for which the money is to be used;
 - (2) a scope of work;
 - (3) the total amount of money to be paid under the contract and, as determined by the EA, subdivided into budget tasks;
 - (4) the time for completion; and
 - (5) any other terms and conditions required by the EA or agreed to by the contracting parties.

§361.72. Use of Funds.

- (a) Limitations of funding. The Board has sole discretion in determining which activities are necessary for the development or revision of RFPs. However, no funds provided by the Board may be expended by RFPGs for the following:
 - (1) activities for which the Board determines existing information, data, or analyses are sufficient for the planning effort including but not limited to:
 - (A) model development, modeling, or collection of data describing flood hazard exposure or flood risks where information for evaluation of flood hazard exposure or flood risks is currently

available from other sources or that will be made available by TWDB or others in sufficient time to be utilized by the RFPG in development of their RFP;

(B) detailed technical evaluations of FMEs or FMSs or FMPs, including regarding feasibility, cost, or impacts, where recent, sufficient information for planning is available, including from the Board or other entity, to evaluate the FMEs or FMSs or FMPs;

(C) evaluations of topics not directly related to the regional flood planning contract scope of work or related flood planning rules for development of regional flood plans; and

(D) revision of the Board-adopted state population projections.

(2) activities directly related to the preparation of applications for state or federal permits or other approvals, activities associated with administrative or legal proceedings by regulatory agencies, and preparation of engineering plans and specifications;

(3) costs associated with administration of the plan's development by the Planning Group Sponsor ~~political subdivision sponsor~~ or RFPG members, including but not limited to:

(A) compensation for the time or expenses of RFPGs members' service on or for the RFPG;

(B) costs of administering the RFPGs, other than those explicitly allowed under (b);

(C) staff or overhead costs for time spent providing public notice and meetings, including time and expenses for attendance at such meetings;

(D) costs for training;

(E) costs of developing an application for funding or reviewing materials developed due to this grant; and

(F) costs of administering the regional flood planning grant and associated contracts;

(4) analysis or other activities related to planning for disaster response or recovery activities; and

(5) analyses of benefits and costs of FMSs flood management strategies beyond the scope of such analyses that is specifically allowed or required by regional flood planning guidance to be provided by the EA unless the RFPG demonstrates to the satisfaction of the EA that these analyses are needed to determine the selection of the FMS or FMP.

(b) The following administrative costs are eligible for funding if the RFPG or its chairperson certifies, during a public meeting, that the expenses are eligible for reimbursement and are correct and necessary:

(1) travel expenses, as authorized by the General Appropriations Act are available only for attendance at a posted meeting of the RFPG unless the travel is specifically authorized by the RFPG and EA;

(2) costs associated with providing translators and accommodations for persons with disabilities for public meetings when required by law or deemed necessary by the RFPGs and certified by the chairperson;

(3) direct costs, excluding personnel-related costs of the Planning Group Sponsor ~~political subdivision sponsor~~, for placing public notices for the legally required public meetings and of providing copies of information for the public and for members of the RFPGs as needed for the efficient performance of planning work; ~~and~~

(4) the cost of public notice postings including a website and for postage for mailing notices of public meetings; ~~and~~-

(5) the Planning Group Sponsor's personnel costs, for the staff hours that are directly spent providing, preparing for, and posting public notice for RFPG meetings, including time and direct expenses for their support of and attendance at such RFPG meetings in accordance with, and as specifically limited by, the flood planning grant contract with the Board.

(c) Subcontracting. A RFPG through the Planning Group Sponsor's eligible applicant's contractor or subcontractor may obtain professional services, including the services of a planner, land surveyor, licensed engineer, or attorney, for development or revision of a regional flood plan only if such services are procured on the basis of demonstrated competence and qualifications through a request for qualifications process in accordance with Texas Government Code Chapter 2254.

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CHAPTER 362. STATE FLOOD PLANNING GUIDELINES.

SUBCHAPTER A. STATE FLOOD PLAN DEVELOPMENT.

§362.1. Applicability.

This subchapter governs the TWDB's preparation, development, and formulation of the state flood plan and the Board's adoption of the state flood plan.

§362.2. Definitions and Acronyms.

(a) 1.0% annual chance flood event - Flood event having a 1.0% chance of being equaled or exceeded in any given year, also referred to as the base flood or 100-year flood.

(b) 0.2% annual chance flood event - Flood event having a 0.2% chance of being equaled or exceeded in any given year, also referred to as the 500-year flood.

(c) Board – The governing body of the Texas Water Development Board.

(d) Executive Administrator (EA) – The Executive Administrator of the TWDB or a designated representative.

(e) Flood Mitigation – The implementation of actions, including both structural and non-structural solutions, to reduce flood risk to protect against the loss of life and property.

(f) Flood Management Evaluation (FME) – A proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.

(g) Flood Management Strategy (FMS) – A proposed plan to reduce flood risk or mitigate flood hazards to life or property. A flood management strategy may or may not require associated Flood Mitigation Projects to be implemented.

(h) Flood Mitigation Project (FMP) – A proposed flood project, both structural and non-structural, that has a non-zero capital costs or other non-recurring cost and that when implemented will reduce flood risk or mitigate flood hazards to life or property.

(i) Neighboring area - means any area, including but not limited to upstream and downstream areas, potentially affected by the proposed flood ~~mitigation management~~ project.

(j) Political Subdivision – County, city, or other body politic or corporate of the state, including any district or authority created under Art. 3§ 52 or Art. 16 § 59 of the constitution and including any interstate compact commission to which the state is a party and any nonprofit WSC created and operating under Ch. 67.

(k) Regional Flood Plan (RFP) – The plan adopted or amended by a Regional Flood Planning Group pursuant to Texas Water Code §16.062 (relating to Regional Flood Plans) and this chapter.

(l) State Flood Plan (SFP) – The most recent State Flood Plan adopted or amended by the Board under Texas Water Code §16.061 (relating to State Flood Plan).

(m) TWDB – Texas Water Development Board.

§362.3. Guidance Principles.

(a) Regional flood planning guidance principles shall be the same as the state flood planning guidance principles and will be revisited every five years.

(b) Development of the regional and state flood plans shall be guided by the following principles. The regional and state flood plans:

- (1) shall be a guide to state, regional, and local flood risk management policy.
- (2) shall be based on the best available science, data, models, and flood risk mapping.
- (3) shall focus on: identifying both current and future flood risks, including hazard, exposure, vulnerability and ~~flood risks, including~~ residual risks; selecting achievable flood mitigation goals, as determined by each RFPG for their region; and incorporating strategies and projects to reduce the identified risks accordingly.
- (4) shall, at a minimum, evaluate flood hazard exposure to life and property associated with 0.2 percent annual chance flood event (the 500-year flood) and, in these efforts, shall not be limited to consideration of historic flood events.
- (5) shall, when possible and at a minimum, evaluate flood risk to life and property associated with 1.0 percent annual chance flood event (the 100-year flood) and address, through recommended strategies and projects, the flood mitigation goals of the RFPG (per item 2 above) to address flood events associated with a 1.0 percent annual chance flood event (the 100-year flood); and, in these efforts, shall not be limited to consideration of historic flood events.
- (6) shall consider the extent to which current floodplain management, land use regulations, and economic development practices increase future flood risks to life and property and consider recommending adoption of floodplain management, land use regulations, and economic development practices to reduce future flood risk.
- (7) shall consider future development within the planning region and its potential to impact the benefits of flood management strategies (and associated projects) recommended in the plan.
- (8) shall consider various types of flooding risks that pose a threat to life and property, including, but not limited to, riverine flooding, urban flooding, engineered structure failures, slow rise flooding, ponding, flash flooding, and coastal flooding, including relative sea level change and storm surge.
- (9) shall focus primarily on flood management strategies and projects with a contributing drainage area greater than or equal to 1.0 (one) square miles except in instances of flooding of critical facilities or transportation routes or for other reasons, including levels of risk or project size, determined by the RFPG.
- (10) shall consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) on neighboring areas. In recommending strategies, RFPGs shall ensure that no neighboring area is negatively affected by the regional flood plan.
- (11) shall include an assessment of existing, major flood mitigation infrastructure and will recommend both new strategies and projects that will further reduce risk, beyond what existing flood strategies and projects were designed to provide, and make recommendations regarding required expenditures to address deferred maintenance on or repairs to existing flood infrastructure.
- (12) shall include the estimate of costs and benefits at a level of detail sufficient for RFPGs and sponsors of flood mitigation management projects to understand project benefits and, when applicable, compare the relative benefits and costs, including environmental and social benefits and costs, between feasible options.
- (13) shall provide for the orderly preparation for and response to flood conditions to protect against the loss of life and property and reduce injuries and other flood-related human suffering.
- (14) shall provide for an achievable reduction in flood risk at a reasonable cost to protect against the loss of life and property from flooding.

(15) shall be supported by state agencies, including the TWDB, General Land Office, Texas Commission on Environmental Quality, Texas State Soil and Water Conservation Board, Texas Parks and Wildlife Department, and the Texas Department of Agriculture, working cooperatively to avoid duplication of effort and to make the best and most efficient use of state and federal resources.

(16) shall include recommended strategies and projects that minimize residual flood risk and provide effective and economical management of flood risk to people, properties, and communities, and associated environmental benefits.

(17) shall include strategies and projects that provide for a balance of structural and nonstructural flood mitigation measures, including projects that use nature-based features, that lead to long-term mitigation of flood risk.

(18) shall contribute to water supply development where possible.

(19) shall also follow all regional and state water planning guidance principles (31 TAC 358.3) in instances where recommended flood projects also include a water supply component.

(20) shall be based on decision-making that is open to, understandable for, and accountable to the public with full dissemination of planning results except for those matters made confidential by law.

(21) shall be based on established terms of participation that shall be equitable and shall not unduly hinder participation.

(22) shall include flood management strategies and projects recommended by the RFPGs that are based upon identification, analysis, and comparison of all flood management strategies the RFPGs determine to be potentially feasible to meet flood mitigation and floodplain management goals.

(23) shall consider land-use and floodplain management policies and approaches that support short- and long-term flood mitigation and floodplain management goals.

(24) shall consider natural systems and beneficial functions of floodplains, including flood peak attenuation and ecosystem services.

(25) shall work be consistent with the National Flood Insurance Program (NFIP) and shall not undermine participation in nor the incentives or benefits associated with the NFIP.

(26) shall emphasize the fundamental importance of floodplain management policies that reduce flood risk.

(27) shall encourage flood mitigation design approaches that work with, rather than against, natural patterns and conditions of floodplains.

(28) shall not cause long-term impairment to the designated water quality as shown in the state water quality management plan as a result of a recommended flood management strategy or project.

(29) shall be based on identifying common needs, issues, and challenges; achieving efficiencies; fostering cooperative planning with local, state, and federal partners; and resolving conflicts in a fair, equitable, and efficient manner.

(30) shall include recommended strategies and projects that are described in sufficient detail to allow a state agency making a financial or regulatory decision to determine if a proposed action before the state agency is consistent with an approved regional flood plan.

(31) shall include ongoing flood projects that are in the planning stage, have been permitted, or are under construction.

(32) shall include legislative recommendations that are considered necessary and desirable to facilitate flood management planning and implementation to protect life and property.

(33) shall be based on coordination of flood management planning, strategies, and mitigation projects with local, regional, state, and federal agencies projects and goals.

(34) shall be in accordance with all existing water rights laws, including but not limited to, Texas statutes and rules, federal statutes and rules, interstate compacts, and international treaties.

(35) shall consider protection of vulnerable populations.

(36) shall consider benefits of flood management strategies to water quality, fish and wildlife, ecosystem function, and recreation, as appropriate.

(37) Shall minimize adverse environmental impacts and be in accordance with adopted environmental flow standards.

(38) Shall consider how long-term maintenance and operation of flood strategies will be conducted and funded.

(39) Shall ~~include~~ consider multi-use opportunities such as green space, parks, water quality, or recreation, portions of which could be funded, constructed, and or maintained by additional, third-party project participants.

§362.4. State Flood Plan Guidelines.

(a) The EA shall prepare, develop, and formulate the state flood plan and the Board shall adopt a state flood plan pursuant to the schedule in Texas Water Code §16.061.

(b) The EA shall incorporate into the state flood plan presented to the Board those RFPs approved by the Board pursuant to Texas Water Code §16.062 and Chapter 361 of this title (relating to Regional Flood Planning). The Board shall, not less than 30 days before adoption or amendment of the state flood plan, publish notice of its intent to adopt a state flood plan and shall mail notice to each RFPG. The Board shall hold a public meeting during which it may adopt a state flood plan or amendments thereto.

(c) The state flood plan shall incorporate information from Board-approved RFPs, and shall address, at a minimum, the following:

(1) Basis for state flood planning, including sections on Texas water statutes, rules, regulations, and Texas' flood management and mitigation institutions.

(2) Summary of the condition and adequacy of flood control infrastructure on a regional basis.

(3) Summary of existing flood risk hazards associated with 1.0% annual chance and 0.2% annual chance flood events.

(4) Description of methods used to develop the regional and state flood plans.

(5) A statewide, ranked list of recommended FMEs, FMSs, and FMPs that have associated one-time capital costs derived from the Board-approved RFPs.

(6) An analysis of completed, ongoing, and proposed FMEs, FMSs, and FMPs included in previous state flood plans including projects funded by the TWDB.

(7) A discussion of how the recommended FMEs, FMSs, and FMPs will reduce flood risk and mitigate flood hazards.

(8) Legislative recommendations the Board considers necessary to facilitate flood mitigation planning and FME, FMS, and FMP implementation.

**Preamble, Summary of Public Comments Received, and
TWDB Responses to Public Comments**

The Texas Water Development Board (“TWDB” or “board”) proposes adding new 31 TAC §§ 361.10- 361.72 and §§ 362.1-362.4

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE NEW CHAPTER.

The Texas Water Development Board (“TWDB” or “board”) adopts new 31 TAC §361 concerning regional flood planning and new 31 TAC §362 concerning state flood planning. Senate Bill 8 of the 86th Legislature, Regular Session requires that the first regional flood plans be delivered to the Texas Water Development Board by January 10, 2023.

SECTION BY SECTION DISCUSSION OF PROPOSED AMENDMENTS INCLUDING PUBLIC COMMENTS RECEIVED AND RESPONSES.

General Comments

Chairman Charles Perry provided written comments thanking staff for traveling throughout the state to host fourteen public meetings and two webinars to listen to and receive feedback from hard-working Texans. The chairman stated that the rules as presented mirror the intent of SB 8 and the subsequent funding provided in SB 500, and that as with all rules promulgated, implementation requires deliberate oversight to ensure that legislative intent is ultimately met.

Response:

The TWDB acknowledges and appreciates this comment. No changes have been made.

Chairman Dade Phelan provided oral comments thanking staff for their work and expressing support the implementation of this monumental legislation. The chairman discussed his district's flood risk and history and asserts that flood mitigation is a statewide issue. He appreciates TWDB's willingness to listen to the public and stakeholders.

Response:

The TWDB acknowledges and appreciates this comment. No changes have been made.

State Senator Carol Alvarado applauds the effort of the TWDB and collaborating state agencies in drafting these proposed rules. The senator suggests that, when possible, the TWDB place a focus on utilizing nature-based flood solutions that promote biodiversity and resident well-being, all while mitigating flood risk.

Response:

The TWDB acknowledges and appreciates the comment and notes that the consideration of nature-based features is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solution are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

State Senator Carol Alvarado expresses concern over the ambiguity of the phrase "negative impacts." The senator agrees that no community should be negatively impacted by flood mitigation efforts and suggests that the TWDB consider revising this phrasing, further defining its meaning, or adding a threshold of impact or damages to clarify the meaning of negative impact.

Response:

The TWDB acknowledges and appreciates the comment and notes that the term "negative affect" is based on language in Senate Bill 8. TWDB has included a definition for "negative effect" in Section 361.10 and the term will be further defined through guidance being developed by the EA.

Judge Aurelio Guerra, Jr. states that Willacy County is a small rural community that experiences recurring flooding and due to high poverty conditions, the county does not have the financial means to provide improvements on its own. Willacy County requests that TWDB consider giving preference to economically distressed counties and counties impacted by upstream flooding.

Response:

The TWDB acknowledges and appreciates the comment and notes that funding of project implementation will occur via financial programs outside of the Senate Bill 8 planning charges. Note that the new Flood Infrastructure Fund (FIF) program that came out of Senate Bill 7 attempts to address some of the affordability issues raised by the commenter. No changes have been made.

Overall, PEW Charitable Trusts strongly supports the new regulations and the framework they create for regional flood planning across the State of Texas and believes the proposed regulations are fully consistent with the requirements of the State's new law, offer a reasonable degree of process flexibility for local communities, and will, over time, reduce the vulnerability of people and property to devastating storms and floods. Further, PEW Charitable Trusts applauds the TWDB for assuring that the regional flood plans, which will be aggregated into a single statewide flood plan, not only focus on current flood risks, but also consider and prepare for future flood risks and found that the TWDB's proposed rules to be sound and thorough.

PEW Charitable Trusts thanks the TWDB for including language which emphasizes the long-standing tenet of Texas law regarding diversion of floodwaters to another property (Texas Water Code 11.086) and the specific direction from the legislature for the TWDB to assure that no neighboring area is negatively affected by a regional flood plan. They consider the requirement that each Regional Flood Planning Groups (RFPG) must consider upstream and downstream impacts (Section 362.3(b)(10)) as well as provide notice to (Section 361.21(h)(3)(c)) and work collaboratively with representatives of neighboring areas (Section 361.11 (f)(8) and (j)) likely to help to assure that the actions or inactions of one planning entity will not exacerbate the flood risk elsewhere; and supports the inclusion of those specific sections (361.60, 361.61, and 361.62) that make it clear that the negative effects consideration is mandatory rather than simply aspirational.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

The American Society of Civil Engineers - Texas Section (ASCE-TX) asserts that the use of the words "feasible" and "infeasible" should not be used anywhere in the planning regulations. They imply that flood risk reduction planning is a binary decision – that projects are either feasible or infeasible. ASCE-TX states that is not an appropriate view of flood risk reduction planning and that it is more appropriate to view flood risk reduction planning as choices along a continuum, rather than as a binary decision.

Response:

TWDB acknowledges that flood risk reduction planning presents multiple choices along a continuum. However, the flood plans will require the identification of projects that are potentially feasible. The term “potentially feasible flood management strategy or potentially feasible flood mitigation project” has been defined in Section 361.10 and is utilized to identify projects that are permissible, economically viable, constructible and implementable with the constraints of certain project area including the preference of the community, economic feasibility etc.

ASCE-TX, consistent with their response to the TWDB’s request for stakeholder input, encourages the TWDB to develop public guidance on how to determine benefit cost ratios (BCRs). They believe that BCR calculations should consider the net triple-bottom line (TBL), including (1) net economic costs/benefits, such as construction and operation costs vs. avoided injuries, death, and property damage; (2) net social costs/benefits, such as cost of cultural displacement, cost of lost income vs. benefits of new jobs, new income, new recreational benefits; and (3) net environmental costs/benefits, such as cost of lost ecosystem services, cost of lost habitat vs. benefit of new ecosystem services and new habitats. ASCE-TX states that TWDB should provide guidance on this to help generate more consistent applications. ASCE stated that the TWDB should incorporate Policy Statement 418, a more holistic BCR, into the proposed regulations in identifying candidate evaluations, strategies, and projects; and in selecting which candidate projects to include regional plans.

Response:

The TWDB acknowledges and appreciates the comment. The Executive Administrator is developing related BCR guidance and resources that will become part of the grant contracts that support the RFPs and that stakeholders will have an opportunity to review. No changes have been made.

The Greater Houston Partnership comments that the Houston region has experienced extreme flood events in recent history. They support the TWDB’s regional approach to flood mitigation planning and supported the passage of Senate Bill 8, Senate Bill 7, and Senate Bill 500.

Additionally, the Greater Houston Partnership and the City of Sugar Land articulate that long-term planning requirements will likely require additional funding. They believe that the TWDB should consider and provide recommendations on how to create sustainable funding sources for local entities to meet substantial data-gathering requirements in the proposed rules.

Response:

TWDB acknowledges and appreciates the comment and agrees that long-term funding is necessary. The TWDB recognizes the ongoing need for planning funding and anticipates allocating the available appropriations under a formula-funding method that will consider the relative amount of work required by the regional flood planning groups. Future appropriations for flood planning to the agency which will support the subsequent data-gathering requirements are subject to future legislative action. No changes have been made to the rules in response to this comment.

Environment Texas, Lower Rio Grande Valley TPDES Stormwater Task Force, Greater Edwards Aquifer Alliance, Research, Applied Technology, Education and Service, Inc., Save Our Springs Alliance, Bayou City Waterkeeper, Farm & City, and the United States Green Building Council Texas Chapter support the emphasis on nature-based features and multi-use opportunities in the proposed rules and cite various benefits to nature-based solutions including reducing flood risk, protecting drinking water quality, recharging aquifers, and providing green space to communities. They suggest that TWDB conduct a statewide efficacy study to provide data on how nature-based techniques can work in Texas.

Response:

TWDB acknowledges and appreciates the comment. The effectiveness of a nature-based flood risk reduction solution is variable based on the type, location and severity of flood risk, and the rainfall pattern, geology and land cover area of where the risk is located. Existing literature includes investigation of nature base flood mitigation solutions and relevant case studies. No changes have been made.

The City of Lake Jackson and the City of Brookshire express appreciation for the efforts of TWDB staff to conduct listening tours in 2019.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

The City of Sugar Land requests that the TWDB develop guidance documents to ensure consistency between projects eligible for Senate Bill 7 funding and projects created through the Senate Bill 8 planning effort.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB is aware of this general issue and is considering how the projects eligible under current FIF funding under Texas Water Code Chapter 15 may compare to and/or relate to projects in the first state flood plan. No changes have been made.

Matthew Berg asserts that a thorough discussion of the causes of flooding is missing from the proposed rules.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Bexar Regional Watershed Management Partners are pleased with the proposed watershed-based approach for regional flood planning and state that they have employed such an approach successfully in their region.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Bexar Regional Watershed Management Partners are supportive of the general approach to closely mirror regional flood planning after the state's water planning process. They say that this strategy has proven to work across the state.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Bexar Regional Watershed Management Partners strongly recommends that the state should promote minimum standards of floodplain management practices across the state. They offer a suggestion that this could be done by requiring entities that receive state funding to participate in the National Flood Insurance Program or a state equivalent program.

Response:

The TWDB acknowledges and appreciates the comment and considers the identification and recommendation of specific floodplain management practices and standards to be the purview of RFPGs and is one of the considerations for RFPGs in Section 361.35(a)(4). No changes have been made.

The Texas Association of Builders and the Texas Apartment Association commend the TWDB for its work to address regional flood planning. The associations support sensible flood planning and mitigation and assert that cities and counties should smartly enforce their development regulations. They also stress the importance of regulations being balanced with the need to slow rising housing costs and respect private property rights.

They state that the need for affordable housing is critical as Texas' population skyrockets. The associations warn that unnecessary and unreasonable requirements can negatively impact home affordability.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The City of Austin comments that having a regional collaboration process is key to achieving flood risk reduction statewide.

Response:

TWDB acknowledges and appreciates the comment and no changes have been made.

The Trinity River Authority describes their jurisdiction's flood risk and recent flood history. The authority states that it has commenced a study of basin-wide flood mitigation opportunities, focusing first on the zone-of-influence of Lake Livingston, and that it is prepared to play a central role in regional flood planning.

Response:

TWDB acknowledges and appreciates the comment and no changes have been made.

The North Central Texas Council of Governments provides a brief history of the council's comments previously provided to the TWDB. The council expresses support for the TWDB in implementing flood-related legislation passed by the 86th Texas Legislature, and states that this is much needed progress in a state whose statistical results in flood risk warrants changes and improvements in this industry.

Response:

TWDB acknowledges and appreciates the comment and no changes have been made.

The North Central Texas Council of Governments seeks clarification on how the \$20.8 million will be divided between the regional flood planning groups, taking into account regional magnitude, number of entities to coordinate with and collect data for, geographically developed areas, and extent of population and population growth.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB anticipates allocating grant funding using a formula approach outside of the rulemaking process based on the

amount of effort anticipated to be required to develop regional flood plans. No changes have been made.

The North Central Texas Council of Governments asserts that the broad belief that the “floodplain” is the area designated on the Flood Insurance Rate Map (FIRM) must be overcome because FIRMs are an insurance tool and much flooding occurs outside and upstream of FEMA FIRM floodplain areas. The council also asserts that streams need to be identified, preserved, and protected before development and urbanization take place. They suggest that a new term, flood prone areas, should be designated to indicate areas to be studied and protected in the state. They state that the term “flood prone areas” is a more comprehensive federally defined term that better describes those areas at risk from flood waters. The council states that the term flood prone areas is not restricted to that area one mile below the top of the watershed, which is important in heavily developed areas, nor restricted to flows calculated in the past that are no longer accurate due to development resulting in increased flows.

Response:

TWDB acknowledges and appreciates the comment. Section 361.10 has been revised to include a definition for “flood-prone”.

The Farm and Ranch Freedom Alliance supports the comments submitted to the TWDB by the Sierra Club-Lone Star Chapter, National Wildlife Foundation, Galveston Bay Foundation, and Hill Country Alliance. Specifically, the alliance urges the TWDB to place a high priority on non-structural flood mitigation measures, including nature-based solutions, in the state and regional flood plans. The alliance states that open space land can reduce flooding and that specific types of land management (ex: rotational grazing, permaculture, etc.) can increase the ability of open space land to capture and hold water efficiently. The alliance also attached three written testimonies given by their members to the Texas legislature.

Response:

The TWDB acknowledges and appreciates the comment and notes that the consideration of nature-based features is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solutions are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

The Pines and Prairies Land Trust endorses the joint comments submitted by the Texas Living Waters Project on the Texas Water Development Board’s proposed rules to implement Senate Bill 8. The Trust is a non-profit working to protect land in South Central

Texas, and whole heartedly promotes nonstructural (including nature-based) flood solutions.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance find the proposed rules to be structured in a manner that faithfully reflects the provisions in Senate Bill 8 (86th Texas Legislature), the enabling legislation requiring the establishment of the flood planning process and directing TWDB to be the primary state agency for implementation.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Hidalgo County provided oral comments expressing support and appreciation for the legislation and rules. The county discussed the county's flood risk and history and difficulty in securing funding for mitigation projects.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Hidalgo County Drainage District #1 provided oral and written comments expressing support for staff's hard work.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

El Paso County provided oral comments stating appreciation for the TWDB's efforts to engage stakeholders.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The City of San Marcos provided oral comments supporting looking at flooding at a regional approach.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Texas Floodplain Management Association provided oral comments describing Texas' flood risk and history and expressing support for staff's work in the development of the proposed rules. The association suggests taking time to accurately identify flood risk in Texas communities, develop accurate flood risk models, and objectively work together to mitigate flood risk. The association also supports non-structural flood mitigation methods.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Lone Star Chapter of the Sierra Club provided oral comments stating appreciation for the work of the TWDB in implementing the flood-related legislation. The Sierra Club supports a comprehensive, innovative approach to water management.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The National Wildlife Federation provided oral comments stating appreciation for the TWDB's open and collaborative process. The federation supports developing the state and regional flood plans in an equitable manner that adequately addresses the needs of socially vulnerable populations. They suggest that each regional flood planning groups should designate subgroups or subcommittees to consider the special flood risks of socially vulnerable populations, to include representatives of these communities. The National Wildlife Federation urges that language be added to the rules to require documentation of any efforts to solicit input from vulnerable communities.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs have the ability under Section 361.11 to choose to create additional subgroups or subcommittees that they consider necessary to address specific flood-related issues of concern in the region. No changes have been made.

Galveston Bay Foundation provided oral comments advocating for non-structural solutions to flooding, including land conservation, preservation, wetland restoration, and buyouts. The foundation also summarized written comments provided.

Response:

The TWDB acknowledges and appreciates the comment and notes that the consideration of nature-based features is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solution are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

Environment Texas provided oral comments advocating for nature-based solutions to flood mitigation. The organization suggests including nature-based solutions in regional and state flood planning and suggest that the TWDB should support a statewide nature-based infrastructure study.

Response:

The TWDB acknowledges and appreciates the comment and notes that the consideration of nature-based features is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solution are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

The City of Austin provided oral comments stating support for the proposed rules.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Orange County Drainage District provided oral comments discussing the area's flood risk and history. The district also provided general comments of support for the TWDB's efforts.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Texas Association of Builders provided oral comments stating that Texas has a proclivity for severe weather and flooding and that they appreciate the need for flood mitigation. They also express appreciation for the TWDB's efforts.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Texas Land Trust Council would like to see additional ways of promoting the integration of flood management with other water policy goals, and other appropriate

public purposes, adopted within the final rules. Ideally, they would like the state to more fully integrate related goals among water resource management, water quality protection, environmental flow management, and flood risk reduction with the hope of achieving more effective flood mitigation and risk reduction strategies for our state. Their recommendations include: broad and diverse representation of interests on the regional flood planning groups and in the regional flood planning process as a whole; better incorporation and incentives for nonstructural flood mitigation measures, including nature-based solutions, in the state and regional flood plans; and, prioritization of flood management strategies that provide multiple public benefits in addition to flood risk reduction and mitigation (such as water quality, water recharge, environmental benefits, public health/recreation benefits, etc.).

Response:

The TWDB acknowledges and appreciates the comment and notes that the representation on the RFPGs closely follows the direction in Senate Bill 8 and, under Section 361.11, allows the RFPGs to add members to ensure adequate representation. The consideration of nature-based flood mitigation is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solution are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance seek clarification on what will be the path and the mechanism that TWDB will use to take the recommendations from the regional flood plans and prioritize the recommended flood management evaluations, strategies, and projects for future funding decisions if applications are made for state financial assistance.

Response:

Identifying and recommending FMEs, FMSs, and FMPs in the regional flood plans, ranking recommended FMEs, FMSs, and FMPs in the state flood plan, and providing state financial assistance to implement specific projects are three separate processes that will occur at different times.

The first step will be for regional flood planning groups to identify and recommend FMEs, FMSs, and FMPs and provide relevant data associated with each project as part of the regional flood planning process. That data will be used by the TWDB to objectively apply a set of relevant flood project ranking criteria.

The second step is to rank the recommended regional FMEs, FMSs, and FMPs as incorporated into the state flood plan. The specific criteria and the associated weightings that will be used for ranking recommended FMEs, FMSs, and FMPs in the state flood plan are not yet determined but will be developed by the TWDB through a transparent process and with stakeholder input. That process will result in a ranking of state flood plan FMEs,

FMSs, and FMPs with a focus on reduction of flood risk to life and property as required by Senate Bill 8.

The last step in implementing projects, subsequent to development of the state flood plan, requires local sponsors to implement FMEs, FMSs, and FMPs, either with local financing or with state financial assistance. Future state financial assistance to implement projects in the state flood plan is anticipated to occur in accordance with existing program requirements or, if there are dedicated funds, under an associated flood intended use plan (FIUP) that would likely use the ranking in the state flood plan as one of the prioritization criteria for allocating funding.

No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance seek clarification on whether the TWDB will use the framework proposed for the Draft Flood Intended Use Plan for FY 2020 to do prioritization after the regional and state flood plans are completed, if the TWDB will use a different approach that will be addressed in guidance to be developed by the agency’s Executive Administrator, or if the TWDB is awaiting further direction from the Texas Legislature as to how prioritization will proceed.

Response:

The 2020 Flood Intended Use Plan was developed for the purpose of allocating Flood Infrastructure Fund dollars and will not be the basis for the prioritization of the projects in the state flood plan. The criteria to be used for ranking FMEs, FMSs, and FMPs in the state flood plan has yet to be determined (see previous comment response), and will be developed through a transparent process with public input. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance respectfully request that the agency establish a robust public review and comment process for development of the guidance by the TWDB Executive Administrator that is cited often in the proposed state and regional flooding planning rules and that apparently will be a critical component of the planning process.

Response:

The EA anticipates providing all future draft versions of the guidance document for stakeholder input. Because this is the inaugural cycle of regional and state flood planning, the TWDB anticipates the need for maintaining some flexibility in developing its guidance documents and looks forward to hearing from stakeholders to improve the quality and credibility of this document along the way. No changes have been made.

The Gulf Coast Water Authority (GCWA) fully supports the comments of the Brazos River Authority (BRA) dated both August 30, 2019 and February 3, 2020 which have been submitted. They ask that the TWDB consider those comments to be those of the GCWA as well, without exception.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The Bayou Land Conservancy endorses the comments provided by the partners of Texas Living Waters (Sierra Club-Lone Star Chapter, National Wildlife Federation, and Galveston Bay Foundation) to Implement Senate Bill 8 (86th Texas Legislature), relating to state and regional flood planning.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

ASCE-TX shared their policy statement as stated below:

FLOOD RISK MANAGEMENT POLICY STATEMENT (ASCE Policy Statement 545)

The American Society of Civil Engineers (ASCE) urges all federal, state and local government agencies, in collaboration with the private sector, to adopt flood-risk management policies that provide for:

- A consistent definition of flood risk and an accepted framework for how risk should be estimated;
- Effective and sustainable management of risks posed by floods to life safety, human health, economic activity, cultural heritage and the environment;
- Collaborative risk sharing and risk management at all levels of government and by all stakeholders;
- Risk informed communication, policies and funding priorities; and
- The use of natural processes to mitigate the consequences of flooding.

ISSUE

Flood risk is defined as the potential of a loss from flooding, and is measured by both the consequences and their probability of occurrence. There is no common vision of how the nation should organize and coordinate to reduce its flood risk. Proposals to deal with this challenge have languished in multiple congressional committees of Congress. The Unified National Program for Floodplain Management, called for by Congress, was last revised in

1994 and has not yet been implemented. We do not have a sound analysis of the potential risk to the nation from flooding.

Collaborative risk management requires continued operation and maintenance of our flood infrastructure. Currently our flood infrastructure remains in marginal condition and there is no realistic plan in place to deal with or improve these conditions. Federal funding is minimal, and local communities lack the resources with which to address the problem.

Federal, state and local governments share the responsibility for continued non-sustainable development within flood prone areas. Unintended consequences of flood insurance, rebuilding funds, tax incentives and political pressures provide a mixed message to the citizens and local governments that are responsible for land-use regulation. Unless more is done to reduce risk, we are creating a potentially insurmountable challenge for future generations.

An effective national risk assessment and risk management initiative will require a consistent definition of flood risk and an accepted framework for how risk should be estimated for different scales and purposes. It needs to incorporate sensitivity to the economic activity and the history of place. While risk is a relatively simple concept, it is far from simple to apply given the dearth of relevant input information and the variety of methods available for its estimate. In reality, there exists a broad spectrum of risk estimation options, some very general and even qualitative and others highly sophisticated.

Climate change and population growth will further stress this already difficult situation. The Federal Emergency Management Agency reported in 2013 that as a result of this change and growth, the 100-year floodplain in the contiguous states could expand by 45 percent by the end of the 21st century.

RATIONALE

Among the great challenges the U.S. faces today is recognizing the magnitude of risk posed by flooding and motivating the public and decision-makers to make the investments required to reduce flood risk. This includes making emergency preparations, strengthening our flood protection systems, land use planning, and finding new ways to reduce our vulnerability to flooding.

Ignoring the challenges is not an option. Brought to focus by Hurricane Katrina, the nation has slowly begun to shift from a mind-set of controlling floods to one of recognizing that absolute protection against these natural hazards is not possible. It is clear that when such action is justified and feasible our efforts must be focused on identifying our risks and developing and implementing a portfolio of approaches to deal with these risks - a portfolio referred to collectively as flood risk management (FRM). Despite the continuing tension between development and FRM, limited steps have been taken and progress has been made in some communities to reduce and more effectively deal with flood risk. Awareness on the part of the public has also increased, especially in light of the continuing occurrence of catastrophic flooding events.

Risk management is a powerful tool in the decision-making process where the conclusions of risk assessment and comparative risk analysis are weighed among other considerations such as statutory requirements, costs, public values and politics, expectations, and exposure to hazards. For engineers, risk assessment is a guide that directs proper land use and engineering planning, design, construction and operation, and maintenance practices. While it is important to plan for possible failure (including provisions for insurance, emergency evacuation, flood proofing, etc.), it is equally important to adequately address risk in the planning, design, and maintenance of systems and how consequences are managed.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Ericka Inman urges the TWDB to commit to a 50-year planning horizon to account for the impacts of climate change, and asks the TWDB to prioritize the following strategies in the plans: buyouts, restoration of riparian corridors, purchase of green space, grants for disadvantaged communities, and low-impact development to reduce flood risk.

Response:

The TWDB acknowledges and appreciates the comment. No changes made.

Chapter 361 Regional Flood Planning.

Subchapter A. General Information.

Section 361.10 Definitions and Acronyms.

Section 361.10 includes definitions and acronyms that are used throughout the Chapter. The definitions are consistent with statutory definitions and usage. To the extent that the definitions are not statutorily defined terms, the TWDB endeavored to make the terms consistent with other TWDB rules, or where appropriate, consistent with language used by flood mitigation professionals. For example, rather than the term, “100-year floodplain,” professionals in the flood mitigation discipline are increasingly using the term “1.0% annual chance flood event.” The rule defines 1.0% annual chance flood event as a, “flood event having a 1.0% chance of being equaled or exceeded in any given year, also referred to as the base flood or 100-year flood.”

Comments:

PEW Charitable Trusts comments that specific direction to consider the range of types of flood risk, including and underscoring the importance of residual risk is helpful and that, while flood planning and new investments in flood mitigation and floodplain management can offer significant reductions in flood risk, experts in the field know well that flood risk cannot be fully eliminated.

Response:

The TWDB acknowledges and appreciates the comment and acknowledges that residual flood risks will always be a factor. Section 361.10 Definitions has been revised to include "Residual Risk", and the term has been included in several sections of Chapter 361, as applicable.

The Woodlands Water Agency suggests that the TWDB define "Negative Affects" (For Example Use: the Association of State Floodplain Managers (ASFPM) definition of "No Adverse Impact", whereby a property owner may not adversely affect the rights of other property owners. Adverse Impacts can be quantified in terms of increased flood peaks, increased flood stages, higher flood velocities, increased erosion and sedimentation or other impacts the community considers important.)

Response:

The TWDB acknowledges and appreciates the comment and notes that the term "negative affects" is taken directly from Senate Bill 8. The TWDB has included a definition for "negative effect" in Section 361.10 and the term will be further defined through guidance being developed by the EA.

The Woodlands Water Agency suggests that "Achievable" in terms of cost, time, and potential for funding via a grant or match be defined (as related to their comment on Section 361.36).

Response:

The TWDB acknowledges and appreciates the comment. Financial assistance determinations will not be made in the regional or state flood plans. No changes have been made.

The Woodlands Water Agency comments that the TWDB should define what may be considered as benefits and costs in order to ensure compliance with federal funding guidelines.

Response:

The EA is developing guidance that will clarify how benefits and costs are to be considered and reported in the regional flood plans. No changes have been made.

PEW Charitable Trusts asks the TWDB to consider adding a definition of ‘nature-based flood mitigation’ and to consider the following language largely from a recently released Federal Highway Administration’s implementation guide definition: “Mitigation approaches involving the use of natural features, materials, and processes to reduce the detrimental impacts of flooding, including flood heights, duration, or velocities, wave damage, and erosion. Examples of Nature-Based Flood Mitigation may include the conservation or restoration of beaches, dunes, wetlands, or floodplain features used as alternatives to or in conjunction with other flood mitigation projects.”

Response:

The TWDB acknowledges and appreciates the comment. A definition for “nature-based flood mitigation” has been added to Section 361.10.

ASCE-TX comments that the definition of “flood mitigation” in Section 361.10(k) should be changed to: “Activities, both structural and non-structural, intended to reduce the likelihood of the inundation of structures, loss of property, or the loss of life or to reduce the cost and efforts of flood recovery.”

Response:

The TWDB acknowledges and appreciates the comment. No changes made.

ASCE-TX comments that the definition of “flood management evaluation” in Section 361.10(l) should be changed to: “An estimate, prepared using appropriate technical analysis and sealed by a registered professional engineer, of the reduction in flood risk in a defined area from the implementation of a flood mitigation project along with the net present value of all economic costs and benefits, social costs and benefits, and environmental costs and benefits associated with the project’s full lifecycle.” This definition will encourage more holistic planning and project selection. It will help encourage the selection of projects with increased co-benefits, higher total value to the State of Texas, higher return on investment to the people of Texas, and projects with lower operations and maintenance costs.

Response:

The TWDB acknowledges and appreciates the comment. Changes were made to the definition of “flood management evaluation”.

ASCE-TX comments that the definition of “flood risk analysis” in Section 361.10(q) should be changed to read: “An estimate, prepared using appropriate technical analysis sealed by a registered professional engineer, of the flood risk in a defined area with or without the implementation of any flood mitigation projects. The Board will provide guidance outlining how this type of analysis will be consistently accomplished in both regional and state flood plans.”

Response:

The definition of flood risk analysis was removed and the term is explained in greater detail in Sections 361.33 and 361.34.

ASCE-TX comments that the definition for “flood management project” in Section 361.10(n) should be changed to match that proposed at Section 363.402(6) for “Flood Project,” with a few suggested ASCE-TX changes as follows: ASCE-TX supports paragraphs (A) through (E) of the proposed definition. ASCE-TX suggests that paragraph (F) be omitted from the definition because deepening an existing ship channel will not reduce the likelihood of the inundation of structures, loss of property, or the loss of life, as outlined in the authorizing legislation. ASCE-TX is concerned that keeping this provision could result in the redirection of scarce state flood risk reduction dollars to projects that should be funded using 100% federal funding from the Harbor Maintenance Trust Fund.

Response:

The TWDB acknowledges and appreciates the comment. The rules allow flexibility for the RFPs to identify and recommend potential FMPs with a focus on reduction of flood risk to life and property as required by Senate Bill 8. No changes have been made.

ASCE-TX comments that the definition of “flood risk” in Section 361.10(p) should be changed to read: “In general, it is a function of the following elements: (1) the likelihood of the hazard occurring; (2) the magnitude of the hazard; (3) the number of people and properties exposed to the hazard; and (4) the vulnerability of the people and properties exposed to the hazard. The Board will provide guidance outlining how this will be consistently calculated in regional and state flood plans.” (See ASCE Policy 545.)

Response:

The TWDB acknowledges and appreciates the comment. A portion of the language provided above is incorporated in the definition of “flood risk” in Section 361.10.

ASCE-TX suggests adding a new definition of “residual risk”: “The flood risk that still remains in an area after completion of a particular flood management project or set of flood management projects that reduces risk in that same area.”

Response:

The TWDB acknowledges and appreciates the comment and a definition for “residual risk” has been added to Section 361.10.

ASCE-TX suggests adding a new definition of “flood-prone”: “Areas with an annual likelihood of inundation of more than 1%.”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.10 has been revised to include a definition for “flood-prone”.

ASCE-TX suggests adding a new definition of “no negative affect”: “No negative affect means no increase the likelihood of inundation of any properties not owned by the project sponsor both upstream and downstream of the project, and no reduction in the availability of water for any water rights holder.”

Response:

The TWDB acknowledges and appreciates the comment and a definition for “negative effect” has been added to Section 361.10. Additional clarification and quantification of “negative effect” will be identified in the guidance document to be provided by the EA.

The City of Sugar Land suggests that the definition of “flood risk analysis” should be modified to only address risk, not economic efficiency of proposed strategies. The City also suggests adding a definition for “flood risk map” that incorporates FEMA’s tiered ranking (0-4) for level of map detail.

Response:

The TWDB acknowledges and appreciates the comment. The definition of “flood risk analysis” was removed, and the term is explained in greater detail in Sections 361.33 and 361.34. Section 361.10 has been revised to include a definition for “flood risk map”.

The Trinity River Authority suggests adding language to the definition of 1% and 0.2% annual chance flood event to reinforce that rules' general requirement that planning activities utilize the best available data, including the use of Atlas 14-based modeling. The Authority clarifies that this proposed change would not require production of Atlas-14 based inundation modeling, but that such modeling should be used where already in existence.

Response:

The TWDB acknowledges and appreciates the comment. Subchapter C, REGIONAL FLOOD PLAN REQUIREMENTS, contains multiple references to requiring RFPs to utilize best available information. Additionally, the guidance principle in Section 362.3(b)(2) states that regional and state flood plans, "shall be based on the best available science, data, models, and flood mapping." No changes have been made.

The Trinity River Authority proposes modifying the definition of flood risk analysis to eliminate economic considerations, which the authority states should instead be subsumed under cost-benefit analyses.

Response:

The TWDB acknowledges and appreciates the comment. The definition for flood risk analysis is removed and the term is described in greater detail in Section 361.33 and 361.34.

North Central Texas Council of Governments states that the definitions for 1.0% annual chance flood event, 0.2% annual chance flood event, flood, and floodplain are redundant to FEMA terms and that this creates a potential for conflict should federal terms change in the future.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance believe that the description of acronyms is straight-forward, and generally agree with the proposed definitions. They assert that the term "flood hazard exposure" is used in certain critical parts of the proposed rules, and while the intended meaning of the term can be inferred from other text in the proposed rules, they believe that

the TWDB should explicitly define “flood hazard exposure” as used here in relation to state and regional flood planning.

Response:

The TWDB acknowledges and appreciates the comment. Flood exposure analyses is described in Sections 361.33 and 361.34.

Harris County Flood Control District (HCFCD) recommends that a definition for "negative impact" or "negatively affect" be included and defined as "An increase in flood risks or flood hazards or an action that causes significant damage to a public or private facility"

Response:

The TWDB acknowledges and appreciates the comment and a definition for “negative effect” has been added to Section 361.10. Additional clarification and quantification of “negative effect” will be identified in the guidance document to be provided by the EA.

Texas Water Conservation Association (TWCA) recommends changes to 361.10(a) and (b) that are intended to reinforce the rules’ general requirement that planning activities utilize the “best available data,” and provide the example of use of Atlas 14-based modeling for the determination of the 1.0% and 0.2% annual chances of inundation, where available. This proposal is not intended to require the production of Atlas 14-based inundation modeling, but that such modeling should be used where already in existence.

Response:

The TWDB acknowledges and appreciates the comment. Subchapter C, REGIONAL FLOOD PLAN REQUIREMENTS, contains multiple references to requiring RFPGs to utilize best available information. Additionally, the guidance principle in Section 362.3(b)(2) states that regional and state flood plans, “shall be based on the best available science, data, models, and flood mapping.” No changes have been made.

With regard to Section 361.10(q), defining “Flood Risk Analysis,” Texas Water Conservation Association (TWCA) proposes that such analyses should not include economic considerations, which should instead be subsumed under benefit-cost analyses. Accordingly, the reference in that subsection to economic efficiency should be omitted.

Response:

The TWDB acknowledges and appreciates the comment. The definition for flood risk analysis is removed and the term is described in greater detail in Section 361.33 and 361.34.

Texas Water Conservation Association (TWCA) recommends including a definition for the term “flood risk map.” That term or variations of it are used throughout the rules, and thus the rules would benefit as a whole from its explicit definition. TWCA suggests “flood risk map” be defined as: A map that shows flood risk for Texas communities at some level of detail using best available data and generally can be classified according to FEMA’s tiered ranking as:

- (1) Tier 0 – Unmapped River or Coastal Miles
- (2) Tier 1 – Not Digital
- (3) Tier 2 – Digital but not based on LiDAR and/or not model backed
- (4) Tier 3 – Digital, LiDAR and model backed
- (5) Tier 4 – Considers future conditions

TWCA also notes that their suggested revisions to this section would require conforming changes to be made to Sections 361.33(a), 361.34(4), and 361.37(3).

Response:

The TWDB acknowledges and appreciates the comment. Section 361.10 has been revised to include a definition for “flood risk map”.

Texas Water Conservation Association (TWCA) proposes the following definition of the term “hydrologic and hydraulic model” to provide guidance to both RFPs and laypeople regarding the meaning of that term: a computer-based mathematical model that aids in the understanding and predicting of the movement of water on the surface of the earth, including inundation as a result of precipitation.

Response:

The TWDB acknowledges and appreciates the comment and has added a definition of “hydrologic and hydraulic model” to Section 361.10.

Section 361.11 Designations and Governance of Flood Planning Regions.

Section 361.11 relates to the designation, future realignments of the flood planning region boundaries and the governance of the regional flood planning groups. Texas Water Code § 16.062 requires the board to designate flood planning regions corresponding to each river basin. At its April 20, 2020 board meeting, the Board designated 15 regions and adopted the corresponding map.

The rule affords the flood planning groups the flexibility to form subcommittees or subgroups.

The rule states that in considering potential future boundary revisions, the board will consider factors such as river basin and sub-watershed delineations, hydrologic features of the river basins, coastal basins and features, development patterns, existing flood planning regions, public comment, and other factors that the board finds relevant.

This section of the rule also includes the designation of initial members for each of the regional flood planning groups, which the board will name based on a member solicitation process to be initiated once the region boundaries are established by the Board.

This section also includes the requirements for each of the regional flood planning groups to adopt bylaws, including minimum elements of the regional flood planning groups' bylaws.

The statute permits the initial regional flood planning groups to designate additional representatives and categories to serve on the regional flood planning group and, requires as much to ensure adequate representation from the interests in its region. The interests are included in statute and an additional interest of 'flood districts' was included in the rule. The minimum required voting interests include: the public, counties, municipalities, industries, agricultural interests, environmental interests, small businesses, electric generating utilities, river authorities, flood districts, water districts, and water utilities.

Non-voting or ex officio members of each flood planning group are also designated by statute and incorporated into the rule in Section 361.11. Those members include one member from the Texas Water Development Board, the Texas Commission on

Environmental Quality, Texas General Land Office, Texas Parks and Wildlife Department, Texas Department of Agriculture, Texas State Soil and Water Conservation Board, and the Texas Division of Emergency Management.

The rule allows RFPGs to add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR. At their inception, the RFPGs will have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure efficient and successful RFPG operation and development of their plans by the statutory deadline.

The rule provides the RFPGs discretion to designate sub-regional committees to address geographical issues within the regions when necessary and as directed by the full RFPG. This section requires the RFPGs to include in its bylaws, the method of formation and governance of any committee or subgroup. Further, the rule provides discretion to the RFPGs that include contact with the Gulf Coast to appoint nonvoting-member liaisons to coordinate with the neighboring RFPGs along the coast.

Section 361.11, also provides authority to the RFPGs to enter into agreements with other RFPGs to coordinate, avoid affecting neighboring areas, share information, or for any other purpose that the RFPGs find will benefit the planning process.

Comments

State Senator Carol Alvarado recommends that regional flood planning groups include members of diverse ethnic and cultural backgrounds. The senator states that historically, ethnic minority groups have been pushed into housing in high-risk flood zones and that it is essential that regional flood planning groups represent a fair cross-section of all members of each community to ensure regional flood plans benefit all Texans.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e)(1) requires a member of “Public, defined as those persons or entities having no economic or other direct interest in the interests represented by the remaining membership categories” to be a voting member on each regional flood planning group, which was a statutory requirement of SB8. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure

adequate representation from the interests in its region. Note that Section 362.3 includes a guiding principle, (35), that specifically states that RFPGs shall consider protection of vulnerable populations. No changes have been made.

The Woodlands Water Agency requests that the potential for development patterns to affect urban flooding be included in the consideration for potential future boundary revisions.

Response:

The TWDB agrees and has revised Section 361.11(b) to include “development patterns” as one of the factors for consideration.

The Woodlands Water Agency requests clarification regarding the qualifications considered for the RFPG initial members.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB will be soliciting for membership following adoption of the final rules. No changes have been made.

The Woodlands Water Agency questions if the TWDB Board will accept nominations.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB will be soliciting for membership following adoption of the final rules. No changes have been made.

The Woodlands Water Agency requests clarification for how initial RFPG members will be selected.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB will be soliciting for membership following adoption of the final rules. No changes have been made.

The Woodlands Water Agency requests clarification on how the TWDB will handle communities that overlap two or more RFPGs? (For example: Liberty County is in 3 areas - San Jacinto, Trinity, and Neches)

Response:

The TWDB acknowledges and appreciates the comment. Communities are welcome and encouraged to participate in the flood planning process with multiple groups. The TWDB acknowledges that unfortunately, political boundaries do not align with the natural boundaries of major river basins and watershed boundaries may present some challenges. No changes have been made.

The Woodlands Water Agency asks what the process is for replacing RFPG members if a member is no longer available to serve.

Response:

The TWDB acknowledges and appreciates the comment. Each RFPG will be required to establish its own bylaws after their initial formation in accordance with Section 361.11(d). Their bylaws will describe such processes for the replacement and selection of new RFPG members. The TWDB anticipates providing a standard set of model bylaws to each RFPG for consideration. No changes have been made.

Houston Stronger suggests expanding the definition of Water Utilities by adding the words “involved in providing” prior to “water supplies” to expand the definition.

Response:

The TWDB acknowledges and appreciates the comment. It is anticipated that every region will have entities that meet the definition as originally drafted. No changes have been made.

Houston Stronger suggests removing drainage districts and levee improvement districts from the Water District membership category and making those a new membership category to also include districts with regional flood management responsibilities.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.11(e) has been revised to include a separate category for “Flood Districts” including flood control districts, drainage districts, and levee improvement districts.

Houston Stronger suggests adding a [single] new membership category for subsidence districts and groundwater conservation districts.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e) and (i) have been revised to clarify that each RFPG, at its discretion, may add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR.

PEW Charitable Trusts comments that the flexibility to make possible realignments in flood planning region (FPR) boundaries or to create sub-watershed groups is helpful. While PEW strongly endorses the approach of “following the water” and assessing risk and mitigation options across an entire basin, they agree that the large size of some Texas river basins may present challenges and that flexibility is warranted.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

PEW Charitable Trusts comments that authorizing the RFPGs to expand representation beyond the specific interests noted in the statute is helpful. For example, they state that it may be useful in certain instances to assure that plan strategies and projects appropriately account for tourism or historic preservation, focus on the special needs of seniors or disabled individuals, or consider the requirements of major medical, education, or other non-profit institutions. In those cases, they believe that additional representation may be merited.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e) and (i) have been revised to clarify that each RFPG, at its discretion, may add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR.

PEW Charitable Trusts comments that creating opportunities for coordination and consultation across the RFPGs to assure an adequately aligned “coastal” flooding plan is helpful.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

El Paso County suggests including language in this section to address the roles and responsibilities of designated alternates for each entity in the absence of the primary designee (voting member).

Response:

The TWDB acknowledges and appreciates the comment. Each RFPG will be required to establish its own bylaws after their initial formation in accordance with Section 361.11(d). Their bylaws shall describe whether or not the RFPG will allow designated alternates to represent voting members. The TWDB anticipates providing a standard set of model bylaws to each RFPG for consideration. No changes have been made.

Greater Houston Partnership notes that the water districts membership category incorporates varied entity types. They suggest removing drainage and levee improvement districts from this category and creating a new required membership category for districts with regional flood management responsibility, such as drainage and levee improvement districts. They also suggest adding regional water authorities to the list of entities considered as water districts.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.11(e) has been revised to include a separate category for “Flood Districts” including flood control districts, drainage districts, and levee improvement districts. The TWDB interprets “Water Districts” under Section 361.11(e) to include regional water authorities, as they are authorized under Section 59, Article 16 of the Constitution, and has added clarifying language to Section 361.11(e)(11).

The City of Sugar Land states that the procedure for establishment of subregions, while bulky, appears workable. They state that it looks like existing groups may want to just liaison with the subgroup so as to not have to deal with all of the other members of the subgroup or regional group when developing what they feel is needed and what they want to participate in.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The City of Sugar Land suggests that the TWDB make clear rules on how regional flood planning group members will be selected. They also seek clarification as to whether there will be time/term limits for members and how many members will be included in each regional flood planning group.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB will be soliciting for membership following adoption of the final rules.

Each RFPG will be required to establish its own bylaws after their initial formation in accordance with Section 361.11(d). The TWDB anticipates providing a standard set of model bylaws to each RFPG for consideration. Their bylaws are expected to address term limits and the processes for the replacement of new RFPG members. Additional language has been added to Section 361.11 to address the specific case of addition of any new voting position that would increase the total number of RFPG voting member positions as requiring a two-thirds vote.

The City of Sugar Land notes that it may be difficult to find representatives of certain interest categories (public, small business, etc.) who are knowledgeable in flood management and planning. The city also suggests that districts with flood management responsibilities, including drainage districts, should be a separate category of required representation. They also recommend broadening the definition of water utilities to include entities involved in providing water supplies.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.11(e) has been revised to include a separate category for “Flood Districts” including flood control districts, drainage districts, and levee improvement districts. No changes have been made regarding broadening the definition of water utilities. It is anticipated that every region will have entities that meet the definition as originally drafted.

The City of Lake Jackson and the City of Brookshire express concern that a single mandatory county representative will be inadequate and that upstream, downstream, and coastal interests are not given special consideration. Specifically, the cities suggest that each county within the flood planning region be designated as a mandatory, voting member of that regional flood planning group and that each RFPG be required to include as mandatory, voting members representatives of coastal, upstream, and downstream municipal interests.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e) and (i) have been revised to clarify that each RFPG, at its discretion, may add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR.

The City of Fort Worth suggests adding Councils of Governments (COGs) as voting or non-voting members of regional flood planning groups. The city discusses North Central Texas Council of Governments' involvement in flood planning efforts.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e) and (i) have been revised to clarify that each RFPG, at its discretion, may add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR.

Matthew Berg believes that there should be multiple representatives for certain interest categories (municipalities, counties, public, water districts, water utilities) or that TWDB could encourage rotational membership among representatives to ensure adequate representation and collaboration.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11(e) and (i) have been revised to clarify that each RFPG, at its discretion, may add additional voting and non-voting interest categories and positions to serve on the RFPG at any time to ensure adequate representation in the FPR.

Matthew Berg requests clarification on the role of non-voting liaisons between major river basins that have been split into more than one flood planning region and for neighboring flood planning regions along the gulf coast. He asks whether such non-voting liaisons will be required to provide positive confirming statements on regional flood plans or aspects of the regional flood plan.

Response:

The TWDB acknowledges and appreciates the comment. The type and level of involvement from non-voting members, other than them specifically not having a vote, shall be determined by the RFPGs. No changes have been made.

Matthew Berg asks if the process for adding voting and non-voting members, as set forth in Section 361.11(h), will be documented in the model bylaws to be developed by the TWDB. He states that political motives may yield undesirable membership outcomes within regional flood planning groups.

Response:

The TWDB acknowledges and appreciates the comment. Each RFPG will be required to establish its own bylaws after their initial formation in accordance with Section 361.11(d). The TWDB anticipates providing a standard set of model bylaws to each RFPG for consideration. Additional language has been added to Section 361.11 to address the specific case of addition of any new voting position that would increase the total number of RFPG voting member positions as requiring a two-thirds vote. Additional language has been added to Section 361.11 that states that the addition of non-voting members must be in accordance with the adopted RFPG bylaws.

Bexar Regional Watershed Management Partners note that the San Antonio River Authority is not currently captured in the current definition of river authorities in the proposed rules. The partners strongly recommend amending the definition for river authorities to the definition found in Section 30.003 of the Texas Water Code: “River Authority’ means any district or authority created by the legislature which contains an area within its boundaries of one or more counties and which is governed by a board of directors appointed or designated in whole or part by the governor, or by the Texas Water Development Board, including without limitation the San Antonio River Authority.”

Response:

The TWDB agrees with this modification and Section 361.11(e)(9) has been modified to include San Antonio River Authority.

The Texas Association of Builders provided oral and written comments suggesting addition of residential developers/builders as voting members of regional flood planning groups to provide groups with homebuilding expertise for effective flood planning.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.11 allows flood planning groups to designate additional voting representatives for required interest categories, and/or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

The City of Austin suggests requiring a liaison from each water supply planning group that overlaps with the flood planning groups to facilitate coordination between groups.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs may coordinate with regional water planning groups, if and when necessary without the need to add another

member to their group. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. No changes have been made.

The City of Sugar Land questions how a dispute will be resolved if one of several political subdivisions is opposed to a project within a regional planning area.

Response:

The TWDB acknowledges and appreciates the comment. The intent of Senate Bill 8 and these associated administrative rules is to encourage bottom-up regional flood planning wherein regional issues are worked out within each region and with the regional flood plans developed by the RFPGs and associated recommendations for projects made by the RFPGs. No changes have been made.

The North Central Texas Council of Governments stated that at the August 8, 2019 TWDB Flood Plan Outreach Meeting in Arlington, their local governments and industry requested that TxDOT, USACE, NCTCOG (or COG), USGS, TFMA, and universities be included in the list of required non-voting members of regional flood planning groups. The council acknowledges that Section 361.11(h) allows regional flood planning groups to add additional members but asserts that those entities should be added to the list of minimum representatives for all regional flood planning groups.

Response:

The TWDB acknowledges and appreciates the comment. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. As the commenter states, Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that the following categories be added to the required voting member interest categories: Land trusts, fisheries managers, academic flood experts, water trusts, parks and recreation interests, and low-income housing advocates. The organizations agree that representation of these interests on the regional

flood planning groups will enhance the breadth and diversity of those groups and increase the prospects for a more comprehensive approach to flood mitigation for a flood planning region.

Response:

The TWDB acknowledges and appreciates the comment. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that the regional flood planning groups require a non-voting member liaison or liaisons from regional water planning groups whose respective planning region or regions include a substantial geographic portion of the flood planning region. The organizations believe that having such a liaison on the regional flood planning groups should enhance coordination flood planning and water supply planning within different areas of the state.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs may coordinate with regional water planning groups, if and when necessary without the need to add another member to their group. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that the voting members of a RFPG as a group, reflect, to the extent possible, the ethnic and cultural diversity of its flood planning region. Through their experiences with the regional water supply planning process, they believe that a number of regional water planning groups do not have a membership that reflects the diversity of the population of their region. That limits the outreach to different population groups and makes less likely their interest in and support for implementation of the regional plans prepared through such a process.

Response:

The TWDB acknowledges and appreciates the comment. RFPG members are expected to be capable of adequately representing their assigned interest category in the region for which they serve. The TWDB will be soliciting for RFPG membership following adoption of the final rules. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

The Texas Land Trust Council recommend that the following categories be added to the required voting member interest categories: Land trusts, fisheries managers, academic flood experts, water trusts, and parks and recreation interests. They believe that representation of these interests on the regional flood planning groups would provide for a more comprehensive approach to flood mitigation for a flood planning region, and would ensure a more balanced consideration of nonstructural and structural flood solutions and more attention to solutions that provide multiple benefits, in addition to flood risk reduction and mitigation.

Response:

The TWDB acknowledges and appreciates the comment. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

The Orange County Drainage District provided oral comments suggesting that regional flood planning groups should include drainage districts as an additional required membership category, instead of drainage districts being included under the larger category of water districts.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.11(e) has been revised to include a separate category for “Flood Districts” including flood control districts, drainage districts, and levee improvement districts.

ASCE-TX comments that there is a typo in Section 361.11(b) And that the acronym should be FPR instead of RFP.

Response:

The TWDB acknowledges and appreciates the comment, but believes the acronyms are correct. No changes have been made.

ASCE-TX suggests that the members of the RFPGs, per Section 361.11(c), should be designated from a list of nominated candidates based on qualification and demonstrated commitment to public service.

Response:

The TWDB acknowledges and appreciates the comment. RFPG members are expected to be capable of adequately representing their assigned interest category in the region for which they serve. The TWDB will be soliciting for RFPG membership following adoption of the final rules. No changes have been made.

ASCE-TX suggest that the rules include the requirement for each RFPG to designate a Chair to be responsible for the implementation of the plan and to be a liaison between the TWDB and the RFPGs.

Response:

The TWDB acknowledges and appreciates the comment. Each RFPG will be required to establish its own bylaws after their initial formation including regarding governance of the group in accordance with Section 361.11(d)(1). The TWDB anticipates providing a standard set of model bylaws to each RFPG for consideration that will include a governance structure to include a chairperson and executive committee. Per Section 361.12, the RFPG shall also designate a political subdivision to act on behalf of the RFPG. The TWDB anticipates that the Chairs of the RFPGs and sponsoring political subdivision will liaison as much as necessary with TWDB to ensure the successful completion and submission of a regional flood plan. Also, per Section 361.11(f)(1), each RFPG will have a designated non-voting TWDB staff representative who will proactively support and act as a liaison to the group and manage the grant contract with the sponsoring political subdivision. Eventual implementation of adopted regional flood plans will rely on a variety of participants including specific sponsors of recommended projects. No changes have been made.

ASCE-TX suggest that the RFPGs include a member from the Transportation Sector.

Response:

The TWDB acknowledges and appreciates the comment and has added a requirement that RFPGs shall consider including a non-voting member to represent regional or local transportation authorities.

The Woodlands Water Agency notes that, at least in their watershed, flooding is taking place in the more urban area of the basin and suggests that urban areas should be able to have more voting members in the RFPG in order to better address possible population bias between upper watershed rural area versus flood-impacted urban areas.

Response:

The TWDB acknowledges and appreciates the comment. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful operation and development of their plans by the deadline. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

With regard to the minimum interests to be represented, TWCA respectfully recommends that drainage districts and levee improvement districts each be named independently as minimum interests to be represented. Such entities are charged primarily with flood mitigation activities, and accordingly a representative of each should be included where such entities exist within a flood planning region.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.11(e) has been revised to include a separate category for “Flood Districts” including flood control districts, drainage districts, and levee improvement districts.

TWCA additionally proposes that “regional water authorities” be specifically named in Section 361.11(e)(10), and that “Water Utilities” be redefined to broaden the ability of entities more generally “involved in providing water” to be represented on RFPGs. TWCA requests an additional change to Section 361.11(e)(11) to prevent the exclusion of the San Antonio River Authority from the river authority category, owing to its elected board.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB interprets “Water Districts” under Section 361.11(e) to include regional water authorities, as they are authorized under Section 59, Article 16 of the Constitution, and has added clarifying

language to Section 361.11(e)(10). No changes have been made regarding broadening the definition of water utilities. It is anticipated that every region will have entities that meet the definition as originally drafted. However, a change to Section 361.11(e)(9) regarding River Authorities has been made to include San Antonio River Authority.

TWCA suggests that the members of regional water planning groups should be permitted to serve as non-voting members of overlapping RFPGs, at the will and desire of a regional water planning group.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs may coordinate with regional water planning groups, if and when necessary without the need to add another member to their group. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. No changes have been made.

Ericka Inman asks the TWDB to include representatives of land trusts and conservation land managers on the RFPGs.

Response:

The TWDB acknowledges and appreciates the comment. At their inception, the RFPGs will already have a minimum of 12 voting plus at least 7 non-voting members for a total of 19 members and will need to carefully consider and manage their own membership size and makeup in order to ensure successful RFPG operation and development of their plans by the statutory deadline. Section 361.11 allows flood planning groups to designate additional voting or non-voting representatives to serve on the flood planning group, if necessary, to ensure adequate representation from the interests in its region. No changes have been made.

Section 361.12 General Regional Flood Planning Group Responsibilities and Procedures.

Section 361.12 contains general RFPG responsibilities and procedures. In particular, this section requires that the RFPGs each designate a political subdivision to be a Planning

Group Sponsor that will be responsible for submitting an application for planning funds on behalf of the RFPG. The Planning Group Sponsor will also be responsible for managing the contracts with the Board and with the consultants supporting the RFPGs, however the Planning Group Sponsor must have RFPG approval before entering into or amending any contract.

This section includes the statutory requirement for the RFPGs to hold public meetings to gather from interested persons, including members of the public and other political subdivisions located in that county, suggestions and recommendations as to issues, provisions, projects, and strategies that should be considered for inclusion in a regional flood plan. The rule further requires the RFPGs to meet annually, at a minimum, and to hold at least one public meeting to establish additional public notice requirements, if any, that the RFPG determines are necessary to ensure adequate public notice and participation within their own regional flood planning area.

Additionally, this section provides the RFPGs discretion to designate subcommittees or subgroups within its region. The rule requires any subcommittee or subgroup that is related to a specific geographical area within the flood planning region (FPR), to define the geographic area based on boundaries that are coterminous with full Hydrologic Unit Code level 8 watersheds within the FPR, and further that those subcommittees include at least one voting member that represents each of the 12 interests outlined in Section 361.11(e).

The rule requires that any subcommittees bring any information or recommendations to the full RFPG for consideration and it explicitly limits the subcommittees from taking certain actions.

Comments

Houston Stronger supports Harris County Flood Control District to act in an administrative agent on behalf of a regional flood planning group.

Response:

The TWDB acknowledges and appreciates the comment. Once formed, each Regional Flood Planning Group will independently select the planning group sponsor that will act on their behalf. No changes have been made.

El Paso County seeks clarification on whether the designated political subdivision has the authority to request additional funding from other participants for the purposes of future planning efforts.

Response:

The TWDB acknowledges and appreciates the comment. These administrative rules do not limit or otherwise modify any of the existing authorities of any political subdivisions. No changes have been made.

The City of Sugar Land expresses concern regarding the efficiency of the requirement that sub-regional committees and subgroups must include one voting member from each of the eleven required interest categories. The city also suggested non-substantive formatting changes to Section 361.12(10).

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees.

The TWDB acknowledges and appreciates the comment and has made no change aside from the suggested modification to the text format.

The City of Fort Worth seeks clarification on whether regional flood planning groups can change the designated political subdivision in the future.

Response:

The TWDB acknowledges and appreciates the comment and added language to Section 361.12(a)(1) to clarify that the RFPG may change the political subdivision supporting the group as follows: *"The RFPG may, at its own discretion, designate a different Planning Group Sponsor at any time."*

Matthew Berg suggests that TWDB could encourage rotation of the political subdivision designated as the representative of the regional flood planning group to ensure adequate representation and collaboration.

Response:

The TWDB acknowledges and appreciates the comment and added language to Section 361.12(a)(1) to clarify that the RFPG may change the political subdivision supporting the group as follows: *“The RFPG may, at its own discretion, designate a different Planning Group Sponsor at any time.”*

The City of Lake Jackson and the City of Brookshire expressed concern that Section 361.12(2) requires a political subdivision to contract with a technical consultant whose work will extend beyond the jurisdiction of the political subdivision and that this could create potential conflicts related to the scope of work. In addition, the City believes this section may be inconsistent with Section 361.72(c). The City requests a change to Section 361.12(2) authorizing a political subdivision to procure a consultant either in accordance with its own procurement requirements or in accordance with the Professional Services Procurement Act (Government Code, Chapter 2254 (A)).

Response:

The TWDB acknowledges and appreciates the comment. The Professional Services Procurement Act, Government Code Chapter 2254, will apply to most of the Planning Group members and therefore, not require different procurement standards for the Planning Group Sponsor. However, language has been added to Sections 361.72 and 361.12 for consistency.

The City of Lake Jackson and the City of Brookshire requests that Section 361.12(4) be amended to require RFPGs to take public comments on flood management *evaluations* in addition to flood management strategies and projects as part of the public meetings process.

Response:

The TWDB agrees and the term “evaluations” was added to the scope of Section 361.12(4).

The City of Lake Jackson and the City of Brookshire requested clarification as to the intent of Section 361.12(9). If the intention is to require that the members of a sub-regional committee, subcommittee, or subgroup represent interests from within the geographic area covered by said committee or group, the City requests the following change: *“It shall include at least one ~~voting~~ member from within the sub-regional geographic area representing each of the interests under Section 361.11(e)(1-11).”*

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the

TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees. The TWDB acknowledges and appreciates the comment and has made no change aside from the suggested modification to the text format.

The methods by which any sub-regional groups operate at the direction of and on behalf of a RFPG are not defined in the rules and would therefore be subject to the RFPG's own bylaws. The TWDB acknowledges and appreciates the comment and no changes have been made.

The Trinity River Authority expresses concern regarding the requirement that sub-regional committees and subgroups must include one voting member from each of the eleven interest categories. The authority believe that this requirement would deprive large-area regional flood planning groups of the ability to effectively and efficiently plan. They suggest striking this requirement. The authority also suggests a non-substantive formatting change to Section 361.12(10).

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees. The TWDB acknowledges and appreciates the comment and has made no change aside from the suggested modification to the text format.

The TWDB acknowledges and appreciates the comment and has made no change aside from the suggested modification to the text format.

The North Central Texas Council of Governments states that in their large metropolitan area (which is absent a flood control district) cities, counties, and special districts have requested that the council take a lead role in the coordination, administration, and regional application processes and that the Trinity River Authority serve to represent the balance of the Trinity River basin downstream of their large metropolitan area. The council states that they are in the best position to provide the vast quantities of data associated with regional flood planning group requirements and elements of the regional flood plan. Their current

understanding, based on discussions with TWDB, is that they are eligible to apply for and perform the role of regional coordinator to the flood planning process in their region if selected by the regional flood planning group.

Response:

The TWDB acknowledges and appreciates the comment. Once formed, each Regional Flood Planning Group will independently select the entity that will act on their behalf. No changes have been made.

The North Central Texas Council of Governments expresses concern regarding the feasibility of the requirement that sub-regional committees and subgroups must include one voting member from each of the eleven required interest categories. The council also seeks clarification regarding if a vote from all eleven interest categories would be required for a subgroup recommendation to be presented to the full group.

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees.

The methods by which any sub-regional groups operate at the direction of and on behalf of a RFPG are not defined in the rules and would therefore be subject to the RFPG's own bylaws.

The TWDB acknowledges and appreciates the comment and makes no change.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance support in general the provisions in this section of the proposed rules, and especially support those provisions that are intended to promote public input to the regional flood planning process and those that provide authorization for the creation of committees, subcommittees, or subgroups within a flood planning region to address topics across the entire region or issues related to specific geographical areas within the flood planning region or coordination of shared issues across neighboring flood planning regions.

However, the joint comments recommend that this section be enhanced by requiring each RFPG to designate a committee, subcommittee, or subgroup to consider the special flood

risk issues impacting socially vulnerable populations within the flood planning region. They believe that the designation and work of such an entity by an RFPG would enhance the prospects that the flood risk reduction needs of socially vulnerable populations would get due consideration in the regional flood planning process.

Response:

The TWDB acknowledges and appreciates the comment. The administrative rules allow RFPGs to designate any type of subcommittees that they consider needed to develop their regional flood plans. No changes have been made.

ASCE-TX suggests that the requirement in Section 361.12(6) for annual meetings may not be frequent enough. They suggest, at minimum, quarterly meetings.

Response:

The annual meeting requirement is only a minimum. Most groups will likely choose to meet much more frequently during periods of time requiring their attention. No changes have been made.

ASCE-TX suggests that the provision in Section 361.12(9) omit the sentence marked in strikethrough font as follows: If a RFPG creates a sub-regional committee or subcommittee or subgroup to address issues related to a specific geographical area smaller than the full FPR, we suggest that, to the extent practical, define such sub-regional geographic areas based on boundaries that are coterminous with full HUC8 watersheds located within the FPR. ~~This shall include at least one voting member representing each of the interests under 361.11(e)(1-11).~~ The requirement to include all of the required voting members would likely be overly cumbersome in practice and would not allow smaller, more agile committees to be formed. This requirement is duplicative because committees formed within a regional planning group will be acting on behalf of the regional planning group, which is composed by the full suite of required stakeholders.

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees.

The TWDB acknowledges and appreciates the comment and has made no change.

The Brazos River Authority has concerns that the concept of developing subgroups or subcommittees to address issues associated with a geographic area smaller than the full flood planning region appears to be redundant in that those areas and "subcommittees" have to go through the same rigor/process, and yet any coordination coming out of the subcommittees must go back before the main flood planning region for final acceptance.

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. Accordingly, the final flood planning regions designated by the Board on April 9, 2020, have since split several major river basins to reduce the geographic extent of flood planning regions that does not eliminate the option of a geographic-based subcommittee should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees. The TWDB acknowledges and appreciates the comment and has made no change.

TWCA has significant concern regarding Section 361.12(9). In the event an RFPG creates a geographically-defined subcommittee, that committee's membership should not be required to include "one voting member representing" each of the mandatory interests to be represented on the RFPG. This requirement, while well intentioned, would deprive large-area RFPGs of the ability to effectively plan.

First, the rules as proposed identify 12 interests that must be represented (assuming all of those interests exist within an RFPG), which would then require that sub-regional workgroups would have a minimum membership of 12 persons. In a large basin divided into three sub-regional workgroups, those groups would require the participation of effectively all voting members of the RFPG, defeating the purpose of division of labor. Such an arrangement would be, at best, cumbersome and unwieldy. Moreover, it would effectively increase the number of de facto RFPG meetings in such a fashion that the process would become unmanageable.

Second, as provided by Section 361.12(10), the work of any subcommittee may only be used "for the purpose of providing information or recommendations as specifically directed by the full RFPG and for potential consideration by the full RFPG." Accordingly, the absence of representation from a mandatory interest would not prejudice that interest, which must be represented on the full RFPG and pass judgment upon any subcommittee recommendations. It is simply unrealistic to require that all interests be represented on geographically-defined RFPG subcommittee, and TWCA accordingly strongly recommends the removal of the final sentence of Section 361.12(9).

Response:

The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees.

The TWDB acknowledges and appreciates the comment and has made no change.

TWCA recommends one non-substantive formatting modification to Section 361.12(10), for purposes of clarification. This modification involves moving the phrase “RFPGs may not authorize committees or subcommittees ... to take any action regarding:” from Section 361.12(10)(A) to the body of Section 361.12(10). Section 361.12(10)(B-D) would be renamed Section 361.12(10)(A-C).

Response:

The TWDB acknowledges and appreciates the comment and has corrected the formatting of Section 361.12(10).

TWCA comments that the difficulty encountered with planning in large basins is compounded by the requirement of Section 361.12(9), which mandates that sub-regional subcommittees or workgroups be populated by “at least one voting member representing each of the interests under Section 361.11(e)(1) – (11).” TWCA proposes that such a requirement is both unnecessary and unduly burdensome.

Response:

The TWDB acknowledges and appreciates the comment. The requirement to include representatives from the 12 voting categories in any geographically based subgroup adheres to the intent of legislative direction given to the TWDB to ensure adequate representation for any subgroup that is based on geography. The final flood planning regions designated by the Board on April 9, 2020, intentionally split several major river basins to reduce the geographic extent of flood planning regions which should significantly reduce the perceived need and/or inclination of RFPGs to designate geographic-based subcommittees. No changes have been made.

Section 361.13 Regional Flood Planning Group Deliverables.

Section 361.13 includes the required deliverables for the RFPG to submit to the Board. These include a draft and final regional flood plan (RFP) and technical memoranda. This section includes administrative guidelines for the RFPs, as well as requirements that the RFPs include geographic information system database deliverables and other information such as documentation of the public process and public comments received.

Section 361.13 requires the RFPGs to submit technical memoranda to the board prior to the submission of the draft RFPs. The technical memoranda must include a list of any political subdivisions or other governmental entities that have oversight or impact on development or political subdivisions that have flood related responsibilities or authority. The technical memoranda should also include a list of prior flood studies considered relevant by the RFPG to development of their plan, a geodatabase and maps that the RFPG considers the best representation of the region-wide floodplains for use in its flood hazard exposure analysis, a list of the flood-related models that the RFPG considers most valuable in developing its plan, a map of the areas that the RFPG finds most prone to flooding in the region, the goals adopted by the RFPG, the process used by the RFPG to identify potentially feasible flood management strategies and flood mitigation projects, and any potential flood management evaluations that could identify potentially feasible strategies and projects.

Comments

PEW Charitable Trusts comments that within the requirements for deliverables (Section 361.13) there is an emphasis on geographic information system (GIS) databases (Items (a)(3) and (e)(3), for example). They state that while moving away from simple static maps may present challenges for some regions, the end result should be a floodplain management approach that can be adjusted and improved overtime as conditions change. By creating and continuing to build out GIS databases, they believe that the TWDB and the regional decision-makers will enhance their capacity to understand and manage flood risk over time. PEW Charitable Trusts believes that they will also be able to better analyze the effectiveness of selected policies and projects over time, building the capacity to inform the public of paybacks achieved and losses avoided from past investments.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

PEW Charitable Trusts and Matthew Berg comment that, in the deliverables section, the requirement for a listing of strategies and projects that were identified but deemed infeasible is helpful and recommended that a minor adjustment be made to assure that the reasoning behind those decisions is also discussed.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.13(e)(10) was changed by adding “including the primary reason for it being infeasible.”

The City of Sugar Land requests clarification regarding whether inundation boundaries will be based on new data (Atlas 14 precipitation) or will use outdated FEMA maps. The city suggests regional flood planning groups should use best available information.

Response:

The TWDB acknowledges and appreciates the comment. The specific methodology and data requirements will be described in technical guidance that will be provided to the RFPGs and that is being developed by the EA and should be consistent with the guidance principles in Section 362.3(b)(2) including consideration of best available data. No changes have been made.

The City of Fort Worth asserts that regional flood planning groups, when identifying areas most prone to flooding, should consider areas of urban flood risk outside of mapped FEMA floodplain areas.

Response:

The TWDB agrees with and acknowledges and appreciates the comment and believes that urban flooding already falls within the scope of the planning process rules and is specifically mentioned as a guidance principle in Section 362.3(b)(8). No changes have been made.

Matthew Berg states that the rules do not provide guidance for regional flood planning groups on how to determine which previous studies are relevant to development of the regional flood plan, as required in Section 361.13(e)(2). He suggests that regional flood planning groups be required to examine any existing academic research on flood dynamics in the river basin or watershed.

Response:

The TWDB acknowledges and appreciates the comment. The rules leave the determination of relevance to the RFPGs and their consultant to make. No changes have been made.

Matthew Berg seeks clarification on how geospatial flood risk data required in Section 361.13(e)(3) will be reconciled if significant discontinuities exist across jurisdictional boundaries. He asks if simply stating such discontinuities will be sufficient.

Response:

The TWDB acknowledges and appreciates the comment. The RFPGs are expected to make certain decisions regarding what is best available information in their region and the best way of addressing such matters. To the extent warranted, the EA may develop additional technical guidance to assist RFPGs in making such decisions. No changes have been made.

The City of Sugar Land asks if every RFPG is going to have their separate Regional Flood Plan.

Response:

Yes, each RFPG shall deliver a draft and final, adopted Regional Flood Plan in accordance with Section 361.50 and EA guidance. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance generally support the provisions in this section of the proposed rules but recommend additional language to require that the RFPGs submit documentation of efforts to solicit and consider input from socially vulnerable populations within the FPR.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB encourages the RFPGs to solicit and consider input from all of the potentially impacted population in any given region, including the socially vulnerable populations as mentioned in a guidance principle in Section 362.3(b)(35). However, it is the responsibility of the RFPGs to consider the interests of the entire region. The RFPGs may solicit information from a wide variety of interests through various means including through the RWPG or other public meetings, outreach, written comments, and or hearings, that must be considered. No change.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance express concern that details about some of the deliverables to be required of each RFP will be specified in guidance to be provided later by the Executive Administrator, rather than be explained in the rules. Their specific concern focuses on the required table that shall “include a list of all recommended FMS and FMPs, and certain key

information associated with each FMP, in accordance with guidance and template to be provided by the EA.”

The proposed rules state that “[t]his table will be the basis for prioritizing recommended flood management projects in the state flood plan.”

The joint comments further express a desire for the Executive Administrator provide an opportunity for public review and comment on that guidance before it is made final. However, their preference would be for these requirements to be in the rules rather than in guidance. They also recommend that that this table include information about the Social Vulnerability Index of neighborhoods or communities for which the FMS and FMPs are proposed and about any ancillary benefits of a FMS or FMP in the RFP.

Response:

The TWDB acknowledges and appreciates the comment. It is the intent of the EA to solicit and consider stakeholder input on the draft technical guidance, once developed, including the specific content referred to by the commenter. Due to the compressed timeline in which to Senate Bill 8 statutory deadlines, the TWDB did not consider there to be sufficient time to develop a robust set of administrative rules for this purpose without unduly delaying the formation of the RFPs and risking being overly restrictive or permissive. The TWDB’s responsibility for ranking the strategies, projects, and evaluations in Texas’ first state flood plan, which will occur after the submission of the final regional flood plans, deserves a well-considered examination of potential approaches as well as a need to retain some degree of flexibility that rules would not have afforded. Term “prioritize” was changed to “rank” in accordance with SB8 language.

ASCE-TX suggests that subsection on deliverables, Section 361.13, Regional Flood Planning Group Deliverables, is misplaced. They believe that the deliverables requirement should be moved to the end of Subchapter C, Regional Flood Plan Requirements, as long as it does not duplicate the requirements of Subchapter C, which outlines the content of a regional flood plan itself. ASCE-TX states that it may be possible to omit the “deliverables” subpart entirely, since each subpart of Subchapter C outlines specific requirements anyway.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

ASCE-TX states that item (e)(5), Map of Areas Most Prone to Flooding, should be revised to read: “A map showing areas identified by the RFPG as having an annual likelihood of inundation of more than 1%, the areal extent of these areas, and the sources of flooding for each area.”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.13 has been modified to clarify that deliverables shall include: “(e)(3) a geodatabase and associated map in accordance with EA guidance that the RFPG considers to be best representation of the region-wide 1.0% annual chance flood event and 0.2% annual chance flood event inundation boundaries, and the source of flooding for each area, for use in its flood risk analysis, including indications of locations where such boundaries remain undefined;” and “(4) a geodatabase and associated maps in accordance with EA guidance that identifies additional flood prone areas not described in (3) based on location of hydrologic features, historic flooding, and/or local knowledge.”

Matthew Berg states that Section 361.13 (e)(9) prescribes a list of FMSs and FMPs deemed infeasible for each RFPG. He suggests that each FMS and FMP should have an explanation of why each was determined to be infeasible.

Response:

The TWDB agrees with and acknowledges and appreciates the comment. Section 361.13(e)(10) was changed by adding “including the primary reason for it being infeasible.”

Subchapter B. Guidance Principles, Notice Requirements, and General Considerations.

Section 361.20 Guidance Principles for State and Regional Flood Planning.

Section 361.20 implements the requirement included in Texas Water Code §§16.061(c) and 16.062(a)(3) that the board adopt guidance principles for the state and regional flood plans. The board developed the guidance principles in coordination with the Texas Commission on Environmental Quality, the Texas Department of Agriculture, the Texas General Land Office, the Texas Parks and Wildlife Department, the Texas Division of Emergency Management, and the Texas State Soil and Water Conservation Board. The board met with the agencies on two occasions to coordinate the development of the guidance principles included in the proposed rule and the agencies have been kept apprised of all modifications. As proposed, Section 361.20 refers participants to the guidance principles in the state flood plan section of the rules at Section 362.3, which are the same as the regional flood plan guidance principles. The rule includes 39 guidance principles that the RGPGs must use to inform their RFPs.

Additionally, Section 361.20 requires the RFPs to include a statement in their RFPs related to the groups' conformance with the guidance principles and to explain how the RFP satisfies the requirements of each of the guidance principles. The RFPs must also include a statement that the plan does not include strategies that will negatively affect neighboring areas. As required by Texas Water Code § 16.062(h) the board shall make a determination whether a regional flood plan affects a neighboring area, and the board may only approve a regional flood plan when it does not negatively affect a neighboring area.

Comments

Texas Water Conservation Association (TWCA) believes that while the language in proposed Section 361.20(b) is a straightforward implementation of Senate Bill 8, it presents the hazard that even trivial and insubstantial effects could create the basis for an intra- or interregional claim of negative effects.

TWCA accordingly recommends that the TWDB consider modifying Section 361.20(b), and all other provisions of Chapter 361 concerning negative effects upon a neighboring area, to incorporate an exception for de minimis negative effects. Many upstream flood mitigation projects could, debatably, result in more water moving downstream more quickly, but only those projects that result in a material amount of additional downstream inundation should be permitted to give rise to a claim of negative effects associated with a strategy or project. Thus, TWCA recommends that Section 361.20(b) be modified to provide as follows:

Each RFPG shall include a statement in their draft and final regional flood plans regarding the RFPG's conformance with § 362.3 of this title, including how the RFP satisfies the requirements of each of the guidance principles including that the plan will not have more than a de minimis negatively effect upon a neighboring area.

As stated, the purpose of this change is to reduce the likelihood that insubstantial negative effects frustrate the planning process. TWCA recommends like changes to Section 361.38(g)(5); 361.39(d); 361.40(2), 361.50(e)(4); 361.51(c)(3)(B); 361.60; and, 361.61(a), (f).

Response:

The TWDB acknowledges and appreciates the comment. Section 361.10 has been revised to include a definition for 'negative effect'.

Section 361.21 General Notice Requirements.

Section 361.21 includes the notice and public participation requirements for the RFPGs. As required in Texas Water Code § 16.062(l), each FPG and committee or subcommittee of a RFPG is subject to Chapters 551 and 552 of the Government Code. The rule further requires each RFPG to create and maintain a website to be used for posting public notices of all its meetings, providing meeting materials, and accepting electronic comments. This section of the rule further requires the RFPGs post notice of their meetings on their websites either thirty, fourteen, or seven days prior to the meetings, depending on the scope of the meeting. Additionally, the RFPGs must notify the voting and non-voting members of the RFPG through email.

Comments

El Paso County suggests clarifying whether notice requirements are in business or calendar days.

Response:

Section 361.21(i) states that all notice requirements are given based on calendar days. No changes have been made.

The City of Sugar Land suggests that information required to be disclosed under this section be provided on the TWDB website for greater consistency and access.

Response:

The TWDB envisions giving regional flood planning groups the opportunity to post notices, such as meeting notices, on the TWDB website. However, such disclosures will not be required in rule. No changes have been made.

Matthew Berg appreciates the public notice requirements in the proposed rules but believes that they are too narrow in scope. He suggests that the EA should provide guidance to regional flood planning groups on developing a proactive strategy for public communications (including social media) to be deployed after significant flooding events.

Response:

The TWDB acknowledges and appreciates this comment; however, established as primarily pre-event planning regional planning groups, the TWDB does not consider RFPGs to be an

appropriate entity for establishing immediate flood response and information. Entities currently charged with responding to flood events in real time (municipalities, counties, TDEM, etc.) remain the primary entities to respond. The TWDB is also updating the TexasFlood.org website to incorporate the state flood planning process and the agency's communications department is implementing proactive strategies for public communications. The RFPGs can also serve as partners in their efforts to disseminate information. No changes have been made.

The City of Lake Jackson and the City of Brookshire express concern that subsections (b) and (d) within Section 361.21 create confusion regarding materials required to be made public and the manner in which the materials are to be made public. Examples include different requirements for "relevant meeting materials," "confidential materials," and "all materials presented or discussed" as well as whether materials are to be made available as "copies" or "online". The cities request the deletion of subsections (b) and (d), plus the following edits to (c) along with associated renumbering: "Each RFPG and any committee, subcommittee, or subgroup of an RFPG shall provide a means by which it will accept written public comments prior to ~~and after~~ meetings. The RFPGs and any committee, subcommittee, or subgroup of an RFPG must also allow oral public comment during meetings."

Response:

The TWDB agrees with much of the comment. Subsection (d) was shortened to acknowledge Homeland Security Exemption, and Subsection (b) was expanded to include the notice time references previously in (d), and the language simplified regarding requirement of making RFPG, subgroup and subcommittee meeting agendas and related meeting materials available to the public through a website. TWDB believes that accepting written and oral public comments at RFPG meetings is sufficient since all subcommittee or subgroup decisions are subject to full RFPG approval. No changes made in Subsection (c).

The City of Lake Jackson and the City of Brookshire express concern that Section 361.21(h)(1) does not provide an opportunity for comments on approval of changes to RFPG membership or any other approvals required by TWDB or EA guidance not specifically addressed in rules. The cities request that a public comment period, allowing for written and oral comments, be specified for all actions taken under Section 361.21(h)(1). In order to facilitate the provision of materials subject to public comment, the cities also request that under 361.21(h)(1) and (h)(2), meeting materials subject to any action of the RFPG and/or public comment be made available at least as long as the notice of the meeting, 7 and 14 days respectively.

Response:

The TWDB acknowledges and appreciates the comment and agrees that RFPG membership actions should require more explicit solicitation and consideration of public comment prior to RFPG action. Former subsection (h)(1)(E) was moved to a new subsection (h)(2)(F) thereby also requiring 14-day notice and prior written comments for RFPG action on membership and was further clarified as follows: “approval of all changes to RFPG members or membership including filling vacancies, the addition of new voting or non-voting interest categories or additional voting or non-voting positions for existing interest categories.” The TWDB considers it important that the remaining actions under Section 361.21(h)(1) remain under the shorter notice requirement in order to not overburden RFPGs ability to take numerous, often administrative-related, actions in a timely manner. No changes were made to the notice document posting period requirements under either section in recognition of the priority of getting meeting notices posted early enough for the public to plan while also recognizing the practical need for some amount of time that may be required to prepare and post the final documents.

The City of Lake Jackson and the City of Brookshire express concern with Section 361.21(h)(3) regarding how written and oral comments and responses to those comments will be incorporated into the draft regional flood plan if the comment period remains open after the RFPG acts on the draft RFP per Section 361.50(d)(1)(D). As such, the cities request that this section be revised to provide a 60-day comment period prior to a meeting.

Response:

The TWDB acknowledges and appreciates the comment and added language in Section 361.21(h)(3)(G) to clarify that written comments submitted after the adoption of the draft plan must be considered prior to adoption of the final plan under Section 361.50(c)(1).

Section 361.22 General Considerations for Development of Regional Flood Plans.

Section 361.22 includes a list of information and tools that the RFPGs are expected to consider when developing their RFPs.

Comments

The Woodlands Water Agency suggests adding following data types/sources: Individual Assistance/Small Business Administration loan data to obtain a more complete understanding of Federal Emergency Management Agency (FEMA) claims and flood damages, U.S. Geological Survey (USGS), National Oceanic and Atmospheric Administration (NOAA) Coast gauges, U.S. Army Corps of Engineers (USACE) gauges, gauges owned/maintained by other entities including river authorities, drainage and flood control districts, USGS inundation data. They state that obtaining these data may require interagency agreements.

Response:

The TWDB acknowledges and appreciates the comment. The rule does not limit the scope of information that may be considered by the RFPGs. No changes have been made.

The Woodlands Water Agency asks if the TWDB will provide a template outline for a Regional Flood Plan (RFP), similar to FEMA flood damage prevention ordinances.

Response:

The TWDB is currently developing guidance documents for use by the RFPGs which anticipates including a template outline for a Regional Flood Plan. No changes have been made.

PEW Charitable Trusts comments that the list of items does not directly mention existing natural features that currently help to mitigate against flood damage or which might be restored to provide better flood protection. PEW also comments that none of 20 items that the RFPGs are to consider directly mention existing natural features that currently help to mitigate against flood damage or which might be restored to provide better flood protections and recommends amending the rule to more specifically and fully integrate the consideration of nature-based approaches into the procedural framework of the regulations.

Response:

The TWDB acknowledges and appreciates the comment. The rules have been modified to include several references to “natural” features with regard to identifying flood infrastructure and recommending potential FMSs and FMPs. The TWDB believes the inclusion of these references throughout Chapter 361 allow for and encourage the consideration of natural features and no changes have been made to this section.

Matthew Berg asserts that regional flood planning groups should be required to consider water quality issues, such as TMDL efforts and stream segments identified in the state impaired water bodies list, and should explore academic research on water quality topics.

Response:

Regional flood planning groups will focus their limited resources primarily on flood mitigation. However, impacts to and/or benefits to water quality will be considered and incorporated as appropriate and as planning group resources allow. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance support the requirement in proposed Section 361.22 that RFPGs “consider a wide variety of available, relevant information and tools when developing regional flood plans...,” and agree with the enumeration of information sources and tools specified. However, they believe that the list of relevant information for RFPGs to consider include at least two additional items related to: Social vulnerability indices for each county partially or completely within the FPR and for each census tract within the FPR that is generally prone to flood; and, Projected impacts of climate change on the FPR that might affect propensity for flooding within the FPR. The organizations believe that the inclusion of this information is important for reasons of equity in the development of the RFP and is consistent with the guidance principle in Section 362.3.

Response:

The TWDB acknowledges and appreciates the comment. The list in Section 361.22 is neither exclusive nor exhaustive and affords the RFPGs the flexibility to consider other data and tools. The flood risks to all populations are expected to be considered by RFPGs, including vulnerable populations as specifically referred to in Section 362.3(b)(35).

RFPGs will have the flexibility to consider, balance, and address a variety of potential risks and uncertainties including related to climate. Relative sea level change is already listed in Section 361.22 and Atlas 14, also listed, includes latest estimates on rainfall changes. TxDOT’s Hydraulic Design Manual recently added a section on Coastal Hydraulic Design and includes statewide guidance on relative sea levels, building off earlier work performed

in the Coastal Resiliency Master Plan, also listed in Section 361.22. The TWDB will continue to collect information and consider potential ways to improve the science associated with regional flood planning.

No changes have been made.

ASCE-TX supports the consideration of relative sea level change in Section 361.22(5) by regional flood planning groups and the state.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

ASCE-TX comments that in Section 361.22(11), the term “flood hazard exposure analysis” is not defined in the proposed regulations and duplicates the term “flood risk analysis” (as defined above). ASCE-TX suggests omitting Item 11 (flood hazard exposure analysis) from the list of deliverables because that is already addressed by Item 12.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.22(12) has been modified to provide additional clarity, and Section 361.22(11) has been removed

ASCE-TX comments that the provisions in Section 361.22(19) should be expanded to require consideration of both existing corridors and future corridors, because future corridors will stimulate additional land development.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.22(20) has been modified to clarify that the consideration critical transportation corridors include both existing corridors and future corridors.

ASCE-TX comments that the provisions in Section 361.22(21) should be changed to require consideration of planned and anticipated future development, not just large-scale development.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.22(22) has been modified to require consideration of planned and anticipated future development, not just large-scale development.

Harris County Flood Control District (HCFCD) recommends that the rules “require” RFPGs to use Atlas 14 data instead of “expecting” the RFPGs to use it.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will determine the best available data to use for communities throughout the Flood Planning Region. This determination shall be consistent with the guidance principle in Section 362.3(b)(2) and may include Atlas 14 data where available. Some communities may have existing, recent studies that rely on pre-Atlas 14 data, or more detailed, location specific studies that rely on other data sources. Technical guidance being developed by the EA will provide additional direction to the RFPGs regarding requirements. No changes have been made.

Subchapter C Regional Flood Plan Requirements.

Subchapter C includes the various requirements and elements of an RFP. This subchapter incorporates the requirements included in Texas Water Code § 16.062(e)(2). In particular, Texas Water Code § 16.062(e)(2) requires each RFP to include a general description of the condition and functionality of flood control infrastructure in the flood planning region; flood control projects under construction or in the planning stage; information on land use changes and population growth in the flood planning region; an identification of the areas in the flood planning region that are prone to flood and flood control solutions for those areas; and an indication of whether a particular flood control solution meets an emergency need, uses federal money as a funding component, and may also serve as a water supply source. The sections are intended to generally align with chapters in each of the regional flood plans.

Section 361.30 Description of the Flood Planning Region.

Section 361.30 requires the RFPs to include a description of the region in general including social, economic, and geographic information. This should include a brief description of the types of historical flooding in the region, resources most at risk from flooding, the entities with a role in flood activities, and the extent of regulatory activities addressing flood risk.

Comments

Matthew Berg states that natural resources and ecosystems are often dependent on flooding and asks how the required description of agricultural and natural resources most impacted by flooding, as required in Section 361.30(6), will be framed.

Response:

The TWDB acknowledges and appreciates the comment and acknowledges that flooding can positively impact agricultural and natural resources in some cases. The RFP's required description of agricultural and natural resources most impacted by flooding may include both positive and negative impacts. No changes have been made.

The City of Lake Jackson and the City of Brookshire express concern that the rule as written may unintentionally exclude political subdivisions with flood-related authority that should be engaged in flood planning activities but are not doing so and note that such political subdivisions should be included. The cities request the following change to Section 361.30(4): “political subdivisions with flood-related authority ~~and that are currently actively engaged in flood planning and flood management activities.~~”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.30(4) has been changed to read: “political subdivisions with flood-related authority and whether they are currently actively engaged in flood planning, floodplain management, and flood mitigation activities;”

Section 361.31 Description of the Existing Major Flood Infrastructure in the Region.

Section 361.31 requires the RFPs to include a description of existing major flood infrastructure in the FPR. This should include a general description of the location, condition, and functionality of the major flood infrastructure in the region. The RFPs should also include a summary of major non-functional flood infrastructure in the FPR.

Comments

PEW Charitable Trusts comments that Section 361.31, which covers the Description of the Existing Major Flood Infrastructure in the Region, does reference natural hydrologic and hydraulic features but lists those as distinct from existing “functional flood infrastructure.” and recommends amending this section to add “natural features, such as wetlands, vegetated dunes, and functioning floodplains,” as an additional item under (2), helping to emphasize the beneficial use of nature as flood mitigation infrastructure.

Response:

The TWDB agrees with the comment in general and also points out that the list is not meant to be exhaustive. Section 361.31 name has been modified to “Description of Existing Natural Flood Mitigation Features and Constructed Flood Mitigation Infrastructure in the Region”. The subsection body has been modified to read: “Regional flood plans shall include a general description of the location, condition, and functionality of:” followed by a single list that also specifically includes “vegetated dunes”. Also, “Surrounding floodplains”

has been changed to “functioning floodplains”. The assessment of condition and functionality already required by the subsection also applies to natural flood mitigation features.

PEW Charitable Trusts comments that the requirement to include, along with the description of any existing major flood infrastructure, information on the condition and adequacy of the structure is helpful and encourages the TWDB to require similar information on any flood infrastructure that is deemed deficient, even if it has not been rendered totally non-functional. They believe that this additional information can aid the selection of appropriate strategies and build support for diligent operation and maintenance of flood mitigation infrastructure.

Response:

The TWDB acknowledges and agrees with the comment. The scope of Section 361.31 description has been modified to read: “non-functional or deficient”.

PEW Charitable Trusts recommends that the TWDB make it clear that the descriptions of major flood projects under development (Section 361.31) and the descriptions of plan recommended Flood Management Projects (FMPs) (Section 361.38) incorporate:

(1) an explanation of any short- or long-term operations and maintenance necessary for the continued functioning of the project, and

(2) a description of any informational or regulatory framework that is planned as a component of the project’s operation.

They provide the following example: if the construction of a levee requires setbacks or vegetation restrictions, the project description should cover the form that such restrictions would take and specify which entity would assume responsibility for informing the public and/or enforcing selected restrictions. Likewise, if the construction of a new dry dam is envisioned and an area above that dam must remain undeveloped to prevent future flood damages, the plan should specify how such restrictions will be maintained over time.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made. There are limited resources available for the development of the regional flood plans which are high-level plans to be incorporated into a state flood plan. The TWDB believes that requiring details about operations and maintenance and the enforcement of any regulations associated with specific existing flood infrastructure will necessarily remain at a high level. With regard to potential recommended projects under Section 361.38, the rules already require that all costs, included O&M, of new projects and associated

regulatory costs such as associated with land acquisition for setbacks, will be considered and that any new regulatory recommendations, whether stand-alone or in conjunction with a constructed project, should be specifically included in the regional flood plans for examples, as FMSs. Technical guidance being developed by the EA will provide further direction with regard to how project costs, including annual costs, shall be presented in the plans including for the purpose of comparing project alternatives.

Matthew Berg appreciates the primary consideration given to natural hydrological and hydraulic features and seeks clarification on how condition and functionality will be assessed for such features. He also notes that the preamble states that the regional flood plans must include a description of the “adequacy” of major flood infrastructure and the proposed rules use the word “functionality.”

Response:

The TWDB acknowledges and appreciates the comment. RFPs will determine how condition and functionality will be assessed. The preamble was updated to align with the rule “functionality” term.

The City of Lake Jackson and the City of Brookshire believe that because municipal separate storm sewer systems are integral to all flood control efforts, they should be included in the list of major flood control infrastructure FPRs must describe.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.31 has been modified to include storm sewer systems in the non-exclusive list of functional flood infrastructure to be described.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance strongly agree with the inclusion of natural flood infrastructure features under Section 361.31. However, they recommend that additional natural features that provide major flood mitigation capabilities and should be added to the list. Such features include the following: prairies and prairie potholes; substantial undeveloped land areas; barrier islands, oyster reefs, mangroves, and dune systems; and, upland forests.

The organizations believe the addition of these natural features would recognize the ability of some of those features to absorb water and slow urban runoff and the ability of others to dissipate storm surge and wave energy, and that this holistic approach would address not only riverine flooding but also pluvial flooding and flood damage due to storm surge.

Response:

The TWDB agrees with the comment in general and also points out that the list is not meant to be exhaustive. Section 361.31 name has been modified to “Description of Existing Natural Flood Mitigation Features and Constructed Flood Mitigation Infrastructure in the Region”. The subsection body has been modified to read: “Regional flood plans shall include a general description of the location, condition, and functionality of:” followed by a single list that also specifically includes “vegetated dunes”. Also, “Surrounding floodplains” has been changed to “functioning floodplains”. The assessment of condition and functionality already required by the subsection also applies to natural flood mitigation features.

The Texas Land Trust Council agrees with the inclusion of natural flood infrastructure features and would like to see additional natural features that provide major flood mitigation benefits added to the list, such as: prairies and prairie potholes; substantial undeveloped land areas; barrier islands, oyster reefs, mangroves, and dune systems; and, upland forests or scrub woodlands. They state that, these natural features have the ability to absorb water and slow urban runoff, as well as to dissipate storm surge and wave energy and that this holistic approach would address not only riverine flooding, but also pluvial flooding, and flood damage due to coastal storm surge.

Response:

The TWDB agrees with the comment in general and also points out that the list is not meant to be exhaustive. Section 361.31 name has been modified to “Description of Existing Natural Flood Mitigation Features and Constructed Flood Mitigation Infrastructure in the Region”. The subsection body has been modified to read: “Regional flood plans shall include a general description of the location, condition, and functionality of:” followed by a single list that also specifically includes “vegetated dunes”. Also, “Surrounding floodplains” has been changed to “functioning floodplains”. The assessment of condition and functionality already required by the subsection also applies to natural flood mitigation features.

ASCE-TX comments that the provisions in Section 361.31 should be changed to clarify that Items (G), (H), and (I) should only be included if they are publicly owned and serve drainage areas of at least 50 acres.

Response:

The TWDB acknowledges and appreciates the comment. The technical guidance being developed by the EA is intended to provide more detailed information on the scope and approach to these types of requirements described in rule. No changes have been made.

Section 361.32 Description of the Major Flood Projects Currently Under Development.

Section 361.32 requires the RFPs to include a description of major flood projects that are currently under development in the region.

Comments

The City of Sugar Land notes inconsistencies in references to major flood infrastructure and projects in the title and text of the section.

Response:

The TWDB acknowledges and appreciates the comment and has made modifications to include references to both flood infrastructure and projects in the title and text of the section.

The Trinity River Authority recommends replacing the word “infrastructure” with “projects” in the phrase “new structural flood management infrastructure currently under construction” for the purposes of consistency in this section.

Response:

The TWDB acknowledges and appreciates the comment and agrees. Change made to Section 361.32.

TWCA recommends two non-substantive changes to Section 361.32, for purposes of the internal consistency of that section. These include changing “adequacy of major flood infrastructure” to “anticipated benefits of proposed or ongoing flood-related projects” and changing “infrastructure” to “projects” in Section 361.32(1).

Response:

The TWDB acknowledges and appreciates the comment and agrees. Changes made to Section 361.32.

Section 361.33 Regional Flood Hazard Exposure Analysis: Current and Future Floodplain Conditions.

Section 361.33 requires the RFPs to include a flood hazard exposure analysis. This analysis should be a region-wide and largely GIS-based, flood exposure analyses to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and the 0.2% annual chance of flood events. The analysis is to be performed for a minimum of two scenarios including once for existing conditions and another for projected conditions in 30 years based on 'no-action' and existing floodplain policies and anticipated development patterns.

Based on comments received from the public, Section 361.33 was revised from the proposed rule. Section 361.33 requires that the RFPs include an existing condition flood risk analyses for the region comprising (1) flood hazard analyses that determines location, magnitude and frequency of flooding; (2) flood exposure analyses to identify who and what might be harmed within the region; and (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities.

Comments

PEW Charitable Trusts comments that information on functioning floodplains and the potential for natural features to mitigate risks or, conversely, to be lost over time, is not directly addressed in the listing but should be.

Response:

The TWDB agrees with the comment. Section 361.33 list has been moved to Section 361.34 and modified to include "anticipated changes to the functionality of the existing floodplain."

PEW Charitable Trusts supports the language which requires an analysis of flood risk exposure in a 30-year time frame based on anticipated development patterns, and agrees that such an analysis should be considered the minimum to be undertaken by each Regional Flood Planning Group (RFPG) and hopes that the TWDB provides additional guidance and technical assistance to regional planning groups to allow them to create and compare multiple scenarios, not only for different and potentially longer timelines, but also for differing combinations or suites of assumptions regarding flood risk conditions and floodplain management approaches.

Response:

The TWDB acknowledges and appreciates the comment and the EA will be providing technical guidance to support the planning groups development of plans. While the RFPGs will not be restricted from performing additional analyses that they may consider relevant, the limited financial and other resources available for regional flood planning will set practical limits on the scope of scenario analyses. No changes have been made.

The City of Sugar Land notes a typo in the draft rules and request correction to reflect that this is Section 361.33, not 391.33.

Response:

The TWDB acknowledges and appreciates the comment and has corrected the typo. Subchapter C has been corrected to reference Section 361.33.

The City of Sugar Land asks whether there will be state mandated timelines for updating maps or data.

Response:

The TWDB acknowledges and appreciates the comment. The rules will not include any state mandated timelines for updating maps or data, but RFPGs will be tasked with identifying and determining best available data and will be able to identify and recommend Flood Management Evaluations in the RFP. No changes have been made.

The City of Sugar Land expresses concern regarding possible inconsistencies with regions using different underlying flood risk data. The city suggests adding language to specify that the underlying maps developed and the identified best available information should be flood-risk related and suggests clarifying that analysis under this section may, but is not required to, rely primarily on existing data and GIS tools.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 is being modified to improve clarity in regard to the requirements for an 'existing condition' flood risk analysis.

The City of Sugar Land requests that the TWDB provide guidance related to performing analyses that incorporate the impact of sea level rise, subsidence, geomorphic changes, and climate change to ensure consistency across regions.

Response:

TWDB acknowledges and appreciates the comment and has added clarifying language to Section 361.34(b)(1)(C) and (E) to indicate that such analyses will be required where existing information is available. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in performing analyses that incorporate the impact of sea level rise, subsidence, geomorphic changes, and climate change, where data is available, to ensure consistency across regions.

Matthew Berg notes a typo in the draft rules and request correction to reflect that this is Section 361.33, not 391.33.

Response:

The TWDB acknowledges and appreciates the comment and has corrected the typo. Subchapter C has been corrected to reference Section 361.33.

Matthew Berg states that it will be difficult for regional flood planning groups to forecast major geomorphic changes in riverine, playa, or coastal systems, as required by 361.33(a)(2)(D), given that these changes are episodic in nature and no good predictive event-based model currently exists.

Response:

The TWDB acknowledges and appreciates the comment and has added clarifying language to Section 361.34(b)(1)(C) and (E) to indicate that such analyses will be required where existing information is available. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in performing analyses that incorporate the impact of sea level rise, subsidence, geomorphic changes, and climate change, where data is available, to ensure consistency across regions.

Matthew Berg suggests that this section of the rules should incorporate a mechanism to integrate appropriate rainfall analyses.

Response:

The TWDB acknowledges and appreciates the comment. The rules allow RFPGs to determine the best available data, including rainfall, to be used throughout the regional flood planning process. The EA is also developing technical guidance to be provided to the RFPGs that will address a variety of specific technical issues, including potentially related to rainfall and other data types to be considered. No changes have been made.

Matthew Berg finds the non-monetary quantification of flood hazard exposure in Section 361.33(d) helpful. He suggests that other key resources such as recreation, environmental, water quality, and navigation should be included in this section, with the ultimate goal of including such factors in cost-benefit analyses.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 is being modified to improve clarity in regard to the requirements for an existing condition flood risk analysis. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in performing these required analyses.

The City of Lake Jackson and City of Brookshire note the typo in the draft Rules and request correction to reflect that this is Section 361.33, not 391.33.

Response:

The TWDB acknowledges and appreciates the comment and has corrected the typo. Subchapter C has been corrected to reference Section 361.33.

The North Central Texas Council of Governments states that the required flood hazard exposure analysis for existing conditions and future conditions will require hydraulic models that include hydrology. They state that for most of the state, this information does not exist. The council asks if funding will be included for this task and seeks clarification on the level of granularity expected in these models.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 is being modified to improve clarity in regard to the requirements for an existing condition flood risk analysis. RFPs may utilize existing hydrologic and hydraulic (H&H) studies and models as available, but this analysis will not involve any new H&H studies or models. Areas identified as having a need for further study may be recommended as FMEs per the processes outlined in Sections 361.37 through 361.39.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance support the thrust of this section, especially the requirement that RFPs develop an “analysis of potential future development and associated flood hazard exposure within the watershed based on a ‘no-action’ scenario of approximately 30 years of continued development and population growth under current development trends and patterns, and existing flood regulations and policies...” The joint commenters also agree

with the considerations listed for developing that analysis, including, for example, “anticipated relative sea level change and subsidence.” However, they believe that “projected impacts of climate change” needs to be added to that list of considerations since sea level change may be only one of the impacts of climate change to coastal areas, but there are other climate change impacts that will affect coastal regions and other FPRs.

Response:

The TWDB acknowledges and appreciates the comment. The revised Section 361.34(b)(1)(G) allows for consideration of other factors deemed relevant by the RFPG, and projected impacts of climate change could be considered under this future condition flood risk analysis. No changes have been made as a result of this comment.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance support the parts of proposed Section 361.33 that delineate required datasets to be considered in estimating potential flood hazard exposure. However, they suggest that “Social Vulnerability Indices for counties and census tracts” be added to the datasets listed in Section 361.33(d).

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 is being modified to improve clarity in regards to the requirements for an existing condition flood risk analysis, and now includes Social Vulnerability Indices for counties and census tracts in Section 361.33(e)(7) as data that is required to be summarized in the existing condition flood risk analysis to be included in RFPs.

Harris County Flood Control District (HCFCD) recommends that in Section 361.33(a)(1), the TWDB should replace "analyses" with statistics to include the number and value of structures of existing development within the current floodplain.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 has been modified to improve clarity in regard to the requirements for an existing condition flood risk analysis. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in performing these analyses.

HCFCD comments that in (a)(1)(A), the rules should allow the use of historical flood data to illustrate flood risk outside a FEMA mapped floodplain.

Response:

The TWDB acknowledges and appreciates the comment and notes that Section 361.33(b)(5) and 361.34(b)(6) require regional flood planning groups to identify known flood-prone areas based on locations of hydrologic features, historic flooding, and/or local knowledge. No changes have been made.

HCFCFCD requests that in (a)(2)(C), with regard to sea level rise, the TWDB provide guidance on what values to use in this evaluation to promote consistency between the adjacent coastal bound RFPGs.

Response:

The TWDB acknowledges and appreciates the comment and has added clarifying language to Section 361.34(b)(1)(C) and (E) to indicate that such analyses will be required where existing information is available. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in performing analyses that incorporate the impact of sea level rise, subsidence, geomorphic changes, and climate change, where data is available, to ensure consistency across regions.

HCFCFCD states that for evaluations of flood risks associated with levees that do not meet FEMA accreditation in (b), they expect this number to increase as the RFPGs update risks based upon Atlas 14. They provide an example from Harris County in which the average increase in rainfall rates for the 1.0 % and 0.2% chance storms increased approximately 30%. They expect the associated rise in base flood elevations will put multiple levees outside of accreditation limits.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 has been revised to improve clarity in regard to the requirements for existing condition flood risk analysis. RFPGs will determine the best available data to use for communities throughout the Flood Planning Region. This determination shall be consistent with the guidance principle in Section 362.3(b)(2) and may include Atlas 14 data where available. This determination of best available data will apply to the evaluation of flood risks associated with levees. No changes have been made.

HCFCFCD requests that RFPGs be allowed to use best available data on existing populations, in (j), if these local datasets are more up to date than the census tract data.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 is being revised to improve clarity in regard to the requirements for existing condition flood risk analysis. The

RFPGs will determine the best available data to use throughout the planning area. This determination of best available data will apply to the evaluation of population data and additional information regarding acceptable sources of population data will be specified by the EA in guidance documents.

HCFCDC comments that data and information developed under Section 361.33 by the RFPGs should also go toward updating regulations to require mitigation of impacts from new development, as necessary, by the jurisdictions within the RFPGs.

Response:

The TWDB acknowledges and appreciates the comment. Neither Senate Bill 8 or these rules grant the RFPGs or political subdivisions any additional regulatory powers or authorities although information developed through the regional flood planning process may be considered by those entities. Section 361.43(2) requires Regional Flood Plans to include regulatory or administrative recommendations that RFPGs consider necessary to facilitate floodplain management and flood mitigation planning and implementation, and any results of the planning process could be used to inform these recommendations. No changes made.

ASCE-TX comments that in Section 361.33, for consistency and clarity, the title of this section should be edited to read: "Existing Flood Risk." They request that the provisions within this section be revised to more closely align with their recommended definition of "flood risk analysis". In general, they believe the subpart should be revised to require regional planning groups to do the following:

- a. Existing Conditions. Collect data and conduct analyses sufficient to characterize the existing conditions for the planning area. Include information about existing development, existing structures, properties, number of residential dwelling units (rental, multi-family, single-family, etc.), people, social vulnerability index, transportation facilities, past flooding, existing flood risk reduction facilities (levees, culverts, dams, channels, detention basin, etc.) rivers, wetlands, coastal areas, past rainfall observations, existing sea levels, soil conditions, geology, and similar information.
- b. Existing Flood Risk. Estimate and map existing flood risks for the region using the methods outlined in pending TWDB guidance and with proper consideration of (1) the likelihood of the hazard occurring; (2) the magnitude of the hazard; (3) the number of people and properties exposed to the hazard; and (4) the vulnerability of the people and properties exposed to the hazard. Prepare a map showing areas identified by the RFPG as having an annual likelihood of inundation of more than 1%, the areal extent of this inundation, and the sources of flooding for each area.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 has been modified to improve clarity in regards to the requirements for an existing condition flood risk analysis.

In addition to the changes driven by TWCA's proposed modifications to Section 361.10, TWCA respectfully suggests that TWDB consider changes to Section 361.33(h). TWCA states that section currently provides that flood hazard exposure analysis should "rely primarily on existing data and GIS tools and not rely on detailed hydrologic or hydraulic modeling efforts." They believe that where sophisticated hydrologic and hydraulic (H&H) modeling does exist, it should be considered by RFPs as they execute their hazard exposure analyses and that those H&H models, where present, provide the "best available data" that is to be relied upon in many other sections of draft Chapter 361. TWCA recommends that Section 361.33(h) be modified to provide that "This analysis will rely primarily on existing data and GIS tools, but where available, and ~~does not rely on~~ should consider detailed hydrologic or hydraulic modeling efforts."

Response:

The TWDB acknowledges and appreciates the comment. Section 361.33 has been modified to improve clarity in regard to the requirements for an existing condition flood risk analysis. RFPs may use hydrologic or hydraulic models, as stated in Section 361.33(b)(3).

Section 361.34 Existing Flood Risk Analyses in the Region.

Section 361.34 requires the RFPs to identify areas where flood risk analyses already exist in the FPR and summarize the information. This analysis should rely on existing hydrologic and hydraulic models. The information will be used by RFPs to identify areas that need flood management evaluations and to efficiently deploy its planning resources.

Based on comments received from public, Section 361.34 was revised from the proposed rule. Section 361.34 now requires that the RFPs include a future condition flood risk analyses for the region comprising (1) flood hazard analyses that determines location, magnitude and frequency of flooding; (2) flood exposure analyses to identify who and what might be harmed within the region; and (3) vulnerability analyses to identify vulnerabilities of communities and critical facilities.

Comments

El Paso County expressed concern that the proposed rules do not offer qualifications to verify the validity and best use of existing data. The county suggests offering examples of which type of analyses are acceptable, or unacceptable, for planning purposes.

Response:

The TWDB acknowledges and appreciates the comment. Guidance will be provided to assist RFPGs in identifying and determining best available data. No changes made related to this comment, however, Section 361.34 is revised to cover “Future Condition Flood Risk Analysis in the Region”.

Matthew Berg asserts that regional flood planning groups should be required to examine any existing academic research and models.

Response:

The TWDB acknowledges and appreciates the comment. Guidance will be provided to assist RFPGs in identifying and determining best available data. No changes made related to this comment, however, Section 361.34 is revised to cover “Future Condition Flood Risk Analysis in the Region”.

The City of Lake Jackson and the City of Brookshire expressed concern about the discrepancy between use of the 1.0% versus the 0.2% annual chance flood events. Specifically, the cities are concerned that although the RFPG will identify risks associated with the 0.2% annual chance of flooding, the RFPG will not set priorities, set goals, or recommend projects to address the risks associated with the 0.2% annual chance of flooding. As such, they request that Section 361.34(1) be changed as follows: “collect and summarize information from existing flood risk analyses associated, at a minimum, with 1.0% annual chance flood events and 0.2% annual chance flood events including the date of existing analyses.”

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will be allowed, but not required, to recommend projects that address the risks associated with other annual chance flood events. The revised Section includes requires the RFPGs to “perform existing condition flood hazard analysis to determine the location and magnitude of both 1.0% annual chance and 0.2% annual chance flood events.”

HCFCFCD requests that in (2), RFPGs should be allowed to provide this information based upon the watershed or sub-watershed approach and in a GIS based format versus lengthy reports.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.34 is revised to cover “Future Condition Flood Risk Analysis in the Region”, and to provide further clarification on the preparation and delivery of information, including in the form of maps. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in preparing the required information.

HCFCFCD requests that the TWDB clarify that in addition to hydrology and hydraulic flood risks, if the TWDB expects the RFPGs to identify coastal flood risks as well.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs should consider coastal flood risks to be included in the identification of hydrologic and hydraulic flood risks. Section 361.34 is revised to cover “Future Condition Flood Risk Analysis in the Region” and provides additional clarity for identification of flood risk.

ASCE-TX comments that in Section 361.34, for consistency and clarity, the title of this section be edited to read: “Future Flood Risk.” They request that the provisions within this section be revised to more closely align with their recommended definition of “flood risk analysis”. In general, they believe that the subpart should be revised to require regional planning groups to do the following:

a. Future Conditions. Estimate changes to population, land use, land development, transportation infrastructure, economic conditions, anticipated future precipitation, anticipated future sea levels, sedimentation in flood mitigation facilities, planned completion of budgeted and scheduled flood risk reduction facilities, and similar information. The planning period considered should be defined by each regional planning group based on their knowledge of anticipated population growth and development but should in no case be less than 20 years.

b. Future “No-Action” Flood Risk. Estimate and map future flood risks for the region using the methods outlined in pending TWDB guidance and with proper consideration of (1) the likelihood of the hazard occurring; (2) the magnitude of the hazard; (3) the number of people comments.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.34 is revised to cover “Future Condition Flood Risk Analysis in the Region”.

Section 361.35 Evaluation of Previous and Current Floodplain Management Approaches and Recommendations for Changes to Floodplain Management.

Section 361.35 requires that the RFPs include an evaluation of previous and current floodplain management approaches in the region and take into consideration future potential changes to the 100-year floodplain and to make recommendations for changes to forward-looking floodplain management.

Comments

Matthew Berg describes that regional flood planning groups are comprised of a diverse set of jurisdictions and that evaluations for sufficiency of floodplain management practices will be politically sensitive. He seeks clarification on if there will be mediation or approval process for such sufficiency determinations.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will responsible for adopting their own bylaws and determining their processes related to their decision-making, voting, and selection of specific recommendations to include in their RFP. No changes have been made.

The Texas Association of Builders and the Texas Apartment Association express concern that through Section 361.35(a)(4), which allows regional flood planning groups to adopt land-use or other standards and require each entity in the region to adopt and enforce those standards, powers and standards that have either been preempted by the state or statutorily prohibited for local entities to exercise could be adopted and enforced by the various local entities. The associations suggests amending the language to read as follows: “RFPGs may also choose to require region-specific, minimum floodplain management or land use or other standards that impact flood-risk and are neither preempted by state law nor statutorily prohibited to the specific entity, that may vary geographically across the region, that each entity in the FPR must adopt and begin enforcing prior to the RFPG including in the RFP any FMEs, FMSs, or FMPs that are sponsored by or that will otherwise

by implemented by that entity.” Texas Association of Builders also provided oral comments regarding this issue.

Response:

The TWDB acknowledges and appreciates the comment and recognizes the fact that the authority of specific entities may be limited regardless of what a flood planning group recommends. Neither Senate Bill 8 or these rules grant the RFPGs or political subdivisions any additional regulatory powers or authorities. No changes have been made.

The City of Lake Jackson and the City of Brookshire expressed concern that the Rules do not authorize or require an RFPG to consider negative effects on neighboring areas when making recommendations for changes to floodplain management. Specifically, they request the following change to Section 361.35(a): “Recognizing the extent that previous and current practices may have increase [sic] flood risks, including residual risks, and considering broad floodplain management approaches that will avoid increasing flood risks, and avoid negatively affecting neighboring areas, the RFPG shall:...”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.35(a) has been modified to include considering broad floodplain management approaches that, as is required of all regional flood plans, will avoid negatively affecting neighboring areas.

The City of Lake Jackson and the City of Brookshire note that rules require the RFPG to consider the extent to which the 1.0% annual change flood event may change over time after considering the analysis performed under Section 361.33, but do not require an analysis of how the 0.2% annual change flood event will change over time. Specifically, they request that text be added to Section 361.35(a)(2) as follows: “take into consideration the future flood hazard exposure analysis performed under Section 361.33, consider the extent to which the 1.0% annual chance flood event ~~annual-chance floodplain~~ and 0.2% annual chance flood event, along with associated flood risks...”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.35 requires RFPGs to only consider the extent to which the 1.0% annual chance flood event may change over time, however, Sections 361.38 and 361.39 have been revised to require RFPGs to at least consider 1.0% annual chance flood events but also allows for and encourages RFPGs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process. No changes have been made due to this comment.

The City of Lake Jackson and the City of Brookshire interpret Section 361.35(a)(4) as exceeding the scope of authority granted to the TWDB and RFPGs by authorizing RFPGs to adopt region-specific minimum floodplain management or land use or other standards that impact flood risk which each entity in the FPR must adopt and begin enforcing before the RFPG will include in the RFP any FMEs, FMSs, or FMPs sponsored by or implemented by that entity. The cities also noted that RFPGs are not regulatory agencies, that because Texas Water Code 16.062 focuses RFPGs on areas prone to flooding it would be improper to adopt region-wide standards unless the entire region is prone to flooding, and that it is improper to condition the listing of a flood control solution on the actions of other entities.

The cities request either the omission of Section 361.35(a)(4) or, alternatively, the following language changes: “(4) RFPGs may also choose to adopt ~~region-specific~~, minimum floodplain management or land use or other standards that impact flood-risk for a flood-prone entity, that may vary geographically, ~~across the region, that each entity in the FPR must adopt and begin enforcing prior to the RFPG including in the RFP any FMEs, FMSs, or FMPs that are sponsored by of that will otherwise be implemented by that entity.~~ RFPGs may identify adoption of the minimum floodplain management or land use or other standards as flood mitigation and floodplain management goals under Section 361.36, as a potential FMS for any flood-prone entity under Section 361.38, or as a recommended FMS under Section 361.39.”

Response:

The TWDB acknowledges and appreciates the comment. Neither Senate Bill 8 or these rules grant the RFPGs or political subdivisions any additional regulatory powers or authorities. Section 361.35(a)(4) allows Regional Flood Plans to include minimum standards that RFPGs consider necessary to facilitate floodplain management and flood mitigation planning and implementation. No changes have been made.

The North Central Texas Council of Governments states that floodplain management goals and recommendations by the regional flood planning groups would be more equitable across the state if a position was taken by TWDB on recognized best practices or guidelines that have already been outlined by the TFMA Higher Standards document or any other listing that could be endorsed. The council states that there is a large discrepancy between these higher standards and national minimums. They also suggest that the State Flood Plan may need to consider providing state recommended or endorsed strategies to create needed consistency.

Response:

The TWDB acknowledges and appreciates the comment and may consider providing guidance to regional flood planning groups on this topic. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance strongly support this section of the proposed rules and believes that infrastructure projects (structural or nonstructural) alone will not address current flood risks or prevent increased flood risks in the absence of effective floodplain management and regulation. They believe that RFPGs must address this critical issue in order to develop effective RFPs to meet the flood mitigation and risk reduction needs of their residents.

Response:

The TWDB agrees, acknowledges, and appreciates the comment. No changes have been made.

The Woodlands Water Agency recommends that at a minimum, the RFPG should adopt the requirements in the current Texas flood damage prevention ordinance templates and that if flood maps have not been updated in some, but not all of the communities within a region, the higher standards should prevail.

Response:

The TWDB acknowledges and appreciates the comment and may consider providing guidance to regional flood planning groups on this topic. No changes have been made.

The Woodlands Water Agency recommends that once a decision/plan is agreed upon within the region, it should be considered, final and enforceable to prevent possible backtracking.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will responsible for adopting their own bylaws and determining their processes related to their decision-making, voting, and selection of specific recommendations to include in their RFP. Neither Senate Bill 8 or these rules grant the RFPGs or political subdivisions any additional regulatory powers or authorities although information developed through the regional flood planning process may be considered by those entities. No changes have been made.

The Woodlands Water Agency recommends that RFPGs consider including language for Drainage Criteria Manuals that oversee development strategies for X Zone areas.

Response:

The TWDB acknowledges and appreciates the comment and agrees with the need to assess development standards both within and outside of floodplain areas. The TWDB has broadened the language Section 361.35 to refer to both floodplain management and land use approaches to provide additional flexibility for consideration. The TWDB believes that the term land use includes standards such as drainage criteria manuals for areas outside of the floodplain.

The Woodlands Water Agency suggests that RFPs consider recommending that communities adopt Atlas 14 for their Drainage Criteria Manuals for stormwater and detention design.

Response:

The TWDB acknowledges, appreciates the comment. RFPs will determine the best available data to use for communities throughout the Flood Planning Region. This determination shall be consistent with the guidance principle in Section 362.3(b)(2) and may include Atlas 14 data where available. Section 361.35(a)(4) allows Regional Flood Plans to include minimum standards that RFPs consider necessary to facilitate floodplain management and flood mitigation planning and implementation. Any decision about adoption of such flood management related standards will be made by each RFP. No changes made.

Section 361.36 Flood Mitigation and Floodplain Management Goals.

Section 361.36 requires that the RFPs identify short-term and long-term flood mitigation and flood management goals of the RFP for, at a minimum, addressing risks to life and property. The goals should be set after considering the resulting information from the flood hazard exposure analyses, available flood risk analyses, and input from the public.

Comments

The City of Lake Jackson and the City of Brookshire request clarification within this section by adding reference to the 1.0% and 0.2% annual chance flood events and suggest the following additional language: "Considering the Guidance Principles under Section 362.3, the flood hazard exposure analyses performed under Section 361.33, existing flood risk analyses identified under Section 361.34, and past and the consideration of current floodplain management practices under Section 361.35, input from the public, and other

relevant information and considerations, RFPs shall for both the 1.0% annual chance flood events and 0.2% annual chance flood events:...”

Response:

The TWDB acknowledges and appreciates the comment. RFPs will have flexibility in determining the floodplain management goals that are the relevant and feasible for their Flood Planning Region. No changes made.

Hudson DeYoe, suggests that goals should be set after considering the resulting information from the flood hazard exposure analyses, available flood risk analyses, and input from the public.

Response:

The TWDB acknowledges and appreciates the comment. No changes made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance strongly support this section of the proposed rules. They believe that setting flood mitigation and floodplain management goals with input from the public is essential to developing a RFP, and that this input needs to include the perspective of as many population sectors as possible with goals that reflect the flood risks to socially vulnerable populations as well as others.

Therefore, they recommend that the proposed section in part be modified to require consideration of input from socially vulnerable populations in developing flood mitigation and floodplain management goals, for these goals to specifically address risks to socially vulnerable populations.

Response:

The TWDB acknowledges and appreciates the comment. As listed in Section 362.3(b)(35), regional and state flood plans shall consider protection of vulnerable populations throughout the flood planning process. No changes have been made.

Section 361.37 Flood Mitigation Need Analysis.

Section 361.37 requires that the RFPs include a flood mitigation need analysis. This should be based on the analyses and goals developed by the RFPs.

Comments

El Paso County suggests adding consideration of areas at high flood risk due to scarcity of resources, to be determined by metrics such as economically disadvantaged designations, in order to identify locations with the greatest flood mitigation and flood risk study needs.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will have flexibility in determining the locations within the Flood Planning Region that the RFPG considers to have the greatest flood mitigation and flood risk study needs. Further details on identifying locations with flood mitigation and/or flood risk study needs is anticipated to be included in technical guidance to be developed by the EA. No changes have been made.

The City of Lake Jackson and the City of Brookshire expressed concern that this section does not specify whether the locations identified is limited to the 1.0% annual chance flood event and request the following language be added to Section 361.37(a): “Based on the analyses and goals developed by the RFPG under §§361.33 - .36 and any additional analyses or information developed using available screening-level models or methods, the RFPG shall identify locations within the FPR that the RFPG considers to have the greatest flood mitigation and flood risk study needs for both the 1.0% annual chance flood events and 0.2% annual chance flood events by considering:...”

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will have flexibility in determining the locations within the Flood Planning Region that the RFPG considers to have the greatest flood mitigation and flood risk study needs. Further details on identifying locations with flood mitigation and/or flood risk study needs is anticipated to be included in technical guidance to be developed by the EA. No changes have been made.

The City of Lake Jackson and the City of Brookshire expressed concern that the Rules do not authorize or require an RFPG to consider negative effects on neighboring areas when conducting a needs analysis. Specifically, they request additional language be inserted above Section 361.37(a)(10) as follows: “(10) potential negative effects on neighboring areas; and (11) potential FMEs and potentially feasible...”

Response:

The TWDB acknowledges and appreciates the comment. This section corresponds to determining locations within the Flood Planning Region that the RFPG considers to have the greatest flood mitigation and flood risk study needs. Potential negative effects of the plans is determined when evaluating proposed Flood Management Strategies and/or Flood Mitigation Projects, and is not anticipated to be a direct factor in determining flood mitigation and flood risk study needs. No changes have been made.

The Woodlands Water Agency suggests that this section should require that only updated, currently accepted hydraulic and hydrologic models be used for the analyses. (For example: FEMA recommends upgrading to HEC-RAS.)

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will have flexibility in selecting the best available information used to determine locations within the Flood Planning Region that the RFPG considers to have the greatest flood mitigation and flood risk study needs. No changes have been made.

ASCE-TX comments that in Section 361.37(a)(3), rather than identifying areas as “prone to flooding” without maps, this provision should require regional planning groups to identify all flood-prone areas (as previously defined in these comments) without inundation maps.

Response:

The TWDB acknowledges and appreciates the comment. The purpose of Section 361.37(a)(3) is to identify areas that currently lack adequate inundation mapping. No changes have been made.

ASCE-TX comments that Section 361.37. Flood Mitigation Needs Analysis. (a)(4) Models, rather than identifying areas “prone to flooding” that do not have adequate inundation maps, this provision should require regional planning groups to identify all flood-prone areas (as previously defined in these comments) without adequate inundation maps.

Response:

The TWDB acknowledges and appreciates the comment. The purpose of Section 361.37(a)(4) is to identify areas that currently lack hydrologic and hydraulic models. No changes have been made.

Section 361.38 Identification and Assessment of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects.

Section 361.38 requires that the RFPs include an evaluation and assessment of potential flood management evaluations, potentially feasible flood management strategies, and potentially feasible flood mitigation projects. Each evaluation of strategies and projects will require reporting information on benefits, costs, and impacts including whether it would negatively affect a neighboring area. Flood management evaluations will be identified for flood prone areas where there are not yet sufficient models and associated analyses to identify and recommend specific strategies and projects. Flood management evaluations will not require evaluations of effects on neighboring areas because these evaluations will, themselves, include such assessment of potential projects.

Comments

Matthew Berg asserts that regional flood planning groups should be required to consider the impacts of flood mitigation projects on increasing erosion and sedimentation. He states that most flood hazard models do not consider this dynamic and he is concerned about the potential for serious damage to water supply infrastructure.

Response:

The TWDB acknowledges and appreciates the comment and Section 361.38(h) has been revised to require that, “evaluations of potentially feasible FMS and FMPs shall include the following information and be based on the following analyses: ... (10) A description of potential impacts and benefits from the FMS or FMP to the environment, agriculture, recreational resources, navigation, water quality, erosion, sedimentation and impacts to any other resources deemed relevant by the RFPG.”

The Hill Country Alliance provided oral comments suggesting that regional flood planning groups should require quantified reporting of the co-benefits of non-structural solutions. The alliance also suggests that the TWDB should require regional flood planning groups to include description of any anticipated contributions to groundwater recharge from flood management projects.

Response:

The TWDB acknowledges and appreciates the comment. The quantified benefits of recommended FMS and FMPs are addressed under Section 361.38 which includes (h)(6)(J)

wherein RFPs may include additional quantified benefits. Section 361.38(h)(10) was changed to include “and benefits” to make clear that benefits to environmental and natural resources should also be described.

Houston Stronger suggests adding “significantly and” before “negatively impact neighboring areas” to avoid spurious disagreements and challenges to plans.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.10 has been revised to include a definition for ‘negative effect’. The definition refers to additional guidance to be provided by the TWDB in the technical guidance document.

PEW Charitable Trusts recommends that the TWDB insert specific mention of nature-based alternatives and offered an option for doing so by inserting an additional item under subsection (g)(5) requiring a description of nature-based mitigation options assessed by the RFP.

Response:

The TWDB agrees in general. Section 361.38(a) has been expanded with “including nature-based solutions” as among the potentially feasible FMSs and FMPs to be identified and a definition of “nature-based flood mitigation” has been added to the definitions.

PEW Charitable Trusts recommends additional clarity and detail on items related to quantitative analyses and benefit-cost ratios. In addition to reporting on the estimated capital cost of projects (Item (g)(7)), they believe the regulations should require estimates of the annual costs associated with any necessary ongoing operations and future maintenance of selected Flood Mitigation Projects (FMP). They understand that the implications of lack of maintenance are mentioned in Item 11, but believe that consideration of the actual O&M numbers over the expected design life of an FMP should be included. They state that this fuller view of total costs over time will allow for a more reasoned comparison of alternative projects and strategies and help drive funding to projects that will endure.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made. The TWDB anticipates that the technical guidance to be provided by the EA will require including key relevant costs of projects including those related to design, development, financing, and permitting of projects as well as operation and maintenance.

PEW Charitable Trusts recommends in Item 8, which speaks directly to benefit-cost ratios, deleting the language that references “current, observed conditions.” They state that elsewhere, the TWDB has been careful to call for consideration of future risks and evaluation of projected growth and development over a 30-year period, so they are puzzled as to why this item reverts to current conditions only. They state that since Item 8 clearly anticipates additional guidance from the Board’s Executive Administrator, they believe the TWDB could defer decisions on how benefit-cost evaluations should deal with current versus future conditions. They understand that the TWDB may find it useful to set priorities and consider the gravity of current risk in making its initial funding decisions, but are hopeful that it will also work with the RFPGs to create a statewide plan that maintains that longer view.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made. The TWDB believes that it is important to limit such analyses to current, observed conditions, including development, when evaluating the potential benefits of expenditures of state funds to avoid speculation about future beneficiaries or the creation of perverse incentives, for example, that might allow or otherwise encourage the continuance of development that would increase flood risks, and as a result, increase the apparent total benefits of a flood mitigation project. However, certain projects that by their nature have a future impact (such as changing development regulations), may need to consider future effects as part of the BCR analysis. Further information on this topic will be provided in technical guidance. The future 30-year period analysis required in the rule is not to evaluate or justify projects in the plan. The 30-year forward look is for the sole purpose of illustrating the potential increase in flood risk that *could occur* in the absence of better floodplain management policies and to thereby encourage regions to make recommendations and for entities to take actions that will avoid further increases to the flood risks.

The City of Sugar Land believes that in some areas of the state, including the Houston area and other coastal regions, it may not be feasible to propose strategies that provide mitigation of the 1% annual chance flood event. The city believes that regional flood planning groups should be allowed to determine appropriate flood management goals for their region.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPGs to at least consider 1.0% annual chance flood events but allows for FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process. The TWDB anticipates further direction to be provided in technical guidance being developed by the EA.

Matthew Berg asserts that cost-benefit analyses under Section 361.38(g) should entail a full and accurate representation of costs and benefits beyond hydrologic and hydraulic information and structural benefits. Specifically, he believes that environmental, agricultural, recreational, navigation, socioeconomic, and water quality benefits should be quantified instead of described to ensure an appropriate cost-benefit analysis. He also states that the catastrophic failure described in Section 361.38(g)(11) is a real threat and that the sense of security and safety induced by build infrastructure has resulted in increased damages. He also asserts that a great deal of the cost-benefit guidance remains undetermined, and thus unavailable for public comment. He asserts that clarifying cost-benefit analysis guidance, with public input, should be a top priority.

Response:

The TWDB acknowledges and appreciates the comment. The quantified benefits of recommended FMS and FMPs are addressed under Section 361.38 which includes (h)(6)(J) wherein RFPGs may include additional quantified benefits. Section 361.38(h)(6)(J) has been revised to read “Other benefits as deemed relevant by the RFPG, including environmental benefits and other public benefits” to make clear that benefits to environmental and natural resources should also be described. The TWDB also anticipates further direction to be provided in technical guidance being developed by the EA. No changes have been made.

Bexar Regional Watershed Management Partners recommend that non-structural and nature-based systems be promoted when evaluating FMSs and FMPs. They state that nature-based solutions provide multiple benefits to communities including flood protection, water quality improvements, reduction in heat island effect, and improved quality of life for the community.

Response:

The TWDB acknowledges and appreciates the comment and notes that the consideration of nature-based features is one of the guidance principles in Section 362.3(b)(17). A definition of nature-based flood mitigation and a requirement for consideration of nature-based solution are added to the rules in Sections 361.10(v) and 361.38(a) respectively.

Bexar Regional Watershed Management Partners recommend applying a triple bottom line approach, which includes consideration of environmental, social, and economic impacts, to the analysis of FMPs as opposed to a strict cost-benefit analysis approach. They assert that

a triple bottom line approach will result in a more accurate and transparent accounting of the total impact of a project.

Response:

The rules require regional flood planning groups to describe potential impacts from FMSs or FMPs to environmental, agricultural, recreational resources, navigation, and impacts to any other resources deemed relevant by the group. The TWDB also anticipates further direction to be provided in technical guidance being developed by the EA. No changes have been made.

Bexar Regional Watershed Management Partners concurs with the need to calculate cost-benefit ratios. They recommend that regional flood planning groups should also consider transportation impacts, safety and loss of life, and suggests that allowances be made for communities with low property values.

Response:

The rules require regional flood planning groups to analyze and provide quantitative reporting on a variety of estimated benefits. RFPGs are required to report on reduction in transportation impacts, such as road closure occurrences. RFPGs are also required to report on metrics for improved safety and reduced loss of life, such as estimated reduction in fatalities and injuries. The TWDB agrees that the treatment of property values must be carefully addressed and accordingly, the rules include a requirement that RFPGs report on the reduction in habitable, equivalent living units, which is a metric that is irrespective of property value. The TWDB also anticipates further direction to be provided in technical guidance being developed by the EA. No changes have been made.

The Trinity River Authority expresses concern regarding the feasibility of the requirement that FMSs and FMPs must, at a minimum, provide flood mitigation association with a 1% annual chance flood event. The authority suggests striking this minimum requirement and adding the language, “to the extent feasible.”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPGs to at least consider 1.0% annual chance flood events, but allows for and encourages RFPGs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

The City of Lake Jackson and the City of Brookshire recommend additional language requiring RFPGs to focus on both the 1.0% and 0.2% annual chance flood events. The cities

suggested the following changes to Section 361.38: "(a) Based on analyses and decisions under §361.33-.37 the RFPG shall identify and evaluate potential FMEs and potentially feasible FMSs and FMPs, some of which may have already been identified by previous evaluations and analyses by others, and that focus, ~~at a minimum,~~ on providing flood mitigation associated a with a 1.0% annual chance flood event and a 0.2% annual chance flood event. An FME is a proposed flood study..." and "(g)(6)(A) Associated flood events that must, ~~at a minimum,~~ include the 1.0% annual chance flood event and 0.2% annual chance flood event;..."

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPGs to at least consider 1.0% annual chance flood events but allows for and encourages RFPGs to consider FMSs and FMPs that address flood events of other frequencies, greater or lesser, to be included in the identification and assessment process.

The Texas Land Trust Council would like to see additional provisions to help demonstrate and evaluate the benefits of nonstructural, including nature-based, FMSs and FMPs. They recommend requiring a quantitative reporting of the estimated benefits of nonstructural, including nature-based, FMSs and FMPs including: Increase in public access to greenspace; Increase in public recreation opportunities; Maintenance or enhancement of fish or wildlife habitat; Value of groundwater recharge; Enhancement of water quality protection, such as avoided wastewater treatment costs; Improvement in air quality; Amount of carbon sequestered; Ecosystem maintenance or restoration; Other benefits deemed relevant by the RFPG.

Response:

The TWDB acknowledges and appreciates the comment and has added to Section 361.38(h)(6)(J) reporting other benefits as deemed relevant by the RFPG including environmental benefits and other public benefits. RFPGs may, at their discretion, quantify additional benefits of nature-based approaches.

The Texas Land Trust Council recommends that an identification of actions to be taken to eliminate, reduce, or mitigate any negative impacts to those resources be included with the requirement of Section 361.38(g).

The council notes that sponsors of certain structural flood infrastructure projects may be required by various permitting processes to evaluate potential negative environmental or other impacts and be required to take steps to avoid or mitigate for those impacts. Therefore, they believe that it is logical to require this information to be included to some extent for FMS or FMP in the regional flood plan.

Response:

The TWDB acknowledges and appreciates the comment and notes that Section 361.38(h)(5) requires “A demonstration that the FMS or FMP will not negatively affect a neighboring area”. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance generally support most of the provisions in this proposed section but have some suggestions for enhancements or modifications. They recommend that the information and analyses required for evaluation of potentially feasible FMS and FMPs additionally include a projection of the estimated lifespan of the FMS or FMP and the projected effectiveness of the FMS or FMP in reducing flood risk throughout its estimated lifespan.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance believe that additional provisions are needed to help demonstrate and evaluate the benefits of nonstructural, including nature-based, FMS and FMPs. Therefore, they recommend the following additional text in proposed Section 361.38(g), to be numbered accordingly:

- () For nonstructural, including nature-based, FMSs or FMPs, a quantified reporting of the estimated benefits, including, where appropriate, but not limited to:
 - (A) Increase in public access to greenspace;
 - (B) Increase in public recreation opportunities;
 - (C) Maintenance or enhancement of fish or wildlife habitat;
 - (D) Value of groundwater recharge;
 - (E) Enhancement of water quality protection, such as avoided wastewater treatment costs;
 - (F) Improvement in air quality;
 - (G) Amount of carbon sequestered;
 - (H) Ecosystem maintenance or restoration;
 - (I) Other benefits deemed relevant by the RFPG.

Response:

The TWDB acknowledges and appreciates the comment and has added to Section 361.38(h)(6)(J) reporting other benefits as deemed relevant by the RFPG including environmental benefits and other public benefits.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance are generally concerned that the requirement in Section 361.38(g)(7) only requires a quantitative reporting of the estimated capital cost of projects in accordance with guidance provided by the EA. As proposed, the rules recognize this fact only in an indirect way by requiring the RFPG to provide “[a] description of potential impacts from the FMS or FMP to the environmental, agricultural, recreational resources, navigation, and impacts to any other resources deemed relevant by the RFPG.” A narrative description in this regard would be important, but we believe that a quantitative reporting of these impacts, which are likely to be negative in the case of at least some structural projects, would also be important for proper evaluation of a FMS or FMP.

Based their view with regards to the potential negative costs of some structural infrastructure projects, they propose that Section 361.38(g) be revised to require a quantitative reporting of the estimated costs of any negative impacts from the FMS or FMP to environmental, archeological, agricultural, recreational, navigation, or other resources in the FPR deemed relevant by the RFPG.

In addition, they recommend that the currently proposed Section 361.38(g)(10) be revised to strike the word “resources” and to require an identification of actions to be taken to eliminate, reduce, or mitigate any negative impacts to those resources.

Response:

The TWDB acknowledges and appreciates the comment. The requirement for a quantification of capital cost is necessary to estimate funding requirements for proposed FMPs in the State and Regional Flood Plans. There are limited resources for developing the first regional flood plans and the RFPGs will have some flexibility to develop their own approach to evaluating impacts and costs within the limits allowed by rule and guidance. The benefit cost evaluations may take into account quantified associated costs related to environmental, agricultural, recreational resources, navigation, and other impacts, as required in Section 361.38(h)(8). These benefit-cost ratios shall be calculated in accordance with technical guidance to be provided by the EA and based on current, observed conditions. However, TWDB also acknowledges that the estimated costs of negative impacts on items like environmental resources are difficult to quantify. Further, each project will need to obtain appropriate permits from federal, state, and local agencies, so those potential impacts will be mitigated to the extent required by law. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance express concern about leaving an important topic such as calculating a benefit-cost ratio to be explained later in guidance. They note that benefit-cost ratio calculations of federally-funded projects have been criticized for decades due to the potential for manipulation and the inequalities often incorporated into traditional benefit-cost calculations, and they believe that these inequalities that tend to disadvantage socially vulnerable populations when property values are used in the calculation of benefits from a flood control project. They recommend that TWDB will provide a robust public review and comment opportunity for the upcoming guidance on regional flood planning to allow adequate scrutiny and input to decisions about such topics as benefit-cost calculations for FMS and FMP.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB recognizes that there are numerous methodologies to calculate a project specific benefit-cost ratio, each with advantages and disadvantages, and some more applicable to certain project types than others. Section 361.38 is intended to allow for broad consideration of all anticipated benefits and costs that are associated with each FMP. The TWDB anticipates seeking stakeholder input during the development of guidance to be provided by the EA. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend revising Section 361.38 to require an estimate of vulnerable populations of census tracts within the area proposed for an FME, based on their Social Vulnerability Indices.

Response:

The TWDB acknowledges and appreciates the comment. As listed in Section 362.3(b)(35), regional and state flood plans shall consider protection of vulnerable populations throughout the flood planning process. No changes have been made.

The Woodlands Water Agency recommends providing a currently accepted formula, such as that used by FEMA or USACE, to calculate the benefit-cost ratio, to ensure that proposed projects will also meet federal funding guidelines.

Response:

The TWDB acknowledges and appreciates the comment. Guidance on calculating benefit-cost ratios will be provided by the EA at a future date. No changes have been made.

ASCE-TX comments that in Section 361.38, the title of this section should be changed to read: "Identification and Assessment of Candidate Flood Management Evaluations (FME's), Flood Management Strategies (FMS's), or Flood Projects (FP's)." All subsections should refer to "candidate" FME's, FMS's, or FP's rather than "feasible" FME's, FMS's, or FP's.

Response:

The TWDB acknowledges and appreciates the comment. The term "potentially feasible flood management strategy or potentially feasible flood mitigation project" has been defined in Section 361.10, however, no change was made due to this comment.

ASCE-TX comments that in Section 361.38(e), regional planning groups should be required to estimate the benefit to cost ratios (BCR's) of all candidate FME's, FMS's, or FMP's identified from the process defined under Section 361.38(b) using methods described in TWDB issued guidance. They believe that regional planning groups should be required to rank all candidate FME's, FMS's, and FP's in order of BCR and determine which of the most beneficial evaluations, strategies, or projects should be retained and which should be excluded from the regional plan (or placed at the bottom of the regional planning group's list of candidate projects), with full consideration of public input, member perspectives, and funding availability. They believe that subsequent changes would need to be applied to related Sections 361.38(g) and 361.38(h) if these recommended changes to Section 361.38(e) are made.

Consistent with their response to the TWDB's request for stakeholder input (see letter dated, August 30, 2019), ASCE-TX encourages the TWDB to develop guidance on how to determine BCR's. BCR calculations should consider the net triple-bottom line (TBL) in calculating the BCR. They assert that this should include (1) net economic costs/benefits, such as construction and operation costs vs. avoided damages; (2) net social costs/benefits, such as cost of cultural displacement, cost of lost income vs. benefits of new jobs, new income, new recreational benefits; and (3) net environmental costs/benefits, such as cost of lost ecosystem services, cost of lost habitat vs. benefit of new ecosystem services and new habitats. They believe the TWDB should provide guidance on this to help generate more consistent applications, per ASCE Policy Statement 418 enclosed with their comments.

ASCE-TX states that the detailed provisions of Section 361.38(g) through (l) might be better placed in guidance rather than in the regulation and that the required minimum content of the regional plan could be specified in the regulations in the proposed "deliverables" section.

Response:

The EA is developing technical guidance that will include a significant focus on the approach to be used by RFPs in the evaluation of BCR. The TWDB anticipates stakeholder

input on the draft guidance. The TWDB must strike a balance between including key requirements directly in the planning rules while retaining some flexibility to refine the requirements through guidance. Deliverables of the plans is included in the rules Section 361.13 and will be further described in the technical guidance and grant contracts. No change was made in response to this comment.

ASCE-TX comments that in Section 361.38(f), the current language stating that all FMP's will be in the State Flood Plan seems out of place in Subchapter C about Regional Planning. They suggest that the existing provision might be better situated in Chapter 362 State Flood Planning Guidelines. They believe that the proposed provision, in its current location, should be revised to require some ranking and selection by the regional groups, and should require a ranking process based on the regional planning group's BCR calculations, using TWDB guidance. ASCE-TX comments that each regional group should determine which of the most beneficial evaluations or studies should be retained and which should be excluded from the regional plan (or placed at the bottom of the regional planning group's list of candidate projects), with full consideration of public input, member perspectives, and funding availability.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

Identifying and recommending FMEs, FMSs, and FMPs in the regional flood plans, ranking recommended FMEs, FMSs, and FMPs in the state flood plan, and providing state financial assistance to implement specific projects are three separate processes that will occur at different times.

The first step will be for regional flood planning groups to identify and recommend FMEs, FMSs, and FMPs and provide relevant data associated with each project as part of the regional flood planning process. That data will be used by TWDB to objectively apply a set of relevant flood project ranking criteria.

The second step is to rank the recommended regional FMEs, FMSs, and FMPs as incorporated into the state flood plan. The specific criteria and the associated weightings that will be used for ranking recommended FMEs, FMSs, and FMPs in the state flood plan are not yet determined but will be developed by TWDB through a transparent process and with stakeholder input. That process will result in a ranking of relevant state flood plan FMEs, FMSs, and FMPs with a focus on reduction of flood risk to life and property as required by Senate Bill 8.

The last step in implementing projects, subsequent to development of the state flood plan, requires local sponsors to implement FMEs, FMSs, and FMPs, either with local financing or with state financial assistance. Future state financial assistance to implement projects in the state flood plan is anticipated to occur in accordance with existing program

requirements or, if there are dedicated funds, under an associated flood intended use plan (FIUP) that would likely use the ranking in the state flood plan as one of the prioritization criteria for allocating funding.

ASCE-TX notes that the proposed provisions that limit eligibility to FMP's that are discrete and independent and that may rely on other projects appear to be contradictory and should be revised. They also state that all provisions that define eligibility for a FMP to appear in a regional plan should be moved to a common location in the regulations, perhaps Section 362.3 Guidance Principles.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB has deleted the word "independent" from Section 361.38(g)(1) in response to comment.

While HCFCD understands the desire in Section 361.38(f) for a 1 % level of protection, they find that this is not always feasible or supported by the local communities so they recommend affording the RFPs some flexibility on the suggested level of protection that is provided by the projects identified and recommended by the RFPs.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPs to at least consider 1.0% annual chance flood events but allows for and encourages RFPs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

HCFCD comments that a way to introduce the suggested level of flexibility in Section 361.38(b) is to allow scalability within the projects. i.e. offer options for various levels of protection and the associated costs and benefits for each so that grant awards could be selective for a given project or phased in as funding allows or is available.

Response:

The TWDB acknowledges and appreciates the comment. The projects recommended in the regional flood plans will be included and ranked in the state flood plan and shall be the projects the regional planning group consider appropriate based on their region's flood risk reduction goals. Changes were made in Section 361.38(b) to allow for lesser level or protection if the minimum required level of protection for an 1% annual chance storm event is not attainable.

Future state financial assistance to implement projects in the state flood plan is anticipated to occur in accordance with existing program requirements or, if there are dedicated funds, under an associated flood intended use plan (FIUP) that would likely use the ranking in the state flood plan as one of the prioritization criteria for allocating funding.

No changes have been made.

HCFCFCD comments that in Section 361.38(e), "or supported as feasible with but at a level of protection less than 1 %" should be added to the end of the sentence.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPs to at least consider 1.0% annual chance flood events but allows for and encourages RFPs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

HCFCFCD comments that in Section 361.38(g)(3), the rules should allow the RFPs to include potential public-private-partnership funding opportunities associated with the proposed projects.

Response:

The TWDB acknowledges and appreciates the comment and Section 361.38(h)(3) has been modified to require information regarding the potential use of federal funds, or other sources of funding. The TWDB considers various types of public-private partnerships are included in "other sources of funding."

HCFCFCD comments that in Section 361.38(g)(8), The TWDB should define how the Benefit-Cost ratio is to be calculated and notes that there are wide variations and various formulas. They believe that this needs to be standardized in order to facilitate consistency in project evaluations across the state. They encourage the TWDB to consider using an approach to BCR which includes provisions that do not put areas with low property values at a disadvantage.

Response:

The TWDB acknowledges and appreciates the comment. Guidance regarding the application of benefit-cost analyses will be provided in technical guidance documents that are currently under development by the EA. The TWDB anticipates seeking stakeholder input on the draft technical guidance. No changes have been made.

HCFCF comments that in Section 361.38(g)(12), the rules should include implementation issues associated with relocations. I.e. residential, commercial, as well.

Response:

The TWDB acknowledges and appreciates the comment. Although Section 361.38(h)(12) is not intended be exhaustive, it has been revised to include “acquisitions” and “relocations” among the implementation issues.

HCFCF comments that in Section 361.38(h)(6)(A-E), the rules should allow the RFPGs to include data from first responders regarding rescues during past events, risks to their staff when performing these rescues, and past accidents when making these rescues.

Response:

The TWDB acknowledges and appreciates the comment and acknowledges that regional flood planning groups may include, among other data, that collected from first responders when reporting on items required under this section. The rule does not currently limit the data sources for such information. No changes have been made.

Texas Water Conservation Association (TWCA) comments that Chapter 361 calls for regional flood plans to provide the details of potential flood mitigation activities to alleviate conditions associated with a 1.0% annual chance flood event. TWCA believes that while unquestionably desirable, this standard may be impossible to achieve in certain parts of the state, based on existing development and conditions. In recognition of that fact, TWCA recommends that several references to that goal be revised to reflect that evaluations, strategies and projects should achieve that goal “to the extent feasible.” To address the fact that such a goal may not be universally achievable, TWCA recommends that Section 361.38(a) be revised as follows:

“Based on analyses and decisions under §§361.33 - 361.37 of this title, the RFPG shall identify and evaluate potential FMEs and potentially feasible FMSs and FMPs, some of which may have already been identified by previous evaluations and analyses by others, and that focus, ~~at a minimum~~ to the extent feasible, on providing flood mitigation associated with a 1.0% annual chance flood event.”

They state that should TWDB consider this change appropriate, a similar change would be warranted in Section 361.39(c).

Response:

The TWDB acknowledges and appreciates the comment. Section 361.38 has been revised to require RFPGs to at least consider 1.0% annual chance flood events but allows for and

encourages RFPs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

TWCA seeks clarification that basin-wide sediment removal and de-snagging or similar projects would qualify under Section 361.38(f).

Response:

Basin-wide sediment removal and de-snagging or similar could potentially qualify as FMSs or FMPs if they provide measurable flood risk reduction. However, these sorts of strategies or projects have recurring impacts and costs that would need to be considered. TWDB would expect the strategy or project to explain where the source of sediment or snagging comes from and how this issue will be addressed in the longer term rather than a single clearing effort. It is anticipated that technical guidance documents will be provided by the EA to support the planning groups and technical consultants in preparing the required information. No changes have been made.

Section 361.39 Recommended Flood Management Evaluations, Flood Management Strategies, and Flood Mitigation Projects.

Section 361.39 requires that the RFPs include specific flood management evaluations, flood management strategies, and flood mitigation projects. Recommended strategies and projects will require a reporting that they will not negatively affect a neighboring area. Recommended flood management evaluations are studies that, once implemented, may lead to identification and recommendation of specific strategies and projects for inclusion in regional flood plans.

Comments

The City of Sugar Land states that many drainage and flood control projects will not have water supply functions and should not be required to have water supply functions.

Response:

The TWDB acknowledges and appreciates the comment. There is no requirement in the rules that projects must have a water supply benefit. No changes have been made.

The City of Sugar Land requests clarification as to if priority in the State and Regional Flood Plans will be given to projects that have preliminary engineering or designs ready.

Response:

Projects will be ranked in the state flood plan based on a set of criteria that are not yet determined but with a focus on flood risk reduction benefits and ability to be implemented. No changes have been made.

The Trinity River Authority expresses concern regarding the feasibility of the requirement that regional flood planning groups must recommend FMEs that are most likely to result in FMSs and FMPs that would, at a minimum, provide flood mitigation association with a 1% annual chance flood event. The authority suggests striking the language “at a minimum” and adding the language “to the extent feasible.”

Response:

The TWDB acknowledges and appreciates the comment. Section 361.39 has been revised to require RFPGs to at least consider 1.0% annual chance flood events but allows for and encourages RFPGs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

The City of Lake Jackson and the City of Brookshire recommend granting RFPGs the discretion to make recommendations related to the 0.2% annual chance flood event and suggest the following language be added to Section 361.39: “(a) RFPGs shall recommend FMSs and FMPs to reduce the potential impacts of flood based on the evaluations under §361.38 of this title and RFPG goals and that must, at a minimum, mitigate for flood events associated with at 1.0 percent annual chance (100-yr flood) and may mitigate for flood events up to the 0.2% annual chance flood event in the discretion of the RFPG. Recommendations shall be based upon the identification...”

Response:

The TWDB acknowledges and appreciates the comment. Sections 361.38 and 361.39 have been revised to require RFPGs to at least consider 1.0% annual chance flood events but also allows for and encourages RFPGs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process. No changes have been made due to this comment.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that FMSs and/or FMPs should, where possible,

minimize the negative water quality impacts of a flood event or provide positive water quality impacts.

Response:

The TWDB acknowledges and appreciates the comment and notes that the guidance principles require that regional and state flood plans shall not cause long-term impairment to water quality in Section 362.3(b)(28) and that the plans shall consider benefits to water quality, as stated in Section 362.3(b)(36). No changes have been made.

ASCE-TX agrees with the name and placement of subpart Section 361.39.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

ASCE-TX comments that the provisions in Section 361.39(a) should be changed to require regional planning groups to recommend FME's, FMS's, or FMP's that provide BCR's greater than 1.0. They assert that it is not helpful to restrict recommended projects to those that "mitigate for floods associated with at (sic) 1.0 percent annual chance (100-yr flood)." ASCE-TX states that there will be high BCR projects that will significantly reduce flood risks, but they may not reduce the likelihood of inundation to less than 1.0 percent per year. For example, they state that areas currently subject to a 30% annual chance of inundation would benefit from a project that reduced that annual chance to only 5%.

Response:

The TWDB acknowledges and appreciates the comment. The rules require that RFPGs must evaluate at least one solution that would mitigate for flood events associated with at 1.0% annual chance (100-yr flood). Sections 361.38(b) and 361.39(a) have been revised to allow for lesser level or protection if the minimum required level of protection for an 1% annual chance storm event is not attainable. The rule does not restrict an RFPG's emphasis on or consideration of BCR in the development of its regional flood plan.

ASCE-TX comments that the provisions in Section 361.39(c) should be changed to use the "negatively affect" language from the statute. If their suggested definition is used for "negatively affect" in Section 361.10, which includes a water supply provision, then they state that Section 361.39(d) need not mention water supply.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.39(d) has been modified to use the term "negatively affect".

HCFCDB comments that generally, the flood risk reduction recommendations do not always meet the set protection goals, i.e. 1 % annual exceedance storm, if the community in which the project is located have different values. They suggest that while a 1 % level of protection is a goal, individual projects may have a different level of protection based upon said community input and direction.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.39 has been revised to require RFPs to at least consider 1.0% annual chance flood events but allows for and encourages RFPs to consider FMSs and FMPs that address flood events of other frequencies to be included in the identification and assessment process.

Section 361.40 Impacts of Regional Flood Plan.

Section 361.40 requires that the RFPs include a region-wide summary of reduction in flood risk that implementation of the RFP would achieve and a description of the type of socioeconomic or recreational impacts the flood management strategies and flood mitigation projects would have. It also requires a description of the impacts that implementation of the RFP would have on the environment, water quality, and navigation. The RFPs must also include a statement that the flood mitigation projects will not negatively affect neighboring areas located within or outside of the FPR.

Comments

The City of Sugar Land requests clarification on how socioeconomic, environmental, ecosystem services, and recreational impacts will be quantified.

Response:

The TWDB acknowledges and appreciates the comment. Technical guidance documents being developed by the EA may provide the planning groups and technical consultants additional information about developing these summaries. No changes have been made to rules in response to this comment.

Matthew Berg appreciates the consideration of socioeconomic, recreational, environmental, water quality, and navigation impacts.

Response:

The TWDB acknowledges and appreciates this comment. No changes have been made.

Hudson DeYoe imagines that one goal of RFPs will be to move more water faster to the coast. Having seen the impact of tropical storms on coastal waters particularly the Laguna Madre, he is concerned about the impact of regional flood planning without the consideration of downstream (coastal) effects. He does not believe that the document includes consideration of the impact of regional flood planning on coastal ecosystems.

Response:

The TWDB acknowledges and appreciates the comment and concern and notes that the guidance principles require that regional and state flood plans shall consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) on neighboring areas. In recommending strategies, RFPs shall ensure that no neighboring area is negatively affected by the regional flood plan, as stated in Section 362.3(b)(10). No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that Section 361.40(4) be revised to include a general description of the overall impacts of the recommended FMPs and FMSs in the RFP on recreation and an identification of any actions to be taken to eliminate, reduce, or mitigate any negative impacts to those resources.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.40(4) has been revised to include agriculture and recreational resources in the required general description of the overall impacts of the recommended FMPs and FMSs in the RFP. The TWDB anticipates that any actions to be taken to eliminate, reduce, or mitigate any negative impacts to those resources shall be included as part of individual projects.

ASCE-TX comments that provisions in Section 361.40 should be modified to require each regional plan to include a narrative description of all the benefits and costs identified in the BCR calculation for each recommended FME, FMS, or FP. They assert that if this description is complete, it will include a discussion of the economic, social, and environmental costs and benefits of each project.

Response:

The TWDB acknowledges and appreciates the comment. The description of impacts required by Section 361.40 is intended to be a holistic summary of both the positive and negative impacts of all FMSs and FMPs contained in the Regional Flood Plan. Additional guidance will be provided by the EA within technical guidance. No changes have been made.

Section 361.41 Contributions to and Impacts on Water Supply Development and the State Water Plan.

Section 361.41 requires that the RFPs include a summary and description of the contributions to and impacts on water supply development that implementation of the RFP would have.

Comments

The Texas Land Trust Council recommends requiring a description of any anticipated contributions to groundwater recharge from the FMSs and FMPs in the regional flood plans. They specifically believe that the direct or indirect groundwater recharge benefits resulting from nonstructural, including nature-based, solutions should be quantified in the regional flood plans.

Response:

The TWDB acknowledges and appreciates the comment. Contributions to groundwater recharge would fall under impacts to “water availability” which is included in the considerations within Section 361.41(2). No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend an additional requirement to include a description of any anticipated contributions to groundwater recharge from FMSs and FMPs included in the RFP.

Response:

The TWDB acknowledges and appreciates the comment. Contributions to groundwater recharge would fall under impacts to “water availability” which is included in the considerations within Section 361.41(2). No changes have been made.

Section 361.42 Flood Response Information and Activities.

Section 361.42 requires that the RFPs include a summary of flood response preparations in the region. This section limits the RFPs from performing additional analysis or other activities related to planning for disaster response and recovery.

Comments

The City of Sugar Land requests clarification on whether flood response preparations by each county and municipality will be reported on or if regional flood groups will create a general flood response plan. The city notes that flood characteristics of the upper, middle, and lower Brazos river basin vary widely.

Response:

Regional flood planning groups will be responsible for summarizing the nature and types of flood response preparations within the flood planning region (including summarizing county and municipality efforts) and will not be tasked with creating a new general flood response plan. No changes have been made in response to this comment.

Section 361.43 Administrative, Regulatory, and Legislative Recommendations.

Section 361.43 requires the RFPs to develop and include any legislative or regulatory recommendations that they find necessary to facilitate floodplain management and flood mitigation planning and implementation. The section also requires the RFPs to make recommendations regarding revenue-raising opportunities to fund flood management activities in the region.

Comments

Matthew Berg is concerned that development of administrative, regulatory, and legislative recommendations could result in tension among regional flood planning group members. He seeks clarification on how these recommendations will be approved and if recommendations need to be agreed upon by all members.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will be responsible for adopting their own bylaws and determining their processes related to their decision-making, voting, and selection of specific recommendations to include in their RFP. No changes have been made.

Section 361.44 Flood Infrastructure Financing Analysis.

Section 361.44 requires that the RFPs include information related to financing the proposed flood management strategies and projects that are included in their plans.

Comments

Matthew Berg seeks clarification on how financing recommendations will be approved and if recommendations need to be agreed upon by all regional flood planning group members. He also seeks clarification on whether each FMS, FMP, and FME will need to have a proposed financing mechanism.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will be responsible for adopting their own bylaws and determining their processes related to their decision-making, voting, and selection of specific recommendations to include in their RFP. No changes have been made.

Section 361.45 Implementation and Comparison to Previous Regional Flood Plan.

Section 361.45 requires that the RGPs include a section that compares the current RFP to the previous RFP including the status of previously recommended flood mitigation strategies.

Comments

Matthew Berg seeks clarification on whether the description of how the new regional flood plan differs from the previous plan will be a quantitative or qualitative comparison.

Response:

The TWDB acknowledges and appreciates the comment. The description comparing the new regional flood plan to the previous plan should be both quantitative and qualitative as appropriate and in accordance with any guidance documents developed by the EA. No changes have been made.

Subchapter D Adoption, Submittal, and Amendments to Regional Flood Plans.

Section 361.50 Adoption, Submittal, Notifications, and Approval of Regional Flood Plans.

Section 361.50 includes procedural requirements for the adoption, submittal, and approval of the RFPs. To align with the statutory requirement that state flood plans be developed every five years, the RFPGs must submit an RFP every five years. Draft RFPs are also required every five years. Statute requires the first regional flood plans to be submitted to the Board by January 10, 2023.

Comments

The City of Sugar Land and Matthew Berg request clarification on whether a majority is required for plan approval or what other benchmark will be used.

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will be responsible for adopting their own bylaws and determining their processes related to their decision-

making, voting, and selection of specific recommendations to include in their RFP. No changes made.

The City of Lake Jackson and the City of Brookshire recommend revisions to clarify that only the final RFP submitted to the EA is required to summarize comments received and the RFPG's responses to those comments. Specifically, the cities request the following changes to Section 361.50(d)(1)(D): "in the adopted RFP, sSummaries of all written and oral comments received pursuant to subsection (c) of this section, with a response by the RFPG explaining how the plan was revised or why changes were not warranted in response to written comments received under subsection (c) of this section."

Response:

The TWDB acknowledges and appreciates the comment. Section 361.50(d)(1)(D) has been revised to clarify the requirements for inclusion of any written or oral comments received from the public on the draft RFP under Section 361.50(c). Section 361.21(h) has also been revised to clarify the public comment requirements related to adoption of the final RFP under Section 361.50.

The City of Lake Jackson and the City of Brookshire request a specific change within Section 361.50 to provide clarity and avoid potential conflicts with the Public Information Act requirements incorporated into Rules Section 361.21(a): "(d)(2)(C) The RFPG shall ~~make publicly available and~~ transfer copies of all data, models, and reports generated by the planning process and used in developing the RFP to the EA. To the maximum extent possible, data..."

Response:

The TWDB acknowledges and appreciates the comment. The TWDB does not consider the language to conflict. No changes have been made.

ASCE-TX comments that in Section 361.50(d)(1)(B), capital costs should be required only for Flood Projects. They state that there is not a capital cost associates with FMEs and FMSS.

Response:

The TWDB acknowledges and appreciates the comment. The associated definitions have been modified to more actually reflect the types of costs associated with these elements of plans.

HCFCFCD agrees that the RFPGs shall vote on the projects for inclusion in their FME, FMS, and FMP but does the TWDB expect this vote to be a simple majority, super majority or unanimous vote?

Response:

The TWDB acknowledges and appreciates the comment. RFPGs will be responsible for adopting their own bylaws and determining their processes related to their decision-making, voting, and selection of specific recommendations to include in their RFP. No changes have been made.

Section 361.51 Amendments to Regional Flood Plans.

Section 361.51 includes the procedural requirements for amending regional flood plans. In addition to the RFPG approving an amendment, the Board must approve amendments to the RFPs.

Comments

The City of Lake Jackson and the City Brookshire expressed support for the proposed process outlined in this section but noted the absence of specifics related to how long a political subdivision has to petition the EA and how long the EA has to act on said petition. As such, the cities request the following modifications: “(b) If the Political Subdivision is not satisfied with the RFPG’s decision on the issue, it may file a petition with the EA to request review of the RFPG’s decision and consider the amendment to the approved RFP. The Political Subdivision shall send the petition to the EA and the chair of the affected RFPG within 30 days after the RFPG’s decision...” and “(2) The EA shall issue a decision on any petition submitted under subsection (b)(1) within 180 days after receipt of a completed petition. The political subdivision may petition the Board for review of the EA’s decision within 30 days after the receipt of the decision. If the EA determines that the changed condition or new information warrants a change in the approved RFP, the EA’s decision shall request the RFPG to consider making the appropriate change. If the RFPG does not...”

In addition, the cities request these minor revisions to subsection numbering:

“(c**b**) Amendments to RFPs and State Flood Plan. An RFPG may amend an adopted RFP at a regular RFPG meeting, after giving notice for an amendment and providing notice in

accordance with §361.21 (relating to Notice). An RFPG must obtain Board approval of all amendments to RFPs under the standards and procedures of this section.

The RFPG may initiate an amendment or an entity may request an RFPG to amend its adopted

~~(1)~~ RFP.

(1) An RFPG's consideration for action to initiate an amendment may occur at a regular RFPG meeting...

~~(d)~~ All amendments to an RFP must meet all the requirements related to development of an RFP.

~~(e)~~ Following amendments of RFPs, the Board shall make any necessary amendments to the State Flood Plan as outlined in §362.4(b) of this title.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB does not consider it necessary to include detailed timeframes within the rules to implement the requirement. No changes have been made.

Subchapter E Negative Effects on Neighboring Areas and Failure to Meet Requirements.

Section 361.60 Addressing Negative Effects on Neighboring Areas Within Flood Planning Regions.

Section 361.60 provides that the board will support the RFPGs in facilitating resolution related to projects that will negatively affect neighboring areas within the same FPR. As required by Texas Water Code § 16.062(h) if the board does determine that an element of a regional flood plan negatively affects a neighboring area, the board must coordinate with the affected area to adjust the plan to ensure that not neighboring area is negatively affected by the plan.

Comments

Matthew Berg seeks clarification on the definition of negative impacts. He believes that all FMSs and FMPs will have some negative impact. He states it is unclear who will have standing to contest a determination of no negative impact to a neighboring area.

Response:

The TWDB has included a definition for “negative effect” in Section 361.10 and the term will be further defined through guidance being developed by the EA.

The City of Lake Jackson and the City of Brookshire expressed concern with the assumption that RFPGs will be able to resolve all conflicts that arise within the region and request the following minor edit and additional language for Section 361.60: “Addressing Negative Effects on Neighboring Areas Within Flood Planning Regions

RFPGs shall resolve issues related to projects in their plan that will negatively affect neighboring areas within the FPR. The EA will provide technical assistance within available resources to the RFPGs requesting such assistance and may assist in facilitating resolution of issues within FPRs. In the event RFPGs are unable to resolve an issue related to projects in a plan that will negatively affect a neighboring area within the FRP, the RFPG may use the process set forth in Section 361.61 to resolve the issue(s).”

Response:

The TWDB acknowledges and appreciates the comment. In accordance with Senate Bill 8, the TWDB expects the regional flood planning groups to make decisions required resolve issues within its region. Further, as stated in the rule, the EA is available to provide technical assistance within available resources.

The Woodlands Water Agency noted a perceived type-o in last sentence, and suggests changing 'not' to 'no'.

Response:

The TWDB acknowledges and appreciates the comment but was unable to locate this typo. No changes have been made.

Section 361.61 Addressing Negative Effects on Neighboring Areas Between Flood Planning Regions.

Section 361.61 addresses negatively affected neighboring areas that are not in the same flood planning region as the project. The rule provides the Executive Administrator with the option to make a recommendation to the Board for resolving a negatively affected neighboring area issue or allows the Executive Administrator to hold a public meeting prior to making a recommendation for the board to approve. The section allows the board, at its discretion, to approve all portions of a regional flood plan with the exception of the specific element that causes the negative effect on neighboring areas.

Comments

The cities of Lake Jackson and Brookshire expressed concern that use of the term “in good faith” may implicate certain legal obligations that are not intended by the Rule. As such, the cities request the following minor edit and suggested deletion: “Addressing Negative Effects on Neighboring Areas Between Flood Planning Regions” and “(a) In the event an RFPG has asserted or the Board finds that there is an element of a draft RFP that will negatively affect a neighboring area in a different FPR, the involved regions shall ~~make a good faith effort to voluntarily~~ work together to resolve the issue.”

Response:

The TWDB acknowledges and appreciates the comment. The TWDB considers the language appropriate and reasonable for the purpose of these rules. No changes have been made.

Section 361.62 Failure of a Regional Flood Plan to Meet Regional Flood Planning Requirements.

Section 361.62 provides the board the ability to direct a RFPG to make changes to its RFP necessary to meet the requirements of this rule and Texas Water Code 16.062.

No comments received for this section.

Subchapter F Regional Flood Planning Grants.

Subchapter F provides the framework and requirements for the TWDB to provide grant funding to RFPs and ensure efficient use of those funds.

Section 361.70 Notice of Funds and Submission and Review of Regional Flood Planning Applications.

Section 361.70 provides for grant application notice requirements and the process by which the board will provide funding to the regional flood planning groups for carrying out their duties.

Comments

Houston Stronger comments that all regional flood planning groups must receive enough funding to develop regional flood plans and that the TWDB should make recommendations on how to create sustainable funding sources so local entities are able to meet requirements in Chapter 361 and notes potential funding sources including at GLO and TDEM.

Response:

The TWDB recognizes the ongoing need for planning funding and anticipates allocating the available appropriations under a formula-funding method that will consider the relative amount of work required by the regional flood planning groups. The TWDB also recognizes the ongoing need to develop information and notes that the plans will be based on the best available information at the time they are developed. The TWDB appreciates the comment and is already coordinating with other state agencies with regard to funding opportunities and related flood planning initiatives. No changes have been made.

Houston Stronger requests that the “TWDB provide guidance to local applicants on using alternative finance and alternative delivery.”

Response:

The TWDB acknowledges and appreciates the comment. Note that the Section 361.70 is referring to grant funds for supporting planning activities of the planning groups, not project implementation. Sponsors of recommended projects in the flood plans make decisions about implementation of their projects. The TWDB has developed guidance for

the use of alternative delivery methods across all the TWDB financing programs which would be available to sponsors seeking financial assistance for flood-related projects. No changes have been made.

Section 361.71 Board Consideration of Applications, Applicant's Responsibilities, and Contract.

Section 361.71 provides the process for the board to take action on and contract for funding assistance applications that have been submitted.

No comments received for this section.

Section 361.72 Use of Funds.

Section 361.72 includes specific elements of regional flood planning that are eligible for reimbursement and those that are unallowed. In particular, the TWDB funding shall not be used for activities for which the Board determines existing information, data, or analyses are sufficient for the planning effort. It is proposed that funding not be used for analysis of activities related to disaster response or disaster recovery. This decision was made primarily because funding and planning for disaster response or recovery efforts exists from other state and federal resources. Additionally, the rules, as modified in response to public comments, allow for a limited share of TWDB funding to be used for reimbursement of direct staff hours that may be required for providing certain administration activities on behalf of the RFPs. This allowance for limited reimbursement of some direct staff costs of planning group sponsors is intended to encourage participation of entities in supporting the RFPs. Allowable administrative expenses are outlined in the rule.

Comments

El Paso County states that the proposed rules limit the use of funds for gathering data or performing analyses where such data or analyses are already available, noting that there

may be circumstances where existing data is outdated and requires revision. They suggest clarifying that funds are available for appropriate updates to outdated data or analyses.

Response:

The TWDB agrees that some existing data and analyses may require updates for RFPG planning purposes in some cases. The rules assign authority to the TWDB to limit funds for activities for which the TWDB determines existing information, data, or analyses are sufficient for the planning effort. The TWDB shall make that determination. No changes have been made in response to this comment.

The City of Sugar Land seeks clarification as to how much of the administrative costs is reimbursable.

Response:

The TWDB acknowledges and appreciates the comment. Changes were made to Sections 361.72(a) and (b) to make eligible for reimbursement personnel costs, of the planning group sponsor, for the staff hours that are directly spent providing preparing for, and posting public notice for RFPG meetings, including time and direct expenses for their support of and attendance at such RFPG meetings in accordance with, and as specifically limited by, the flood planning grant contract with the TWDB.

The City of Lake Jackson expressed concern that Section 361.12(2) appears to be in conflict with Section 361.72(c). The City requests that Section 361.72(c) incorporate reference to the designated political subdivision's own procurement requirements as an alternative to the Professional Services Procurement Act provided in Subchapter A, Chapter 2254 of the Government Code.

Response:

The TWDB acknowledges and appreciates the comment. The Professional Services Procurement Act, Government Code Chapter 2254, will apply to most of the Planning Group members and therefore, not require different procurement standards for the Planning Group Sponsor. However, language has been added to Sections 361.72 and 361.12 for consistency.

The North Central Texas Council of Governments seeks clarification on how the planning group sponsor is to be compensated for the time involved in the extensive work associated with developing the regional flood plan if costs associated with the administration of the plan's development are not reimbursable.

Response:

The TWDB acknowledges and appreciates the comment. Changes were made to Sections 361.72(a) and (b) to make eligible for reimbursement personnel costs, of the planning group sponsor, for the staff hours that are directly spent providing preparing for, and posting public notice for RFPG meetings, including time and direct expenses for their support of and attendance at such RFPG meetings in accordance with, and as specifically limited by, the flood planning grant contract with the TWDB.

The City of Lake Jackson and the City of Brookshire expressed concern that, as written, the Rule and Fiscal Note fail to recognize or fund significant costs to political subdivisions, especially in the first planning cycle. The cities note four significant limitations related to funding, including authorizing the Board to determine that anything less than “the best available” information is “sufficient”; prohibiting funding for “preparation of engineering plans and specifications” regardless of the nature of those plans and specifications; prohibiting payment of actual costs to political subdivisions involved in the planning process; and a lack of authority related to subcontracting and procurement concerns. The cities request specific changes to the language in this Section as follows: “(a) Limitations of funding. The Board has sole discretion in determining which activities are necessary for the development or revision of RFPs. However, no funds provided by the Board in accordance with Section 361.70 and 361.71 may be expended by RFPGs for the following:

(1) activities for which the Board determines existing information, data, or analyses are the best available science, data, models, and flood mapping sufficient for the planning effort including but not limited to:...”;

“(2) activities directly related to the preparation of applications for state or federal permits or other approvals, activities associated with administrative or legal proceedings by regulatory agencies, and preparation of engineering plans and specifications for state or federal permits, administrative or legal proceedings, or other approvals...”;

~~“(3)(B) costs of administering the RFPGs;~~

~~(B) staff or overhead costs for time spent providing public notice and meetings, including time and expenses for attendance at such meetings;~~

~~(D) costs for training;~~

~~(E) costs of developing an application for funding or reviewing materials developed due to this grant; and~~

~~(F) direct costs, excluding personnel-related costs of the political subdivision sponsor, for placing costs of administering the regional flood planning grant and associated contracts...”;~~
and

“(b)(3) public notices for the legally required public meetings and of providing copies of information for the public and for members of the RFPGs as needed for the efficient performance of planning work; ~~and~~

(4) the cost of public notice postings including a website and for postage for mailing notices of public meetings; and

(5) professional services procured pursuant to subsection (c).

(c) Subcontracting. A RFPG through the eligible applicant's contractor or subcontractor may obtain professional services, including the services of a planner, land surveyor, licensed engineer, or attorney, for development or revision of a regional flood plan only if such services are procured on the basis of demonstrated competence and qualifications through a request for qualifications process in accordance with Texas Government Code Chapter 2254 or in accordance with the procurement requirements that apply to that political subdivision.

Response:

The TWDB acknowledges and appreciates the comment. Changes were made to Sections 361.72(a) and (b) to make eligible for reimbursement personnel costs, of the planning group sponsor, for the staff hours that are directly spent providing preparing for, and posting public notice for RFPG meetings, including time and direct expenses for their support of and attendance at such RFPG meetings in accordance with, and as specifically limited by, the flood planning grant contract with the TWDB. No other changes made in response to this comment.

Chapter 362 State Flood Planning Guidelines.

Subchapter A State Flood Plan Development.

Section 362.1 Applicability.

Section 362.1 clarifies that the subchapter provides guidelines for the TWDB's preparation, development, formulation, and the Board's adoption of the state flood plan.

No comments received for this section.

Section 362.2 Definitions and Acronyms.

Section 362.2 includes definitions that apply to the Chapter.

Comments

ASCE-TX comments that to the extent applicable, the definitions appearing in Section 362.2 should match those presented in Section 361.10, as modified by their comments.

Response:

The TWDB acknowledges and appreciates the comment. Modifications have been made to match Sections 362.2 and 361.10.

Section 362.3 Guidance Principles.

Section 362.3 contains the guidance principles that are to be used in the development of the regional flood plans and the state flood plan. As noted above, Texas Water Code §§16.061(c) and 16.062(a)(3) requires the TWDB to adopt guidance principles for the regional flood plans and the state flood plan. The rule includes 39 principles that must be used to guide the development of the RFPs and state flood plan.

Comments

PEW Charitable Trusts strongly supports the specific direction to consider nature-based flood solutions, including the requirement within the Guidance Principles (Section 362.3) for RFPs to consider natural systems and beneficial functions of floodplains (Item 24) and to encourage mitigation approaches that work with natural patterns and conditions of floodplains (Item 27). They assert that these principles are important not only because they have the potential to maximize co-benefits such as improvements in water quality, fish and wildlife enhancement, recreational opportunities, and ecosystem function (Item 36), but also because they can help to control the long-term costs involved with keeping flood mitigation projects functioning.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Matthew Berg encourages the relocation of the guidance principles to the beginning of Chapter 361 in order to highlight their importance as a foundational piece of the regional flood planning process.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

Matthew Berg comments that the one square mile minimum threshold in Section 362.3(b)(9) will limit regional flood planning groups from considering important issues of localized urban flooding and ponding. He states that if these areas will not be formally addressed by FMPs or RFPs, issues such as localized urban flooding and ponding will be left to the primary jurisdictions that have so far failed to provide any resolution.

Response:

The TWDB acknowledges and appreciates the comment. The guidance principle in Section 362.3(b)(9) requires regional and state flood plans to focus primarily on flood management strategies and projects with a contributing drainage area greater than or equal to 1.0 (one) square miles but provides various exceptions to this requirement. The TWDB believes there is significant flexibility in the rules as drafted. No changes have been made.

Matthew Berg asserts that every FMS and FMP will have some upstream and downstream impacts and believes that the approach of considering these effects, as laid out in Section 362.3(b)(10), is the correct approach.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

Matthew Berg requests that “when applicable” be struck from Section 362.3(b)(12) because he believes that comparing costs and benefits is always applicable.

Response:

The TWDB acknowledges and appreciates the comment. References to a comparison of benefits and costs are included in several sections throughout Chapters 361 and 362, and the guidance principle in Section 362.3(b)(12) requires regional and state flood plans to

perform these comparisons as applicable to each section of the rule. No changes have been made.

Matthew Berg agrees that regional flood plans should include a balance of structural and nonstructural measures as described in Section 362.3(b)(17); however, he suggests that specific means to assess this balance are necessary.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

Matthew Berg supports the guidance principle that requires regional flood plans to consider natural systems and beneficial functions of floodplains, including flood peak attenuation and ecosystem services; however, he suggests that specific means to assess this are necessary.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made.

Bexar Regional Watershed Management Partners recommend including a guiding principle that states regional flood planning groups should take into consideration the impacts of future weather and climate conditions when preparing flood management strategies and flood management projects.

Response:

The TWDB acknowledges and appreciates the comment. TWDB acknowledges at least two good sources are currently available to account for latest estimates of risk. For rainfall, Atlas 14 was updated in Texas in 2018 by National Oceanic and Atmospheric Administration (NOAA) and widely considered as best available extreme rainfall data for Texas based on observed rainfall data in the past. For relative sea level change, NOAA, Federal Highway Administration (FHWA), and General Land Office (GLO) have provided guidance and TxDOT's Hydraulic Design manual has consolidated that guidance for planning and design projects into easy to use tables, as well as flexibility to perform more detailed modeling, if needed.

No changes have been made.

The City of Lake Jackson and the City of Brookshire request that “major flood infrastructure” be used consistently throughout the rules in lieu of “major flood mitigation infrastructure” which appears in Section 362.3(b)(11) but is not defined.

Response:

The TWDB acknowledges and appreciates the comment and has modified Section 362.3(b)(11) to refer to “major flood infrastructure” for consistency.

The North Central Texas Council of Governments states that the guidance principles in Sections 362.3(b)(4), (5), and (9) reference FEMA FIRM map 100-year and 500-year flood areas. The council asserts that the term flood prone is a more comprehensive federally defined term that better describes those areas at risk from flood waters. The council states that the term flood prone is not restricted to that area 1 mile below the top of the watershed, which is important in heavily developed areas, nor restricted to flows calculated in the past that are no longer accurate due to development resulting in increased flows.

Response:

The TWDB acknowledges and appreciates the comment. A definition for the term “flood-prone” has been added. Neither the principles nor the defined term refer to any distance from the top of the watershed.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance generally support the proposed Guidance Principles – with some suggested tweaks – and we applaud TWDB and the other state agencies with whom TWDB consulted in the drafting of these Principles. They also agree that the Guidance Principles for the state flood plan should be the same for the regional flood planning process and should be revisited every five years to assure that they continue to be appropriate or need to be revised to reflect lessons learned during any one planning cycle.

Response:

The TWDB acknowledges and appreciates the comment and no changes have been made. Section 361.43(2) requires RFPs to develop and include in their flood plans any regulatory or administrative recommendations that they consider necessary to facilitate floodplain management and flood mitigation planning and implementation. Suggestions for revisions to Section 362.3 Guidance Principles would be included in this requirement.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend in Section 362.3(b)(12), which reads “shall include

the estimate of costs and benefits at a level of detail sufficient for RFPs and sponsors of flood management projects to understand project benefits and, **when applicable** [emphasis added], compare the relative benefits and costs, including environmental benefits and costs, between feasible options,” they recommend that the term “when applicable” be dropped and the phrase “except in a circumstance where only one feasible option is identified” be substituted in its place. They state that environmental benefits and costs affect industry, recreation, tourism, and people in general and should be considered in all decisions about feasible options for flood mitigation.

Response:

The TWDB acknowledges and appreciates the comment and agrees. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance recommend that the text in Section 362.3(b)(18), which reads “shall contribute to water supply development where possible,” be modified (in bold and italics) to say “shall contribute to water supply development, ***which may include enhancement of groundwater recharge***, where possible.” We believe that it is important to recognize that there is more than one way that a flood mitigation project might have a water supply benefit and more than one type of flood mitigation project that may provide such a benefit.

Response:

The TWDB acknowledges and appreciates the comment and acknowledges that there are multiple flood project types that can contribute to water supply development. Contributions to groundwater recharge would fall under impacts to “water availability” which is included in the considerations within Section 361.41(2). No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance encourage TWDB to modify the text in Section 362.3(b)(26), which reads “shall emphasize the fundamental importance of floodplain management policies that reduce flood risk,” to emphasize the potential of low impact development and restrictions on building in the floodplain to reduce future flood risk and prevent recurrent flooding of properties. They suggest that the respective Guidance Principle be modified (in bold and italics) as follows: “shall emphasize the fundamental importance of floodplain management policies that reduce flood risk, ***including encouragement of low impact development and restrictions on building in floodplains.***” Commenters indicate that numerous floodplain management policies may contribute to the reduction of flood risk, but low impact development practices – which increasingly are being promoted in major

Texas cities – and floodplain building restrictions are some of the most effective and logical approaches to reduce flood risk.

Response:

The TWDB acknowledges and appreciates the comment. Section 361.35(a)(4) allows RFPs to choose to adopt region-specific, minimum floodplain management or land use or other standards that impact flood-risk, that may vary geographically across the region. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance believe that in Section 362.3(b)(35), which reads “shall consider protection of vulnerable populations,” a more forceful Guidance Principle than “consider” is needed to assure that all Texans have a stake in the successful implementation of regional and state flood planning. They recommend a modified version of this Guidance Principle to read as follows (modifications in bold and italics): “shall ***promote flood management strategies and flood management projects to reduce flood risk for vulnerable populations.***”

Response:

The TWDB acknowledges and appreciates the comment. The RFPs will be expected to consider FMSs and FMSPs to reduce flood risk to all populations. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance urge a more proactive evaluation of the potential benefits in Section 362.3(b)(36), which currently calls for consideration of benefits “to water quality, fish and wildlife, ecosystem function, and recreation, as appropriate”. Such an evaluation will always be appropriate, even if it turns out benefits are not achievable. We recommend this Guidance Principle be revised to read as follows (proposed new language shown in bold and italics): “shall ***include an evaluation of the potential for*** flood management strategies ***to benefit*** water quality, fish and wildlife, ecosystem function, and recreation.”

Response:

The TWDB acknowledges and appreciates the comment. The primary focus of the new planning of regional flood planning is to mitigate risk to life and property. RFPs are required to consider the benefits of flood management strategies to water quality, fish and wildlife, ecosystem function, and recreation in Section 362.3(b)(36), and communities may propose strategies that focus on potential benefits to these resources. No changes have been made.

Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance assert that with respect to Section 362.3(b)(37), the reference to simple compliance with adopted environmental flow standards appears to be largely redundant of Section 362.3(b)(34) because the flow standards are part of the TCEQ rules for water rights. However, they believe that minimizing any reduction in frequency of meeting flow levels identified for protection in environmental flow standards, including strategy targets where they are included, is an appropriate guidance principle that should be included. They recommend this Guidance Principle be revised to read as follows (proposed new language shown in bold and italics): “shall minimize adverse environmental impacts ***including, in addition to complying with permitting requirements of*** adopted environmental flow standards, ***by minimizing the extent of any reductions in frequency of meeting flow levels identified in the flow standards, including any strategy targets.***”

Response:

The TWDB acknowledges and appreciates the comment. Additional information on ways to address this guidance principle may be provided in the technical guidance to be provided by the EA. No changes have been made.

The Woodlands Water Agency recommends the TWDB consider using other quantification methods for determining 'flood-related human suffering' in Section 362.3(b)(13). They believe that economic impacts may not be adequately determined by the standards of Cost-Benefit analysis when a business owner loses income while waiting the flood damage to be repaired so he can reopen for business.

Response:

The TWDB acknowledges and appreciates the comment. Guidance regarding the application of benefit-cost analyses, including flood-related human suffering, will be provided in technical guidance documents that are currently under development by the EA. The TWDB anticipates seeking stakeholder input on the draft technical guidance. No changes have been made.

The Woodlands Water Agency recommends that this guidance principle also include improvement of water quality in Section 362.3(b)(18).

Response:

The TWDB acknowledges and appreciates the comment. Section 362.3(b)(36) requires the regional and state flood plans to consider benefits of flood management strategies to water

quality, fish and wildlife, ecosystem function, and recreation, as appropriate. No changes have been made.

ASCE-TX comments that language in Section 362.3(b)(3) should be revised to more clearly match the terminology they suggested in Section 361.10. For example: “shall identify existing flood risks, future ‘no-action’ flood risks, candidate projects to reduce risks, and anticipated residual risks.”

Response:

The TWDB acknowledges and appreciates the comment. Section 362.3(b)(3) has been revised to more closely match the terminology used throughout Chapters 361 and 362.

ASCE-TX suggests revising text in Section 362.3(b)(12) to more clearly require regional flood planning groups to include residents with language barriers, lower incomes, limited access to transportation, limited access to information technology, limited or no property ownership, childcare needs, and disabilities in the flood planning process.

Response:

The TWDB acknowledges and appreciates the comment. As listed in Section 362.3(b)(35), regional and state flood plans shall consider protection of vulnerable populations throughout the flood planning process. No changes have been made.

ASCE-TX comments that Section 362.3(b)(21) should be revised to more clearly match the concepts they suggested for Section 363.38(e). They suggest omitting “feasible” and “infeasible” options and, instead, use high BCR candidates and low BCR candidates. They also suggest including social costs and benefits.

Response:

The TWDB acknowledges and appreciates the comment. The term “potentially feasible flood management strategy or potentially feasible flood mitigation project” has been defined in Section 361.10 Definitions as permissible, constructible, economically viable and implementable. Technical guidance documents to be provided by the EA will address BCR requirements. Section 362.3(b)(12) has been revised to include a comparison of social benefits and costs between feasible options. No changes have been made to Section 362.3(b)(21).

ASCE-TX comments that Section 362.3(b)(22) should be revised to address their General Comment.

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

The City of Sugar Land requests the addition of “risk” between “flood” and “mapping” in Section 362.3(b)(2).

Response:

The TWDB acknowledges and appreciates the comment and has made the requested change. .

The Brazos River Authority believes that the level of detail for planning is not well defined in the proposed Chapter 362 state flood planning guidelines. They have specific concerns about Section 362.3(b)(9) of the proposed rules related to the guidance principle whereby regional and state flood plans shall focus on flood management strategies and projects with a contributing drainage area greater than or equal to one square mile. They believe that planning on that scale with a number of structures, proposed projects, etc. will be very difficult for one planning region as large as the Brazos River basin.

Response:

This guidance principle is provided as a lower-end limit aimed at guiding RFPGs toward consideration of larger projects. RFPGs may choose to focus on strategies and projects with larger or smaller contributing drainage areas based on regional needs and available planning resources. No changes have been made.

HCFCF comments that in (b)(5), the rules should allow RFPGs to consider projects that provide less than a 1.0% level of protection based upon community input and support.

Response:

The TWDB acknowledges and appreciates the comment. The rule requires RFPGs to, at a minimum, consider projects and strategies that address flood events associated with a 1.0 percent annual chance flood event where feasible and allows RFPGs to also consider projects that address flood events of other frequencies. No changes have made to Section 362.3(b)(5).

HCFCF comments that in (b)(6), the rules should allow the TWDB to withhold approval of project applications from within the RFPGs that are found to not have sufficient regulations

or floodplain management best practices in place until they and/or their membership do so.

Response:

The TWDB acknowledges and appreciates the comment. Requirements for TWDB funding of flood related projects is covered under Chapter 363 and is not covered under Chapters 361 and 362. No changes have been made.

HCFCF comments that in (b)(12), the rules should include the evaluation of social impacts between feasible options as well.

Response:

The TWDB acknowledges and appreciates the comment. Section 362.3(b)(12) has been revised to also include a comparison of social benefits and costs between feasible options.

HCFCF comments that in (b)(39), the rules should be revised to read "Shall include consideration for multi-use opportunities ... "

Response:

The TWDB acknowledges and appreciates the comment. Section 362.3(b)(39) has been revised to read "Shall consider multi-use opportunities ... ".

TWCA suggests revising the sentence in (b)(2) to read "shall be based on the best available science, data, models, and flood risk mapping"

Response:

The TWDB acknowledges and appreciates the comment. Section 362.3(b)(2) was revised to read "shall be based on the best available science, data, models, and flood risk mapping".

TWCA suggests revising the sentence in (b)(10) to read "shall consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) on neighboring areas. In recommending strategies, RFPGs shall ensure that no neighboring area is subject to more than a de minimis negative effect by the regional flood plan.

Response:

The TWDB acknowledges and appreciates the comment. A definition for “negative effect” has been added to clarify this issue and the term will be further defined through guidance being developed by the EA. No changes have been made.

Section 362.4 State Flood Plan Guidelines.

Section 362.4 provides the framework for the Executive Administrator to develop the state flood plan and make a recommendation to the Board. This section also includes information that should be derived from the regional flood plans and incorporated into the state flood plan.

Comments

Matthew Berg suggests striking the word “control” from “flood control infrastructure” in Section 362.4(c)(2).

Response:

The TWDB drafted this language based on the authorizing statute and believes that statutory language should be retained. No changes have been made.

Matthew Berg states that no information is provided regarding how ranking of FMEs, FMSs, and FMPs will be performed and suggests that the TWDB solicit public input on that process.

Response:

The TWDB acknowledges and appreciates the comment. The TWDB anticipates soliciting stakeholder input on the criteria and weightings. No changes have been made.

PEW Charitable Trusts commented that they don’t see any principles that they would fundamentally disagree with and offered some possible alternative wording out of concern that the sheer length of the list could appear to some to be onerous or overwhelming. They recommended that the TWDB consider either using the full summary version of the guidance principles that they provided or grouping the existing items into categories, such as public participation, analyses, goal and objectives, etc. They also suggested eliminating

items (4) (5), (9), and (31) as being less principles and more as procedural direction adequately covered in other portions of the rules.

Response:

The TWDB acknowledges and appreciates the comment and the commenter's effort to restate the principles more succinctly. In accordance with statute, the development of the guidance principles and their specific wording required participation and agreement among numerous individuals from multiple state agencies, including through in-person meetings. No changes have been made.

In general, Sierra Club – Lone Star Chapter, National Wildlife Federation, Galveston Bay Foundation, and Hill Country Alliance support the provisions on “State Flood Plan Guidelines” in the proposed rules, but they also recommend certain modifications and enhancements to those Guidelines to make the State Flood Plan more comprehensive, forward-looking, and potentially effective in addressing the state's flooding challenges. Their recommendations include the following modifications (in bold and italics) to existing provisions as well as additional provisions, appropriately numbered:

(7) A discussion of how the recommended FMEs, FMSs, and FMPs will reduce flood risk and mitigate flood hazards, *including reduction of risk and mitigation of flood hazards to vulnerable populations, and a discussion of the multiple ancillary benefits of the recommended FMEs, FMSs, and FMPs.*

() *A discussion of the extent to which nonstructural flood measures, including nature-based solutions, were incorporated into the state flood plan.*

() *A discussion of the breadth and diversity of participation in and input to the development of the regional and state flood plans.*

Response:

The TWDB acknowledges and appreciates the comment. No changes have been made.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENTS

Ms. Rebecca Trevino, Chief Financial Officer, has determined that for each of the first five years that the rule will be in effect, there will be no fiscal implications for state or local governments beyond the fiscal implications associated with the enactment of Senate Bill 8, Act of the 86th Texas Legislature, 2019. The estimated financial impact on state government from the implementation of the regional and state flood planning processes as mandated by Senate Bill 8 will be an estimated cost of \$173.6 million for the first five years. This estimate is based upon the costs of providing technical assistance by board staff and other board administrative costs of supporting the regional flood planning efforts.

The board estimated cost to local governments of developing regional flood plans as required by Senate Bill 8 and these rules to be \$82.1 million through September 1, 2024. An appropriation of \$20.8 million has been made for the FY20-21 biennium by the 86th Texas Legislature. This agrees with the assumptions included in the board's fiscal note. The appropriation is sufficient to fund 100% of the estimated cost of regional flood planning for 2020 and 2021. Therefore, the resulting estimated cost to local governments for the years 2020 and 2021 is \$0.0 for each year in the required local contributions to the regional flood planning.

These rules are not expected to result in costs to either state or local governments. There no change in costs as the funding is provided. These rules are not expected to have any impact on state or local revenues. The rules do not require any increase in expenditures for state or local governments as a result of administering these rules. It should be noted that political subdivisions that chose to act on behalf of the RFPGs may incur costs such as staff time or de minimis administrative costs. Therefore, there are no foreseeable implications relating to state or local governments' costs or revenue resulting from these rules.

Because these rules will not impose a cost on regulated persons, the requirement included in Texas Government Code Section 2001.0045 to repeal a rule does not apply. Furthermore, the requirement in Section 2001.0045 does not apply because these rules are necessary to implement legislation.

No comments received for this section.

PUBLIC BENEFITS AND COSTS

Ms. Rebecca Trevino also has determined that for each year of the first five years the proposed rulemaking is in effect, the public benefit anticipated as a result of the administration of these new sections will be regional flood planning across the state, increased local and regional cooperation, and regional and state flood plans.

No comments received for this section.

LOCAL EMPLOYMENT IMPACT STATEMENT

The board has determined that a local employment impact statement is not required because the proposed rule does not adversely affect a local economy in a material way for the first five years that the proposed rule is in effect because it will not impose new requirements on local economies. The board also has determined that there will be no adverse economic effect on small businesses, micro-businesses, or rural communities as a result of enforcing this rulemaking. The board also has determined that there is no anticipated economic cost to persons who are required to comply with the rulemaking as proposed. Therefore, no regulatory flexibility analysis is necessary.

No comments received for this section.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The board reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code §2001.0225 and determined that the rulemaking is not subject to Texas Government Code, §2001.0225, because it does not meet the definition of a “major environmental rule” as defined in the Administrative Procedure Act. A “major environmental rule” is defined as a rule with the specific intent to protect the environment or reduce risks to human health from environmental exposure, a rule that

may adversely affect in a material way the economy or a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The intent of the rulemaking is to implement a regional and state flood planning processes and develop a state and regional flood plans.

Even if the proposed rule were a major environmental rule, Texas Government Code, §2001.0225 still would not apply to this rulemaking because Texas Government Code, §2001.0225 only applies to a major environmental rule, the result of which is to: (1) exceed a standard set by federal law, unless the rule is specifically required by state law; (2) exceed an express requirement of state law, unless the rule is specifically required by federal law; (3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or (4) adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking does not meet any of these four applicability criteria because it: (1) does not exceed a standard set by federal law; (2) does not exceed an express requirement of state law; (3) does not exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; and (4) is not proposed solely under the general powers of the agency, but rather under Texas Water Code §§16.061 and 16.062. Therefore, this proposed rule does not fall under any of the applicability criteria in Texas Government Code, §2001.0225.

No comments received for this section.

TAKINGS IMPACT ASSESSMENT

The board evaluated this proposed rule and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The specific purpose of this rule is to implement a regional and state flood planning processes and develop state and regional flood plans. The proposed rule would substantially advance this stated purpose by establishing the regional flood planning groups and providing the framework for regional and state flood plans.

The board's analysis indicates that Texas Government Code, Chapter 2007 does not apply to this proposed rule because this is an action that is reasonably taken to fulfill an

obligation mandated by state law, which is exempt under Texas Government Code, §2007.003(b)(4).

Nevertheless, the board further evaluated this proposed rule and performed an assessment of whether it constitutes a taking under Texas Government Code, Chapter 2007.

Promulgation and enforcement of this proposed rule would be neither a statutory nor a constitutional taking of private real property. Specifically, the subject proposed regulation does not affect a landowner's rights in private real property because this rulemaking does not burden nor restrict or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulation.

Therefore, the proposed rule does not constitute a taking under Texas Government Code, Chapter 2007.

No comments received for this section.

GOVERNMENT GROWTH IMPACT STATEMENT

The board reviewed the proposed rulemaking in light of the government growth impact statement requirements of Texas Government Code §2001.0221 and has determined, for the first five years the proposed rule would be in effect, the proposed rule will: (1) create regional flood planning structure, a government program; (2) require the creation of new employee positions to administer and oversee the funding; and (3) may require an increase in future legislative appropriations to the agency.

No comments received for this section.

STATUTORY AUTHORITY

This rulemaking is proposed under the authority of Texas Water Code §16.453(Floodplain Management Account for funding planning grants), §16.061 State Flood Planning, and §16.062 Regional Flood Planning.

