

SECTION 1 INTRODUCTION

1.1 PURPOSE

The Corridor Development Certificate Process (CDC) affirms local government authority for local floodplain management and establishes a set of Common Regional Criteria and procedures for development within the Trinity River Corridor. The goal of the Corridor Development Certificate is the stabilization of flooding risks along the Trinity River Corridor in North Central Texas. The CDC Process incorporates future watershed conditions as a consideration in floodplain development decisions. As floodplain development continues, standards have been established to ensure that this development does not exacerbate flooding.

To stabilize flood risks as the floodplain develops, the CDC Common Regional Criteria requires no increase in water surface elevation and no decrease in valley storage for the Regulatory Flood (100-year frequency flood); as well as analysis of the Standard Project Flood (SPF). To address future potential flood risks as the Upper Trinity River watershed develops, the CDC hydrologic modeling is based on future anticipated watershed development (year 2055). Any proposed private or public projects within the Regulatory Zone, the Federal Emergency Management Agency (FEMA) 100-year regulatory floodplain of the Trinity River Corridor, must obtain a CDC prior to start of construction, unless specifically exempted per the provisions provided within this CDC Manual.

While local governments retain ultimate control over their own floodplain development decisions, the CDC Process provides other participating cities and counties along the Trinity River the opportunity to review and comment on projects throughout the Trinity River Corridor. This peer review process facilitates better floodplain management decisions.

The CDC is intended to be consistent and complementary with other community floodplain permit requirements. Each local government retains development authority within its jurisdiction. The CDC does not replace or substitute for any other state or federal program. Local governments may choose to incorporate the CDC Common Regional Criteria into existing permitting strategies for other floodplains throughout their respective communities.

The CDC member communities (2021)

Cities

- Arlington
- Carrollton
- Coppell
- Dallas
- Farmers Branch
- Fort Worth
- Grand Prairie
- Irving
- Lewisville

Counties

- Dallas County
- Denton County
- Kaufman County
- Tarrant County

1.2 BACKGROUND

During the Dallas-Fort Worth Metroplex development boom in the mid-1980s, the U.S. Army Corps of Engineers (USACE) began to receive numerous requests for federal Section 404 permits within the Trinity River floodplain for commercial and residential development. Individually or cumulatively, these projects were considered to have the potential to compromise existing flood control protection and impact wetlands and other natural resources. The USACE Fort Worth District Engineer determined that it was necessary to develop a regional perspective to evaluate the impacts of individual permit decisions in accordance with the spirit and intent of the National Environmental Policy Act (NEPA) and other applicable laws. Therefore, during 1984 through 1988, the U.S. Army Corps of Engineers prepared a regional environmental impact statement “for the sole purpose of establishing a permitting strategy for the Trinity River and its tributaries.” The *Regional Environmental Impact Statement Trinity River and Tributaries – 1988* (TREIS) determined that the cumulative impact of allowing individual development projects in the Trinity River floodplain could be both measurable and significant. The TREIS also indicated that the permitting approach adopted by the U.S. Army Corps of Engineers had the potential to significantly reduce flood hazards. Based on the TREIS findings, the USACE issued a Record of Decision in April 1988 (Appendix C) specifying criteria the USACE would use to evaluate Section 404 permit applications in the Trinity River Corridor.

The USACE completed the Upper Trinity River Reconnaissance Study in 1990, which indicated that the CDC Common Regional Criteria would reduce the size and value of development losses in the SPF floodplain in half due to:

- decreased development impacts in the floodplain
- stabilized flood elevations due to preservation of valley storage, while allowing the permitted development in the floodplain

In response to the TREIS and Record of Decision, the cities and counties in the Trinity River Corridor formed the Trinity River Steering Committee (Steering Committee), facilitated by the North Central Texas Council of Governments (NCTCOG). The Steering Committee adopted a Draft Statement of Principles for Common Permit Criteria (January 1988), a Resolution for a Joint Trinity River Corridor Development Certificate Process (December 1988), and a Regional Policy Position on the Trinity River Corridor (January 1989). In addition to the policy-oriented Steering Committee, a Flood Management Task Force was formed, comprised of city and county staff. The Steering Committee directed the Flood Management Task Force to develop a process and manual based on the criteria outlined in the USACE Record of Decision. The result was the publication of the 1st Edition of the Corridor Development Certificate Manual, drafted by the Flood Management Task Force following a two -and one-half year period of intense discussion and negotiation. The Trinity River Corridor Steering Committee approved the first edition of the CDC Manual on May 23, 1991. Nearly two years later, all participating cities and counties had officially amended their floodplain ordinances to adopt the CDC Common Regional Criteria and process.

In January 2018, the Flood Management Task Force established the NFIP-CDC Model Consolidation Team. The Team was charged with developing an updated process for review and issuance of CDC and floodplain development permits that incorporated and maintained the new geo-referenced version of the Upper Trinity River FEMA model. A plan for the development of a consolidated NFIP-CDC Model was developed which would provide one unified HEC-RAS model that incorporated model files supporting both the NFIP and CDC programs. The Team created a streamlined process which addressed the requirements for both programs. The *Summary of Findings and Recommendations for the NFIP-CDC Combined Modeling Effort* (Appendix C) was approved by the Flood Management Task Force in August 2020.

Four previous editions of the CDC Manual were released in 1991, 1998, 2002, and 2010. The 4th Edition was amended in 2013 to include hydrologic data developed from a USACE updated Upper Trinity River regional hydrologic and hydraulic study. The 5th Edition incorporates the recommendations from the NFIP-CDC Model Consolidation Team to update the CDC Process for the consolidated NFIP-CDC Model.

1.3 BENEFITS

Establishment of the CDC Process provides several benefits and innovations, including the stabilization of flood risk. These include:

- Common Regional Criteria
- State-of-the-art floodplain mapping
- Hydrologic modeling based on year 2055 Upper Trinity River watershed development
- A hydraulic model incorporating CDC permitted floodplain development
- U.S. Army Corps of Engineers technical review
- Regional review and comment
- Guarantee of local control of floodplain development decisions
- Innovative and transferrable process that can be replicated in other communities

CDC Common Regional Criteria. A common design hydraulic computer model, the CDC Model, is used as the base model for design and analysis. The CDC Model incorporates flood event peak discharges based on 2055 watershed conditions. The specific CDC Common Regional Criteria include the following (see Section 2.5 for more detailed description of the Common Regional Criteria):

- No increase in the 100-year flood water surface elevation (within 0.04 feet) and no significant increase in the Standard Project Flood water surface elevation
- A maximum allowable decrease of valley storage in the 100-year flood and Standard Project Flood discharges of 0.0% and 5.0%, respectively
- No creation, or significant increase, in erosive water velocity on-site or off-site

The Applicant must submit applicable supporting data indicating that the Common Regional Criteria have been satisfied. The data enables the CDC/Floodplain Administrator to make a more informed decision and ensure that development in the floodplain does not contribute to an increased flooding risk.

Floodplain Mapping. Two-foot contour interval topographic mapping was developed in 1991, as part of the development of the original CDC Model. The mapping consisted of approximately 240 square miles of the Upper Trinity River Watershed, indicating roadways and other major topographic features. The mapping provided a consistent base for all the cities and counties in the Trinity River Corridor.

Hydrologic Modeling Based on 2055 Watershed Development. The CDC Common Regional Criteria requires hydrologic data based on a future watershed development. Flood event peak flows are based on year 2055 expected watershed development in the upper Trinity River watershed and are provided in Appendix B of this manual. These flows provide the CDC/Floodplain Administrator a better idea of future runoff conditions on which to base development approval decisions.

A Current Hydraulic Model Incorporating Permitted Floodplain Development. The USACE Fort Worth District maintains the official CDC Model. The CDC Model is updated by the USACE periodically. The goal of the CDC Model is to include permitted and completed projects to reflect cumulative effects of all permitted actions to aid the CDC/Floodplain Administrator in the considerations of future CDC applications.

U.S. Army Corps of Engineers Technical Review of CDC Applications. The USACE provides Technical Review of the CDC applications, per a letter of request by the participating CDC/Floodplain Administrator. The Technical Review includes evaluation of the Applicant's hydraulic modeling and evaluation of the project as it pertains to the Common Regional Criteria. The USACE provides the respective CDC/Floodplain Administrator, via letter, with the results of the Technical Review. This provides CDC/Floodplain Administrators with additional data to make well-informed development decisions.

Regional Review and Comment. The CDC Process provides the participating cities and counties along the Trinity River the opportunity to review and comment on projects in their neighbors' jurisdiction. The Applicant's CDC submittal is forwarded to each of the participating entities in

the Trinity River Corridor for review and comment. USACE Technical Review results may be forwarded, per the CDC/Floodplain Administrator's discretion. Participating local governments have 30 days to review and comment on the development request. These comments will be tracked by NCTCOG. While each individual city and county makes the final development decisions, the CDC Process reinforces "peer pressure" through the establishment of the Common Regional Criteria.

Guarantee of Local Control of Floodplain Development Decisions. Cities and counties, via their elected officials and floodplain ordinances, retain ultimate authority over development occurring in their floodplain, providing that the development complies with other pertinent state and federal regulations. The CDC Process does not supersede other state and federal programs. The CDC Process allows parallel review of the various federal and local regulatory permits required for floodplain development. This feature of the CDC Process ensures that minimal additional time is added to the local development decision-making process and that the overall federal, state, and local approval process is streamlined for quicker decision-making.