CORRIDOR DEVELOPMENT CERTIFICATE MANUAL

TRINITY RIVER CORRIDOR – NORTH CENTRAL TEXAS

JOINTLY PREPARED BY:

CITIES:
ARLINGTON, CARROLLTON, COPPELL, DALLAS, FARMERS BRANCH, FORT WORTH, GRAND PRAIRIE, IRVING, LEWISVILLE

COUNTIES:
DALLAS, TARRANT

SPECIAL DISTRICTS:
FEDERAL EMERGENCY MANAGEMENT AGENCY – REGION VI, NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, TARRANT REGIONAL WATER DISTRICT, TRINITY RIVER AUTHORITY OF TEXAS, UNITED STATES ARMY CORPS OF ENGINEERS - FORT WORTH DISTRICT

FOURTH EDITION
July 2009
Amended October 2020

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1.1 PURPOSE OF THE CORRIDOR DEVELOPMENT CERTIFICATE PROCESS

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 project 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 herein.

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.

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 afforded to floodplain residents, and to 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 (included in Appendix C) specifying criteria the USACE would use to evaluate Section 404 permit applications in the Trinity River Corridor. These criteria included:

- "No rise in the 100-year or SPF elevation for the proposed condition will be allowed."
- "The maximum allowable loss in storage capacity for the 100-year and SPF, 0% and 5% respectively."
- "Alterations in the floodplain may not create or increase an erosive water velocity on or off-site."

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. 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 technically-oriented 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.

The USACE completed the Upper Trinity River Reconnaissance Study in 1990, which predicted that with only National Flood Insurance Program (NFIP) criteria in place, a Standard Project Flood would:

- flood 42,460 acres in the Upper Trinity River Basin
- cause $11.1 billion damage

With flood risks stabilized to 1990 levels with CDC criteria, a Standard Project Flood would:

- flood 22,720 (compared to 42,460) acres in the Upper Trinity River Basin
- cause $4.25 billion (compared to $11.1 billion) in damages

The Upper Trinity River Reconnaissance Study indicated that 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

The three previous Editions of the CDC Manual were released in 1991, 1998 and 2002. The 2nd Edition of the CDC Manual included the establishment of a CDC Review Fund and Cost Recovery Fee to support maintenance of the CDC Model and technical review by the USACE; updated frequency flood peak discharge data; and the elimination of the "Review Zone". The 3rd Edition of the CDC Manual was a result of ongoing maintenance to address comments regarding the CDC Process from local floodplain administrators, CDC Applicants and others.

This edition, the 4th Edition of the CDC Manual, was necessary to address technological advances as well as out dated items including the Regulatory Zone map, exemptions, hydraulic model, and other topics. Many items were clarified in order to create consistency among applications and the Cost Recovery Fee was increased for the first time since the CDC Manual's inception in 1991.

The 4th Edition has been recently amended to include more recent hydraulic model data which more accurately reflects the projected discharges and water surface elevations.

1.3 BENEFITS OF THE CDC PROCESS

Establishment of the CDC Process provides a number of 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

Each of these innovations is discussed below.

1.3.1 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 Chapter 2 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.

1.3.2 Floodplain Mapping

As part of the development of the original CDC Process and CDC Model, 2-foot contour interval topographic mapping was developed in 1991, which includes approximately 240 square miles of the Upper Trinity River Watershed, indicating roadways and other major topographic features. The mapping provides a consistent base for all the cities and counties in the Trinity River Corridor.

1.3.3 Hydrologic Modeling Based on 2055 Watershed Development

The CDC Common Regional Criteria requires hydrologic data based on a future watershed development scenario. This data will be used in evaluation of the proposed project. Flood event peak discharges based on year 2055 expected watershed development in the upper Trinity River watershed are provided in Appendix B of this manual. These discharges give the CDC/Floodplain Administrator a better idea of future runoff conditions on which to base development approval decisions.

1.3.4 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.

1.3.5 U.S. Army Corps of Engineers Technical Review of CDC Applications

The USACE provides Technical Review of the CDC applications, per 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.

1.3.6 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.

1.3.7 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 comply 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.

1.4 GEOGRAPHIC AREA OF REGULATION

The Trinity River Corridor is defined in the Trinity River Corridor Interlocal Agreement (effective date January 1, 1990) as the bed and banks of the river segments from the dams of Lewisville Lake, Grapevine Lake, Lake Worth, Benbrook Lake, Lake Arlington, and Mountain Creek Lake, downstream to the area near Post Oak Road and the Trinity River in southeast Dallas County, and all of the adjacent land area and all watercourses contained within the boundaries of the river floodplain as designated by the Steering Committee.

The Regulatory Zone is the Federal Emergency Management Agency (FEMA) 100-year regulatory floodplain of the Trinity River Corridor, minus areas of Specific Prior Development, produced from the Clear Fork, West Fork, Elm Fork, and main stem of the Trinity River. The outer boundary of the Regulatory Zone within the tributaries, such as Village Creek, Mountain Creek, and Denton Creek, is determined from the backwater from the Clear Fork, West Fork, Elm Fork, and main stem of the Trinity River.

As the Trinity River COMMON VISION Program and the Upper Trinity River Feasibility Study produce new information, these geographic areas may be revised. The Trinity River Corridor Steering Committee will approve revisions to the CDC Regulatory Zone boundaries as necessary.

1.5 DEVELOPMENT ACTIVITIES AFFECTED

Any proposed public or private development located entirely or partially within the Regulatory Zone of the Trinity River Corridor must obtain a CDC prior to start of any development activity, unless specifically exempted as discussed in Section 1.6 EXEMPTIONS AND VARIANCES.

A development activity is defined as "any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or significant changes to vegetative cover." To ensure consistency with Texas Commission on Environmental Quality (TCEQ) requirements, development activity also includes "any levee or other improvement."

A development activity by a city or county within the Regulatory Zone will be subject to CDC requirements and will be subject to other applicable local, federal, and state regulations. To avoid conflicts between adopted policy and city or county ordinances, a government CDC application will be considered as any other CDC application. If a city or county proposes a project within its own jurisdiction, the CDC/Floodplain Administrator of that city or county will issue or deny a CDC for the project. Even when ruling on itself, the city or county must complete the CDC Process as described in Chapter 4.

1.6 EXEMPTIONS AND VARIANCES

CDC Applicants may request an Exemption or Variance to the CDC Process. If an Applicant proposing a development activity that is located partially or completely within the Trinity River Corridor can show in writing, through the completion of Part 1 of the CDC Application, that the activity meets any of the conditions below, the permitting entity may deem the project exempt from the CDC Process or grant a Variance.

1.6.1 Exemptions to the CDC Process

Under certain circumstances, the permitting entity may issue an Exemption from the Common Regional Criteria and CDC Process. Applicants seeking development approval may request an Exemption if the development activity in question falls into any of the following categories:

- Maintenance, repair, or identical replacement of existing infrastructure
- Outfall structures where the outfall has been permitted under the Federal NPDES or State TPDES program
- Intake structures
- Discharge of material for backfill or bedding for utility lines, provided that no significant change occurs in pre-existing bottom contours and excess material is removed to a disposal area out of the Regulatory Zone
- Bank stabilization activities provided that no significant change occurs in pre-existing bottom contours and excess material is removed to a disposal area out of the Regulatory Zone
- Small-scale projects that cause minimal change in ground surface elevation and no decrease in hydraulic conveyance and valley storage for the 100-year flood.
- Temporary construction-related activity. (Note: See Chapter 2 Section G regarding "Significant Temporary Construction".)

- Specific Prior Development. The existing development projects as defined in Section 1.7 DEFINITIONS AND ACRONYMS of this Manual and listed in Appendix B.3 (also referred to as Grandfathered Projects).

Prior to initiation of the Regional Review and Comment process, the CDC Applicant may request an Exemption to the CDC Process in writing, by completing Part 1 of the CDC Application (see Chapter 3). The permitting entity will issue or deny the Exemption in accordance with the local floodplain ordinance and other ordinance Exemption procedures. If an Exemption is granted, Part 2 of the CDC Application does not have to be completed. If an Exemption is granted, Part 1 shall be maintained on file by the permitting entity and the jurisdiction granting the exemption shall notify CDC signatories and USACE of the Exemption. This ends the CDC Process for the case of Exemption.

It is recommended that the CDC Applicant contact the appropriate local government for floodplain management ordinance requirements and the U.S. Army Corps of Engineers Fort Worth District for federal regulations that may pertain to the Applicant's project.

1.6.2 Variances to CDC Common Regional Criteria

Applicants may request a Variance if the development activity does not meet the established Common Regional Criteria as detailed in Chapter 2 CDC COMMON REGIONAL CRITERIA of this manual. A Variance shall be any modification of the literal provisions of the CDC Criteria by the participating local jurisdiction. The permitting entity may issue a Variance under the following circumstances:

- When strict enforcement of the CDC Process would cause undue hardship, owing to circumstances unique to the individual property on which the Variance from the process is requested.

- When a public project is deemed to be in the "overall regional public interest", as determined by the jurisdiction's policy-making body, e.g. city council or commissioners' court.

An Applicant seeking a Variance must:

- Complete the standard CDC Application. The CDC Application will be subject to Regional Review and Comment by the participating CDC permitting entities.
- Undergo Technical Review by the USACE.
- Complete the Variance Request Form, explaining why meeting the Common Regional Criteria would cause undue hardship or why the project is in the "overall regional public interest".

Since the CDC is adopted as an element of the permitting entity's National Flood Insurance Program floodplain ordinance, a CDC Variance is subject to that jurisdiction's floodplain ordinance Variance procedures.

1.7 DEFINITIONS AND ACRONYMS

Applicant. Entity or individual requesting a CDC.

100-year Flood. A statistical description of a flood having a one percent (1%) probability of being equaled or exceeded in any given year.

2055 Hydrology. The Upper Trinity River watershed conditions associated with anticipated land use in the year 2055.

CDC Hydraulic Ineffective Flow Area. The area of the floodplain that floodwater occupies and the downstream velocity is near zero. This area is represented in the CDC model river cross-sections by the ineffective flow area option and is excluded from the water surface elevation computations. The floodwater in the ineffective flow area of the river cross-sections occupies valley storage and is included in valley storage computations.

The final determination of the project boundary and location with respect to the ineffective flow area will be made by the local CDC/Floodplain Administrator. The CDC/Floodplain Administrator may request assistance of the USACE with the determination procedure.

CDC Model. The official computer model of the Upper Trinity River study area. The CDC Model was developed using the USACE Hydrologic Engineering Center River Analysis System (HEC-RAS) computer program. Discharges for eight specific flood events are included in the CDC Model, however only the 100-year and SPF are used in the CDC. The flood event discharges were developed based on year 2055 watershed conditions and were developed using the USACE Upper Trinity River watershed HEC-1 program. The limits of the CDC Model are as follows:

- Elm Fork: West Fork/Elm Fork confluence to Lewisville Dam (29.04 miles)
- West Fork: West Fork/Elm Fork confluence to Lake Worth Dam (58.08 miles)
- Clear Fork: West Fork/Clear Fork confluence to Benbrook Dam (12.43 miles)
- Trinity River main stem: West Fork/Elm Fork confluence to downstream of Dowdy Ferry Road in southeast Dallas (23.25 miles).

The CDC Model includes several projects permitted but not constructed.

CDC Process. Process (as presented in Chapter 4) to be followed by Applicants seeking a Corridor Development Certificate for projects located within the Trinity River Corridor.

CDC Review Fund. In order to offset the costs associated with USACE Technical Review and NCTCOG corridor-wide CDC administration, a CDC Review Fund and cost recovery fee have been incorporated into the CDC Process and have been specified in the CDC Manual. This fund provides for the technical review, administration, and tracking of the CDC Process. Section 3.3 of the CDC Manual contains a detailed description of the fund and the CDC cost recovery fees.

CDC Tracking Code. Upon receipt of a completed CDC Application, the CDC/Floodplain Administrator must assign it a CDC Tracking Code, which is a unique identification number for each CDC Application. The Tracking Code begins with "CDC" and then indicates the city/county name, the date, and the order the application was received that day. For example, if the City of Dallas receives two CDC applications on 1 June 2002, the CDC Tracking Codes would be as follows: "CDC Dallas 060102-1" and "CDC Dallas 060102-2."

Conveyance. A measure of the flow capacity of a cross-section. Conveyance is dependent on the geometry and friction or roughness characteristics of the cross-section.

Corridor Development Certificate (CDC). Local government permission for development activity within the Regulatory Zone of the Trinity River Corridor. The Corridor Development

Certificate is implemented at the local level as the official "floodplain permit" for the Trinity River Corridor, and is issued as a part of the city or county floodplain permit program.

Development Activity. Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, clearing, paving, excavation, drilling operations, or storage of equipment or materials. To ensure consistency with TCEQ requirements, development activity also includes "any levee or other improvement."

Exemptions. Developments outside the scope and intent of the CDC Process as described in Section 1.6 EXEMPTIONS AND VARIANCES.

FEMA. Federal Emergency Management Agency

HEC-RAS. The Hydrologic Engineering Center - River Analysis System software developed by the U.S. Army Corps of Engineers to perform one-dimensional steady flow and unsteady flow river hydraulics computations. Refer to the Hydrologic Engineering Center web site for more information: http://www.hec.usace.army.mil/

HEC-1. U.S. Army Corps of Engineers software developed by the Hydrologic Engineering Center designed to simulate the surface runoff response of a river basin to precipitation by representing the basin as an interconnected system of hydrologic and hydraulic components. Refer to the Hydrologic Engineering Center web site for more information: http://www.hec.usace.army.mil/

NCTCOG. North Central Texas Council of Governments. Refer to the NCTCOG website for more information: http://www.nctcog.org.

NFIP. National Flood Insurance Program

Permitting Entity. One of the currently participating local governments in the CDC Process.

Regulatory Zone. The area where the CDC Process and requirements apply. This area is the FEMA 100-year floodplain minus areas of Specific Prior Development. The Regulatory Zone is more fully defined in Section 1.4.

Significant Changes to Project. Any significant changes to a development activity, project plan, or regulatory program that require the re-evaluation of CDC approval may require re-application for a new CDC. In general terms, a significant change that would require a new CDC would be a change that would materially affect permitted valley storage or conveyance, or have significant environmental impacts. Changes in regulatory programs include ordinance/order changes of the permitting jurisdiction, as well as changes in state and federal regulatory programs prior to the completion of the development activity. The CDC/Floodplain Administrator will review the changes and determine whether re-application for a new CDC is required.

Specific Prior Development (Grandfathered Projects). Under the CDC Process, existing projects that are included in the CDC Model are identified as Specific Prior Development and may not require a CDC. (See Appendix B.3). If any significant changes in the project occur, or if the Term of CDC Validity expires (5 years from the date of listing in the CDC Manual as Specific Prior Development), the project may lose its specific prior development status and be subject to the CDC Process. This provision of the process only applies to the CDC requirement. It does not apply to any other state or federal regulatory program.

Standard Project Flood (SPF). The Standard Project Flood is the flood that may be expected from the most severe combination of meteorological and hydrologic conditions that are considered to be reasonably characteristic of the geographical region involved, excluding extremely rare combinations. In practical terms, a SPF usually has a 0.3 to 0.08 percent probability of being equaled or exceeded in any given year, and is usually between 40 and 60 percent of a Probable Maximum Flood (PMF). The SPF represents a "standard" against which

the degree of protection selected for a project may be judged and compared with protection provided for similar projects in other localities. In general terms, the SPF for the Trinity River Corridor is commonly equated to an 800-year storm frequency.

TCEQ. Texas Commission on Environmental Quality

Technical Review. Review performed by the USACE. The review is initiated by the letter request of the participating city or county. The Technical Review consists of evaluation of the Applicant's hydraulic information as it pertains to the CDC Common Regional Criteria.

Term of CDC Validity (Sunsetting of CDC). The CDC is valid for five (5) years. If no development activities occur within five years from the date of issuance, the Applicant may submit a written request no later than 60 days prior to the fifth anniversary of the CDC issuance for up to a three (3) year CDC extension (see sample letter D.4 in Appendix D), otherwise, the CDC shall cease to be valid on that anniversary date. The permitting entity may grant an additional three-year extension (see sample letter D.5 in Appendix D). If an extension is granted, summary project status reports are required and must be submitted to the CDC/Floodplain Administrator annually. If an extension is not granted, the Applicant must reapply for a CDC. Note: Other local, state, and federal permits and regulatory processes may not have the same validity time or sunsetting requirements.

Trinity River Corridor. For the purpose of the CDC Process, the Trinity River Corridor is defined as the bed and banks of the river segments from the dams of Lewisville Lake, Grapevine Lake, Lake Worth, Benbrook Lake, Lake Arlington, and Mountain Creek Lake downstream to the point on the main stem of the Trinity River near Post Oak Road in southeast Dallas County, and all of the adjacent land area and all watercourses contained within the boundaries of the river floodplain as designated by the approved Trinity River Corridor digital map maintained on computer by NCTCOG.

TWDB. Texas Water Development Board. Coordinates NFIP within the State of Texas

USACE. United States Army Corps of Engineers

Upper Trinity River Basin. The Trinity River watershed upstream of the vicinity of Post Oak Road and the main stem of the Trinity River in southeast Dallas County.

USACE Section 404 Permit. Important elements of the program implemented by the USACE under Section 404 of the Clean Water Act include conducting jurisdictional determinations for wetlands and other waters of the United States, evaluating applications for individual and general permits for activities in these jurisdictional areas, ensuring compliance of issued permits, and enforcing requirements of the law for unpermitted activities. The USACE works closely with other federal, state and local natural resource agencies and the public in exercising these responsibilities. The USACE Fort Worth District web site gives additional information on the USACE Regulatory Program: http://www.swf.usace.army.mil/Missions/Regulatory.aspx

Valley Storage. The water volume between the water surface and the ground surface that occupies a given reach of the river. For purposes of the CDC Process, the valley storage is computed with respect to the Pre-Project and With-Project 100-year and SPF water surface elevations. The CDC Process relies on the protection and preservation of this storage of floodwater to stabilize flooding risk over time.

Variance. A Variance is any modification of the literal provisions of the CDC Manual Criteria by the participating local jurisdiction when strict enforcement of the CDC Process would cause undue hardship owing to circumstances unique to the individual property on which the Variance is granted, or when the project would be in the overall regional public interest, as determined by the jurisdiction's policy-making body, e.g. city council or commissioners' court. Please see Section 1.6 EXEMPTIONS AND VARIANCES.

1.8 PENALTIES FOR UNAUTHORIZED CONSTRUCTION

Failure to comply with the provisions of the policies and regulations within this CDC Manual will result in the penalties specified in the floodplain management ordinance or regulations of the jurisdiction.

For further information regarding penalties for unlawful storm water management or development activities within the floodplain, please consult the appropriate local government for floodplain management ordinance requirements, as well as the following:

- Texas Commission on Environmental Quality
- Federal Emergency Management Agency
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers Fort Worth District.

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Chapter 2
CDC COMMON REGIONAL CRITERIA

2.1 COMMON REGIONAL CRITERIA/GENERAL INFORMATION

The CDC Common Regional Criteria for development in the Regulatory Zone of the Trinity River are based on year 2055 watershed conditions. In the CDC Application, the Applicant must provide sufficient detailed information to document Common Regional Criteria compliance. The burden of proof of compliance is the responsibility of the CDC Applicant.

The Applicant must use the CDC Model to evaluate the impacts of the proposed project. The CDC Model may be obtained from the USACE Fort Worth District Hydrology and Hydraulics Branch. The Applicant and the CDC/Floodplain Administrator may request additional supporting hydrologic or hydraulic information from the USACE.

The proposed project hydrologic and hydraulic information, submitted as part of the CDC Application for compliance with the Common Regional Criteria, must be representative of a project close to a 100 percent level of design and one that the proposed project plans and specifications will be directly based upon.

All CDC applications must comply with the following CDC Common Regional Criteria, unless granted an Exemption or a Variance:

2.1.1 Hydraulic Impacts

2.1.1.1 Water Surface Elevations. No increase in the 100-year flood water surface elevations (within 0.04 feet) and no significant increase in the Standard Project Flood water surface elevations.

Note: It is expected that every effort will be made to limit increases in the SPF water surface to at or near zero. The significance of any increases will be at the discretion of the technical reviewer and the local permitting authority.

Evaluation of projects for water surface elevation and valley storage criteria will be based on the following guidelines:

- Project is located within both the 100-year and SPF ineffective flow areas:
  - No evaluation of the 100-year and the SPF water surface elevation is required
  - 100-year and SPF valley storage evaluation is required

- Project is located within a 100-year ineffective flow area but within the SPF effective flow area:
  - No evaluation of the 100-year water surface elevation is required
  - Evaluation of the SPF water surface elevation is required
  - 100-year and the SPF valley storage evaluation is required

The location of a project with respect to an ineffective flow area will be determined by the USACE with assistance of the local CDC/Floodplain Administrator.

The evaluation of water surface elevation for compliance with the criteria shall be based on the submitted "as-designed" condition with the inherent assumption that the project will be operated and maintained in perpetuity as designed. If no maintenance will be performed on the project to preserve the original design parameters, then this future project condition shall be considered the "as-designed" condition.

The current CDC Model (Pre-Project Model) establishes a baseline condition that will be used to compare the proposed project condition model (With-Project Model) with respect to the CDC Common Regional Criteria. There may be conditions where additional cross-

sections are necessary to adequately represent a proposed project, due to the cross-section spacing, location, and alignment of the cross-sections in the CDC Model. If additional cross-sections are used in the With-Project model, additional Pre-Project cross-sections should also be developed in the same locations and incorporated into the CDC Model, thereby creating a 'Revised CDC Model'. This Revised CDC Model shall be used as the Pre-Project conditions model for comparison to evaluate the With-Project hydraulic impacts. If a Revised CDC Model is developed, then a comparison of results of the Revised CDC Model with the original CDC Model shall be submitted (in addition to the With-Project comparison results). The method of developing the additional cross-sections is at the applicant's discretion but shall be described in the application package. Hydraulic calculations shall be provided for a distance upstream of the project sufficiently to identify the full impacts of the project.

2.1.1.2 Valley Storage.

The maximum allowable valley storage decrease for the 100-year flood and Standard Project Flood are 0.0% and 5.0%, respectively.

General. The following is an expanded discussion of the process of computing valley storage impacts of proposed floodplain development projects. The determination of valley storage impacts consists of the comparison of two conditions: Pre-Project and With-Project (sometimes referred to as Post-Project). The computation of valley storage in the CDC Process can be divided into two parts, On-Site and Off-Site. The maximum allowable valley storage decrease, stated as the percent change, is computed with respect to the Pre-Project (existing conditions) amount of valley storage On-Site (within the boundary of the proposed project tract). The intent of the Common Regional Criteria is to identify the specific valley storage impact of an individual proposed project, therefore the impact must be evaluated with respect to the original available On-Site (entire tract) valley storage, not the disturbed area within the project tract, the hydrologic routing reach, the entire river reach, or an area that includes land on the opposite side of the river from the subject tract.

Pre-Project On-Site valley storage. The first step in the determination of valley storage impact is the computation of Pre-Project On-Site valley storage. It is suggested that specialized terrain software or other detailed methods be used to compute On-Site valley storage, since the HEC-RAS model may not fully account for valley storage in a specific project tract. The choice of method for valley storage computation is at the discretion of the Applicant's engineer. However, assistance in determining the most appropriate method is available from the CDC/Floodplain Administrator and/or the USACE Water Resources Branch.

With-Project On-Site and Off-Site valley storage. The With-Project conditions model represents the proposed project tract and its resulting impact on water surface profiles and valley storage. Given the restraints of the water surface profile criteria (paragraph 2.1.1), the With-Project conditions model could possibly produce a decrease in the 100-year and SPF water surface profiles within, adjacent to, and upstream of, the proposed project (for example, due to additional conveyance on a project tract or a more efficient bridge structure). If the With-Project condition results in a reduction of the water surface profile, this reduction is classified as a valley storage loss. This is considered a loss in valley storage since the approved 100-year and SPF flows in the river corridor, shown in Appendix B.1 Tables 1A - 1D and incorporated into the CDC Model, were produced from the upper Trinity River watershed runoff model using computed reach-by-reach valley storage values. The 100-year and SPF flows are considered approved regional flows and therefore "fixed" - likewise the corresponding valley storage values are considered fixed values from which all future proposed projects are evaluated against.

For the With-Project conditions analysis, both On-Site and Off-Site valley storage must be determined. With-Project On-Site valley storage can be determined using the same methods as used to compute Pre-Project On-Site valley storage. The On-Site valley storage will represent the proposed changes to the project tract, such as grading and cut/fill. The Off-Site valley storage is determined by computing the impacts to all lands adjacent to, and upstream of, the project tract. If the proposed project results in a reduction in water surface profile (as compared to Pre-Project), then the upstream extent to which the impacts of the reduction is computed to is the location in which the With-Project water surface profile converges with the Pre-Project water surface profile. This can be determined using the output table in the HEC-RAS program.

The output table can be used to also obtain the Pre-Project valley storage at the convergence point, which will be compared to the With-Project value.

Note that if the With-Project conditions model produces no reduction in water surface profile, the only valley storage change is confined to the project tract, since there are no Off-Site impacts. Off-Site valley storage in this case would not need to be computed.

Computational procedure. The engineering efforts required for adherence to the Common Regional Criteria with respect to the water surface elevations and valley storage criteria is a balancing act of trying to satisfy both criteria at the same time. While a reduction in water surface profile may initially be considered as a positive impact, the negative impacts of this reduction to valley storage may be significant. The cumulative impact of a reduction in valley storage is increased peak flows. The challenge for the project design engineer is to achieve the required water surface criteria, while achieving the allowable valley storage reduction.

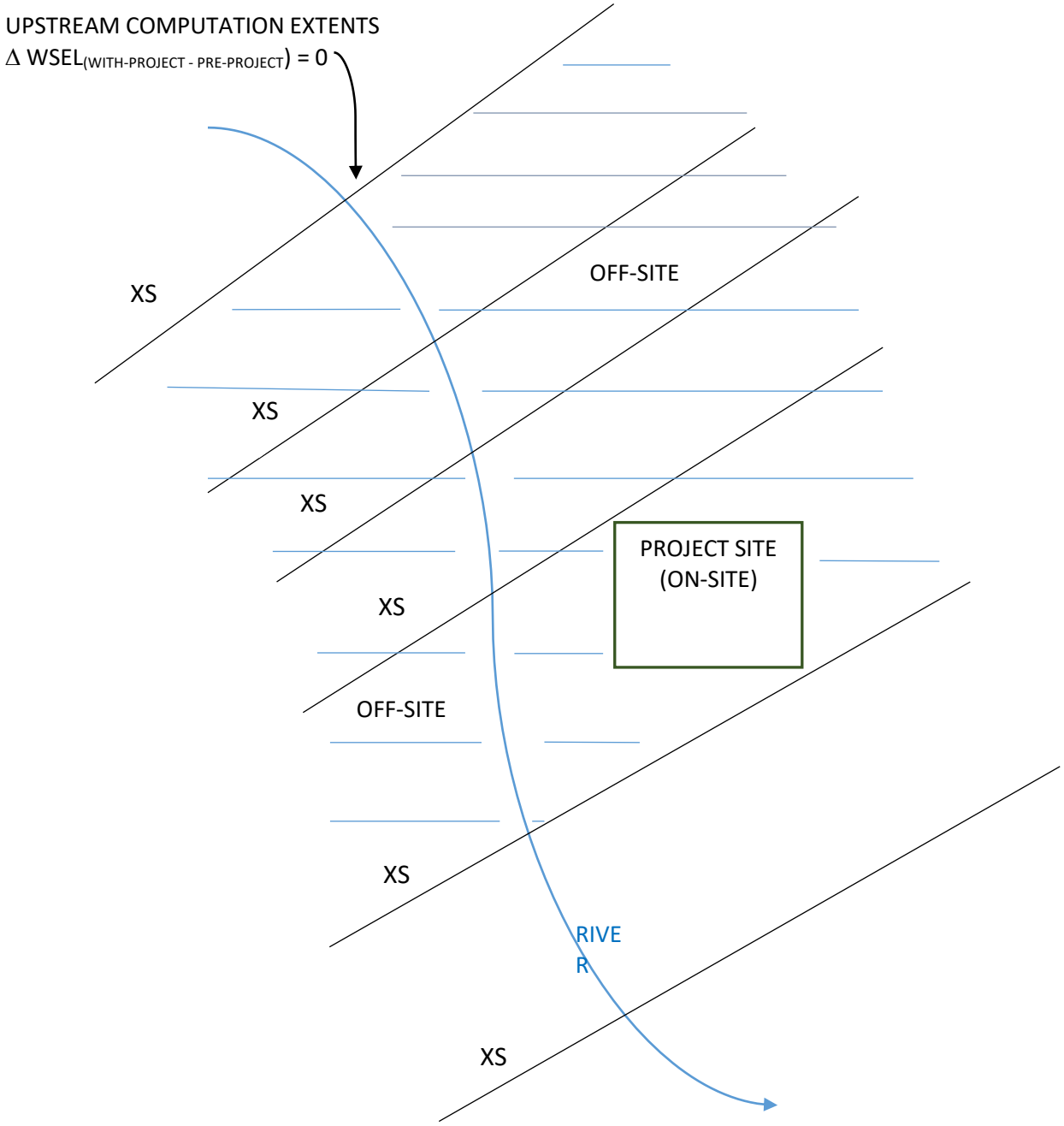
The allowable valley storage reduction is computed as follows:

- *Determine Pre-Project On-Site valley storage (this will be the denominator in the equation to compute percent change in valley storage*
- *Determine With-Project On-Site valley storage*
- *Determine Pre-Project Off-Site valley storage (if needed)**
- *Determine With-Project Off-Site valley storage (if needed)**
- *Determine Valley Storage Net Change which equals the sum of the On-Site and Off-Site valley storage values.*
- *Determine Valley Storage Percent Change: Divide Valley Storage Net Change into the Pre-Project On-Site valley storage value. This will produce the percent change in valley storage (which could be a gain or loss). *Note that if the With-Project conditions model produces no reduction in water surface profile, the only valley storage change is confined to the project tract, since there are no Off-Site impacts.*

Required valley storage is generally provided within the proposed project site. However, compensatory valley storage may be provided at a separate site, outside of the proposed project

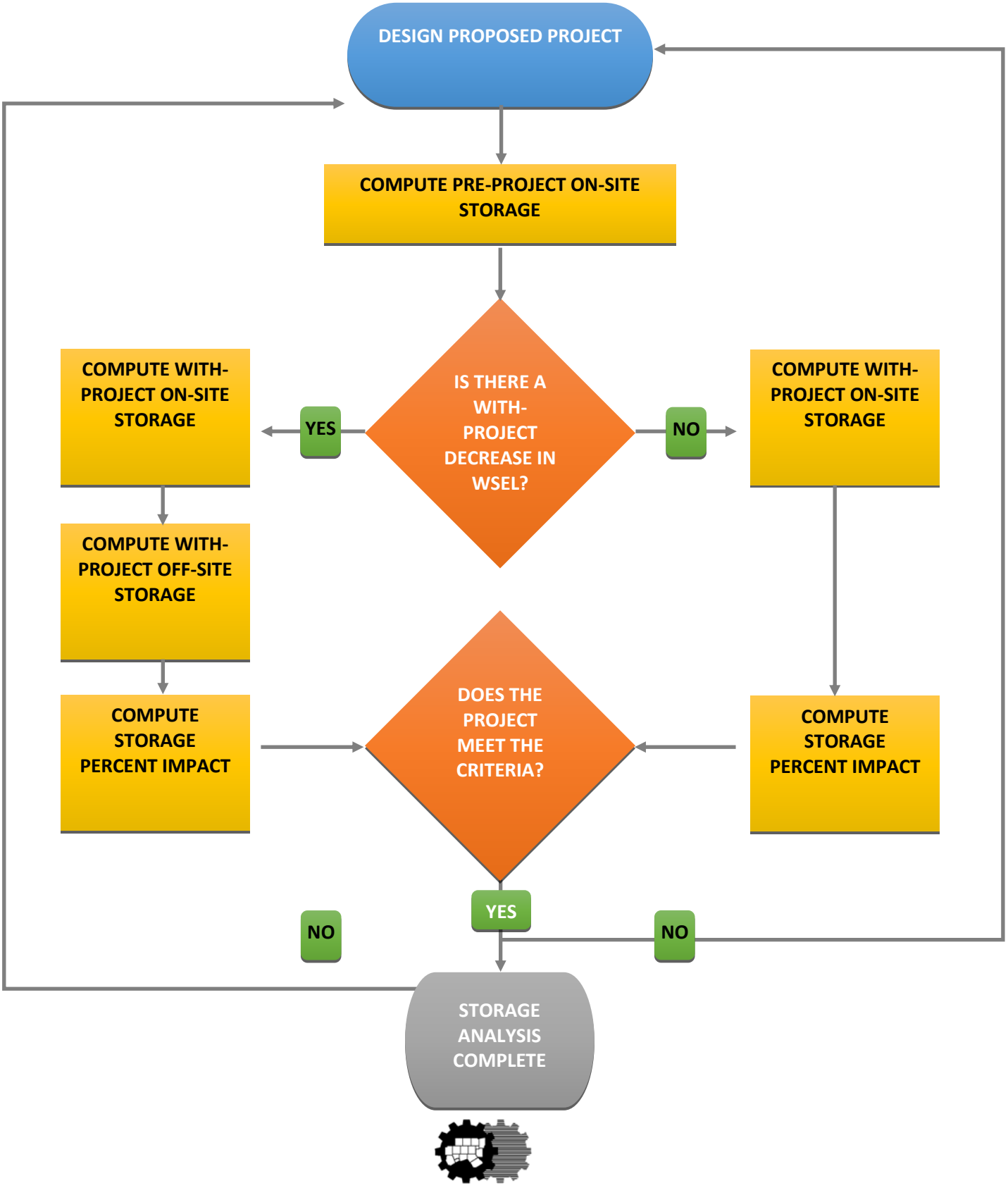
site, but preferably in the vicinity of the original project site and within the hydrologic routing reach, subject to approval by the local CDC/Floodplain Administrator and the USACE. This valley storage compensation area will be evaluated with the same criteria as the original project site such that the valley storage compensation can be maintained in perpetuity. The valley storage site footprint shall be added to the original On-Site tract footprint to calculate the total tract area, which will be used to compute the percent reduction (or gain) in overall valley storage. The valley storage area will be subject to a full hydraulic evaluation in the same manner as the original project site if it is located in the active flow area. If the proposed valley storage area is located within a participating city or county jurisdiction other than the originating jurisdiction, then the CDC/Floodplain Administrator from the affected city or county must be notified and an approval granted by the affected CDC/Floodplain Administrator.

FIGURE 2-1
PROJECT SITE LAYOUT PLAN



Note: For bridge/roadway projects, the On-Site footprint is the right-of-way limits within the floodplain.

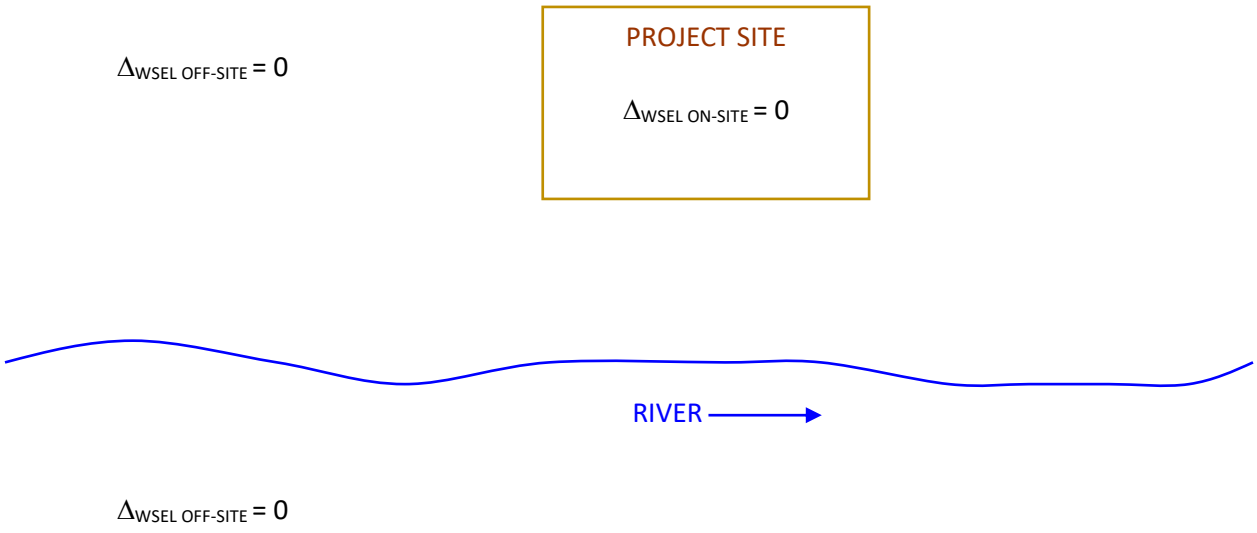
FIGURE 2-2
FLOW CHART - CDC VALLEY STORAGE COMPUTATION PROCESS



2.1.1.2.1 Valley Storage Examples

The following examples are intended to assist the Applicant engineer in computing valley storage impacts of proposed projects. Assistance is available from the CDC/Floodplain Administrator and/or the USACE Water Resources Branch.

Example 1. No decrease in the With-Project 100-year and SPF water surface elevations within project site (On-Site) and outside of project site (Off-Site). All valley storage compensation within the proposed project site.



Pre-Project Conditions

Pre-Project 100-year volume On-Site = 100 acre-feet
Pre-Project SPF volume On-Site = 200 acre-feet

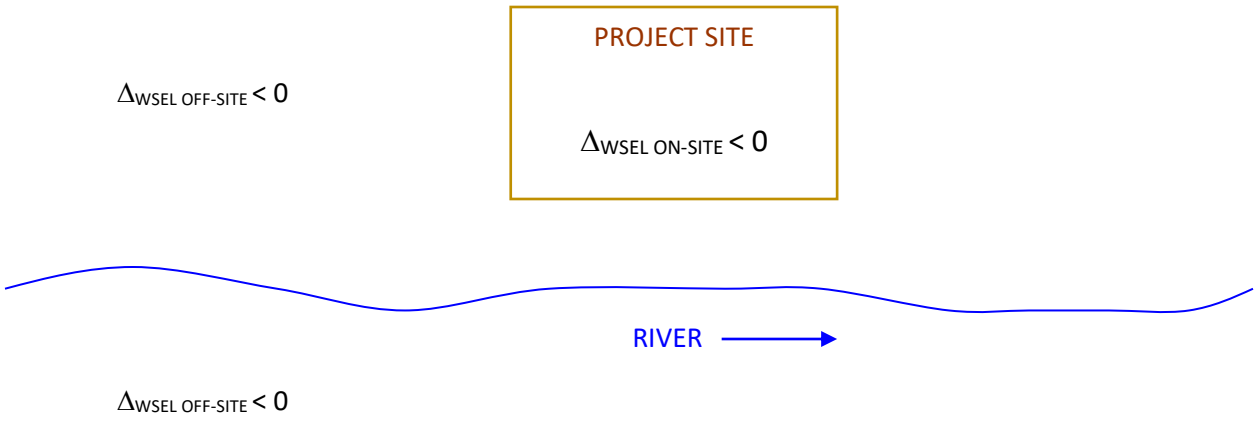
With-Project Conditions

With-Project 100-year volume On-Site must be ≥ 100 acre-feet

With-Project maximum SPF allowable loss of valley storage (5%) = 10 acre-feet (200 acre-feet x 0.05), therefore, the total With-Project SPF valley storage On-Site must be ≥ 190 acre-feet (200 acre-feet – 10 acre-feet).

All computations for valley storage are confined to the project tract On-Site, since the With-Project conditions model produces no reduction in water surface profile. Consideration of Off-Site valley storage is not necessary.

Example 2. Decrease in the With-Project 100-year and SPF water surface elevations within project site (On-Site) and outside of project site (Off-Site). All valley storage compensation within the proposed project site.



Pre-Project Conditions

Pre-Project 100-year volume On-Site = 100 acre-feet
Pre-Project SPF volume On-Site = 200 acre-feet

With-Project Conditions

With-Project 100-year volume On-Site must be ≥ 100 acre-feet

With-Project maximum SPF allowable loss of valley storage (5%) = 10 acre-feet (200 acre-feet x 0.05), therefore, the total With-Project SPF valley storage On-Site must be ≥ 190 acre-feet (200 acre-feet – 10 acre-feet)

Determine valley storage net change which is the sum of the On-Site and Off-Site valley storage values. Divide into the Pre-Project On-Site valley storage value. This will produce the percent change in valley storage (which could be a gain or loss). For example for the SPF:

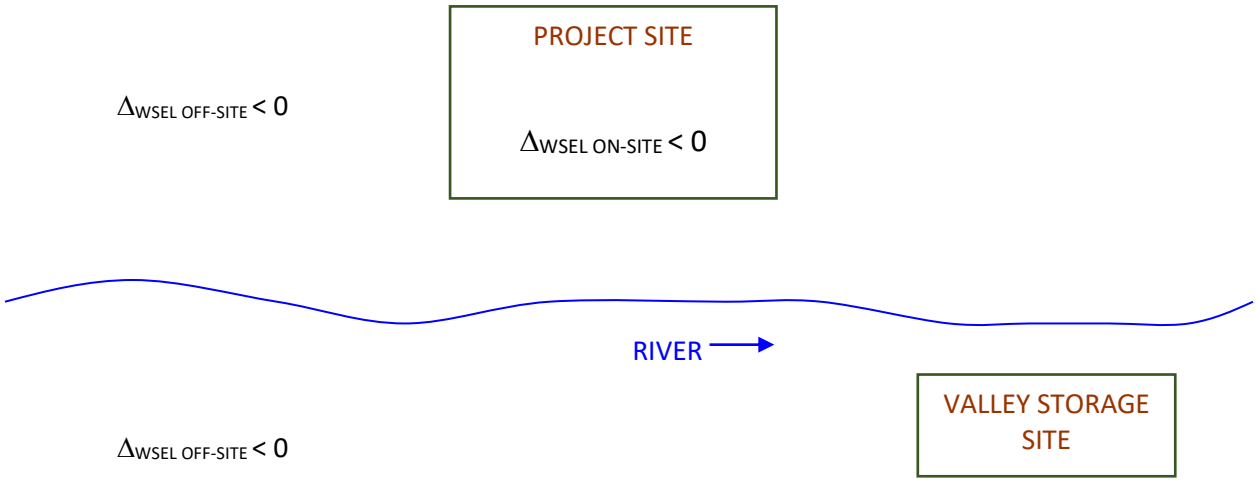
Pre-Project On-Site 200 af*
With-Project On-Site 200 af

Pre-Project Off-Site 300 af
With-Project Off-Site 295 af

Σ On-Site = (200-200) = 0
Σ Off-Site = (295-300) = -5

% change in valley storage = -5/200* = 0.025 = -2.5%

Example 3. Decrease in the With-Project 100-year and SPF water surface elevations within project site (On-Site) and outside of project site (Off-Site). Valley storage compensation located in a separate tract from the proposed project site.



Pre-Project Conditions

Pre-Project 100-year volume On-Site = 120 acre-feet ⇨ Total: Project Site + Valley Storage Site
Pre-Project SPF volume On-Site = 220 acre-feet

With-Project Conditions

There is a decrease in the 100-year and SPF water surface elevations On-Site and Off-Site, therefore, the total With-Project 100-year volume (On-Site and Off-Site) must be ≥ 120 acre-feet

With-Project maximum SPF allowable loss of valley storage (5%) = 11 acre-feet (220 acre-feet x 0.05), therefore, the total With-Project SPF valley storage On-Site and Off-Site must be ≥ 209 acre-feet (220 acre-feet – 11 acre-feet)

Pre-Project On-Site 220 af*
With-Project On-Site 222 af

Pre-Project Off-Site 400 af
With-Project Off-Site 388 af

Σ On-Site = (222-220) = 2
Σ Off-Site = (388-400) = -12
% change in valley storage = -10/220* = 0.045 = -4.5%

2.1.1.3 Velocities. Alterations of the floodplain may not create or significantly increase an erosive water velocity, on-site and off-site, including the main river channel, based on requirements of the permitting entity.

2.1.2 Hydraulic Impacts of Tributary Projects

For portions of tributary projects that are located in the Regulatory Zone, the hydraulic criteria are the same as for projects located in the Clear Fork, West Fork, Elm Fork, and main stem Trinity River Regulatory Zone. No separate tributary hydraulic model is required.

2.1.3 Cumulative Impacts

The upstream, adjacent, and downstream effects of the proposed project will be considered. The proposed project will be reviewed with the assumption that adjacent projects have an equal opportunity to be constructed. The cumulative impacts of all projects must not exceed the Common Regional Criteria.

2.1.4 Preservation of Adjacent Project Storage

The Applicant must respect the valley storage provided by adjacent projects by ensuring that their hydraulic connection to the river is maintained. If the proposed project blocks the hydraulic connection of the adjacent project, additional valley storage to offset the decrease caused by the blockage of the hydraulic connection is required.

2.1.5 Design Level of Flood Protection

The engineering analysis for a CDC will include the effects of the Applicant's proposal on the 100-year flood and Standard Project Flood and shall demonstrate meeting USACE, TWDB, and local criteria for pertinent flood events.

2.1.5.1 Levees. For new levees protecting urban development, the minimum design criterion for the top of levee is the SPF water surface elevation plus four feet, unless a relief system is designed and implemented that will prevent catastrophic failure of the levee system.

2.1.5.2 Buildings. For fills associated with building construction of habitable structures, the minimum finished floor elevation is the CDC 100-year flood elevation plus one foot. However, in some cases, city and county criteria exceeds this minimum, and the higher standard must be used in the design of the project and the CDC Application.

2.1.6 Storage and Borrow Areas

The excavation of storage and borrow areas to elevations lower than the bottom elevation of the stream is generally hydraulically undesirable. The volume of such excavations above the elevation to which the area can be kept drained can be considered in the hydrologic storage computations. Refer to the Paragraph 2.1.1.2 Valley Storage regarding baseline flows. Excavation or fill that compromises channel stability shall not be allowed.

2.1.7 Significant Temporary Construction.

For proposed projects that do not qualify for an Exemption and have significant temporary construction activities associated with the proposed project, the Applicant shall be required to submit hydraulic and valley storage impacts representing these temporary impacts, as well as the proposed final project. Mitigation of adverse hydraulic and valley storage impacts due to these temporary construction activities may be required by the CDC/Floodplain Administrator.

Chapter 3
CDC APPLICATION REQUIREMENTS

3.1 CDC APPLICATION REQUIREMENTS

CDC applications shall be submitted on forms contained in Section 3.2. The permitting entity shall furnish the forms to the Applicant in either hard copy or digital form. To insure that all proposed developments are afforded a complete and consistent level of analysis, the Application shall include, but not be limited to the following:

- CDC Application Part 1 and Part 2 (see Section 3.2)
- CDC Application Data Requirements (See Section 3.1.2)
- CDC Cost Recovery Fee (Section 3.3).

An Engineer licensed in the State of Texas must seal or stamp the CDC Application. Detailed descriptions of these requirements are presented below.

3.1.1 CDC Application - Part 1 and Part 2

To initiate the Corridor Development Certificate process, the Applicant should first contact the permitting entity for a pre-submittal conference. The CDC/Floodplain Administrator of that entity will determine if the project is located within or partially within the Regulatory Zone.

If no part of the proposed project is located within the Regulatory Zone, the CDC/Floodplain Administrator is not required to take any further action beyond making this determination. No forms are required and the CDC Process ends at this point (although other local floodplain regulations may apply).

If the project is located within or partially within the Regulatory Zone, the CDC Process must be followed. The Applicant shall complete Part 1 and Part 2 of the CDC Application (see Section 3.2) and submit the Application to the CDC/Floodplain Administrator, unless the Applicant is seeking an Exemption, in which case the Applicant must only complete Part 1. If the CDC/Floodplain Administrator decides at any time to deny a CDC, the CDC Process may be terminated.

Hydrologic data (Part 1). Discharges for the 100-year and Standard Project Flood events are based on projected year 2055 urbanization. The Applicant shall use the year 2055 discharges provided in Appendix B Table 1 (and included in the HEC-RAS CDC Model, or as revised by USACE). The Applicant should clearly identify these discharges in the '100 Year Flood' and 'Standard Project Flood' tables.

In conjunction with the common policies described herein, the CDC discharges listed in Appendix B Table 1 represent a watershed with modest stability in future discharges. However, future discharge modifications will undoubtedly be required. For consistency in CDC review and evaluation of design requirements, the Trinity River Corridor Steering Committee will continue to periodically review and approve revisions to the discharges.

Hydraulic data (Part 2). Water surface elevations shall be provided at the upstream, middle, and downstream ends of the project (for Pre-Project and With-Project conditions) for the 100-year flood and Standard Project Flood discharges presented in the Appendix B Table 1. Hydraulic calculations shall be continued for a distance great enough upstream and downstream of the project to verify that water surface elevations are not increased by the proposed modifications.

Spaces are provided in the "100 Year Flood" and "Standard Project Flood" tables to list water surface elevations for a number of points upstream and downstream of the project. In all

cases, the best available water surface elevation data shall be utilized. Elevation data should be computed considering full cross-section widths across the floodplain.

3.1.2 CDC Application Data Requirements

The following information, as a minimum, shall be submitted in a CDC Application.

- Technical Report. A report that describes in detail the proposed project, the project area, the hydraulic modeling analysis, and a summary of the project impacts.

- Computer Models. Submit the HEC-RAS models for Pre-Project conditions and With-Project conditions in digital format. Include sufficient descriptions of the project (including new or revised cross-sections, plan names, etc.) in the HEC-RAS model for both Pre-Project and With-Project conditions. Include a listing and description of the plans used in the HEC-RAS models and the version of HEC-RAS used in the analysis.

- Output. HEC-RAS hydraulic computation output tables for Pre-Project and With-Project conditions models for the 100-year and SPF flood events in both hardcopy and digital format for the project reach and upstream river extents as necessary. Hardcopy HEC-RAS input data are not necessary as long as the HEC-RAS models are provided in digital format.

- Plots. Pre-Project and With-Project conditions cross-section plots (hardcopy). The number and location of sections shall adequately describe and support documented computations.

- Valley Storage Data. Detailed valley storage computations, produced by either the CDC Model or other methods. Include applicable plots indicating the water surface elevations produced from the baseline discharges.

- Operation and Maintenance Summary. Explanation of the operation and maintenance aspects of the project and requirements to preserve the 'as-designed' conditions represented in the submitted computer model.

- Comparison Tables. Develop comparison tables for Pre-Project and With-Project water surface elevations, channel velocities, and overbank velocities, for the 100-year and SPF flood events.

- Location Map(s). A map indicating the location of the project within the Trinity River Corridor and a more detailed map indicating the location of the project relative to adjacent properties and major roads and physical features.

- Hydraulic Work Map. The hydraulic work map must indicate the locations of the model cross-sections relative to the project used in the hydraulic analysis. The map must also show Pre-Project and With-Project contour data, floodplain and floodway boundaries, map scale, and benchmarks (with datum adjustments).

- Site Map. The site map may be general or detailed, according to the complexity of the project and the level of analysis required. The site map must be consistent with the permitting requirements of the community and should be adequate for confirmation of model parameters during technical review.

- Project Boundary in Digital Format (if available). At a minimum, the application shall include a hardcopy map indicating the project boundary used to compute the on-site valley storage.

3.1.3 CDC Cost Recovery Fee

For information regarding the CDC Cost Recovery Fee, see Section 3.3.

3.2 CDC APPLICATION FORM

The CDC Application Form consists of the following:

- CDC Application Checklist
- CDC Application Part 1 and Part 2
- Final CDC Action/Findings Form
- CDC Extension Request

CDC Tracking Code: _____

CDC APPLICATION CHECKLIST

APPLICATION FORMS

____ Application Form Part 1

____ Application Form Part 2

MAPS

____ Location map

____ Hydraulic Work Map

____ Site map

____ Project boundary in digital format

CDC MODEL FILES

____ Pre-Project conditions and With-Project conditions models in digital format

____ Hard copy printouts and plots of cross-sections and water surface elevation profiles for 100-year flood and SPF for Pre-Project and With-Project conditions

____ Technical Report

COST RECOVERY FEE

____ $6,000 for effective flow area

____ $4,000 for ineffective flow area

____ $6,000 for ineffective flow area but within the SPF effective flow area

____ $0 for exempted projects

CDC Tracking Code: _____

CDC APPLICATION - PART 1

To be completed by Applicant or Applicant's representative and submitted to the appropriate local CDC/Floodplain Administrator. Attach additional pages as necessary. This application is considered public information and will be distributed to federal, state, and local governmental agencies as outlined in the CDC Manual.

1. APPLICANT INFORMATION

Applicant's Representative. Identify person knowledgeable of and authorized to respond to questions concerning data provided by the Applicant.

CDC Applicant/Property Owner: _____

Project Name: _____

Property Address: _____

City/County: _____

Owner/Applicant Representative:: _____

Telephone and Email: _____

Relationship to Applicant: _____

Address: _____

Telephone: _____

E-mail: _____

Engineer: _____

Engineer Telephone and Email: _____

Project Size (total acres): _____

Area of Floodplain at Project Site (acres): _____

CDC Tracking Code: _____

2. **LOCATION**

Provide general description of location, including street address, nearest cross street, and identified impacted water bodies:

Latitude/longitude of project centroid (to six decimal places). Can be found using DFWmaps.com:

_____

Project boundary in digital format (if available) _____

FEMA FIRM map/panel number, effective FIRM date, and flood zone: _____

_____

3. **PROPOSED PROJECT**

Proposed Activity: (check appropriate categories)

☐ dredge/channel modification

☐ swale construction

☐ fill

☐ excavation

☐ levee

☐ bridge/river crossing

☐ other (include explanation here)

Proposed Use: (check appropriate categories)

☐ private single dwelling(s)

☐ private multi-dwelling(s)

☐ public

☐ commercial

☐ industrial

☐ other (include explanation here)

Brief description of project:

4. PROJECT LOCATION WITH RESPECT TO INEFFECTIVE FLOW AREA

- ☐ Not located entirely within an ineffective flow area
- ☐ Located entirely within both the 100-year and the SPF ineffective flow area
- ☐ Located entirely within the 100-year ineffective flow area only

5. VERSION OF HEC-RAS USED IN THE ANALYSIS: _____

6. EXEMPTIONS AND VARIANCES

Exemption Category: (check if applicable - additional documentation may be required)

- ☐ Maintenance, repair, or identical replacement of existing infrastructure
- ☐ Outfall structures where the outfall has been permitted under the Federal NPDES or State TPDES program
- ☐ Intake structures
- ☐ Discharge of material for backfill or bedding for utility lines, provided that no significant change occurs in pre-existing bottom contours and excess material is removed to a disposal area out of the Regulatory Zone
- ☐ Bank stabilization activities provided that no significant change occurs in pre-existing bottom contours and excess material is removed to a disposal area out of the Regulatory Zone
- ☐ Small-scale projects that cause minimal change in ground surface elevation and no decrease in hydraulic conveyance and valley storage for the 100-year flood
- ☐ Temporary construction-related activity
- ☐ Specific Prior Development - The existing development projects as defined in Section 1.7 DEFINITIONS AND ACRONYMS of this Manual and listed in Appendix B.3 (also referred to as Grandfathered Projects).

Applicant requests a Variance to Common Permit Criteria: ☐ Yes ☐ No

(If yes, please explain supporting information here)

CDC Tracking Code: _____

CDC APPLICATION - PART 2

Detailed Hydrologic and Hydraulic Information

To be completed by Applicant or Applicant's representative and submitted to the appropriate local CDC/Floodplain Administrator. Attach additional pages as necessary. This application is considered public information and will be distributed to federal, state, and local governmental agencies as outlined in the CDC Manual.

100-YEAR FLOOD

Parameter	Location	Pre-Project	With-Project	Change
Discharge	Downstream Boundary (DB) cross-section _____	cfs	n/a	n/a
	Upstream Boundary (UB) cross-section _____	cfs	n/a	n/a
Channel Velocity	Downstream Boundary cross-section _____	fps	fps	fps
	Upstream Boundary cross-section _____	fps	fps	fps
Water Surface Elevation (NGVD)	_____ feet downstream of DB cross-section _____	ft	ft	ft
	_____ feet downstream of DB cross-section _____	ft	ft	ft
	Downstream Boundary cross-section _____	ft	ft	ft
	Mid-project cross-section _____	ft	ft	ft

	Upstream Boundary cross-section _____	ft	ft	ft
	_____ feet upstream of DB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
Project Lands in Floodplain (acre)	On-Site	ac	ac	ac
Valley Storage (acre-feet)	On-Site	ac-ft	ac-ft	ac-ft
	Off-Site (if applicable)	ac-ft	ac-ft	ac-ft
Valley Storage Net Change (acre-feet)	Sum of (On-Site Change + Off-Site Change)			ac-ft
Valley Storage Percent Change (%)	Valley Storage Net Change/Pre-Project On-Site Valley Storage			%

STANDARD PROJECT FLOOD (SPF)

Parameter	Location	Pre-Project	With-Project	Change
Discharge	Downstream Boundary (DB) cross-section _____	cfs	n/a	n/a
	Upstream Boundary (UB) cross-section _____	cfs	n/a	n/a
Channel Velocity	Downstream Boundary cross-section _____	fps	fps	fps
	Upstream Boundary cross-section _____	fps	fps	fps
Water Surface Elevation (NGVD)	_____ feet downstream of DB cross-section _____	ft	ft	ft
	_____ feet downstream of DB cross-section _____	ft	ft	ft
	Downstream Boundary cross-section _____	ft	ft	ft
	Mid-project cross-section _____	ft	ft	ft
	Upstream Boundary cross-section _____	ft	ft	ft

	_____ feet upstream of DB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
	_____ feet upstream of UB cross-section _____	ft	ft	ft
Project Lands in Floodplain (acre)	On-Site	ac	ac	ac
Valley Storage (acre-feet)	On-Site	ac-ft	ac-ft	ac-ft
	Off-Site (if applicable)	ac-ft	ac-ft	ac-ft
Valley Storage Net Change (acre-feet)	Sum of (On-Site Change + Off-Site Change)	ac-ft	ac-ft	ac-ft
Valley Storage Percent Change (%)	Valley Storage Net Change/Pre-Project On-Site Valley Storage			%

7. VALLEY STORAGE MITIGATION

Describe hydraulic mitigation used to compensate for project valley storage impacts.

Application is hereby submitted for a Corridor Development Certificate (CDC). I certify that I am knowledgeable of the information contained in this application, and that to the best of my knowledge and belief, this information is true, complete, and accurate.

_____

Signature of CDC Applicant or Applicant's Representative

_____

Typed Name/Title/Date

_____

P.E. License Number and seal/stamp

CDC Tracking Code: _____

FINAL CDC ACTION/FINDINGS FORM

(To be completed by CDC/Floodplain Administrator and submitted to NCTCOG)

CDC ACTION: (check one)

☐ Granted with favorable/neutral comments from other signatories

☐ Granted with one or more unfavorable comments from other signatories

☐ Granted with Variance with favorable/neutral comments from other signatories

☐ Granted with Variance with one or more unfavorable comments from other signatories

☐ Denied (please explain):

By my authority under the City/County, I hereby issue the City/County's findings and final action.

_____

Signature of CDC/Floodplain Administrator City/County

_____

Typed Name/Title/Date

(For multi-jurisdictional approval) By my authority under the City/County, I hereby issue the City/County's findings and final action.

_____

Signature of CDC/Floodplain Administrator City/County

_____

Typed Name/Title/Date

CDC Tracking Code: _____

CDC EXTENSION REQUEST

(To be submitted by CDC Applicant to local CDC/Floodplain Administrator, with a copy to NCTCOG)

Applicant's Representative. Identify person knowledgeable and authorized to respond to questions concerning data provided by the Applicant.

Applicant Name: _____

Name of Representative: _____

Relationship to Applicant: _____

Project Address: _____

Address of Representative/Applicant: _____

Telephone/e-mail: _____

Explanation for Extension Request

_____

Applicant's or Representative's Signature/Typed Name /Title Date

---

CDC/Floodplain Administrator Action/Findings
(To be completed by CDC/Floodplain Administrator)

Extension Request Granted? Yes ☐ No ☐

Period of Extension: From: _____ To: _____

_____

Signature of CDC Administrator/Typed Name/Title Date City/County

3.3 CDC Submittal

3.3.1 Fee

The CDC Cost Recovery Fee funds the costs associated with the USACE Technical Review of CDC applications and NCTCOG corridor-wide CDC administration. The fees, paid into the CDC Review Fund, also support the continued USACE maintenance of the CDC Model.

CDC Applicants for development activities within the Regulatory Zone and within a hydraulically effective flow area will submit to the City/County a $6,000 check payable to NCTCOG as Custodian of the CDC Review Fund.

Evaluation of projects for water surface elevation and valley storage criteria will be based on the following guidelines:

Projects within the CDC Regulatory Zone but within a hydraulically ineffective flow area are required to pay a CDC recovery fee. The criteria governing the application of the ineffective flow area with respect to hydrologic and hydraulic impact requirements and CDC Cost Recovery Fee are as follows:

- Project is located within both the 100-year and SPF ineffective flow areas
  - No evaluation of the 100-year and the SPF water surface elevation is required
  - 100-year and SPF valley storage evaluation is required
  - CDC Application Fee $4,000*
- Project is located within a 100-year ineffective flow area but within the SPF effective flow area
  - No evaluation of 100-year water surface elevation is required
  - Evaluation of SPF water surface elevation is required
  - 100-year and SPF valley storage evaluation required
  - CDC Application Fee $6,000

*The reduction in fee represents the reduced costs for technical analyses and administration associated with projects that are within a CDC ineffective flow area of the Regulatory Zone.

CDC ineffective flow areas are defined in the CDC Model. The location of a project with respect to an ineffective flow area will be determined by the USACE with assistance of the local CDC/Floodplain Administrator.

3.3.2 Submittal

Applicant should provide the Cost Recovery Fee payments to:

North Central Texas Council of Governments - Custodian of Corridor
Development Certificate Review Fund
Department of Environmental and Development
P.O. Box 5888
Arlington, Texas 76005-5888

The CDC Tracking Code must be included on the check. The local CDC/Floodplain Administrator will coordinate the submittal of the CDC Cost Recovery Fee in a similar manner to the fees associated with FEMA reviews. Note: The CDC Cost Recovery Fee does not include fees related to federal or state programs (specifically, FEMA Letter of Map Change review fees).

Once the Cost Recovery Fee is paid to NCTCOG as Custodian of the CDC Review Fund, NCTCOG will forward a check for the appropriate fee to the USACE. The check, bearing the CDC Tracking Code for identification, shall be mailed to:

U.S. Army Corps of Engineers
Fort Worth District
ATTN: CESWF-RM-FC
P.O. Box 17300
Fort Worth, Texas 76102-0300

Supplemental fees to fund additional USACE Technical Review will be required for projects requiring more extensive analysis. In the event that the USACE determines that additional

funds are required to meet the final cost of the specified Technical Review, the USACE shall notify the CDC Applicant and NCTCOG in writing of the amount of additional funds required. These additional costs will be billed on a per hour basis beyond the Cost Recovery Fee amount based upon a time and cost estimate provided by USACE within the 30-day review period. Within 30 calendar days thereafter, the Applicant must provide the additional funds to the NCTCOG as custodian of the CDC Review Fund. The additional funds shall include a $250 processing fee for the NCTCOG. NCTCOG shall provide the USACE with a check for the full amount of the additional required funds. The Technical Review will be suspended if no funds are received.

3.3.3 Submittal to CDC Participants

The CDC application should be submitted electronically to the CDC participants. The CDC participants are found in Appendix E.

CHAPTER 4
THE CDC PROCESS

A process as complex as the CDC Process can be described from a variety of perspectives. In order to describe the process for the purposes of this manual, two perspectives have been utilized. Section 4.1 CDC PROCESS - OUTLINE DESCRIPTION describes the process from the point of view of a CDC Applicant. Section 4.2 CDC PROCESS - RESPONSIBILITY DESCRIPTIONS describes the responsibilities of the CDC/Floodplain Administrator, the USACE Hydrology and Hydraulics Branch, the USACE Regulatory Branch, TCEQ, Reviewing Local Governments (Signatories), NCTCOG, and the CDC Applicant.

4.1 CDC PROCESS - OUTLINE DESCRIPTION

4.1.1 Pre-Application Conference and Determination

To initiate the CDC Process, the Applicant shall meet with the permitting entity (city or county) for a Pre-Application Conference. The CDC/Floodplain Administrator of that local government identifies the location of the proposed project in relation to the boundary of the Regulatory Zone.

- If the project is located completely outside the Regulatory Zone, the CDC/Floodplain Administrator is not required to take any further action. No forms are required and the CDC Process ends at this point, although other local floodplain ordinance requirements may apply.

- If the project is located within or partially within the Regulatory Zone, the CDC Process must be continued.

If a project is located within two or more jurisdictions within the Regulatory Zone, the jurisdiction with the largest portion of project land area will be responsible for the CDC application process (lead permitting entity) subject to agreement between the local jurisdictions. Two local jurisdictions can agree to a multijurisdictional permit in which case they would both complete the Final CDC Action/Findings Form. The Applicant shall submit a complete CDC application to all jurisdictions in which the project is located. The lead permitting entity shall consult with the other jurisdictions in which the project is located and obtain their approval before granting a CDC.

4.1.2 Obtaining the CDC Model

The Applicant or the City/County shall contact the USACE Fort Worth District Hydrology and Hydraulics Branch (817-886-1690 or 817-886-1676) to obtain the current CDC Model.

4.1.3 Submission of CDC Application and Assignment of Tracking Code

The Applicant is required to submit all parts of the CDC Application as described in Chapter 3 and shown on the Application Checklist (Section 3.2).

Upon receipt of a completed CDC Application, the CDC/Floodplain Administrator must assign it a CDC Tracking Code, which is a unique identification number for each CDC Application. The Tracking Code begins with "CDC" and then indicates the city/county name, the date (month/day/year), and the order the application was received that day. For example, if the City of Dallas receives two CDC applications on 1 June 2008, the CDC Tracking Codes would be as follows: "CDC Dallas 060108-1" and "CDC Dallas 060108-2."

4.1.4 Request for Exemption

The CDC Applicant may request an Exemption to the CDC Process in writing, using the Part 1 of the CDC Application. The permitting entity will issue or deny the Exemption in accordance with the allowable exemptions noted in Section 1.6.

If an exemption is granted, Part 2 of the CDC Application does not have to be completed. Part 1 of the CDC Application should be maintained on file by the permitting entity and a copy provided to NCTCOG for CDC administration and to the USACE for documenting hydrologic and hydraulic analyses. This ends the CDC Process for the case of Exemption. (The CDC Applicant should still contact the USACE and TCEQ to determine if the development activity is subject to other specific permit requirements by those agencies.)

4.1.5 Request for Variance

An Applicant seeking a Variance must complete Parts 1 and 2 of the CDC Application and undergo Regional Review and Comment by participating cities and counties of the Trinity River Corridor Interlocal Agreement. In addition, whenever a Variance is requested, Technical Review by USACE is required.

4.1.6 Regional Review and Comment

Upon receipt of a complete CDC Application, the CDC/Floodplain Administrator initiates the Regional Review and Comment process by forwarding electronic copies of the CDC Application to the local government signatories, USACE Hydrology and Hydraulics Section (1 hard copy required), TCEQ, and NCTCOG. Addresses are listed in Appendix E. Electronic copies of the Application larger than 5MB must be sent by regular mail on a compact disc or placed on an FTP site for download.

Other participating local government signatories will have 30 days from receipt of the CDC Application to review and comment. If the signatory reviewer decides to comment, the comments should be forwarded in writing (hard copy or e-mail under 1MB) to the appropriate CDC/Floodplain Administrator and copied to NCTCOG (see sample review and comment letter D.1 in Appendix D).

4.1.7 Technical Review

To initiate Technical Review, the required CDC cost recovery payment is submitted, along with the completed CDC Application, to NCTCOG as Custodian of the CDC Review Fund. USACE Technical Review will not occur without payment. See Section 3.3 for a complete discussion of the CDC Cost Recovery Fee.

USACE shall have 30 days to complete the Technical Review, following payment processing and receipt of complete application information (payment processing through the NCTCOG and USACE administrative systems may take 2-4 weeks from NCTCOG receipt of payment). Comments from the USACE will be forwarded to the local CDC/Floodplain Administrator (copied to the Applicant and NCTCOG). In the event that the USACE is not able to complete the CDC Review within 30 days, the USACE will notify the Applicant, the local CDC/Floodplain Administrator, and NCTCOG.

4.1.8 Final CDC Decision

The CDC/Floodplain Administrator reviews comments from other CDC participants and the results of the Technical Review and makes a CDC decision. This decision can be:

- granting the CDC with favorable/unfavorable comments from other signatories,

- granting the CDC with conditions (including a Variance) with favorable/unfavorable comments from other signatories, or
- denying the CDC.

The CDC/Floodplain Administrator shall notify the Applicant of the final CDC decision (see sample letters D.2 and D.3 in Appendix D). The CDC/Floodplain Administrator shall complete the Final CDC Action/Findings Form and forward copies to NCTCOG and USACE.

Note: A CDC will not substitute for a Section 404 permit and vice versa. The Applicant must also satisfy permitting requirements of state and federal agencies (FEMA, TCEQ, USACE), if such permits are applicable.

4.1.9 CDC Term, Annual Status Reports, and CDC Extensions

The CDC is valid for five (5) years. During the development phase, annual project status reports must be submitted to the CDC/Floodplain Administrator and forwarded to NCTCOG (see sample status memo D.4 in Appendix D).

If no development activities occur within five (5) years from the date of issuance, the Applicant may submit a written request, no later than 60 days prior to the fifth anniversary of the CDC issuance, for up to a three (3) year CDC extension (see Form in Section 3.2), otherwise, the CDC shall cease to be valid on that anniversary date. The permitting entity may grant an additional three-year extension (see sample letter D.5 in Appendix D). If an extension is granted, summary project status reports are required and must be submitted to the CDC/Floodplain Administrator annually. If an extension is not granted, the Applicant must reapply for a CDC.

4.1.10 Changes in Development Activities, Project Plans, or Regulatory Programs

Any significant changes to a development activity, project plan, or regulatory program require a re-evaluation of the CDC and may require re-application for a new CDC. In general terms, a

significant change that would require a new CDC would be a change that would materially affect approved valley storage or conveyance, or have significant environmental impacts. Changes in regulatory programs include city ordinance/county order changes of the permitting jurisdiction, as well as changes in state and federal regulatory programs prior to the completion of the development activity. The CDC/Floodplain Administrator will review the changes and determine whether re-application for a new CDC is required.

The permitting entity's CDC decision is subject to that jurisdiction's floodplain ordinance appeals process. Any change in a CDC action due to an appeal should be forwarded to NCTCOG.

4.2 CDC PROCESS - RESPONSIBILITY DESCRIPTIONS

4.2.1 CDC/Floodplain Administrator

- Hold initial pre-application consultation with potential Applicants
- Determine if the project is located inside or outside the CDC Regulatory Zone
- Determine if the project qualifies for an Exemption
- Ensure that the CDC Application is complete and that the current version of the CDC Model has been used. Assign tracking number.
- Request a Technical Review by the USACE via written letter.
- Forward copies of the CDC Application to the local government signatories, USACE Fort Worth District Hydrology and Hydraulics Branch (2 copies), TCEQ, and NCTCOG for Regional Review and Comment and Technical Review. Respond to signatory reviewers' requests for more information as needed.
- Coordinate CDC Cost Recovery Fee payment
- Based on regional comments, Technical Review, and the CDC/Floodplain Administrator's own judgment, determine final CDC action. Issue a letter and forward copies of Final CDC Action/Findings Form to NCTCOG,USACE, and CDC Participants.
- Request annual status reports from Applicant. Forward copies of status reports to NCTCOG.
- Re-evaluate CDC in the event of significant changes in project
- Submit responses to CDC extension requests to the Applicant with a copy to NCTCOG, USACE, and CDC Participants.

4.2.2 USACE

- Perform Technical Review within 30 days from the time that the review fee has been processed and a complete Application has been received (See Section 4.1.7)
- Notify the permitting entity, Applicant's Representative, and NCTCOG, if the Technical Review will take longer than 30 days

- Provide Technical Review findings to permitting entity, Applicant's Representative, and NCTCOG
- Update the CDC Model with project information

4.2.3 USACE Regulatory Branch

- Notify USACE permit applicants that they may need to apply for a CDC
- Forward Section 404 determination to permitting entity, Applicant's representative, and NCTCOG

4.2.4 TCEQ

- Notify parties applying for a TCEQ 401 Certification that they may need to apply for a CDC
- Forward 401 Certification reviews to Applicant, permitting entity, and NCTCOG

4.2.5 Reviewing Local Governments (Participants)

- Review CDC Applications forwarded for Regional Review and Comment
- Forward comments to appropriate CDC/Floodplain Administrator and NCTCOG within 30 days of receipt of CDC Application

4.2.6 NCTCOG

- Track CDC applications
- NCTCOG will forward a check for the appropriate fee to the USACE
- Submit quarterly CDC Status Reports to Trinity River Committees and participating cities and counties, and USACE
- Provide support for revisions of the CDC Manual and CDC maps when necessary
- Administer CDC Cost Recovery Fee

4.2.7 CDC Applicant

- Obtain current CDC Model

- Pre-application conference
- Prepare CDC Application
- Submit the CDC Application and the Cost Recovery Fee to the local CDC/Floodplain Administrator. (CDC Tracking Code must be included on the check)
- Submit annual status reports to the local CDC/Floodplain Administrator, with a copy to NCTCOG
- If an extension of the CDC is desired, a request shall be submitted to the CDC/Floodplain Administrator no later than 60 days prior to the expiration of the CDC

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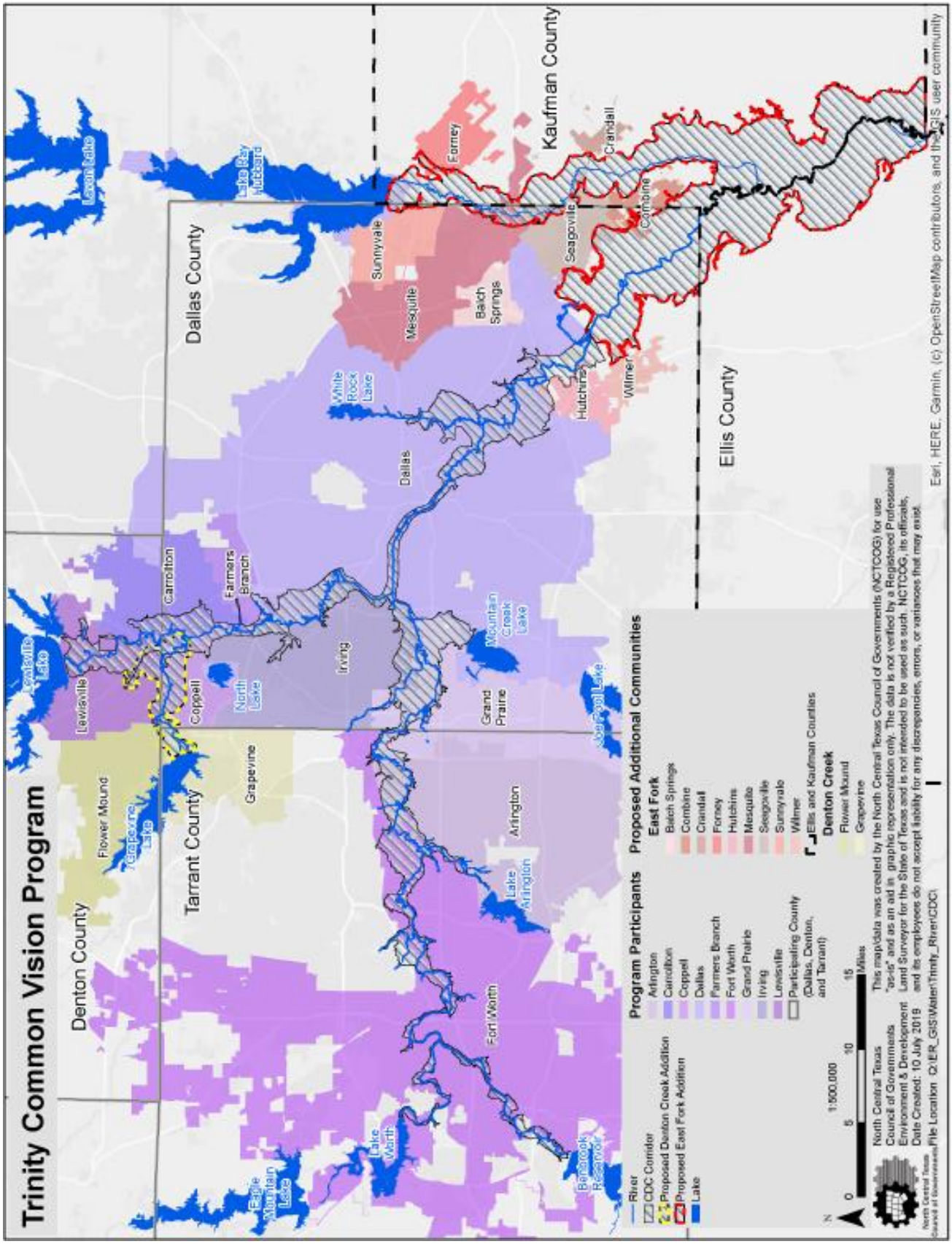
APPENDIX A

MAP SET
TRINITY RIVER CORRIDOR – CDC REGULATORY ZONE

The following map is for reference only. Final determination of the CDC Regulatory Zone boundary is the responsibility of the local Floodplain Administrator.


Trinity Common Vision Program
Denton County
Tarrant County
Dallas County
Kaufman County
Ellis County
Lewisville
Carrollton
Farmers Branch
Coppell
Grapevine
Flower Mound
Irving
Dallas
Grand Prairie
Arlington
Fort Worth
Mesquite
Balch Springs
Sunnyvale
Forney
Seagoville
Combine
Crandall
Hutchins
Wilmer
Program Participants
Proposed Additional Communities
East Fork
Denton Creek
Ellis and Kaufman Counties
Proposed Denton Creek Addition
Proposed East Fork Addition
River
CDC Corridor
Lake
1:500,000
Miles
North Central Texas Council of Governments
Environment & Development
Date Created: 10 July 2019
File Location Q:\ER_GIS\Water\Trinity_River\CDC\
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

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APPENDIX B

CDC MODEL - HYDROLOGIC AND HYDRAULIC BASELINE INFORMATION

B.1 Table 1A-1D: Computed Probability Discharges

The CDC flood event discharges listed in Table 1A-1D represent a watershed with modest stability in future discharges. However, discharge revisions may be required in the future. For consistency in permit review and evaluation of design requirements, the Trinity River Corridor Steering Committee will continue to periodically review and approve revisions.

B.2 Table 2A-2D: 100-Year Flood and SPF Water Surface Elevation Data

B.3 Specific Prior Development/Grandfathered Projects

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APPENDIX B.1

TABLE-1A
WEST FORK TRINITY RIVER
COMPUTED PROBABILITY DISCHARGES (CFS)

2055 FUTURE CONDITIONS
APPROVED AUGUST 2013

Location	100-Year (cfs)	SPF (cfs)
West Fork above Elm Fork	103,100	234,200
West Fork below Mountain Creek	103,600	234,500
West Fork above Mountain Creek	102,500	228,300
West Fork below Bear Creek	105,500	241,700
West Fork above Bear Creek	99,200	217,200
West Fork at Grand Prairie Gage	106,300	223,000
West Fork below Johnson Creek	109,000	222,700
West Fork above Johnson Creek	108,800	220,700
West Fork at SH 360	107,400	217,000
West Fork at FM 157	108,500	219,000
West Fork below Walker Branch	109,000	219,800
West Fork above Walker Branch	107,700	214,500
West Fork below Village Creek	110,400	217,400
West Fork above Village Creek	89,000	179,200
West Fork below Big Fossil Creek	91,400	181,900
West Fork above Big Fossil Creek	77,800	154,100
West Fork below Sycamore Creek	83,500	164,600
West Fork above Sycamore Creek	68,200	143,300
West Fork below Marine Creek	71,500	139,600
West Fork above Marine Creek	69,200	135,800
West Fork below Clear Fork (at West Fork Gage)	69,400	135,900
West Fork above Clear Fork	35,100	63,300
West Fork at Lake Worth Dam	35,100	56,700

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APPENDIX B.1

TABLE-1B
CLEAR FORK TRINITY RIVER
COMPUTED PROBABILITY DISCHARGES (CFS)

2055 FUTURE CONDITIONS
APPROVED AUGUST 2013

Location	**100-Year (cfs)**	**SPF (cfs)**
Clear Fork at mouth	48,300	93,000
Clear Fork at IH-30 (at Clear Fork Gage)	50,100	94,700
Clear Fork below Mary's Creek	48,500	95,700
Clear Fork above Mary's Creek	*13,000	*71,800
Clear Fork below Benbrook Dam spillway	*13,000	*71,800
Clear Fork at Benbrook Dam	**1	**1

* Controlling outflow from Benbrook Lake spillway.
** No release from Benbrook Dam outlet works.

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APPENDIX B.1

TABLE-1C
ELM FORK TRINITY RIVER
COMPUTED PROBABILITY DISCHARGES (CFS)

2055 FUTURE CONDITIONS
APPROVED AUGUST 2013

Location	100-Year (cfs)	SPF (cfs)
Elm Fork above West Fork	**28,800	94,100
Elm Fork above West Fork	44,700	94,100
Elm Fork below Bachman Branch	45,400	94,000
Elm Fork above Bachman Branch	44,600	91,800
Elm Fork below Joe's Creek	44,900	91,800
Elm Fork above Joes' Creek	45,000	91,000
Elm Fork below Hackberry Creek	48,100	92,000
Elm Fork above Hackberry Creek	46,900	87,900
Elm Fork below Farmers Branch	47,800	88,700
Elm Fork below Cell A sluice	47,600	87,300
Elm Fork below Irving FCD sluice	47,400	86,000
Elm Fork below Cooks Branch	47,200	85,700
Elm Fork below Cell B sluice	47,300	85,400
Elm Fork below Grapevine Creek	47,200	85,100
Elm Fork above Grapevine Creek	45,300	82,600
Elm Fork below Hutton Branch	45,400	82,200
Elm Fork at Carrollton Gage (Sandy Lake Road)	48,200	88,000
Elm Fork below Timber Creek (IH35 lower)	49,400	86,900
Elm Fork below Timber Creek (at IH35)	30,300	*66,600
Elm Fork below Dudley Branch	*21,000	*66,600
Elm Fork above Indian Creek	*21,000	*66,600
Elm Fork below Midway Branch	*21,000	*66,600
Elm Fork above Midway Branch	*21,000	*66,600
Elm Fork below Stewart Creek	*21,000	*66,600
Elm Fork above Stewart Creek	***1	***1
Elm Fork below Prairie Creek	***1	***1
Elm Fork above Prairie Creek at Lewisville Dam	***1	***1

* Controlling outflow from Lewisville Lake spillway.
** Elm Fork coincident discharge.
*** Above Lewisville Lake spillway. No release from Lake Lewisville outlet works.

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APPENDIX B.1

TABLE-1D
MAIN STEM TRINITY RIVER
COMPUTED PROBABILITY DISCHARGES (CFS)

2055 FUTURE CONDITIONS
APPROVED AUGUST 2013

Location	100-Year (cfs)	SPF (cfs)
Trinity River below Five Mile Creek	129,000	300,300
Trinity River above Five Mile Creek	130,000	300,100
Trinity River below Below Dallas Gage (Loop 12)	130,200	301,700
Trinity River below White Rock Creek	123,900	302,200
Trinity River above White Rock Creek	128,600	283,600
Trinity River at Dallas Gage (Commerce Street)	128,600	294,700
Trinity River below Elm Fork/West Fork	129,400	296,200

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APPENDIX B.2

TABLE 2-A
WEST FORK TRINITY RIVER
100-YEAR AND SPF DISCHARGE AND WATER SURFACE ELEVATIONS
2055 FUTURE CONDITIONS
MODEL APPROVED AUGUST 2013

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
0	WEST FORK/ELM FORK CONFLUENCE			
1494	103000	424.45	234000	437.17
2208	103000	424.49	234000	437.19
2687	103000	424.87	234000	437.42
3323	103000	426.18	234000	438.45
3831	103000	426.38	234000	438.63
4671	103000	426.69	234000	438.91
5788	103000	426.92	234000	439.08
8149	103000	427.23	234000	439.28
8375	104000	427.18	234000	439.26
8469	104000	427.19	234000	439.26
8884	104000	427.34	234000	439.32
9520	104000	427.53	234000	439.42
9616	104000	427.54	234000	439.43
9617	104000	427.48	234000	439.37
9690	LOOP 12			
9763	104000	427.55	234000	439.44
9764	104000	427.48	234000	439.41
9861	104000	427.57	234000	439.59
10280	104000	427.82	234000	439.64
10681	104000	427.95	234000	439.73
11274	104000	428.05	234000	439.79
11911	104000	428.16	234000	439.85
12811	103000	428.29	228000	439.92
13523	103000	428.54	228000	440.06
14335	103000	428.79	228000	440.23
15055	103000	428.96	228000	440.32
15780	103000	429.73	228000	440.72
16454	103000	430.29	228000	441.15
17516	103000	431.07	228000	441.78
17726	103000	431.86	228000	442.04

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
18140	103000	432.21	228000	442.27
18823	103000	432.45	228000	442.47
19924	106000	433.36	242000	442.83
24882	106000	435.86	242000	444.14
25434	106000	436.22	242000	444.45
27882	106000	436.82	242000	444.75
28450	106000	436.97	242000	444.87
28749	106000	437.01	242000	444.62
28795	**MEYERS/MACARTHUR ROAD**			
28841	106000	437.11	242000	445.04
29040	106000	437.37	242000	445.69
31471	106000	437.59	242000	445.81
32042	106000	437.91	242000	446.04
32718	106000	438.18	242000	446.24
32814	106000	438.22	242000	446.26
32919	106000	438.26	242000	446.28
32967	106000	438.31	242000	446.31
33014	106000	438.32	242000	446.31
33062	106000	438.33	242000	446.33
33136	106000	438.35	242000	446.34
33188	106000	438.36	242000	446.35
33220	106000	438.37	242000	446.35
33267	106000	438.37	242000	446.36
33294	106000	438.38	242000	446.36
33313	106000	438.38	242000	446.37
33335	106000	438.38	242000	446.37
33382	106000	438.38	242000	446.37
34268	106000	438.47	242000	446.44
35205	91500	438.58	242000	446.5
37015	91500	438.83	242000	446.65
37566	N/A	N/A	217000	446.74
37716	**HUNTER FERREL ROAD**			
37866	91500	439.18	217000	446.81
37996	91500	439.27	N/A	N/A
38059	91500	439.33	217000	446.88
38167	91500	439.36	217000	N/A
38285	91500	439.37	217000	N/A
38451	91500	439.5	217000	N/A

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
38623	91500	439.61	217000	N/A
38702	91500	439.64	217000	N/A
39095	91500	439.72	217000	N/A
40850	91500	440.28	217000	N/A
41697	91500	440.46	217000	446.98
42166	91500	440.55	217000	N/A
42303	91500	440.61	217000	N/A
42373	91500	440.64	223000	447.05
42751	91500	440.75	223000	447.09
42961	91500	440.78	223000	447.21
43369	91500	441.12	217000	447.45
43731	91500	441.23	217000	N/A
43880	91500	441.23	217000	N/A
44153	91500	441.2	223000	447.65
44232	91500	440.93	223000	447.13
44291.5	**BELT LINE ROAD**			
44351	91500	442.07	223000	448.28
44427	91500	442.86	223000	448.74
45296	91500	443.98	N/A	N/A
46329	91500	444.48	223000	449.07
46797	**BELT LINE ROAD RECLAMATION BRIDGE**			
47265	91500	444.77	N/A	N/A
48431	91500	445.01	N/A	N/A
49477	91500	445.5	223000	449.3
50225	91500	445.69	223000	449.48
50235	91500	445.68	N/A	N/A
51481	91500	445.77	223000	449.71
51581	91500	445.91	N/A	N/A
52592	91500	447.02	223000	450.35
52602	91500	447.03	N/A	N/A
53730	91500	448.27	223000	450.79
55761	109000	449.79	221000	452.62
57099	109000	450.47	221000	453.96
57303	109000	450.77	221000	454.4
57495	**SH 161**			
57586	109000	451	221000	454.8
58337	109000	451.43	221000	455.46
59680	109000	452.43	221000	456.82

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
60480	109000	452.98	221000	457.64
61054	109000	453.49	221000	458.46
61157	109000	453.52	221000	458.28
61158	109000	452.75	221000	458.08
61198	**NW 19TH STREET**			
61238	109000	453.98	221000	459.74
61239	109000	455.55	221000	461.55
61344	109000	455.89	221000	461.86
63507	109000	457.58	221000	464.06
65500	109000	458.96	221000	465.75
66037	109000	459.48	221000	466.38
66515	109000	459.86	221000	466.88
67543	109000	460.29	221000	467.47
67950	109000	460.53	221000	467.85
68329	109000	460.61	221000	467.93
69186	109000	461.04	221000	468.48
69798	109000	461.2	221000	468.67
70006	109000	461.29	221000	468.77
70832	107000	461.57	217000	469.11
71246	107000	461.71	217000	469.28
71700	107000	461.8	217000	469.37
72000	107000	461.84	217000	469.46
72500	107000	462.01	217000	469.58
72628	107000	462.05	217000	469.58
73460	107000	462.08	217000	469.5
73634	107000	462.07	217000	469.57
74891	107000	462.77	217000	470.52
78083	55500	463.93	217000	471.23
78183	55500	463.87	217000	471.32
78184	55500	464.07	217000	471.32
78189	**UNION PACIFIC RAILROAD**			
78194	55500	463.21	217000	471.36
78195	55500	463.21	217000	471.36
78299	55500	463.24	217000	471.39
80816	55500	465.29	217000	471.67
80912	55500	465.41	217000	472.13
80913	55500	465.41	217000	472.13
80958	**SH 360**			

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
81003	55500	465.58	217000	472.42
81004	55500	465.58	217000	472.43
81130	55500	465.75	217000	472.57
82018	55500	466.11	217000	473.04
83836	55500	466.24	217000	473.1
84548	55500	466.32	217000	473.14
85875	107000	466.5	217000	473.27
86300	107000	466.57	217000	473.34
87415	107000	466.64	217000	473.42
88045	107000	466.71	217000	473.53
88710	107000	466.83	217000	473.67
89870	107000	466.93	217000	473.79
91637	107000	467.04	217000	473.92
92680	107000	467.09	217000	474
94400	107000	467.15	217000	474.07
95765	107000	467.22	217000	474.16
96070	107000	467.25	217000	474.19
96240	107000	467.28	217000	474.24
96550	108000	467.33	219000	474.32
96955	108000	467.45	219000	474.44
97925	108000	467.59	219000	474.58
99908	108000	467.71	219000	474.7
99918	108000	467.71	219000	474.7
99980	108000	467.72	219000	474.85
99990	108000	467.72	219000	474.85
101480	108000	467.83	219000	474.97
102900	108000	467.94	219000	475.08
104010	108000	468.01	219000	475.14
104780	108000	468.05	219000	475.19
106865	108000	468.08	219000	475.21
107250	108000	468.13	219000	475.25
107775	108000	468.25	219000	475.41
108080	43500	468.25	219000	475.45
108335	43500	468.26	219000	475.5
108465	43500	468.28	219000	475.55
108570	43500	468.26	219000	475.6
108685	43500	468.39	219000	475.62
109005	43500	468.51	219000	475.65

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
109220	43500	468.41	219000	475.65
109385	43500	469.58	219000	475.72
109405	43500	469.6	219000	475.65
109480	**FM 157**			
109530	43500	470.81	219000	476.94
109585	43500	471.05	219000	477.22
109695	43500	471.22	219000	477.57
110210	43500	471.6	219000	477.71
110515	43500	471.94	219000	477.86
111205	43500	472.52	219000	478.22
111210	43500	472.49	219000	478.1
111230	**RIVER LEGACY PARKS PEDESTRIAN BRIDGE**			
111250	43500	472.56	219000	478.26
111255	43500	472.63	219000	478.46
111679	43500	472.87	219000	478.51
112574	108000	473.22	219000	478.85
116053	108000	476.12	219000	481.48
116664	109000	476.45	220000	481.88
118100	109000	477.57	220000	483.41
118369	109000	477.81	220000	483.91
118883	109000	478.27	220000	484.55
119740	109000	478.72	220000	484.95
120428	109000	479.04	220000	485.17
120930	109000	479.48	220000	485.47
121401	109000	479.75	220000	485.76
121885	109000	479.91	220000	485.98
122304	109000	480.09	220000	486.19
122578	109000	480.11	220000	486.29
122858	109000	480.12	220000	486.38
123144	109000	480.14	220000	486.47
123437	109000	480.16	220000	486.53
123744	109000	480.18	220000	486.57
124110	108000	480.22	215000	486.69
124600	108000	480.23	215000	486.81
125016	108000	480.26	215000	487.09
125286	108000	480.28	215000	487.29
125562	108000	480.31	215000	487.43
125701	108000	480.24	215000	487.45

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
125742	108000	480.36	215000	487.52
126020	108000	480.4	215000	487.56
126217	108000	480.43	215000	487.58
126400	108000	480.43	215000	487.64
126590	108000	480.45	215000	487.65
126600	108000	480.45	215000	487.65
127781	108000	480.53	215000	487.75
127872	108000	480.53	215000	487.76
127873	108000	480.54	215000	487.76
127880.5	**TRAMMEL-DAVIS ROAD**			
127888	108000	480.54	215000	487.76
127889	108000	480.54	215000	487.76
127989	108000	480.54	215000	487.76
127999	108000	480.56	215000	487.78
130407	108000	480.63	215000	487.84
130918	108000	480.65	215000	487.86
131467	108000	480.71	215000	487.91
133290	108000	480.85	215000	488.03
133369	108000	480.86	215000	488.04
133370	108000	480.84	215000	488.03
133391	**ARLINGTON-BEDFORD ROAD**			
133412	108000	480.86	215000	488.04
133413	108000	480.88	215000	488.05
133499	110000	480.89	217000	488.06
133537	110000	480.93	217000	488.1
133770	110000	480.96	217000	488.13
133780	110000	480.96	217000	488.13
136930	110000	481.08	217000	488.22
138208	110000	481.14	217000	488.3
140885	110000	481.29	217000	488.48
142669	89000	481.39	179000	488.58
144480	89000	481.45	179000	488.63
147336	89000	481.52	179000	488.71
147346	89000	481.52	179000	488.71
147404	89000	481.53	179000	488.71
147414	89000	481.53	179000	488.71
147424	89000	481.53	179000	488.72
147496	89000	481.54	179000	488.72

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
147512	89000	481.54	179000	488.72
148106	89000	481.6	179000	488.77
148663	89000	481.73	179000	488.86
149202	89000	481.71	179000	488.91
150374	89000	482.79	179000	489.19
151136	89000	483.4	179000	489.42
151932	89000	484.46	179000	489.96
153293	89000	485.56	179000	490.55
154301	89000	486.17	179000	491.08
154403	89000	486.27	179000	491.17
154404	89000	486.06	179000	491.1
154424	**PRECINCT LINE ROAD**			
154444	89000	486.41	179000	491.24
154445	89000	486.64	179000	491.29
154527	89000	486.65	179000	491.31
155714	89000	487.45	179000	492.11
158061	89000	488.87	179000	493.5
158561	89000	489.44	179000	494.02
158671	89000	489.47	179000	494.08
160778	89000	490.33	179000	494.92
160878	89000	490.44	179000	495.07
161058	89000	490.63	179000	495.29
161322	89000	490.83	179000	495.55
161634	89000	491.17	179000	495.93
161734	89000	491.23	179000	496.01
162435	89000	491.56	179000	496.43
165243	91500	492.75	182000	497.87
171900	91500	495.37	182000	500.04
176313	91500	499.41	182000	503.59
177485	91500	500.49	182000	505.53
178263	91500	501.1	182000	506.47
178377	91500	501.65	182000	507.68
178428	**IH 820**			
178479	91500	502.06	182000	508.86
178664	91500	502.12	182000	509.05
179075	91500	502.68	182000	509.94
180455	91500	502.93	182000	510.13
181265	91500	502.84	182000	509.6

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
181285	91500	502.69	182000	508.98
181326	**HANDLEY-EDERVILLE ROAD**			
181367	91500	502.83	182000	509.53
181471	91500	502.89	182000	509.84
181475	91500	502.86	182000	509.79
181479	91500	502.86	182000	509.79
181521	91500	502.96	182000	510.2
182146	91500	503.29	182000	510.71
183096	91500	503.56	182000	511.12
183709	91500	503.84	182000	512.16
184495	91500	504.37	182000	512.99
184850	78000	504.94	154000	513.5
185387	78000	505.15	154000	513.69
185909	78000	505.13	154000	513.63
186691	78000	505.16	154000	513.71
186871	78000	505.11	154000	513.68
187025	78000	505.1	154000	513.71
187075	78000	505.18	154000	513.84
187076	78000	505.28	154000	513.89
187080	78000	505.29	154000	513.89
187126	78000	505.32	154000	513.98
187647	78000	505.69	154000	514.22
188241	78000	506.07	154000	514.36
189097	78000	506.26	154000	514.45
189901	78000	506.3	154000	514.46
190115	78000	506.3	154000	514.46
190275	78000	506.3	154000	514.46
190456	78000	506.31	154000	514.46
190850	78000	506.33	154000	514.47
191291	78000	506.36	154000	514.49
191625	78000	506.43	154000	514.52
192756	78000	506.6	154000	514.6
193010	78000	506.64	154000	514.62
193090	78000	506.65	154000	514.64
193150	78000	506.68	154000	514.64
193191	78000	506.68	154000	514.65
193367	78000	506.73	154000	514.67
193445	78000	506.74	154000	514.69

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
193550	78000	506.77	154000	514.68
193960	78000	507	154000	514.78
195089	78000	507.38	154000	515.02
195526	78000	507.67	154000	515.2
195930	78000	508.23	154000	515.46
196680	78000	508.78	154000	515.74
197450	78000	509.29	154000	516.16
197631	78000	509.32	154000	516.19
197812	78000	509.5	154000	516.32
198174	78000	509.73	154000	516.57
199000	78000	510	154000	516.91
199650	78000	510.51	154000	517.27
201380	78000	510.96	154000	517.73
203180	78000	511.38	154000	518.15
204336	78000	511.64	154000	518.35
205240	78000	512.64	154000	519.23
206218	78000	513.29	154000	519.72
206325.5	**EAST 1ST STREET**			
206448.3	78000	513.43	154000	519.84
207998	78000	513.71	154000	520.02
208638.1	83500	513.83	165000	520.15
209098	83500	514.03	165000	520.35
209734	83500	514.35	165000	520.65
210038.7	83500	514.56	165000	520.8
210502.6	83500	514.78	165000	520.99
211182.5	83500	515.07	165000	521.25
212348.6	83500	515.33	165000	521.54
212838.3	83500	515.48	165000	521.7
213855	83500	515.92	165000	522.09
214682.5	83500	516.19	165000	522.35
215148.4	83500	516.28	165000	522.48
215842	83500	516.43	165000	522.66
216896	83500	516.85	165000	523.01
217463.3	83500	516.79	165000	522.96
217634.1	83500	516.79	165000	523.09
217695.6	**BEACH STREET DAM**			
217720.9	83500	516.83	165000	523.09
217973.4	83500	516.88	165000	523.14

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
218250.3	83500	517	165000	523.13
218297	83500	516.97	165000	523.01
218330	**BEACH STREET**			
218363	83500	517.06	165000	523.62
218392.7	83500	517.54	165000	524.53
218473.3	83500	517.93	165000	525.01
218557.3	83500	517.96	165000	525.06
218832.1	83500	517.97	165000	525.08
219217.1	83500	518.11	165000	525.25
219535.1	83500	518.26	165000	525.38
219898.8	83500	518.33	165000	525.44
220239.1	83500	518.37	165000	525.49
220501.9	83500	518.42	165000	525.53
220725.2	83500	518.4	165000	525.52
220974.4	83500	518.42	165000	525.5
221418.5	83500	518.57	165000	525.59
222113.5	68000	518.69	143000	525.62
222384.6	68000	518.64	143000	525.55
222551.6	68000	518.52	143000	525.36
222623.6	**RIVERSIDE DRIVE**			
222651.4	68000	518.37	143000	525.42
222677.9	**RIVERSIDE DRIVE**			
222701	68000	522.63	143000	525.88
222814.9	68000	522.52	143000	525.33
223108.4	68000	523.05	143000	527.17
223565.1	68000	523.32	143000	527.97
223743.1	68000	523.33	143000	527.95
224119.3	68000	523.49	143000	528.29
224600.2	68000	523.52	143000	528.37
225093.8	68000	523.63	143000	528.64
225352.2	68000	523.58	143000	528.47
225857.2	68000	523.6	143000	528.54
226382.3	68000	523.56	143000	528.45
226912.7	68000	523.69	143000	528.6
227430.9	68000	523.85	143000	529.07
227702.5	68000	523.79	143000	528.88
227760.9	**TRINITY RAILWAY EXPRESS**			
227819.7	68000	523.84	143000	529.2

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
227866	68000	523.89	143000	529.37
228181.9	68000	524.02	143000	529.66
228422.4	68000	524.07	143000	529.77
228572.3	68000	524.12	143000	529.87
228727.1	68000	524.14	143000	529.94
228882.1	68000	524.19	143000	530.01
228942.2	68000	524.27	143000	530.14
229009.4	**4TH STREET DAM**			
229049.2	68000	524.47	143000	530.41
229116.1	68000	524.52	143000	530.44
229159.1	**4TH STREET**			
229200.2	68000	524.6	143000	530.78
229333.6	68000	524.66	143000	530.98
229485.7	68000	524.74	143000	531.17
229624.6	68000	524.82	143000	531.37
229811.2	68000	524.9	143000	531.57
229920.9	68000	524.95	143000	531.69
230077.8	68000	525.05	143000	531.97
230326.5	68000	525.12	143000	532.17
230452.6	68000	525.13	143000	532.2
230512.4	68000	525.14	143000	532.21
230664.8	**SH 121**			
230758.2	68000	525.22	143000	532.48
230802.3	68000	525.33	143000	532.74
230927.7	68000	525.26	143000	532.57
230962.7	**BELKNAP STREET**			
231008.5	68000	525.34	143000	532.98
231097.7	68000	525.33	143000	532.95
231177.9	68000	525.31	143000	532.89
231370	68000	525.4	143000	533.18
231549.6	68000	525.44	143000	533.25
231727.8	68000	525.48	143000	533.31
231852.5	68000	525.52	143000	533.39
231994.9	68000	525.6	143000	533.57
232174.5	68000	525.71	143000	533.75
232304.4	68000	525.8	143000	533.94
232437.7	68000	525.87	143000	534.09
232566.4	68000	525.94	143000	534.23

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
232908.1	68000	526.06	143000	534.48
233136.9	68000	526.08	143000	534.54
233353.1	68000	526.1	143000	534.58
233644.6	68000	526.14	143000	534.66
233990.2	68000	526.14	143000	534.66
234252.7	68000	526.13	143000	534.63
234484.1	71500	526.2	140000	534.88
234711.5	71500	526.33	140000	535.11
234889.2	71500	526.33	140000	535.07
234926.2	71500	526.27	140000	534.96
234990.5	**IH 35E**			
235086.8	71500	526.36	140000	535.14
235503.9	71500	526.47	140000	535.31
235952.9	71500	526.72	140000	535.74
236201.6	71500	526.72	140000	535.73
236563.3	71500	526.69	140000	535.69
236883.8	71500	526.68	140000	535.67
237284.1	71500	526.66	140000	535.65
237501	71500	526.71	140000	535.62
237659.6	71500	526.73	140000	535.66
237903.3	71500	526.96	140000	536.06
237939.2	**UNION PACIFIC RAILROAD**			
237987.5	71500	527.09	140000	536.5
238283.8	71500	527.15	140000	536.5
238612.5	71500	527.26	140000	536.46
238695.5	71500	527.32	140000	536.56
238773	**NORTHSIDE DRIVE**			
238881.1	71500	527.64	140000	537.4
239025.7	71500	527.98	140000	537.91
239269.4	71500	528.08	140000	538.12
239603.9	71500	528.13	140000	538.21
239822	71500	528.19	140000	538.31
240009.9	71500	528.2	140000	538.35
240126	71500	528.21	140000	538.35
240292	71500	528.24	140000	538.39
240441	71500	528.25	140000	538.41
240614.1	71500	528.26	140000	538.44
240814	71500	528.26	140000	538.43

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
241026.7	71500	528.03	140000	538.21
241206.6	71500	528	140000	538.03
241224.7	71500	527.93	140000	537.92
241244.4	**UNION PACIFIC RAILROAD**			
241264.2	71500	528.11	140000	538.64
241290.9	71500	528.17	140000	538.72
241326.1	71500	528.16	140000	538.72
241340.8	71500	528.14	140000	538.84
241352.2	**BNSF RAILROAD**			
241363.7	71500	528.23	140000	539.57
241377.9	71500	528.25	140000	539.51
241442.8	71500	528.3	140000	539.72
241482.4	71500	528.24	140000	539.66
241498.9	**BNSF RAILROAD**			
241515.2	71500	528.38	140000	540.21
241545.7	71500	528.49	140000	540.42
241602.9	71500	528.56	140000	540.51
241652.8	71500	528.52	140000	540.47
241732.3	**SAMUELS AVENUE**			
241815.4	71500	529.66	140000	541.46
242030.7	69000	530.03	136000	541.89
242283.8	69000	529.86	136000	541.71
242448.8	69000	529.91	136000	541.71
242660.3	69000	529.95	136000	541.69
242883.7	69000	529.97	136000	541.63
243175.6	69000	530	136000	541.52
243416.7	69000	530.07	136000	541.51
243695.5	69000	530.14	136000	541.58
243924.9	69000	530.25	136000	541.72
244071	69000	530.27	136000	541.74
244128.4	**NORTHSIDE DRIVE**			
244198.7	69000	530.44	136000	542.45
244479.4	69000	530.59	136000	542.61
244849.2	69000	530.67	136000	542.73
245146.9	69000	530.77	136000	542.8
245448.4	69000	531.04	136000	543.15
245772.4	69000	531.31	136000	543.52
246013.2	69000	531.47	136000	543.79

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
246254.2	69000	531.63	136000	544.04
246365.1	69000	531.62	136000	544.04
246476.7	69000	531.55	136000	544.01
246509	**TRWD DAM**			
246535.4	69000	531.55	136000	544.05
246637.1	69000	531.69	136000	544.1
246949.8	69000	531.68	136000	544.03
247316.2	69000	531.77	136000	543.95
247429.1	69000	531.85	136000	544.05
247743	69000	532.01	136000	544.31
248160	69000	532.38	136000	544.58
248479.3	69500	532.46	136000	544.65
248847.2	69500	532.63	136000	544.82
249342.9	69500	532.79	136000	544.94
249738.4	69500	533.16	136000	545.22
249983.8	69500	533.2	136000	545.22
250182.7	69500	533.3	136000	545.3
250468.9	69500	533.32	136000	545.39
250673.4	69500	533.41	136000	545.46
250884	69500	533.42	136000	545.44
251047	69500	533.51	136000	545.48
251180.3	69500	534.12	136000	546.04
251357	69500	533.92	136000	545.79
251377	69500	533.91	136000	545.76
251405	**NUTT DAM**			
251430.2	69500	534.71	136000	546.02
251480.3	69500	534.71	136000	546.01
251524.5	69500	534.76	136000	546
251835.9	69500	535.19	136000	546.04
252042.2	69500	535.41	136000	546.14
252212.3	69500	535.92	136000	546.42
252401.1	69500	536.16	136000	546.51
252502.1	69500	536.19	136000	546.42
252580.2	69500	536.36	136000	546.48
252638.8	**NORTH MAIN STREET**			
252706.3	69500	537.79	136000	549.32
252774.7	69500	537.57	136000	549.1
252918.1	69500	538.27	136000	549.63

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
253189.2	69500	538.64	136000	549.91
253345.2	69500	539.05	136000	550.4
253395.2	69500	539.06	136000	550.48
253483.7	69500	539.02	136000	550.63
253562.6	69500	539.37	136000	551.28
253579	**PEDESTRIAN BRIDGE**			
253592	69500	539.89	136000	551.67
253818.1	69500	540.7	136000	552.67
254485.9	35000	541.51	63500	553.47
254801.4	35000	541.41	63500	553.37
254928.7	35000	541.41	63500	553.36
255118.2	35000	541.48	63500	553.39
255356	35000	541.53	63500	553.41
255546.4	35000	541.6	63500	553.47
255754.9	35000	541.61	63500	553.49
256039.3	35000	541.66	63500	553.55
256299.8	35000	541.7	63500	553.59
256553.1	35000	541.79	63500	553.68
256709.4	35000	541.74	63500	553.66
256886.7	35000	541.75	63500	553.68
256910.3	**TARANTULA RAILROAD**			
256928.4	35000	541.98	63500	554.06
257056.1	35000	542.14	63500	554.15
257269.8	35000	542.32	63500	554.31
257418.7	35000	542.4	63500	554.4
257641.7	35000	542.43	63500	554.44
257849.1	35000	542.4	63500	554.42
258064.6	35000	542.39	63500	554.39
258288	35000	542.41	63500	554.4
258568.1	35000	542.43	63500	554.35
258790	35000	542.35	63500	554.22
258860.7	**HENDERSON STREET**			
258937.5	35000	542.51	63500	554.45
259346.8	35000	542.87	63500	554.93
259744.4	35000	542.96	63500	555.05
260033.1	35000	543	63500	555.09
260354.8	35000	543.03	63500	555.12
260762.5	35000	543.07	63500	555.16

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
261066.5	35000	543.11	63500	555.19
261463.5	35000	543.1	63500	555.2
261842.7	35000	543.05	63500	555.21
261868	35000	542.94	63500	555.19
261919	**UNIVERSITY DRIVE**			
261970	35000	543.5	63500	555.36
262054.6	35000	543.89	63500	555.43
262516	35000	543.92	63500	555.45
262763.9	35000	543.94	63500	555.46
263294.3	35000	543.97	63500	555.47
263532.6	35000	543.99	63500	555.48
264027.4	35000	544.01	63500	555.49
264584.8	35000	544.05	63500	555.5
265433	35000	544.07	63500	555.51
266072.5	35000	544.09	63500	555.5
266445.2	35000	544.07	63500	555.47
266841.7	35000	544.18	63500	555.49
267052.2	35000	544.3	63500	555.52
267563.7	35000	544.36	63500	555.63
268148	35000	544.52	63500	555.77
268509.5	35000	544.58	63500	555.81
268923.7	35000	544.63	63500	555.82
269150.5	35000	544.92	63500	555.98
269446.7	35000	544.87	63500	555.94
269610.6	35000	544.78	63500	555.9
269705.5	35000	544.85	63500	555.94
269944.1	35000	545.1	63500	556.08
270252.7	35000	545.25	63500	556.11
270564.2	35000	545.24	63500	556.06
270900.4	35000	545.27	63500	556.06
271269.5	35000	545.4	63500	556.14
271634	35000	545.62	63500	556.29
271952	35000	545.65	63500	556.33
272202.9	35000	545.51	63500	556.25
272525.4	35000	545.58	63500	556.29
272836.8	35000	545.83	63500	556.4
273187.6	35000	545.89	63500	556.43
273513.4	35000	546.19	63500	556.75

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
273814.8	35000	546.65	63500	557.09
273967.4	35000	546.74	63500	557.14
274144	35000	546.57	63500	557.02
274149	35000	546.57	63500	557.01
274191	35000	546.57	63500	557
274196	35000	546.63	63500	557.15
274342.7	35000	546.63	63500	557.06
274899.6	35000	546.54	63500	556.75
275282.5	35000	546.96	63500	557.06
275620.4	35000	547.1	63500	557.17
275747.2	35000	547.26	63500	557.34
275942.7	35000	547.34	63500	557.54
276052.6	35000	547.42	63500	557.65
276125.9	35000	547.41	63500	557.56
276195.9	**WHITE SETTLEMENT ROAD**			
276265.7	35000	547.65	63500	557.86
276412.8	35000	547.91	63500	558.17
276753.4	35000	548.1	63500	558.35
277135.4	35000	548.26	63500	558.44
277497.7	35000	548.39	63500	558.52
277760.9	35000	548.48	63500	558.59
277944.9	35000	548.55	63500	558.7
278151.2	35000	548.59	63500	558.75
278250.3	35000	548.62	63500	558.73
278390.9	35000	548.67	63500	558.78
278631.3	35000	548.82	63500	558.84
278899.3	35000	548.87	63500	558.79
279230.9	35000	549	63500	558.88
279408.3	35000	549.21	63500	559.12
279595	35000	549.26	63500	559.16
279856.3	35000	549.39	63500	559.3
280166.3	35000	549.5	63500	559.36
280473	35000	549.65	63500	559.49
280738.3	35000	549.82	63500	559.67
280947.3	35000	550.1	63500	560
281071.7	35000	550.15	63500	560.12
281137.8	35000	550.26	63500	560.28
281157.9	35000	550.3	63500	560.32

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
281181.7	**TUCKER DAM**			
281195.4	35000	550.42	63500	560.5
281245.5	35000	550.69	63500	560.75
281464.6	35000	550.3	63500	560.2
281636.1	35000	550.36	63500	560.24
281978.7	35000	550.56	63500	560.41
282303.7	35000	550.8	63500	560.6
282606.7	35000	550.98	63500	560.76
282880.9	35000	551.18	63500	561.01
283241	35000	551.35	63500	561.16
283616.7	35000	551.64	63500	561.44
283999	35000	551.86	63500	561.63
284318.9	35000	551.99	63500	561.75
284588.4	35000	552.07	63500	561.8
284840.9	35000	552.18	63500	561.9
285118.3	35000	552.29	63500	562.01
285337.4	35000	552.4	63500	562.11
285518.5	35000	552.51	63500	562.21
285705.9	35000	552.61	63500	562.3
285891.3	35000	552.68	63500	562.36
286083.7	35000	552.77	63500	562.42
286142.2	35000	552.79	63500	562.41
286214.2	**WHITE SETTLEMENT ROAD**			
286287.5	35000	553.06	63500	562.8
286475.7	35000	553.23	63500	563.13
286668.6	35000	553.29	63500	563.21
286821.8	35000	553.34	63500	563.25
286999.9	35000	553.49	63500	563.4
287193.9	35000	553.64	63500	563.48
287409.2	35000	553.69	63500	563.47
287782.6	35000	553.93	63500	563.63
288151.3	35000	554.06	63500	563.75
288337.2	35000	554.16	63500	563.83
288551.7	35000	554.11	63500	563.74
288633.7	**SH 183/RIVER OAKS**			
288719.8	35000	554.57	63500	564.48
288732.5	35000	554.51	63500	564.4
288781.5	35000	554.54	63500	564.43

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
288788.5	**CHANNEL DAM**			
288795.5	35000	554.89	63500	564.84
288832.5	35000	554.92	63500	564.86
289624.5	35000	555.47	63500	565.26
290635.5	35000	556.18	56500	566.39
291187.5	35000	556.53	56500	566.34
292064.5	35000	557.12	56500	566.79
292852.5	35000	557.86	56500	567.48
292953.5	35000	557.79	56500	567.34
292974.5	**CARSWELL ACCESS**			
292995.5	35000	557.92	56500	567.43
293097.5	35000	558.33	56500	567.93
293564.5	35000	558.61	56500	567.93
294548.5	35000	559.06	56500	568.11
295478.5	35000	559.71	56500	568.66
296345.5	35000	560.26	56500	568.89
296460.5	35000	560.49	56500	568.93
296479.5	**MEANDERING ROAD**			
296499.5	35000	560.58	56500	569.03
296618.5	35000	560.62	56500	569.16
297175.5	35000	560.93	56500	569.76
297551.5	35000	561.06	56500	569.84
297601.5	35000	561.09	56500	569.85
297607.5	**CHANNEL DAM**			
297613.5	35000	561.1	56500	569.92
297653.5	35000	561.29	56500	570.1
297998.5	35000	562.26	56500	570.28
298842.5	35000	563.45	56500	570.8
298892.5	35000	563.52	56500	570.82
298895	**CHANNEL DAM**			
298899.5	35000	563.67	56500	570.88
298943.5	35000	563.72	56500	570.9
299631.5	35000	564.46	56500	571.19
300530.5	35000	565.78	56500	571.75
301394.5	35000	566.48	56500	572.22
302774.5	35000	567.46	56500	572.78
303510.5	35000	567.93	56500	573.1
303612.5	35000	567.73	56500	572.96

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
304609.5	35000	568.8	56500	574.04
305599.5	35000	569.16	56500	574.49

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
SPLIT FLOW AREA LOWER WEST FORK				
34268	14500	438.53	N/A	N/A
35205	14500	438.53	N/A	N/A
37015	14500	438.56	N/A	N/A
37145	14500	438.57	N/A	N/A
37160	14500	438.57	N/A	N/A
37170	**LONE STAR ROAD**			
37200	14500	438.58	N/A	N/A
37205	14500	438.58	N/A	N/A
37566	14500	438.57		
37716	**HUNTER-FERRELL ROAD**			
37866	14500	438.59	N/A	N/A
38059	14500	438.63	N/A	N/A
41697	14500	438.66	N/A	N/A
42373	N/A	N/A	N/A	N/A
42751	14500	438.69	N/A	N/A
42961	14500	438.72	N/A	N/A
43369	14500	438.95	N/A	N/A
43919	14500	439.77	N/A	N/A
44153	14500	440.77	N/A	N/A
44232	14500	443.39	N/A	N/A
44291.5	**BELT LINE ROAD**			
44351	14500	445.07	N/A	N/A
44427	14500	445.24	N/A	N/A
46329	14500	445.91	N/A	N/A
49477	14500	446.01	N/A	N/A
50225	14500	446.11	N/A	N/A
51481	14500	446.19	N/A	N/A
52592	14500	446.23	N/A	N/A
53730	14500	446.27	N/A	N/A
53930	14500	446.3	N/A	N/A

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
54255	14500	446.44	N/A	N/A
54330	**HARDROCK ROAD**			
54405	14500	448.78	N/A	N/A
SPLIT FLOW AREA MIDDLE WEST FORK				
78084	51500	463.06	N/A	N/A
78185	51500	463.28	N/A	N/A
78186	51500	463.28	N/A	N/A
78189	**UNION PACIFIC RAILROAD**			
78196	51500	463.43	N/A	N/A
78197	51500	463.43	N/A	N/A
78300	51500	463.46	N/A	N/A
80817	51500	463.69	N/A	N/A
80914	51500	463.49	N/A	N/A
80915	51500	463.49	N/A	N/A
80958	**SH 360 RELIEF BRIDGE**			
81005	51500	464.38	N/A	N/A
81006	51500	464.39	N/A	N/A
81131	51500	465.53	N/A	N/A
82019	51500	466.07	N/A	N/A
83837	51500	466.19	N/A	N/A
84549	51500	466.25	N/A	N/A
SPLIT FLOW AREA UPPER WEST FORK				
108081	64500	468.28	N/A	N/A
108336	64500	468.3	N/A	N/A
108466	64500	468.32	N/A	N/A
108571	64500	468.33	N/A	N/A
108686	64500	468.33	N/A	N/A
109221	64500	468.32	N/A	N/A
109386	64500	468.38	N/A	N/A
108081	64500	468.28	N/A	N/A
108336	64500	468.3	N/A	N/A
108466	64500	468.32	N/A	N/A
108571	64500	468.33	N/A	N/A
108686	64500	468.33	N/A	N/A
109221	64500	468.32	N/A	N/A

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
109386	64500	468.38	N/A	N/A
109406	64500	468.39	N/A	N/A
109480	**FM 157 RELIEF BRIDGE**			
109531	64500	469.43	N/A	N/A
109586	64500	469.49	N/A	N/A
109696	64500	469.9	N/A	N/A
110211	64500	469.7	N/A	N/A
110516	64500	470.96	N/A	N/A
111680	64500	472.69	N/A	N/A

NOTE: SPLIT FLOW FOR 100-YEAR DISCHARGES ONLY

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APPENDIX B.2

TABLE 2-B
CLEAR FORK TRINITY RIVER
100-YEAR / SPF DISCHARGE AND WATER SURFACE ELEVATIONS
2055 FUTURE CONDITIONS
MODEL APPROVED AUGUST 2013

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
0	CLEAR FORK/WEST FORK CONFLUENCE			
473.31	48500	541.16	93000	553.25
482.9306	PEDESTRIAN BRIDGE			
501.6482	48500	541.22	93000	553.38
670.0113	48500	541.22	93000	553.34
811.3182	48500	541.2	93000	553.31
1034.324	48500	541.31	93000	553.38
1266.415	48500	541.58	93000	553.5
1396.939	48500	541.55	93000	553.53
1463.029	HENDERSON STREET			
1537.796	48500	541.82	93000	554.22
1765.998	48500	542.05	93000	554.34
1984.189	48500	542.13	93000	554.36
2196.683	48500	542.31	93000	554.48
2412.767	48500	542.66	93000	554.76
2556.313	48500	542.95	93000	554.92
2689.521	48500	543.03	93000	555.01
3113.178	48500	543.47	93000	555.18
3405.202	48500	543.4	93000	555.1
3628.557	48500	543.51	93000	555.13
3940.902	48500	543.62	93000	555.22
4042.46	48500	543.66	93000	555.21
4191.802	48500	543.69	93000	555.25
4346.114	48500	543.67	93000	555.27
4397.276	7TH STREET			
4460.321	48500	543.78	93000	555.35
4701.715	48500	543.81	93000	555.33
4920.554	48500	543.72	93000	555.13
5037.092	48500	543.93	93000	555.24
5284.416	48500	544.35	93000	555.59
5422.282	48500	544.47	93000	555.68

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
5622.383	48500	544.87	93000	556.1
5799.004	48500	545.16	93000	556.28
5925.721	48500	545.26	93000	556.37
6085.75	48500	545.38	93000	556.5
6128.55	**LANCASTER AVENUE**			
6172.783	48500	545.43	93000	556.54
6273	48500	545.49	93000	556.56
6321	48500	545.5	93000	556.56
6422	48500	545.52	93000	556.57
6431	**TILLEY PEDESTRIAN BRIDGE**			
6440	48500	545.56	93000	556.6
6482.044	48500	545.55	93000	556.58
6650.128	48500	545.48	93000	556.54
6755.375	48500	545.42	93000	556.51
6772.202	**CHANNEL DAM**			
6795.375	48500	545.42	93000	556.55
6996.185	48500	545.5	93000	556.55
7194.381	48500	545.53	93000	556.54
7791.853	48500	546.03	93000	556.73
8167.88	48500	546.32	93000	556.79
8180.994	**BNSF RAILROAD**			
8192.064	48500	546.9	93000	558.41
8204.815	48500	546.94	93000	558.56
8224.763	**CHANNEL DAM**			
8244.969	48500	546.94	93000	558.66
8334.659	48500	547.46	93000	558.74
8482.235	50000	547.5	94500	558.76
8679.124	50000	548	94500	559.03
8852.849	50000	548.18	94500	559.24
9127.056	50000	548.4	94500	559.37
9296.469	50000	548.56	94500	559.41
9489.013	50000	548.74	94500	559.49
9539.207	50000	548.68	94500	559.52
9557.631	**CHANNEL DAM**			
9579.344	50000	548.69	94500	559.56
9629.433	50000	548.99	94500	559.56
9801.369	50000	549.07	94500	559.61
10214.95	50000	549.25	94500	559.7

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
10698.88	50000	549.53	94500	559.83
10926.89	50000	549.59	94500	559.87
10946.4	**CHANNEL DAM**			
10966.91	50000	549.59	94500	559.87
11035.45	50000	550.14	94500	559.99
11428.19	50000	550.13	94500	559.98
11657.13	50000	550.57	94500	560.04
11768.63	50000	550.62	94500	560
11968.02	50000	550.76	94500	560.34
12010.59	50000	551.11	94500	560.13
12079	**IH 30**			
12145.68	50000	551.32	94500	560.35
12195.16	50000	551.41	94500	560.3
12228.18	50000	551.34	94500	560.34
12244.75	50000	551.27	94500	560.24
12278.97	**VICKERY BOULEVARD**			
12303.75	50000	551.74	94500	560.44
12348	50000	551.88	94500	560.71
12458	**SH 121/SOUTHWEST PKWY**			
12568.12	50000	552.01	94500	561.07
12615.75	**CITY DAM NO. 2**			
12617.75	50000	553.88	94500	561.52
12625.52	50000	553.88	94500	561.52
12643.73	50000	553.82	94500	561.38
12650.65	50000	553.78	94500	561.24
12692	**UNION PACIFIC RAILROAD**			
12733.65	50000	554.2	94500	561.82
12760.85	50000	554.07	94500	563.69
12822.55	**ROSEDALE STREET**			
12901.55	**USGS CLEAR FORK GAGE**			
12901.55	50000	554.79	94500	563.88
13062.82	50000	554.46	94500	563.85
13253.36	50000	555.15	94500	564.07
13389.58	50000	555.34	94500	564.33
13395.58	**MINIATURE RAILROAD**			
13401.58	50000	556.33	94500	564.63
14297	50000	558.65	94500	565.38
14949	50000	558.93	94500	565.62

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
15442	50000	559.29	94500	565.86
15613	50000	559.18	94500	565.81
15948	50000	559.91	94500	566.16
15983.3	50000	559.91	94500	566.11
16018.6	50000	559.91	94500	566.08
16054	50000	559.91	94500	566.08
16077.5	**UNIVERSITY DRIVE**			
16100	50000	560.08	94500	566.45
16120	50000	560.01	94500	566.4
16140	**UNIVERSITY DRIVE**			
16161	50000	560.14	94500	566.81
16196.6	50000	560.15	94500	566.82
16232.3	50000	560.24	94500	566.88
16268	50000	560.36	94500	566.93
16314.5	50000	560.34	94500	566.9
16361	50000	560.32	94500	566.89
16407.5	50000	560.3	94500	566.87
16454	50000	560.27	94500	566.86
16500.5	50000	560.25	94500	566.85
16547	50000	560.05	94500	566.83
16596.7	50000	560.16	94500	566.94
16646.5	50000	560.26	94500	567.03
16696.2	50000	560.35	94500	567.11
16746	50000	560.42	94500	567.19
16790.4	50000	560.43	94500	567.19
16834.8	50000	560.47	94500	567.2
16879.2	50000	560.44	94500	567.17
16923.7	50000	560.44	94500	567.17
16968.1	50000	560.84	94500	567.16
17012.5	50000	560.82	94500	567.16
17057	50000	560.81	94500	567.18
17092	50000	560.89	94500	567.18
17127	50000	561.01	94500	567.2
17162	50000	561.09	94500	567.21
17183.5	**ROGERS ROAD**			
17206	50000	561.38	94500	567.81
17254	50000	561.44	94500	567.89
17302	50000	561.52	94500	567.97

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
17351.3	50000	561.56	94500	568.09
17400.6	50000	561.58	94500	568.09
17450	50000	561.63	94500	568.11
17499.	50000	561.68	94500	568.13
17548.6	50000	561.73	94500	568.14
17598	50000	561.78	94500	568.16
17647.3	50000	561.84	94500	568.18
17696.6	50000	561.91	94500	568.2
17746	50000	561.96	94500	568.14
18275	50000	562.14	94500	568.25
18867	50000	562.59	94500	568.22
19645	50000	563.5	94500	569.1
20351	50000	564.26	94500	570.19
21239	50000	565.3	94500	572.05
21275.5	**CHANNEL DAM**			
21279	50000	565.82	94500	572.62
21329	50000	565.76	94500	572.5
21844	50000	566.35	94500	573.03
22604	50000	567.38	94500	574.22
23535	50000	568.68	94500	575.79
24091	50000	569.63	94500	577.01
24191	50000	569.7	94500	577.06
24242	**HULEN STREET**			
24293	50000	570.18	94500	577.67
24355	50000	571.6	94500	579.83
24456	50000	571.47	94500	579.49
25321	50000	572.56	94500	580.61
25371	**CHANNEL DAM**			
25421	50000	573.11	94500	581.33
25577	50000	573.24	94500	581.46
25578	50000	573.24	94500	581.34
25618	50000	573.24	94500	581.58
25658	**STONEGATE/CLEAR FORK MAIN STREET**			
25699	50000	573.33	94500	581.65
25738	50000	573.34	94500	581.53
25739	50000	573.34	94500	581.79
26300	50000	573.84	94500	582.24
27364	50000	575.02	94500	582.81

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
28689	50000	577.02	94500	584.98
29435	50000	578.11	94500	587.3
29481.5	**CHANNEL DAM**			
29485	50000	578.72	94500	587.41
29535	50000	578.8	94500	587.5
29613	50000	578.86	94500	587.12
29634.5	**CHANNEL DAM**			
29638	50000	579.28	94500	587.13
29663	50000	579.35	94500	587.27
30174	50000	580.61	94500	587.34
30913	50000	581.78	94500	588.66
31770	50000	583.15	94500	591.36
32371	50000	584.07	94500	592.59
32602	50000	584.38	94500	591.87
32710	**SH 121/SOUTHWEST PARKWAY**			
32794	50000	585.06	94500	592.75
32814	50000	585.11	94500	594.35
32940	50000	585.21	94500	594.2
33577	50000	586.38	94500	594.65
34116	50000	587.32	94500	595.47
34699	50000	588.91	94500	596.75
34814	50000	588.18	94500	595.87
34830	**BRYANT-IRVIN ROAD**			
34846	50000	588.95	94500	597.23
34878	50000	589.2	94500	598.04
34896.5	**BRYANT-IRVIN ROAD**			
34915	50000	590.07	94500	598.82
34957	50000	591.31	94500	600.12
35012.5	**CHANNEL DAM**			
35016	50000	591.5	94500	600.36
35076	50000	591.68	94500	600.45
35519	48500	592.17	95500	600.56
35969	48500	592.67	95500	600.81
36466	48500	593.81	95500	601.13
37449	48500	595.43	95500	601.84
38091	48500	595.94	95500	601.99
38738	48500	596.39	95500	602.49
39023	48500	597.52	95500	604.97

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
39055	48500	597.58	95500	605.11
39062	**CITYVIEW DAM**			
39101	48500	601.03	95500	605.44
39380	48500	601.46	95500	605.29
39879	48500	602.43	95500	608.22
39977	48500	602.37	95500	607.95
40020.5	**SH 183**			
40064	48500	602.64	95500	608.3
40178	48500	602.41	95500	608.34
41045	48500	606.22	95500	612.83
43324	13000	611.2	72000	615.15
44342	13000	611.22	72000	615.43
45015	13000	611.71	72000	618.51
45544	13000	612.41	72000	620.29
46175	13000	612.91	72000	621.36
46489	13000	612.91	72000	621.14
46490	13000	612.91	72000	621.14
46550	**IH 20**			
46610	13000	613.1	72000	623.13
46611	13000	613.1	72000	623.13
46736	13000	613.22	72000	624.64
49420	13000	615.92	72000	627.76
50598	13000	617.57	72000	628.44
51599	13000	618.77	72000	628.99
52140	13000	619.24	72000	629.19
52188.5	**RAWLS DAM**			
52192	13000	619.31	72000	629.22
52242	13000	619.32	72000	629.25
53352	13000	620.38	72000	629.87
53901	13000	621.2	72000	630.53
54806	13000	622.42	72000	631.36
57021	13000	624.64	72000	632.67
58850	13000	626.97	72000	634.03
60451	13000	630.15	72000	635.58
61472	1	630.92	1	636.3
62405	1	630.92	1	636.3
62953	1	630.92	1	636.3
64380	1	630.92	1	636.3

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
65344	1	630.92	1	636.3
65616	1	630.92	1	636.3

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APPENDIX B.2

TABLE 2-C
ELM FORK TRINITY RIVER
100-YEAR / SPF DISCHARGE AND WATER SURFACE ELEVATIONS
2055 FUTURE CONDITIONS
MODEL APPROVED AUGUST 2013

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
0	ELM FORK/WEST FORK CONFLUENCE			
3013	44500	424.65	94000	437.42
3118	44500	424.68	94000	437.45
3119	44500	424.68	94000	437.45
3154	SHADY GROVE ROAD			
3190	44500	424.7	94000	437.48
3295	44500	424.72	94000	437.49
4076	44500	424.8	94000	437.55
4653	44500	424.81	94000	437.56
4759	44500	424.82	94000	437.57
4760	44500	424.81	94000	437.56
4792.5	SH 356/IRVING BOULEVARD			
4826	44500	424.83	94000	437.63
4925	44500	424.85	94000	437.64
5438	44500	424.88	94000	437.67
5965	44500	424.91	94000	437.7
6563	44500	424.94	94000	437.72
6643	44500	424.95	94000	437.73
6653	BNSF RAILROAD			
6663	44500	424.96	94000	437.73
6667	44500	424.96	94000	437.73
6668	44500	424.96	94000	437.73
6678	BNSF RAILROAD			
6689	44500	424.98	94000	437.74
6783	44500	425	94000	437.75
7355	44500	425.11	94000	437.85
7829	44500	425.15	94000	437.88
8599	44500	425.23	94000	437.91
9594	44500	425.39	94000	438.01
10532	44500	425.48	94000	438.07
11576	44500	425.59	94000	438.16

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
12658	44500	425.65	94000	438.22
13293	45500	425.68	94000	438.25
13842	45500	425.75	94000	438.3
13940	45500	425.76	94000	438.31
13941	45500	425.77	94000	438.33
13961	45500	425.77	94000	438.33
13962	45500	425.76	94000	438.31
14062	45500	425.77	94000	438.33
14317	45500	425.78	94000	438.34
14411	45500	425.78	94000	438.34
14478	**SH 183/JOHN W. CARPENTER FREEWAY**			
14544	45500	425.8	94000	438.35
14545	45500	425.84	94000	438.38
14648	45500	425.84	94000	438.38
15678	45500	425.94	94000	438.46
16649	45500	426.01	94000	438.51
17615	45500	426.08	94000	438.6
18521	45500	426.11	94000	438.63
18570	45500	426.12	94000	438.59
18571	45500	426.1	94000	438.55
18571	**FRASIER DAM**			
18576	45500	426.1	94000	438.55
18577	45500	426.14	94000	438.62
18621	45500	426.14	94000	438.62
19477	44500	426.19	92000	438.66
20480	44500	426.31	92000	438.76
21333	44500	426.37	92000	438.79
22356	45000	426.42	92000	438.81
22456	45000	426.42	92000	438.76
22457	45000	426.48	92000	438.84
22501	**SH 482/STORY LANE**			
22546	45000	426.51	92000	438.93
22610	45000	426.48	92000	438.93
22630	**DART RAIL LINE**			
22649	45000	426.5	92000	438.94
23574	45000	426.69	92000	439.02
24534	45000	426.78	91000	439.06
24900	45000	426.79	91000	439.07

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
25248	45000	426.83	91000	439.08
26342	45000	426.89	91000	439.1
27249	45000	426.96	91000	439.12
28109	45000	427.02	91000	439.15
28770	45000	427.22	91000	439.19
29170	45000	427.43	91000	439.21
29319	45000	427.59	91000	439.22
29320	45000	427.58	91000	439.24
29378.5	**LOOP 12/WALTON WALKER BOULEVARD**			
29438	45000	427.64	91000	439.32
29539	45000	427.67	91000	439.35
30755	45000	427.78	91000	439.4
31605	48000	427.86	92000	439.43
31880	38200	427.93	92000	439.43
32748	38200	427.98	92000	439.46
33960	38200	428.07	92000	439.49
34078	38200	428.2	92000	439.5
34178	38200	428.14	92000	439.5
34179	38200	428.27	92000	439.52
34191.5	**WILDWOOD DRIVE**			
34205	38200	428.3	92000	439.53
34320	38200	428.32	92000	439.52
34430	38200	428.34	92000	439.53
35400	38200	428.38	92000	439.55
36107	38200	428.33	92000	439.53
37169	38200	428.71	92000	439.69
37297	38200	428.73	92000	439.63
37298	38200	428.98	92000	439.89
37307	**BURLINGTON NORTHERN RAILROAD**			
37317	38200	429.03	92000	439.91
37450	38200	429.1	92000	439.92
39820	38200	429.25	92000	440.05
40767	38200	429.3	92000	440.08
42882	38200	429.52	92000	440.19
42984	38200	429.58	92000	440.21
43005.5	**CALIFORNIA CROSSING ROAD**			
43026	38200	429.63	92000	440.25
43144	38200	429.62	92000	440.25

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
44243	38200	429.86	92000	440.36
44293	38200	429.87	92000	440.36
44294	38200	429.48	92000	440.22
44299	38200	430.02	92000	440.22
44300	38200	429.76	92000	440.45
44345	38200	430.29	92000	440.47
47791	38200	430.87	92000	440.74
48610	38200	431.01	92000	440.81
48711	38200	431.03	92000	440.82
48712	38200	431.21	92000	440.86
48756	**NORTHWEST HIGHWAY**			
48801	38200	431.41	92000	440.9
48911	38200	431.42	92000	440.9
49916	48000	431.66	92000	441.02
50753	48000	431.78	92000	441.08
51512	48000	431.82	92000	441.1
52394	48000	431.84	92000	441.1
53292	48000	431.85	92000	441.11
54233	47000	431.94	88000	441.16
54411	47000	431.97	88000	441.17
54473	47000	431.97	88000	441.17
54619	47000	431.99	88000	441.17
54763	47000	432	88000	441.17
54811	47000	432	88000	441.17
54948	47000	432.01	88000	441.18
54985	47000	432	88000	441.17
55696	47000	432.19	88000	441.2
57195	47000	432.41	88000	441.24
58046	48000	432.74	88500	441.29
58429	48000	432.84	88500	441.31
58532	48000	433.17	88500	441.18
58572	**ROYAL LANE**			
58612	48000	433.42	88500	441.4
58654	48000	433.63	88500	441.5
59073	48000	433.92	88500	441.61
59960	48000	434.06	88500	441.65
60810	48000	434.06	88500	441.66
61203	47500	434.04	87500	441.64

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
62351	47500	434.17	87500	441.73
63381	47500	434.2	87500	441.77
64104	47500	434.15	87500	441.8
64195	47500	434.29	87500	441.84
64196	47500	434.29	87500	441.84
64240	**IH 635 EB/LBJ FREEWAY EB**			
64285	47500	434.43	87500	441.91
64405	47500	434.54	87500	441.97
64406	47500	434.54	87500	441.97
64450	**IH 635 WB/LBJ FREEWAY WB**			
64495	47500	434.66	87500	442.04
64617	47500	434.6	87500	442.01
65313	47500	435.24	87500	442.35
66159	47500	435.78	87500	442.61
67169	47500	436.21	87500	442.89
67264	47500	435.85	87500	442.69
67265	47500	435.85	87500	442.69
67314	**VALLEY VIEW LANE**			
67364	47500	436.14	87500	443.5
67474	47500	436.54	86000	443.7
67614	47500	436.83	86000	443.9
68705	47500	437.3	86000	444.22
69701	47500	437.56	86000	444.42
70593	47000	437.63	85500	444.5
71682	47000	437.83	85500	444.63
72713	47500	437.99	85500	444.74
76475	47000	438.33	85000	444.95
78187	47000	438.47	85000	445.06
80579	47000	438.63	85000	445.19
81848	45500	438.99	82500	445.39
82762	45500	439.31	82500	445.53
83530	45500	439.57	82500	445.66
84436	48000	439.82	82000	445.77
84959	48000	440.04	82000	445.85
86107	48000	440.17	82000	445.91
86551	48000	440.35	82000	446.01
86793	48000	440.34	82000	446.01
87191	48000	440.38	82000	446.07

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
87338	48000	440.13	82000	445.59
87339	48000	440.19	82000	445.81
87383	**BELT LINE ROAD**			
87428	48000	440.54	82000	446.61
87521	48000	441.01	82000	447.07
87522	48000	441.02	82000	447.07
87531	**SOUTHERN PACIFIC RAILROAD**			
87541	48000	441.15	82000	447.12
87645	48000	441.3	82000	447.36
87965	48000	442.22	N/A	N/A
88468	48000	442.51	N/A	N/A
88712	48000	442.38	N/A	N/A
89694	48000	443.35	N/A	N/A
90532	48000	443.54	N/A	N/A
91530	48000	443.75	N/A	N/A
92351	48000	443.77	N/A	N/A
93141	48000	443.62	N/A	N/A
93190	48000	443.68	N/A	N/A
93191	48000	442.7	N/A	N/A
93191	**USGS CARROLLTON GAGE**			
93196	48000	442.76	N/A	N/A
93197	48000	444.25	N/A	N/A
93212	48000	444.22	N/A	N/A
93254.5	**SANDY LAKE ROAD**			
93297	48000	444.2	N/A	N/A
93359	48000	444.44	N/A	N/A
93940	48000	445.45	N/A	N/A
97178	49500	447.63	N/A	N/A
97919	49500	447.96	87000	449.67
98884	49500	448.21	87000	450.07
99708	49500	448.38	87000	450.36
101428	49500	448.52	87000	450.52
102686	49500	448.59	87000	450.6
104700	30500	448.75	66600	450.81
104750	30500	448.77	66600	451.3
105167	30500	448.85	66600	451.4
105600	30500	449.03	66600	451.61
105936	30500	449.14	66600	451.74

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
106657	30500	449.3	66600	451.94
106700	30500	449.33	66600	451.97
107820	30500	449.52	66600	452.2
107964	30500	449.53	66600	452.23
109152	30500	449.64	66600	452.36
109304	30500	449.67	66600	452.41
109445	30500	449.68	66600	452.43
109670	30500	449.71	66600	452.47
110074	30500	449.93	66600	452.9
110174	30500	449.96	66600	452.9
110194	**IH 35E ACCESS ROAD**			
110214	30500	450.1	66600	453.21
110261	30500	450.24	66600	453.53
110323	**IH 35E/STEMMONS FREEWAY**			
110385	30500	450.58	66600	454.3
110435	30500	450.56	66600	454.28
110455	**IH 35E ACCESS ROAD**			
110475	30500	450.74	66600	454.62
110572	30500	451.13	66600	455.24
111934	21000	451.68	66600	455.79
112494	21000	451.74	66600	455.93
112617	21000	451.74	66600	455.94
112622	**UNION PACIFIC RAILROAD**			
112627	21000	451.75	66600	455.97
112732	21000	451.76	66600	455.98
113864	21000	451.88	66600	456.18
116381	21000	452.01	66600	456.28
118732	21000	452.17	66600	456.4
119714	21000	452.26	66600	456.49
120752	21000	452.36	66600	456.59
122844				**SH 121**
122934	21000	452.6	66600	457.07
123134	21000	452.65	66600	457.1
123524	21000	452.71	66600	457.15
124975	21000	452.91	66600	457.26
125658	21000	453.08	66600	457.36
126171	7100	453.3	10600	457.54
126172	7100	453.3	10600	457.54

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
126232	**HEBRON PARKWAY**			
126292	7100	453.3	10600	457.55
126293	7100	453.3	10600	457.55
126818	7100	453.33	10600	457.57
126819	7100	453.33	10600	457.57
127374	7100	453.36	10600	457.59
127686	7100	453.4	10600	457.62
128259	7100	453.44	10600	457.65
129048	7100	453.59	10600	457.67
129689	7100	453.65	10600	457.7
130377	7100	453.82	10600	457.74
130977	7100	453.97	10600	457.76
131532	7100	454.26	10600	457.97
131998	7100	454.42	10600	458.12
132656	7100	454.58	10600	458.3
133634	7100	454.75	10600	458.43
134538	7100	454.89	10600	458.57
135370	7100	455.13	10600	458.72
136149	7100	455.42	10600	458.99
137352	7100	455.79	10600	459.33
137878	7100	455.88	10600	459.41
138514	7100	456.03	10600	459.62
139643	21000	456.21	66600	459.69
139890	21000	456.22	66600	459.69
141084	21000	456.22	66600	459.71
141274	21000	456.22	66600	459.73
141518	21000	456.23	66600	459.77
141891	21000	456.3	66600	459.9
142702	21000	456.31	66600	459.95
142900	21000	455.38	66600	459.97
143265	21000	456.91	66600	460
143756	21000	456.91	66600	460.02
144148	21000	456.91	66600	460.01
144314	21000	456.92	66600	460.05
144474	21000	456.93	66600	460.12
144554	21000	456.94	66600	460.16
144676	21000	456.96	66600	460.25
144901	21000	457	66600	460.4

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
145143	21000	456.98	66600	460.43
145405	21000	456.13	66600	460.26
145775	21000	458.06	66600	462.21
146190	21000	459.02	66600	462.54
146373	21000	458.41	66600	462.51
147204	21000	460.96	66600	463.99
147300	21000	461.08	66600	464.18
147301	21000	461.08	66600	464.18
147345	**SH 121**			
147390	21000	461.34	66600	464.83
147489	21000	461.46	66600	465.1
148101	1	461.86	1	465.85
148723	1	461.86	1	465.85
149594	1	461.86	1	465.85
150592	1	461.86	1	465.85
151320	1	461.86	1	465.85
152100	1	461.86	1	465.85
153092	1	461.86	1	465.85
153191	1	461.86	1	465.85
153192	1	461.86	1	465.85
153206	**ATSF RAILROAD**			
153221	1	461.86	1	465.85
153328	1	461.86	1	465.85
158878	**LEWISVILLE DAM**			

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
SPLIT FLOW AREA MIDDLE ELM FORK				
81	9800	427.75	N/A	N/A
408	9800	428.23	N/A	N/A
712	9800	428.41	N/A	N/A
889	9800	428.58	N/A	N/A
1069	9800	428.64	N/A	N/A
1527	9800	428.68	N/A	N/A
1693	**CULVERT**			
1859	9800	428.74	N/A	N/A

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
1936	9800	428.8	N/A	N/A
1985.5	**NORTHWEST HIGHWAY**			
2035	9800	428.81	N/A	N/A
2241	9800	428.8	N/A	N/A
2443	9800	428.82	N/A	N/A
2478.5	**LOMBARDY LANE**			
2514	9800	428.82	N/A	N/A
2906	9800	428.65	N/A	N/A
3188	9800	428.81	N/A	N/A
3525	9800	429.23	N/A	N/A
3806	9800	429.36	N/A	N/A
4071	9800	429.5	N/A	N/A
4345	9800	430.18	N/A	N/A
4677	9800	430.33	N/A	N/A
5127	9800	430.51	N/A	N/A
5841	9800	430.61	N/A	N/A
6108	9800	430.65	N/A	N/A
6448	9800	430.69	N/A	N/A
6925	9800	430.79	N/A	N/A
7360	9800	430.83	N/A	N/A
7639	9800	430.86	N/A	N/A
7856	9800	430.9	N/A	N/A
8084	9800	430.92	N/A	N/A
8217	9800	430.95	N/A	N/A
8255	**SPANGLER ROAD**			
8293	9800	430.96	N/A	N/A
8419	9800	430.96	N/A	N/A
8594	9800	431.04	N/A	N/A
8953	9800	431.1	N/A	N/A
9089	9800	430.9	N/A	N/A
9100	**BURLINGTON NORTHERN RAILROAD**			
9111	9800	431.26	N/A	N/A
SPLIT FLOW AREA PGBT EAST				
87000	N/A	N/A	15500	448.09
88712.1	N/A	N/A	15500	448.1
89694.1	N/A	N/A	15500	448.27
90532.1	N/A	N/A	15500	448.32
91530.1	N/A	N/A	15500	448.37

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
92351.1	N/A	N/A	15500	448.41
93141.1	N/A	N/A	15500	448.48
93190.1	N/A	N/A	15500	448.5
93191.1	N/A	N/A	15500	448.5
93196.1	N/A	N/A	15500	448.5
93197.1	N/A	N/A	15500	448.5
93212.1	N/A	N/A	15500	448.49
93297.1	N/A	N/A	15500	448.51
93359.1	N/A	N/A	15500	448.55
93940.1	N/A	N/A	15500	448.62
97178.1	N/A	N/A	15500	448.71
98000	N/A	N/A	15500	448.85
SPLIT FLOW AREA PGBT WEST				
88712	N/A	N/A	66500	448.1
89694	N/A	N/A	66500	448.24
90532	N/A	N/A	66500	448.3
91530	N/A	N/A	66500	448.37
92351	N/A	N/A	66500	448.39
93141	N/A	N/A	66500	448.42
93190	N/A	N/A	66500	448.44
93191	N/A	N/A	66500	448.35
93196	N/A	N/A	66500	448.36
93197	N/A	N/A	66500	448.48
93212	N/A	N/A	66500	448.47
93254.5	**SANDY LAKE ROAD**			
93297	N/A	N/A	66500	448.48
93359	N/A	N/A	66500	448.6
93940	N/A	N/A	66500	448.8
97178	N/A	N/A	66500	449.36
SPLIT FLOW UPPER AREA ELM FORK				
126171	13900	453.37	56000	457.61
126172	13900	453.37	56000	457.61
126232	**HEBRON PARKWAY**			
126292	13900	453.41	56000	457.64
126293	13900	453.41	56000	457.64
126818	13900	453.62	56000	457.68
127248	13900	453.65	56000	457.71
127678	13900	453.21	56000	457.8

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
128188	13900	454.03	56000	458.03
128738	13900	454.02	56000	458.08
129258	13900	454.33	56000	458.06
129848	13900	454.39	56000	458.26
130418	13900	454.64	56000	458.35
131168	13900	454.77	56000	458.69
131838	13900	454.84	56000	458.87
132538	13900	454.85	56000	459.06
132780	13900	454.66	56000	459.38
132950	13900	455.92	56000	459.5
LEWISVILLE LAKE SPILLWAY				
3500	21000	465.7	66600	469.48
4420	21000	468.51	66600	471.2
5080	21000	469.64	66600	472.71
5500	21000	470	66600	473.19
5940	21000	470.58	66600	477.24
6730	21000	472.26	66600	479.7
7310	21000	473.92	66600	485.21
7380	21000	473.26	66600	484.48
8300	21000	479.74	66600	489.37
9030	21000	480.69	66600	490.45
9810	21000	482.29	66600	492.54
10510	21000	483.03	66600	493.04
11770	21000	485.66	66600	495.52
11870	21000	485.9	66600	495.52
11880	**ATSF RAILROAD**			
11890	21000	486.08	66600	495.81
12720	21000	490.33	66600	500.31
13580	21000	500.75	66600	507.67
15010	21000	508.92	66600	518.5
15590	21000	512.7	66600	520.71

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APPENDIX B.2

TABLE 2-D
TRINITY RIVER
100-YEAR / SPF DISCHARGE AND WATER SURFACE ELEVATIONS
2055 FUTURE CONDITIONS
MODEL APPROVED AUGUST 2013

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
25457	129000	392.7	300000	398.9
27415	129000	393.81	300000	400.31
29003	129000	394.12	300000	400.73
30157	129000	394.26	300000	400.92
32658	129000	394.75	300000	401.55
32748	129000	394.78	300000	401.51
32772	**DOWDY-FERRY ROAD**			
32796	129000	394.85	300000	401.72
32870	129000	395.05	300000	402.02
35192	129000	395.64	300000	402.82
36519	129000	395.85	300000	403.13
37760	129000	395.99	300000	403.31
40250	129000	396.24	300000	403.65
42590	129000	396.54	300000	404.08
44224	129000	397.12	300000	404.91
48797	129000	398.52	300000	406.75
49913	129000	399.03	300000	407.69
50003	**IH 20/IH 635**			
50093	129000	399.13	300000	407.89
51060	129000	399.48	300000	408.42
52016	130000	399.68	302000	408.91
53028	130000	399.71	302000	408.96
53445	130000	399.72	302000	408.98
53580	130000	399.72	302000	408.99
54014	130000	399.73	302000	409.01
55003	130000	399.75	302000	409.04
55893	130000	399.76	302000	409.07
56750	130000	399.78	302000	409.11
58584	130000	399.82	302000	409.17
59451	130000	399.85	302000	409.23
60954	130000	399.89	302000	409.29

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
62087	130000	399.95	302000	409.39
63971	130000	400.04	302000	409.52
66395	130000	400.29	302000	409.81
68027	130000	401.1	302000	410.71
68150	130000	401.24	302000	410.87
69100	130000	401.36	302000	410.91
69782	130000	401.47	302000	410.96
70000	130000	401.52	302000	410.99
71510	130000	401.67	302000	411.07
73020	130000	402.01	302000	411.37
74136	130000	402.44	302000	411.83
75204	130000	403	302000	412.16
75812	130000	403.31	302000	411.89
75847	130000	403.4	302000	412.01
75882	130000	403.41	302000	412.05
75926	**SH 12**			
75970	130000	403.56	302000	412.91
76824	130000	404.44	302000	414.27
77843	130000	404.71	302000	414.47
78614	124000	404.81	284000	414.56
79352	124000	404.91	284000	414.68
80036	124000	405.02	284000	414.78
80641	124000	405.14	284000	414.87
81209	124000	405.29	284000	414.99
81790	124000	405.49	284000	415.19
82361	124000	405.68	284000	415.38
83381	129000	405.86	295000	415.58
84658	129000	405.99	295000	415.73
85916	129000	406.28	295000	416.02
87333	129000	406.6	295000	416.34
88626	129000	406.91	295000	416.69
89108	129000	406.98	295000	416.81
89527	129000	407.06	295000	416.83
89537	**UNION PACIFIC RAILROAD**			
89547	129000	407.16	295000	417.13
89764	129000	407.32	295000	417.32
89996	129000	407.37	295000	417.37
90230	129000	407.42	295000	417.4

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
90458	129000	407.5	295000	417.51
90498	**SH 310**			
90538	129000	407.81	295000	418.16
90927	129000	408.19	295000	418.59
91392	129000	408.48	295000	418.97
94735	129000	408.96	295000	419.45
95404	129000	409.24	295000	419.76
95764	129000	409.39	295000	419.92
96286	129000	409.61	295000	420.06
96333	129000	409.64	295000	420.08
96570	129000	409.71	295000	420.13
96617	129000	409.73	295000	420.15
96795	129000	409.8	295000	420.21
97043	129000	409.87	295000	420.27
97280	129000	409.94	295000	420.32
97730	129000	410.02	295000	420.38
98188	129000	410.09	295000	420.42
98653	129000	410.16	295000	420.44
99167	129000	410.34	295000	420.59
99800	129000	410.58	295000	420.8
100453	129000	410.8	295000	421.03
101138	129000	410.96	295000	421.22
101800	129000	411.16	295000	421.43
102800	129000	411.53	295000	421.88
103453	129000	411.73	295000	422.12
103493	**BNSF RAILROAD**			
103533	129000	412.12	295000	422.59
103960	129000	412.32	295000	422.8
104446	129000	412.46	295000	422.98
104960	129000	412.61	295000	423.18
105329	129000	412.65	295000	423.27
105358	**MLK BOULEVARD**			
105387	129000	412.77	295000	423.76
106100	129000	413.27	295000	424.2
106650	129000	413.47	295000	424.47
107130	129000	413.65	295000	424.69
107546	129000	413.78	295000	424.85
107551	129000	413.76	295000	424.84

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
107776	129000	413.79	295000	424.86
107781	129000	413.81	295000	424.88
107965	129000	413.83	295000	424.9
108100	129000	413.79	295000	424.81
108116	129000	413.8	295000	424.81
108128	129000	413.83	295000	424.86
108158	129000	413.83	295000	424.86
108240	129000	413.84	295000	424.86
108250	129000	413.84	295000	424.87
108270	129000	413.81	295000	424.78
108276	129000	413.82	295000	424.93
108287	**ATSF RAILROAD**			
108298	129000	414.34	295000	425.74
108348	129000	414.5	295000	425.97
108364	**DART RAIL LINE**			
108380	129000	414.64	295000	426.09
108457	129000	414.77	295000	426.3
108514	129000	414.82	295000	426.33
108530	129000	414.82	295000	426.32
108552	129000	414.82	295000	426.33
108688	129000	414.87	295000	426.44
108698	129000	414.86	295000	426.43
108866	129000	414.89	295000	426.47
108871	129000	414.9	295000	426.48
109035	129000	414.91	295000	426.5
109246	129000	414.92	295000	426.51
109458	129000	414.93	295000	426.5
109670	129000	414.92	295000	426.49
109882	129000	414.92	295000	426.46
109957	129000	414.92	295000	426.46
109983	**CORINTH STREET**			
110009	129000	414.96	295000	426.6
110086	129000	414.99	295000	426.62
110214	129000	415	295000	426.62
110342	129000	415.02	295000	426.64
110470	129000	415.04	295000	426.67
110626	129000	415.06	295000	426.68
110783	129000	415.06	295000	426.67

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
110929	129000	415.09	295000	426.7
111076	129000	415.11	295000	426.73
111223	129000	415.11	295000	426.73
111400	129000	415.12	295000	426.74
111577	129000	415.16	295000	426.79
111754	129000	415.21	295000	426.87
111940	129000	415.27	295000	426.96
112127	129000	415.32	295000	427.05
112314	129000	415.33	295000	427.07
112473	129000	415.35	295000	427.1
112633	129000	415.37	295000	427.13
112783	129000	415.38	295000	427.15
112883	129000	415.39	295000	427.16
112933	129000	415.4	295000	427.16
113089	129000	415.41	295000	427.18
113247	129000	415.44	295000	427.21
113405	129000	415.45	295000	427.22
113563	129000	415.48	295000	427.24
113726	129000	415.52	295000	427.29
113890	129000	415.57	295000	427.35
114054	129000	415.57	295000	427.37
114116	129000	415.58	295000	427.38
114149.5	**IH 35E NB**			
114183	129000	415.63	295000	427.65
114243	129000	415.64	295000	427.67
114457	129000	415.77	295000	427.82
114510	129000	415.78	295000	427.83
114541	**IH 35E SB**			
114572	129000	415.81	295000	427.96
114641	129000	415.82	295000	427.96
114773	129000	415.83	295000	427.97
114905	129000	415.89	295000	428.03
115038	129000	415.92	295000	428.06
115236	129000	415.93	295000	428.08
115434	129000	415.94	295000	428.1
115633	129000	415.91	295000	428.08
115705	129000	415.92	295000	428.09
115734.5	**JEFFERSON BOULEVARD**			

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
115764	129000	416.02	295000	428.26
115937	129000	416.11	295000	428.37
116111	129000	416.11	295000	428.37
116185	129000	416.13	295000	428.39
116214	**HOUSTON STREET**			
116243	129000	416.21	295000	428.66
116314	129000	416.23	295000	428.69
116464	129000	416.32	295000	428.78
116615	129000	416.33	295000	428.8
116766	129000	416.4	295000	428.95
116942	129000	416.42	295000	428.98
117118	129000	416.46	295000	429.02
117294	129000	416.49	295000	429.06
117403	129000	416.54	295000	429.11
117572	129000	416.69	295000	429.25
117672	129000	416.7	295000	429.27
117801	129000	416.77	295000	429.35
117920	129000	416.83	295000	429.41
118000	129000	416.85	295000	429.44
118075	129000	416.87	295000	429.46
118283	129000	416.91	295000	429.51
118381	129000	416.94	295000	429.55
118533	129000	417	295000	429.61
118611	129000	417.02	295000	429.63
118657	**IH 30**			
118703	129000	417.09	295000	429.72
118782	129000	417.12	295000	429.74
118966	129000	417.18	295000	429.81
119150	129000	417.25	295000	429.88
119334	129000	417.3	295000	429.93
119518	129000	417.33	295000	429.97
119686	129000	417.37	295000	430.01
119855	129000	417.39	295000	430.04
120023	129000	417.42	295000	430.08
120192	129000	417.43	295000	430.11
120337	129000	417.49	295000	430.15
120483	129000	417.49	295000	430.16
120629	129000	417.55	295000	430.2

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
120693	129000	417.59	295000	430.25
120729	**COMMERCE STREET**			
120765	129000	417.66	295000	430.5
120831	129000	417.68	295000	430.52
121002	129000	417.73	295000	430.59
121174	129000	417.83	295000	430.68
121345	129000	417.94	295000	430.8
121517	129000	418.03	295000	430.92
121607	129000	418.04	295000	430.97
121623	**UNION PACIFIC RAILROAD**			
121639	129000	418.13	295000	431.23
121723	129000	418.17	295000	431.25
121884	129000	418.19	295000	431.27
122045	129000	418.26	295000	431.34
122206	129000	418.29	295000	431.37
122390	129000	418.31	295000	431.4
122438	129000	418.31	295000	431.4
122500	**WOODALL RODGERS FREEWAY**			
122562	129000	418.38	295000	431.5
122760	129000	418.46	295000	431.57
122834	129000	418.49	295000	431.61
122860	**CONTINENTAL AVENUE**			
122886	129000	418.53	295000	431.74
122961	129000	418.55	295000	431.76
123161	129000	418.6	295000	431.81
123341	129000	418.65	295000	431.86
123441	129000	418.68	295000	431.89
123511	129000	418.69	295000	431.91
123661	129000	418.73	295000	431.95
123861	129000	418.78	295000	432.01
124052	129000	418.83	295000	432.07
124243	129000	418.87	295000	432.13
124434	129000	418.94	295000	432.21
124626	129000	419	295000	432.29
124841	129000	419.07	295000	432.37
125056	129000	419.1	295000	432.41
125272	129000	419.13	295000	432.45
125487	129000	419.2	295000	432.53

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
125703	129000	419.24	295000	432.58
125884	129000	419.29	295000	432.63
126065	129000	419.31	295000	432.65
126246	129000	419.34	295000	432.68
126428	129000	419.4	295000	432.74
126609	129000	419.43	295000	432.78
126791	129000	419.45	295000	432.8
126973	129000	419.51	295000	432.85
127155	129000	419.56	295000	432.9
127352	129000	419.59	295000	432.93
127549	129000	419.63	295000	432.98
127746	129000	419.66	295000	433.01
127779	129000	419.67	295000	433.01
127994	129000	419.69	295000	433.03
128010.5	**SYLVAN AVENUE CHANNEL BRIDGE**			
128027	129000	419.73	295000	433.07
128092.5	**SYLVAN AVENUE**			
128158	129000	419.77	295000	433.15
128290	129000	419.8	295000	433.17
128323	129000	419.8	295000	433.17
128538	129000	419.87	295000	433.24
128727	129000	419.91	295000	433.27
128916	129000	419.94	295000	433.31
129105	129000	420.02	295000	433.37
129284	129000	420.08	295000	433.43
129463	129000	420.09	295000	433.44
129642	129000	420.13	295000	433.48
129822	129000	420.12	295000	433.48
129999	129000	420.18	295000	433.54
130176	129000	420.25	295000	433.59
130354	129000	420.28	295000	433.62
130531	129000	420.31	295000	433.65
130709	129000	420.34	295000	433.68
130926	129000	420.41	295000	433.75
131144	129000	420.45	295000	433.79
131361	129000	420.46	295000	433.81
131579	129000	420.51	295000	433.85
131788	129000	420.56	295000	433.9

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
131998	129000	420.61	295000	433.93
132207	129000	420.63	295000	433.96
132417	129000	420.68	295000	434
132627	129000	420.74	295000	434.06
132849	129000	420.77	295000	434.09
133071	129000	420.8	295000	434.12
133293	129000	420.83	295000	434.16
133515	129000	420.9	295000	434.22
133738	129000	420.93	295000	434.26
133929	129000	420.94	295000	434.27
134121	129000	420.97	295000	434.3
134313	129000	421.05	295000	434.36
134505	129000	421.1	295000	434.41
134697	129000	421.11	295000	434.42
134769	129000	421.11	295000	434.42
134826.5	**HAMPTON ROAD**			
134883	129000	421.18	295000	434.5
134952	129000	421.24	295000	434.54
135141	129000	421.23	295000	434.54
135330	129000	421.27	295000	434.56
135520	129000	421.3	295000	434.59
135709	129000	421.34	295000	434.62
135899	129000	421.4	295000	434.66
136104	129000	421.43	295000	434.69
136310	129000	421.48	295000	434.73
136515	129000	421.52	295000	434.76
136721	129000	421.54	295000	434.78
136927	129000	421.6	295000	434.82
137150	129000	421.63	295000	434.85
137374	129000	421.66	295000	434.87
137598	129000	421.7	295000	434.9
137822	129000	421.75	295000	434.94
138046	129000	421.81	295000	434.99
138236	129000	421.85	296000	435.01
138427	129000	421.87	296000	435.04
138618	129000	421.91	296000	435.08
138809	129000	421.98	296000	435.15
138999	129000	422.02	296000	435.19

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
139189	129000	422.06	296000	435.22
139379	129000	422.09	296000	435.25
139569	129000	422.14	296000	435.28
139744	129000	422.17	296000	435.31
139920	129000	422.19	296000	435.34
140096	129000	422.23	296000	435.37
140272	129000	422.26	296000	435.4
140448	129000	422.28	296000	435.42
140548	129000	422.29	296000	435.43
140629	**CHANNEL BRIDGE**			
140646	129000	422.34	296000	435.46
140690	**WESTMORELAND ROAD**			
140734	129000	422.4	296000	435.55
140840	129000	422.46	296000	435.58
140940	129000	422.49	296000	435.6
141152	129000	422.53	296000	435.63
141364	129000	422.57	296000	435.67
141576	129000	422.61	296000	435.71
141789	129000	422.66	296000	435.75
142004	129000	422.7	296000	435.79
142220	129000	422.76	296000	435.83
142436	129000	422.8	296000	435.86
142652	129000	422.84	296000	435.9
142839	129000	422.87	296000	435.92
143026	129000	422.91	296000	435.96
143213	129000	422.95	296000	435.99
143400	129000	422.99	296000	436.02
143582	129000	423.02	296000	436.05
143764	129000	423.05	296000	436.08
143947	129000	423.09	296000	436.11
144129	129000	423.14	296000	436.15
144312	129000	423.19	296000	436.18
144488	129000	423.23	296000	436.21
144664	129000	423.28	296000	436.25
144840	129000	423.34	296000	436.3
145016	129000	423.38	296000	436.33
145193	129000	423.42	296000	436.37
145386	129000	423.48	296000	436.41

RIVER CROSS-SECTION	100-YEAR DISCHARGE (CFS)	100-YEAR WSEL (FEET)	SPF DISCHARGE (CFS)	SPF WSEL (FEET)
145580	129000	423.52	296000	436.44
145773	129000	423.56	296000	436.49
145967	129000	423.6	296000	436.52
146156	129000	423.62	296000	436.54
146345	129000	423.71	296000	436.6
146534	129000	423.75	296000	436.62
146724	129000	423.81	296000	436.67
146910	129000	423.82	296000	436.69
147096	129000	423.88	296000	436.73
147282	129000	423.89	296000	436.75
147469	129000	423.92	296000	436.77
147635	129000	423.96	296000	436.8
147802	129000	424	296000	436.83
147969	129000	424.02	296000	436.86
148136	129000	424.08	296000	436.89

APPENDIX B.3

TABLE 1

SPECIFIC PRIOR DEVELOPMENT/GRANDFATHERED PROJECTS

CITY	PROJECT
Main Stem Trinity River	
Dallas	McCommas Bluff Landfill
Elm Fork Trinity River	
Lewisville	Farmers Branch Landfill
West Fork Trinity River	
Irving	Irving Landfill
Grand Prairie	Grand Prairie Landfill
Arlington	Arlington Landfill
Fort Worth	River Trails
Clear Fork Trinity River	

APPENDIX C

BACKGROUND DOCUMENTATION

C.1 Regional Policy Position on Trinity River Corridor – 1989

C.2 Resolution for a Joint Corridor Development Certificate Process

C.3 U.S. Army Corps of Engineers Record of Decision – Regional Environmental Impact Statement: Trinity River and Tributaries

APPENDIX D

SAMPLE LETTERS

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D.1 Sample Review Comment Letter

DATE:

From:
Signatory
CDC/Floodplain Administrator
(Contact Person)
Address Block
Phone

To:
Permitting Entity
(Contact Person)
Address Block

CDC APPLICATION REVIEW AND COMMENT

CDC Tracking Code _____

Dear Sir or Madam:

After reviewing the CDC Application with the above tracking code, the City/County would like to make the following comment(s):

1.

2.

3.

4.

If you have any questions regarding the information provided, please contact me at {phone #}. Thank you for this opportunity to provide comments and your continued participation in this important regional effort.

_____
SIGNED

cc:
CDC Tracking
Dept. of Environment and Development
(Contact Person)
P.O. Box 5888
Arlington, Texas 76005-5888
(817) 695-9210
(817) 695-9191 fax

D.2 Sample Transmittal Letter – CDC Final Action – CDC Granted

DATE:

From:
Permitting Entity
(Contact Person)
Address Block
Phone

To:
CDC Applicant

CDC FINAL ACTION

CDC Tracking Code _____

Dear Sir or Madam:

After processing with the Corridor Development Certificate application process, the {Permitting Entity} has made the following decision in regard to CDC application:

If you have any questions regarding this information, please contact me at {phone #}.

_____
SIGNED

Enclosure: CDC Final Action/Findings Form

cc:
CDC Tracking
Dept. of Environment and Development
(Contact Person)
P.O. Box 5888
Arlington, Texas 76005-5888
(817) 695-9210
(817) 695-9191 fax

D.3 Sample Transmittal Letter – CDC Final Action – CDC Denied

DATE:

From:
Permitting Entity
(Contact Person)
Address Block
Phone

To:
CDC Applicant

CDC FINAL ACTION
REQUEST FOR REAPPLICATION

CDC Tracking Code _____

Dear Sir or Madam:

After proceeding with the Corridor Development Certificate application process, the {Permitting Entity} has made the following decision in regard to CDC application {CDC Tracking Code}:

The original CDC application has been denied and a request for a new CDC application has been made with the following comments:

If you have any questions regarding this information, please contact me at {phone #}.

_____
SIGNED

Enclosure: CDC Final Action/Findings Form

cc:
CDC Tracking
Dept. of Environment and Development
(Contact Person)
P.O. Box 5888
Arlington, Texas 76005-5888
(817) 695-9210(817)
695-9191 fax

D.4 CDC Annual Status Summary Memo

DATE:

From:
CDC Applicant

To:
Permitting Entity
(Contact Person)
Address Block
Phone

CDC ANNUAL STATUS SUMMARY

CDC Tracking Code _____

Dear Sir or Madam:

It has been ___ year(s) since the issuance of CDC {CDC Tracking Code}. The status of the development activity associated with that CDC is as follows:

An extension of this permit ***is or is not*** being requested at this time. (Please see CDC Manual for information).

If you have any questions regarding this information, please contact me at {phone #}.
If you are requesting an extension, please return this form and other information to me.

_____
SIGNED

cc:
CDC Tracking
Dept. of Environment and Development
(Contact Person)
P.O. Box 5888
Arlington, Texas 76005-5888
(817) 695-9210
(817) 695-9191 fax

D. 5 Sample response to Request for CDC Extension

DATE:

From:
Permitting Entity
(Contact Person)
Address Block
Phone

To:
CDC Applicant

RESPONSE TO REQUEST FOR CDC EXTENSION

CDC Tracking Code _____

Dear Sir or Madam:

The {Permitting Entity} received your request for an extension to your CDC {CDC Tracking Code}.

After consideration, the {city/county} has decided to deny your request for extension for the following reasons:

OR

After consideration, the {city/county} has decided to grant one 3–year extension to your CDC. If at the end of 3 years the project is not complete, you will need to submit a new CDC Application.

If you have any questions regarding this decision, please contact me at {phone #}.

_____
SIGNED

cc:
CDC Tracking
Dept. of Environment and Development
(Contact Person)
P.O. Box 5888
Arlington, Texas 76005-5888
(817) 695-9210
(817) 695-9191 fax

APPENDIX E

POINTS OF CONTACT

** Last Update: October 2020 **

ARLINGTON

Sidney Kelly
City of Arlington
P.O. Box 90231
Arlington, Texas 76004-3231
sidney.kelly@arlingtontx.gov
(817) 459-6590 fax (817) 459-6585

CARROLLTON

Matthew Brennan
City of Carrollton
P.O. Box 110535
Carrollton, Texas 75011-0535
matthew.brennan@cityofcarrollton.com
(972) 466-3183 fax (972) 466-3193

COPPELL

Kumar Gali
City of Coppell
P.O. Box 9478
Coppell, Texas 75019
kgali@coppelltx.gov
(972) 304-3679 fax (972) 304-7041

DALLAS

Steve Parker
City of Dallas
320 E. Jefferson Blvd. Room 307 Suite #321
Dallas, Texas 75203
stephen.parker@dallascityhall.com
(214) 948-4666 fax (214) 948-4657

Kimberly Dewailly
City of Dallas
320 E. Jefferson Blvd. Room 312
Dallas, Texas 75203
kimberly.dewailly@dallascityhall.com
(214) 948-4619 fax (214) 948-4657

Tam Vu
City of Dallas
320 E. Jefferson Blvd. Room 307 Suite #321
Dallas, Texas 75203
tam.vu@dallascityhall.com
(214) 948-4683 fax (214) 948-4657

FARMERS BRANCH

Marc Bentley
13000 William Dodson Parkway
Farmers Branch, Texas 75234
marc.bentley@farmersbranchtx.gov
(972) 919-2593 fax (972) 919-2585

FORT WORTH

Clair Davis
City of Fort Worth
T/PW Stormwater Management
1000 Throckmorton St.
Fort Worth, Texas 76102
clair.davis@fortworthgov.org
(817) 392-5981 fax (817) 392-7854

Cindy Robinson
City of Fort Worth
1000 Throckmorton St.
Fort Worth, Texas 76102
cindy.robinson@fortworthgov.org
(817) 392-7947 fax (817) 392-7854

GRAND PRAIRIE

Noreen Housewright
City of Grand Prairie
300 W. Main Street
Grand Prairie, Texas 75050
nhousewright@gptx.org
(972) 237-8150 fax (972) 237-8116

IRVING

Garry Fennell
City of Irving
825 W. Irving Blvd.
Irving, Texas 75060
gfennell@cityofirving.org
(972) 721-3721 fax (972) 721-2592

LEWISVILLE

Jeff Kelly
City of Lewisville
P.O. Box 299002
Lewisville, Texas 75029-9002
jkelly@cityoflewisville.com
(972) 219-3492 fax (972) 219-3487

SEAGOVILLE

Jennifer Bonner
City of Seagoville
701 North Highway 175
Seagoville, Texas 75159
jbonner@seagoville.us
(469) 319-5028

DALLAS COUNTY

Lissa Shepard
Dallas County
411 Elm Street, 4th floor
Dallas, Texas 75202
lissa.shepard@dallascounty.org
(214) 653-6392 fax (214) 653-6445

KAUFMAN COUNTY

Kelley Chastain
Kaufman County
100 W. Mulberry
Kaufman, Texas 75142
kelley.chastain@kaufmancounty.net
(469) 376-4130

Ron Sullivan
Kaufman County
100 W. Mulberry
Kaufman, Texas 75142
ron.sullivan@kaufmancounty.net
(469) 376-4151

TARRANT COUNTY

Joe Trammel
Tarrant County
100 East Weatherford Rm# 401
Fort Worth, Texas 76196
jltrammel@tarrantcounty.com
(817) 884-1153 fax (817) 884-1178

TARRANT REGIONAL WATER DISTRICT

Manager of Energy and Water Resources
Laura Blaylock
P.O. Box 4508
Fort Worth, TX 76164
laura.blaylock@trwd.com
(817) 720-4269 fax (817) 625-9112

Water Resources Engineer
Craig Ottman
808 E. Northside Drive
Fort Worth, TX 76102
craig.ottman@trwd.com
(817) 720-4205

TRINITY RIVER AUTHORITY

Manager, Planning and Environmental Services
Glenn Clingenpeel
Trinity River Authority
P.O. Box 60
Arlington, Texas 76004
clingenpeelg@trinityra.org
(817) 467-4343 fax (817) 465-0970

U.S. ARMY CORPS OF ENGINEERS

Water Resources Study Section
Darlene G. Prochaska
P.O. Box 17300, Room 4A01
Fort Worth, Texas 76102-0300
darlene.g.prochaska@usace.army.mil
(817) 886-1682 fax (817) 886-6481

Water Resources Branch
Michael Danella
P.O. Box 17300, Room 4A01
Fort Worth, Texas 76102-0300
Michael.a.danella@usace.army.mil
(817) 886-1690

FEDERAL EMERGENCY MANAGEMENT AGENCY

Risk Region VI, Risk Assessment Branch
Alan Johnson
800 North Loop 288
Denton, TX 76209
alan.johnson@fema.dhs.gov
(940) 383-7338

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Water Quality Division
401 Coordinator
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087
lili.murphy@tceq.texas.gov
(512) 239-5366

TEXAS WATER DEVELOPMENT BOARD

State NFIP Coordinator
Yi Chan
1700 North Congress Ave.
Austin, Texas 78711
yi.chan@twdb.texas.gov
(512) 936-6903

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

NCTCOG CDC Administrator
Mia Brown
P.O. Box 5888
Arlington, Texas 76005-5888
mbbrown@nctcog.org
(817) 695-9227 fax (817) 695-9191

*If the contact information above is incorrect and needs to be updated, please send an email to EandD@nctcog.org with a request to update Appendix E of the 4th Edition of the CDC Manual.