



NCTCOG Flooding, Stormwater, and Water Quality Programs

June 21st, 2023

Welcome and Introductions

- Thanks for attending!
- This webinar will be recorded.
- Please mute your line.
- Unmute your line when you would like to speak.
 - We will also watch the chat box for questions



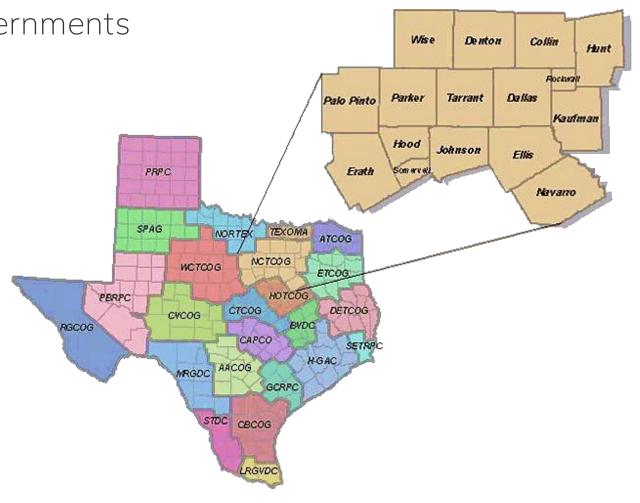
What is NCTCOG?

Voluntary association of local governments

- 228 Member Governments
 - 16 Counties
 - 169 Cities
 - 19 School Districts
 - 24 Special Districts

Assists local governments in:

- Planning for common needs
- Cooperating for mutual benefit
- Recognizing regional opportunities
- Resolving regional problems
- Making joint decisions





Environment & Development Overview











Materials
Management
Regional Landfill
Capacity
Recycling
Waste to Energy
Illegal Dumping
Technical
Resources

Watershed
Management
Stormwater
Management
Water Quality
Trinity River
Common Vision
Flood Risk
Reduction

Natural
Resources
Water Source
& Supply
Energy
Open Space
Planning/
Preservation

Public Works
Construction
Standards
Sustainable
Public Rights
of Way
Block Grants
Wastewater
Roundtable

Development
Excellence
Principles of
Development
Excellence
Technical
Tools
Building
Codes

Pre-Workshop Survey Questions

Poll question will appear on your screen







Trinity River COMMON VISION Program



Timeline & Background

1990 Upper Trinity River Basin Reconnaissance Report

Upper Trinity River Feasibility Study (UTRFS)

US Army Corps of Engineers

Cumulative impacts of flooding based on different levels of floodplain development



Record of Decision

Damages could total more than \$11 billion if floodplain unregulated

Floodplain management could cut losses to \$4 billion

1990 Flood Management Task Force

Task Force formed CDC criteria developed based on ROD

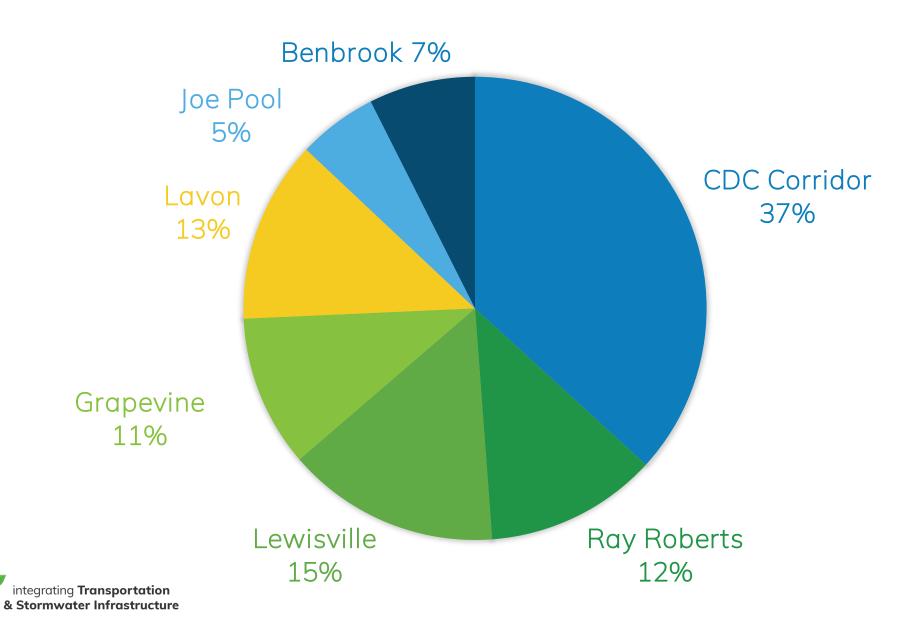


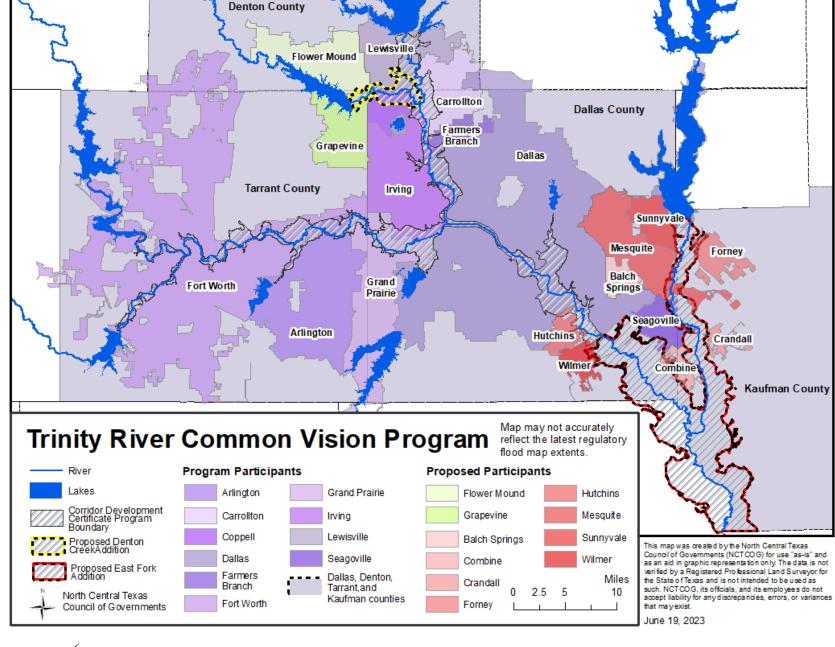
Corridor Development Certificate (CDC) Manual produced in 1991





Active Flood Storage





1989 Interlocal Agreement

- 10 cities
- 4 counties

Programmatic Partners

- NCTCOG
- USACE
- FEMA
- TWDB

Special Districts

- TRWD
- TRA



CDC Program Goals

Corridor Development Certificate Program







Provides Oversight

Provides oversight for projects in the floodplain and establishes a regional review process

Allows Development

Allows development in the floodplain after receiving a CDC permit

Project Review

Allows all Flood
Management Task Force
(FMTF) members to review
projects for the entire
regulatory footprint



Step 0: Pre-CDC Application Conference

Step 1: Submission of Application to City

Step 2: Submission of CDC Application

Step 3: Comment Period

Step 4: Application is sent to USACE for Review

Step 5: Technical Review Results/Model Update



step 00

Pre-CDC Application Conference

Communication is key in the CDC process. NCTCOG highly recommends that developers and potential CDC applicants hold a pre-CDC conference with the floodplain administrator of the CDC Permitting Entity in which the project is located.



step 01

Developer Submits Application to City

If a developer wants to develop in the floodplain, they first dowonload the model and insert their project. The developer then meets with the CDC Permitting Entity to get their application in order. This step may vary by jurisdiction.



step 02

City Submits CDC Application

The CDC Permitting Entity submits the CDC Application and fees to the Trinity COMMON VISION program through this website.



step 03

Municipalities Offer Comments

Starting the day the application is submitted, CDC communities are notified and have 30 days to review and provide comments on the application.



step 04

Application Sent to USACE for Review

The application and all documentation is sent to the U.S. Army Corps of Engineers (USACE) for review. The USACE will coordinate review with the Applicant's engineer representative during the review process.



step 05

Project Added to CDC Model

The project is added to the CDC Model by USACE after the CDC permit is granted by the submitting CDC Permitting Entity.





The goal of the Corridor Development Certificate (CDC) process is the stabilization of flood risk along the Trinity River. The CDC program originated in 1991 as part of the awareness in the 1980s that commercial and residential development in the Trinity River corridor, individually or cumulatively, 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 CDC does not prohibit floodplain development, but ensures that any development that does occur in the floodplain will not adversely raise flood water levels or significantly reduce flood storage capacity.

The CDC process allows local governments to retain ultimate control over floodplain permitting decisions, while other communities along the Trinity River Corridor are given the opportunity to review and comment on projects in their neighbor's jurisdiction. As the Metroplex economy continues to grow and develop, the CDC process will help prevent increased flood risks.



Status Definitions

Granted: The CDC Application has gone through the full CDC process and the permitting entity has granted a CDC.

Exemption Granted: The permitting entity has determined the project is exempt from the CDC criteria (Section 1.6.1 of the CDC Manual 4th Edition).

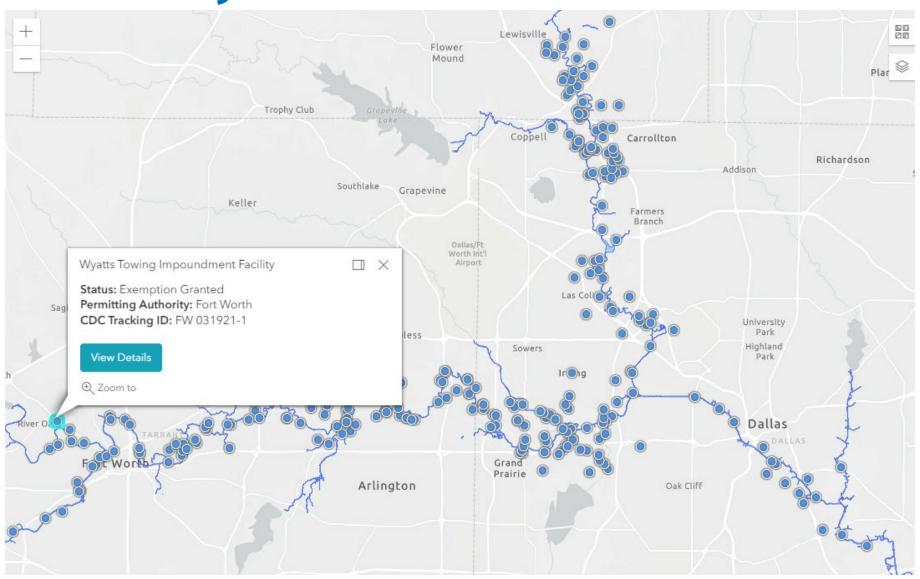
Variance Granted: The permitting entity has given this project a variance from the CDC criteria (Section 1.6.2 of the CDC Manual 4th Edition).

Comment Period: The CDC Application is currently in the 30-day review period by the CDC participating entities (Section 1.3.6 of the CDC Manual 4th Edition).

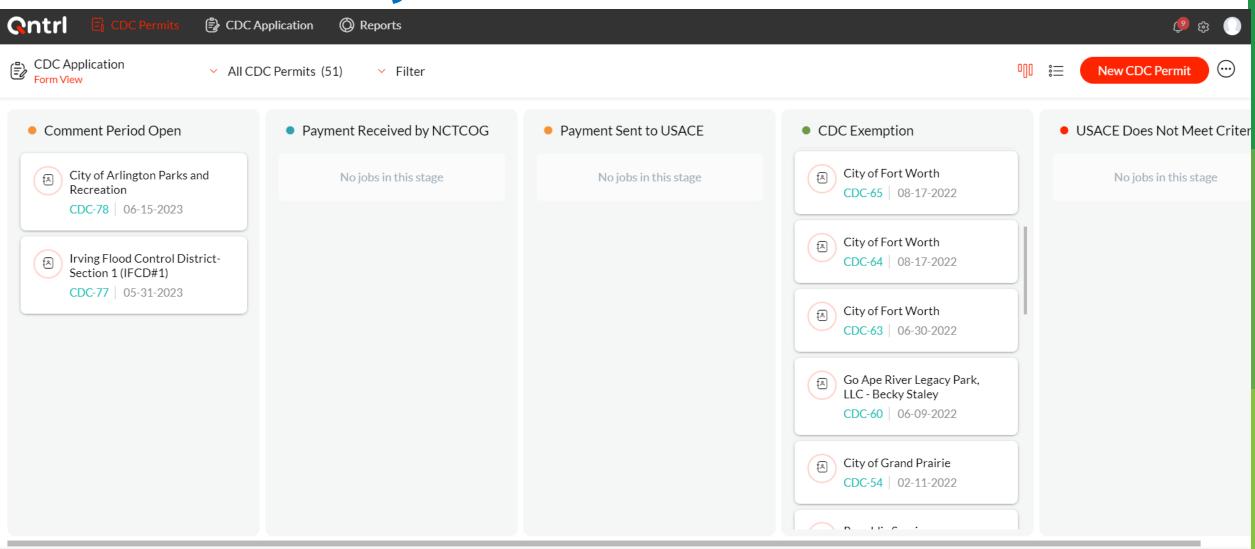
Under Review: The CDC Application is currently under Technical Review by the United States Army Corps of Engineers (USACE) (Section 4.1.7 of the 4th Edition CDC Manual).

CDC Tracking Number	Project Name	Jurisdiction	Status	Last Updated
IRV 053123-01	Maintenance Fill, West Levee	Irving	:: Comment Period	05/31/2023
FW 092622-1	Colonial Country Club	Fort Worth	⊘ Granted	05/04/2023
FW031623-1	VCWRF Bio Solids Facility Bank Stabilization	Fort Worth	⊘ Exemption Granted	04/17/2023
cdc-000	Project Name Default2023-03-13 11:14:09	xArlington	:: Comment Period	03/13/2023
DAL 111020-1	9328 Harry Hines	Dallas	1 Technical Review	02/22/2023
LEW 081522-1	Lewisville Landfill	Lewisville	⊘ Granted	02/16/2023
FW052322-1	Trinity Trails East Phase 2	Fort Worth	1 Technical Review	02/08/2023
GP 040122-1	Oakdale Industrial III	Grand Prairie	1 Technical Review	02/08/2023



















North TXShare Program: OneRain Regional Flood Warning Software Program

Enterprise-level hydrologic and flood warning software

Leverages existing gauging networks in the region

Provides centralized-view to alarm, visualize, and disseminate information

Real-time conditions











Community Rating System Users Group

Community Rating System (CRS) Users Group

FEMA voluntary incentive program

Promotes floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP).

CRS Users Groups provide a forum for municipal, county, regional, and state networks to support one another in qualifying for CRS credit.

North Central Texas group meets quarterly





Activities to Earn Credits

Public Information

 Programs that advise people about the flood hazard, flood insurance, and ways to reduce flood damage

Mapping & Regulations

 Programs that limit floodplain development or provide increased protection to new and existing development

Flood Damage Reduction

• Programs that reduce the flood risk to existing development

Flood Preparedness

• Flood warning, levee safety, dam safety projects



Discounts available to property owners in CRS communities

Rate Class	Discount for SFHA*	Discount for Non-SFHA**	Credit Points Required
1	45%	10%	4,500 +
2	40%	10%	4,000-4,499
3	35%	10%	3,500-3,999
4	30%	10%	3,500-3,499
5	25%	10%	3,000-2,999
6	20%	10%	2,500-2,499
7	15%	5%	1,500-1,999
8	10%	5%	1,000-1,499
9	5%	5%	500-999
10	0	0	0–499

Special Flood Hazard Area

^{**} Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage. The Preferred Risk Policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. Although they are in SFHAs, Zones AR and A99 are limited to a 5% discount. Premium reductions are subject to change.



NCTCOG North Texas CHARM Workshops

3 ▼ Active (Base Scenario) Population Land Use By Acres **Dwelling Types** 390,000 음 200,000 -41% 66,165 59% SumMixedUse SumCommercial Current Population SumIndustrial Single Family Scenerio Population SumRural Scenerio Children le Of Contents 🗓 😞 🚨 I 🖫 Base Scenario ALLES OF THE REAL PROPERTY. ☐ CHARM_2_2 <all other values> LU Paint LU Cemetery LU Commercial LU Downtown Mixed Use LU Industrial LU Institutional/Government LU Office LU Open Space-Preserved LU Parks and Rec LU Res Apartments LU Res Suburb Single Fam LU Rural LU Utility LU Vacant Null ☐ Census_Blocks_2010 Scenar ■ Basemap

What is North Texas CHARM?

Community Health And Resource Management



Texas A&M AgriLife Extension

- Developed by the Texas Community Watershed Partners program through FEMA fundingHosts workshops across Texas
- and the country.



NCTCOG

 Worked with AgriLife to host workshops across North Texas Communities



Scenarios

- Population Growth
- Flood Mitigation
- Emergency Resiliency
- Social Vulnerability
- Housing Equity
- Access to Green Space
- Community Specific Goal



- 85 cities and 8 counties
- Expected to grow by 2,000,000 residents by 2045
- 19% growth in impervious surface from 2006 2016

 The CHARM tool is a user-friendly GIS mapping application that anyone can use

 Paint changes onto a map of your city and watch in real time the results of those changes









Fostering meaningful conversations among stakeholders regarding future planning and resiliency.







Regional Public Works Program



Regional Public Works Program Mission Statement

- Exchanging ideas
- Pooling resources to address common needs
- Establishing uniform standards to produce better products at lower costs
- Developing the public works profession in North Central Texas





What the Regional Public Works Program includes:

- Ongoing Public Works Council support
- Continuing development of a Sustainable Public Rights-of-Way (SPROW)
 Best Management Practices (BMP) Guidebook
- Hosting public works trainings and maintaining the Public Works Training Calendar
- Continuing service as a FEMA Cooperating Technical Partner (CTP)
- Updates to the Public Works Construction Standards drawings
- Continuing development of technical resources and adoption of the integrated Stormwater Management Program (iSWM)
- Hosting the Public Works Roundup
- Coordination of cooperative purchasing agreements

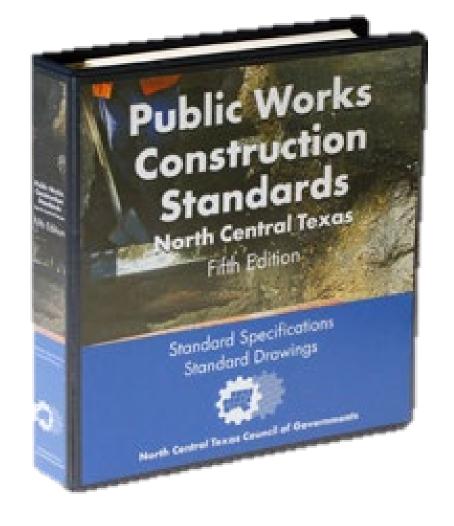


Construction Standards

Guides infrastructure development in North Central Texas

General provisions, roadway construction, pavement, stormwater drainage

Specifications and standard drawings





Sustainable Public Rights of Way Promote best practices to:

- Improve air and water quality
- Improve infrastructure life cycle and performance
- Promote economic development
- Promote integration of rights of way and surrounding land use





integrated Stormwater Management Program (iSWM)



Reduce flooding
Meet state/federal
regulations
Improve water quality
Reduce operation costs
NCTCOG technical
assistance

iSWM Criteria Manual (For Adoption) iSWM Technical Manual (For Reference)

iSWM Program

iSWM Tools (For Reference) iSWM Program
Guidance
(For Reference)



Why Adopt iS WM?

- iSWM[™] Helps Keep Residents Safe
- 2. iSWM[™] Protects Property Value
- 3. iSWM[™] Improves Water Quality
- 4. iSWM™ Helps Meet State and Federal Regulations





iS WM Program Benefits and Incentives:

- NCTCOG Provides:
 - Free training to iSWM communities and their designated design consultants
 - Classes for larger, municipal audiences, such as planners
 - Plaques that can be displayed in communities
 - Signage that designates a community's level of iSWM implementation











































iS WM Program Benefits and Incentives:

Other benefits:

- Adoption of higher standards may provide credits toward a lower FEMA Community Rating System (CRS) rating, equating to reduced insurance rates for your community's residents
- Natural systems can reduce on-going operation and maintenance costs
- A community with more natural features is likely to be more sustainable – and more desirable – over time















































Regional Stormwater Management Program



Stormwater Program Overview

Regional Stormwater Management Coordinating Council (RSWMCC) provides guidance for a comprehensive regional approach to stormwater management. Ongoing activities include:

- Assisting with Stormwater Management Plans (SWMP)
- Identifying regional cooperative opportunities
- Hosting roundtables focused on construction/post-construction
- Supporting and maintaining the regional stormwater website
- Creating and maintaining a case study library of resources and tools
- Providing public education and outreach



Public Education Task Force (PETF)

• Promotes municipal stormwater public education through the exchange of professional experience, exploration, development, and opportunities for cooperation.

Public Outreach Campaigns & Efforts:

- Doo the Right Thing
- Texas SmartScape
- North Texas Community Cleanup Challenge
- Yard Waste





Regional Stormwater Management - Illicit Discharge Detection & Elimination Roundtable

The Regional Stormwater Management Program's IDDE Task Force, composed of representatives from participating local governments, meets quarterly to discuss opportunities for regional cooperation and initiatives, as well as to share ideas, questions, and challenges faced in managing local programs.

Workshops

- Industrial Inspectors Training
- Basic Dry Weather Field Screening Workshop
- Municipal Industrial Inspector Workshop



Regional Stormwater Management – Pollution Prevention

Pollution prevention, (P2) is any practice that eliminates or reduces pollution at its source. The goals of the P2 Roundtable are:

- Prevent or reduce pollutant runoff from municipal operations
- Remove floatables and other pollutants discharged from storm sewers
- Develop procedures for proper disposal of wastes





BMP Library

Minimum Control Measures (MCMs)

- Public Education, Outreach, and Involvement
- Illicit Discharge Detection & Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention and Good Housekeeping for Municipal Operations









Water Quality Management Program

Water Quality Management Overview

NCTCOG is the Regional Water Quality Planning Agency for North Central Texas in 1975.

Responsible for developing the Water Quality Management Plan (WQMP) for 16-county North Central Texas region.

The Water Resources Council assists NCTCOG in updating the WQMP.



Water Quality Management Planning (WQMP) program

The purpose of the WQMP is to help identify potential needs and priorities for improving water quality in the region. In meeting that purpose, the WQMP provides data on water quality, water supply, and wastewater sources and discharges.

- Identify water quality programs that contribute to watershed protection and water quality improvements
- Identify issues that impact water quality, wastewater treatment strategies, and water supply
- Update all data and sources with the most recent information available
- Map the locations of permitted on-site sewage facilities (septic systems) in the NCTCOG region



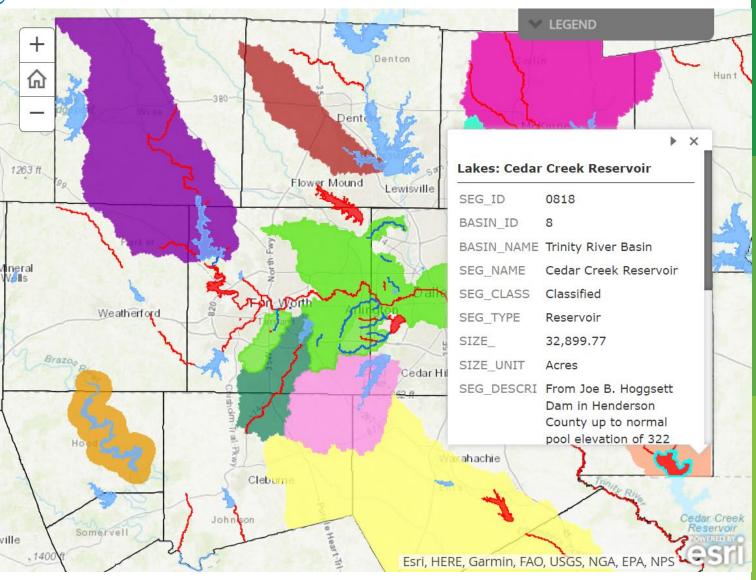
Water Quality Management Plan

A Story Map

2022 Update to the North Central Texas Water Quality Management Plan - Executive Summary,

Water Quality Overview

NOTE: All the water quality data in this interactive mapping tool was downloaded from TCEQ's GIS Data Hub, Water Programs, which uses data from the most recent report on the status of Texas' waterways, the 2020 Texas Integrated Report of Surface Water Quality and Texas 303(d) List (Integrated Report). TCEQ adopted the draft 2020 Integrated Report on March 25, 2020, and EPA approved the 2020 Texas 303 (d) List on May 12, 2020. EPA recently approved the 2022 Integrated Report on July 7, 2022, too late for inclusion in the 2022 Update to the North Central Texas Water Quality Management Plan. However, the data will be









Economic & Environmental Benefits of Stewardship Tool (EEBS)



Goals in Developing EEBS

The tool identifies:

- Environmental effects of new transportation projects
- Appropriate stewardship activities to reduce these effects
- Environmental and economic benefits of implementing stewardship activities



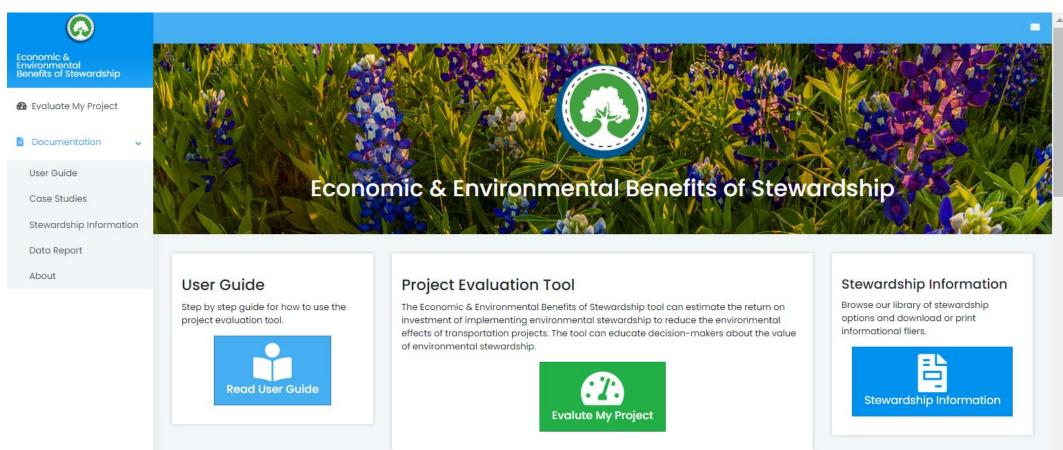






EEBS Website

http://eebs.nctcog.org

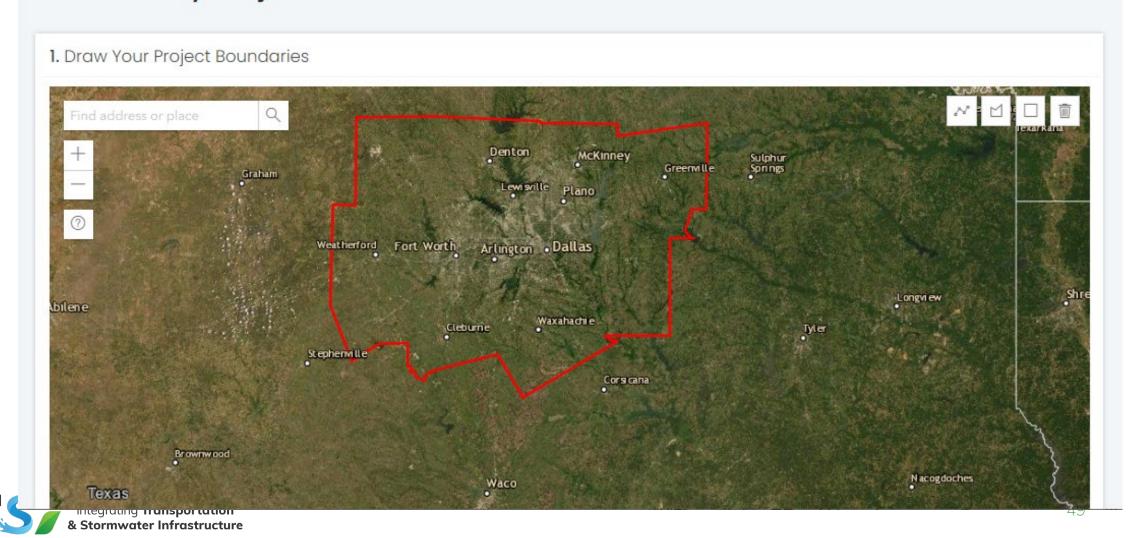




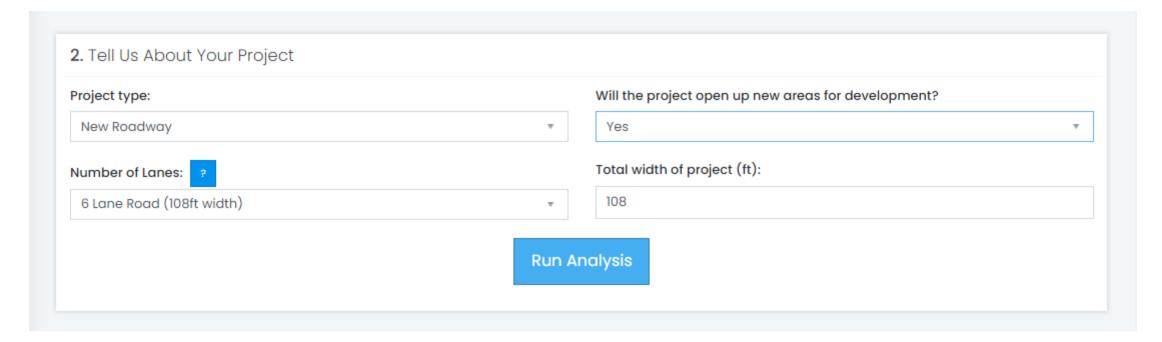
Draw Project Boundaries

Evaluate My Project

Home > Stewardship Evaluation Tool



Define Project Type and Size





Review Potential Environmental Effects





7494
Feet of Streams

51.1Acres Flood Zone



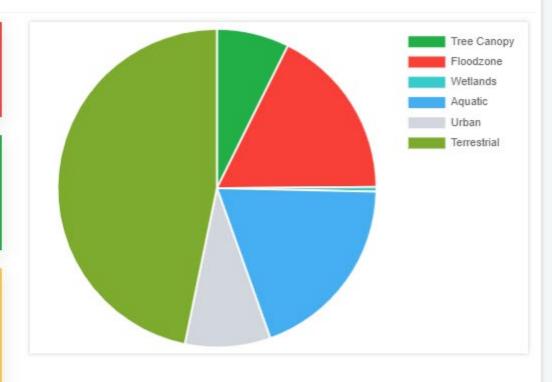
56.0
Acres Aquatic

21.4
Acres Tree
Canopy



25.3 Acres Urban

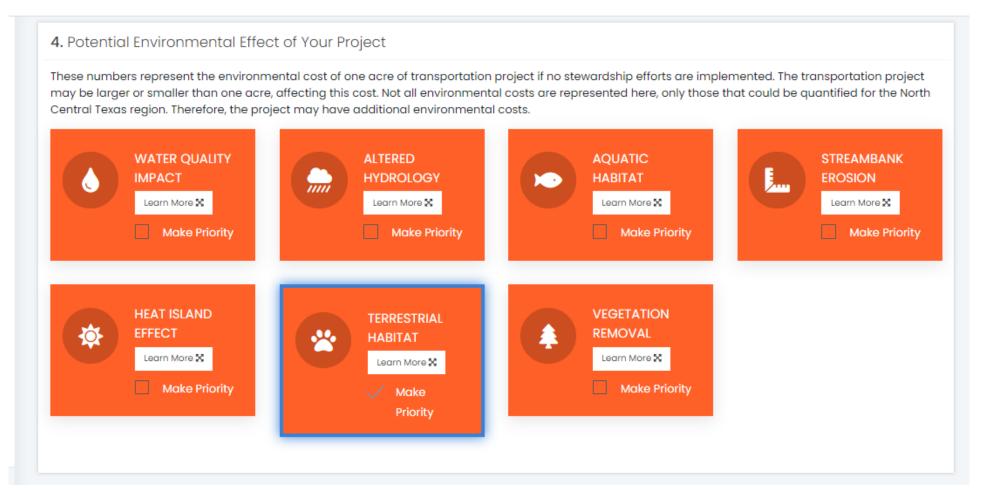
Some datasets may overlap causing sum total of acres to be greater than actual total of acres.



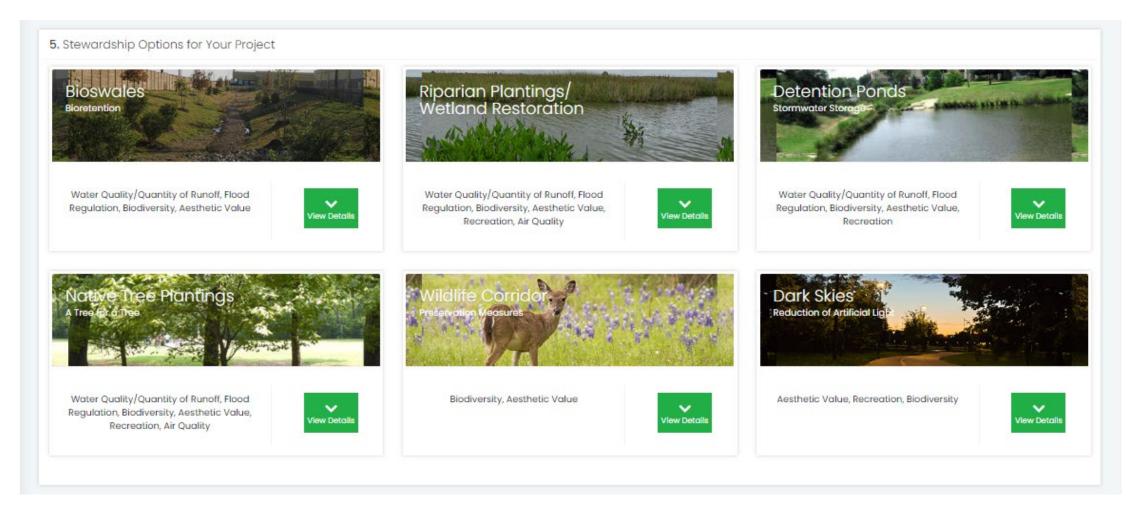
Your project may affect a resource that may require regulatory compliance. Stewardship options provided may not meet the necessary requirements. Further coordination with regulatory agencies and mitigation may be required.



Explore and Prioritize Potential Environmental Effects



Identify Potential Stewardship Options





Explore Costs and Benefits of Stewardship Options







16 County Watershed Management Initiative

Legislation Enabling Counties to Manage Floodplain Development

- The State specifically addresses the NFIP in the Texas Water Code
- To be eligible to participate the political subdivision must be able to qualify under the requirement of 44 CFR, Subchapter B – Insurance and Hazard Mitigation criteria.

§ 16.3145. NATIONAL FLOOD INSURANCE PROGRAM ORDERS OR ORDINANCES.

The governing body of each city and county shall adopt ordinances or orders, as appropriate, necessary for the city or county to be eligible to participate in the National Flood Insurance Program.

44 CFR 59.2 (b) To qualify for the sale of federally-subsidized flood insurance a community must adopt and submit to the Federal Insurance Administrator. as part of its application, flood plain management regulations, satisfying at a minimum the criteria set forth at part 60 of this subchapter, designed to reduce or avoid future flood, mudslide (i.e., mudflow) or flood-related erosion damages. These regulations must include effective enforcement provisions.



Legislation Enabling Counties to Manage Floodplain Development

 The Texas Water Code defines political subdivision to include Counties

Sec. 16.313. DEFINITIONS. In this subchapter: (1) "Political subdivision" means any political subdivision or body politic and corporate of the State of Texas and includes any county, river authority, conservation and reclamation district, water control and improvement district, water improvement district, water control and preservation district, fresh water supply district, irrigation district, and any type of district heretofore or hereafter created or organized or authorized to be created or organized pursuant to the provisions of Article XVI, Section 59 or Article III, Section 52 of the Constitution of the State of Texas; "political subdivision" also means any interstate compact commission to which the State of Texas is a party, municipal corporation, or city whether operating under the Home Rule Amendment of the Constitution or under the General Law.



Legislation Enabling Counties to Manage Floodplain Development

§ 16.315. Political Subdivisions; Compliance With Federal Requirements.

Political subdivisions are authorized to take necessary actions to comply with the requirements of the NFIP, including but not limited to:

- Engaging in floodplain management
- Adopting and enforcing permanent land use and control measures
- Declaring property to be in violation of local laws, regulations, or ordinances
- Taking steps, using regional, watershed, and multi-objective approaches, to improve management and use of flood-prone areas
- Adopting more comprehensive floodplain management rules



Post Workshop Survey Questions



Questions?



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Stormwater Program Resources

Educator Toolbox

• https://nctcog.org/envir/watershed-management/stormwater/educator-toolbox

BMP Library

• https://nctcog.org/envir/watershed-management/stormwater/bmp-library

YouTube Trainings

• https://www.youtube.com/user/nctcoged



Floodplain Management Resources

Trinity River COMMON VISION Program

https://nctcog.org/envir/watershed-management/trinity-river-common-vision

Flood Management Task Force

• https://nctcog.org/envir/committees/trinity-river-common-vision-steering-committee/flood-management-task-force

Corridor Development Certificate

http://trinityrivercdc.com/

CRS Users Group

• https://nctcog.org/envir/watershed-management/crs-user-group



Water Quality Resources

Water Resources Website

• https://nctcog.org/envir/natural-resources/water-resources

Water Resources Council

https://nctcog.org/envir/committees/water-resources-council

Webinars

https://www.youtube.com/@NCTCOGED/videos

North Central Texas Watershed Stakeholders

• The North Central Texas Watershed Stakeholders group meets annually to discuss water quality planning in the region and to exchange information about watershed management.



Thank You!

Presentation can be found at https://nctcog.org/tsi under the dropdown Workshops tab.

