



City of Bastrop, Texas

Project Identification Exercise Report

July 28, 2025

TEXAS A&M
AGRILIFE
EXTENSION

COMMUNITY HEALTH AND
RESOURCE MANAGEMENT



FEMA

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List of Acronyms

ASFPM	Association of State Floodplain Managers
BLE	Base Level Engineering
BUILD	Better Utilizing Investments to Leverage Development
CAPCOG	Capital Area Council of Governments
CHARM	Community Health and Resource Management
CRS	Community Rating System
CTP	Cooperating Technical Partner
EWN	Engineering with Nature
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPMS	Floodplain Management Services
GIFT	Green Infrastructure for Texas
GIS	Geographic Information System
GLO	Texas General Land Office
iSWM	Integrated Stormwater Management Program
LID	Low Impact Development
NCTCOG	North Central Texas Council of Governments
NFIP	National Flood Insurance Program
NPS	National Park Service
PIE	Project Identification Exercise
RCP	Resilient Communities Program
RTCA	Rivers, Trails, and Conservation Assistance Program
TCEQ	Texas Commission on Environmental Quality
TCWP	Texas Community Watershed Partners
TDEM	Texas Department of Emergency Management
TFMA	Texas Floodplain Management Association
TWDB	Texas Water Development Board
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation

Project Background



Project Set Up

Staff from the City of Bastrop reached out to Texas Community Watershed Partners (TCWP), to bring a facilitated planning workshop to the community of Bastrop. On June 25, 2025, staff from the City of Bastrop, City Council, and Planning & Zoning Commissions attended a Project Identification Exercise (PIE) Workshop, facilitated by staff at TCWP at the Bastrop City Hall - Council Chambers.

These services are provided in-kind to the City of Bastrop as part of a cooperative effort between the City and Texas A&M AgriLife Extension Service. The Community Health and Resource Management (CHARM) mapping platform demonstrated in the workshop, is a program of TCWP, within the Texas A&M AgriLife Extension Service's Disaster Assessment and Recovery unit. TCWP's technical services are supported by the Federal Emergency Management Agency (FEMA) Cooperating Technical Partner (CTP) program.

Exercise Attendees

Local and Regional Stakeholders

Table 1: Local Stakeholder Workshop Attendees

Name	Organization/Agency/Department	Title
Ishmael Harris	City of Bastrop	Mayor
Kerry Fossler	City of Bastrop, City Council	Council Member, Place 4
John Kirkland	City of Bastrop, City Council	Mayor Pro-Tem, Commissioner, Place 5
Perry Lowe	City of Bastrop, City Council	Council Member, Place 1
Cynthia Meyer	City of Bastrop, City Council	Council Member, Place 2
Kevin Plunkett	City of Bastrop, City Council	Council Member, Place 3
Brittany Epling	City of Bastrop, Development Services Department	Senior Planner
Alonda Macias	City of Bastrop, Development Services Department	Planner
Elizabeth Wick	City of Bastrop, Engineering Department	Project Manager
Robert Barron	City of Bastrop, Information Technology Department	GIS Manager
David Barrow	City of Bastrop, Planning & Zoning Commission	Commissioner, Place 9
Pete Parsons	City of Bastrop, Planning & Zoning Commission	Commissioner, Place 6
Jordan Scott	City of Bastrop, Planning & Zoning Commission	Commissioner, Place 8

Glenda Dayton	County Museum, Bastrop	President
Jane Wright	County Museum, Bastrop	Vice President

Texas Community Watershed Partners, Texas A&M AgriLife Extension Staff

Table 2: Texas Community Watershed Partners Staff

Organization	Name	Title
Amanda Cain	TCWP, Texas A&M AgriLife Extension Service	Resilience Planner
Dana Borham	TCWP, Texas A&M AgriLife Extension Service	Geospatial Analyst
Kelsey Johnson	TCWP, Texas A&M AgriLife Extension Service	Associate Planning Program Director
Erika Pham	TCWP, Texas A&M AgriLife Extension Service	Geospatial Analyst
Dana Raborn	TCWP, Texas A&M AgriLife Extension Service	Resilience Planner
Carlos Reyes	TCWP, Texas A&M AgriLife Extension Service	Geospatial Analyst

CHARM Overview

The CHARM approach supports community decision-making by fostering dialogue and collaboration through data-driven exercises. During a CHARM session, TCWP works with communities to identify key stakeholders, gather local data on community risks, and prepare interactive facilitated exercises designed to generate meaningful outcomes.

CHARM utilizes geographic information system (GIS)-based technology powered by CommunityViz software, enabling participants to model scenarios by painting new features on a map and instantly calculating potential risks. The exercises use the weTable, an interactive setup that encourages stakeholders to gather "around-the-table" to engage with models of their community, encouraging engagement and collaboration for actional insights.

This PIE Report builds upon the insights gained from the CHARM exercises and discussions to identify and prioritize actional projects addressing the community's critical needs. The following documents are included as attached appendices:

Appendix A: Bastrop PIE Workshop – Memo – June 2025, a document provided to the City following the workshop, includes compiled information regarding key discussion points from the workshop.

Appendix B: Bastrop County CHARM Resiliency Workshop Report (2022) is provided for reference to previous CHARM interactions with the City of Bastrop.

Community Overview

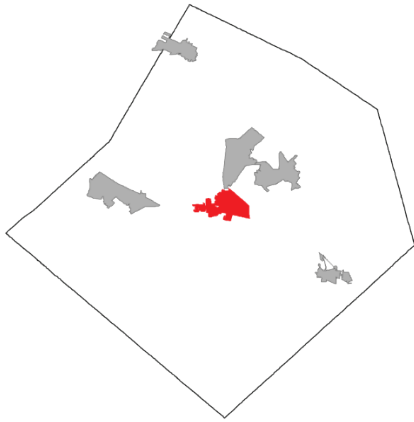


Figure 1: Bastrop, Texas

Bastrop is highlighted in red. The Bastrop County boundary in black is for reference.



Figure 2: Bastrop County, Texas

Bastrop County, highlighted in red, provides reference to its location within Texas

Bastrop, TX

The City of Bastrop is approximately 30 miles southeast of Austin, part of the Greater Austin metropolitan area. The lower Colorado River runs through the City and has historically contributed to flood hazards in the community throughout the years. The City has recently updated their Comprehensive plan to include enhanced future land use categories and descriptions in order to prepare for a growing community. Bastrop also participates in the Bastrop County Hazard Mitigation Plan, which was last updated in 2022. As a part of the Greater Austin metropolitan area, this area is projected to see increased population growth over the next several decades.

Population Statistics

2010 Population: 7,218

2020 Population: 9,689

Population figures from the 2010 and 2020 Decennial Census.

Mapping Products

The Bastrop PIE Workshop brought together key stakeholders from City Council and the Planning & Zoning Commission to collaboratively discuss community hazards and risks pertaining to flooding. The discussions between the two tables held at the workshop have been synthesized into a single document that was provided to the City soon after the workshop (Appendix A). This document covers the variety of topics that came up during the workshop, and led to the identification of potential projects for the City to consider, which are described in detail in the **Project Identification Overview** section.

The following maps (**Figure 3 - Figure 9**) provide relevant information to all table discussions regarding flood zone data (Flood Insurance Rate Maps and Base Level Engineering), as well as captured comments from different discussion topics. These products combined with Appendix A provide a comprehensive overlook of the conversations held during the workshop.

City of Bastrop, FEMA 2023 Effective Flood Zones

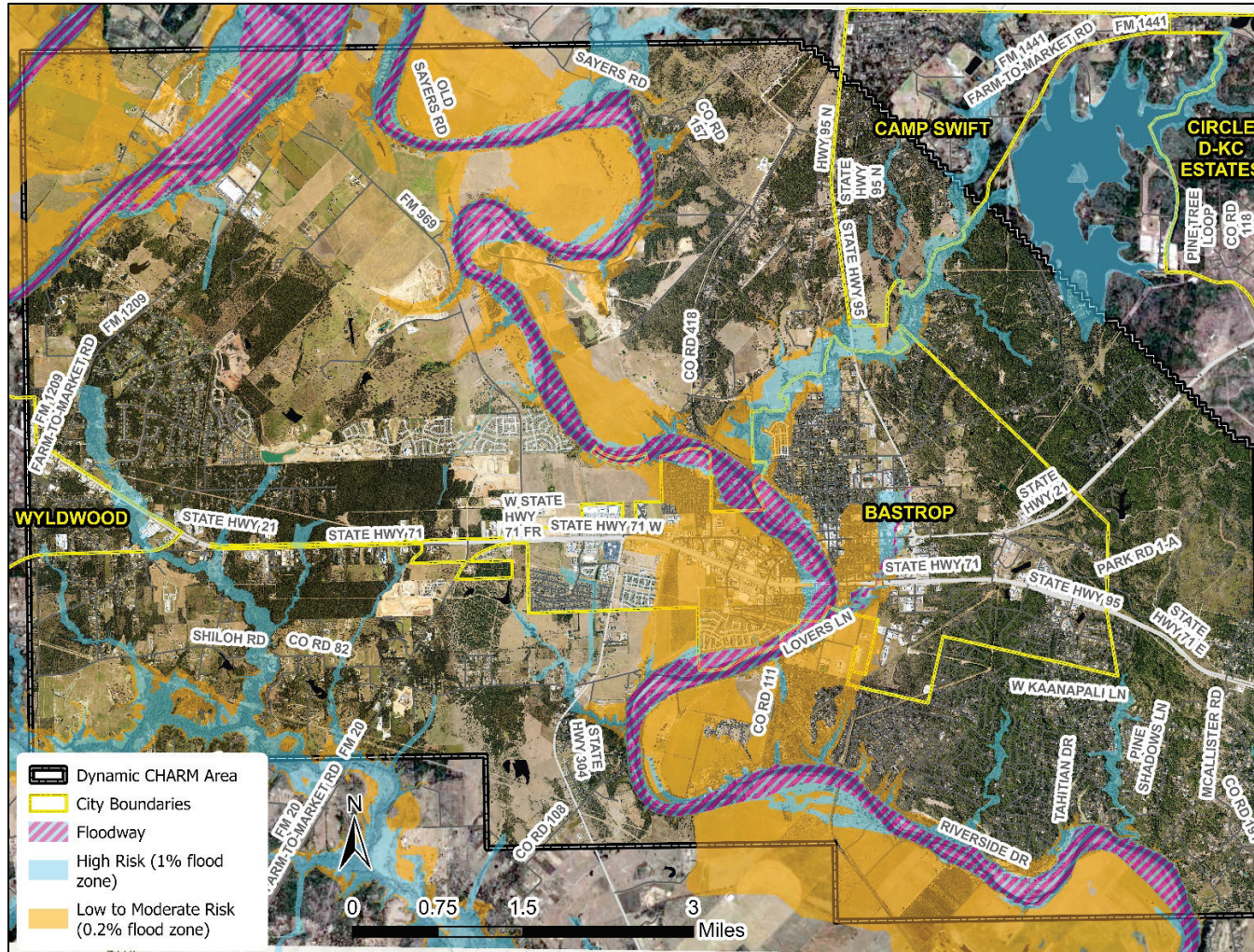


Figure 3: City of Bastrop, FEMA 2023 Effective Flood Zones

This map displays the FEMA 2023 Effective Flood Zones, as represented in the current regulatory FIRM. The FEMA 2023 Effective Flood Zones (FIRMs) in this map are the regulatory standard as of the date of this report. Other flood data, such as Base Level Engineering (BLE) are not considered regulatory, however, those can be utilized as “best available data”. FIRMs and BLE can be utilized together to provide a more comprehensive representation of risk when looking for best available data.

The Effective FIRMs show there is significant coverage of the 0.2% (500-year) flood zone in parts the City compared to the 1% (100-year) flood zone.

City of Bastrop, FEMA Base Level Engineering

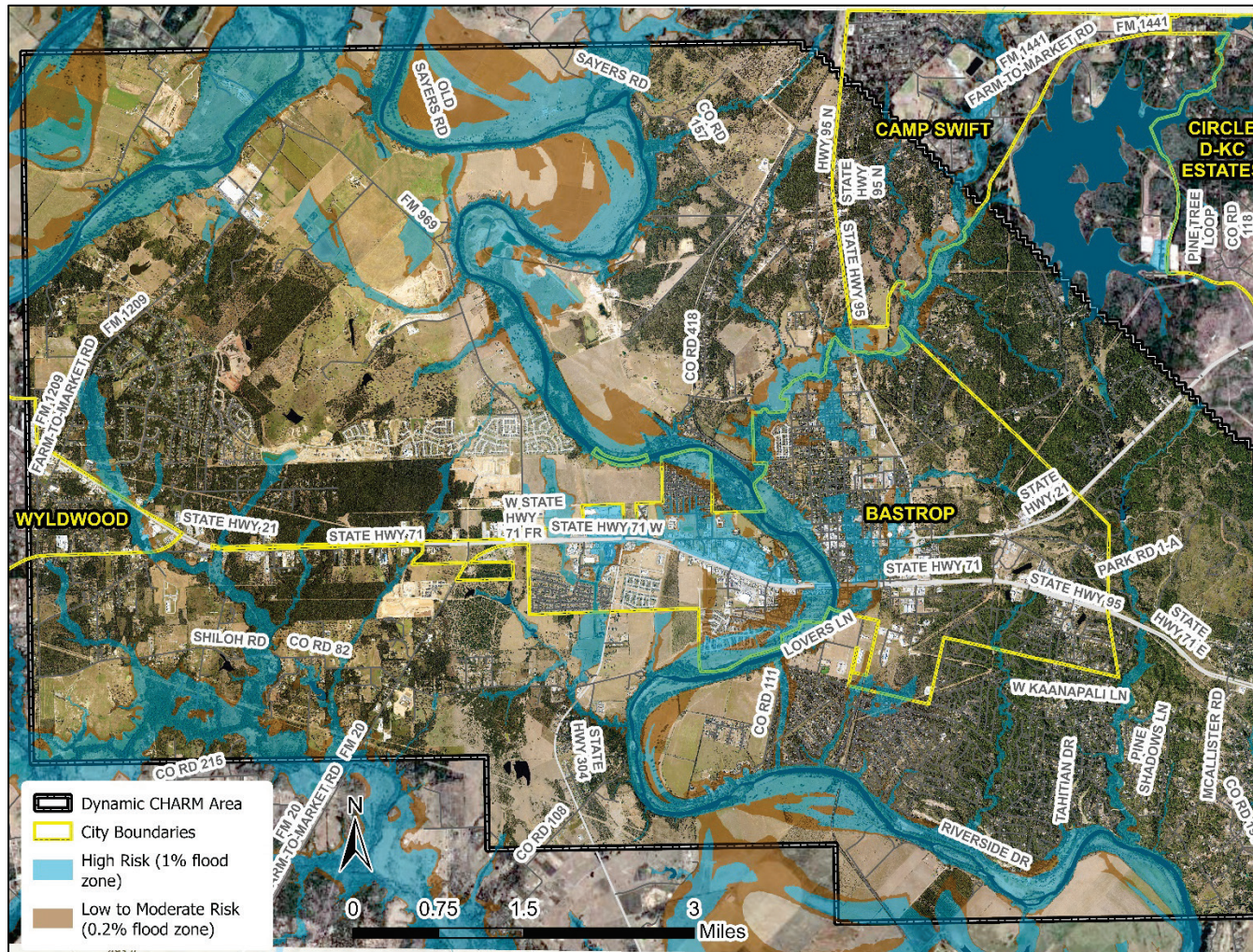


Figure 4: City of Bastrop, FEMA Base Level Engineering

This map provides an overview of the CHARM model's planning area (dynamic CHARM area) and highlights flood zones. The flood zone data shown here is FEMA's Base Level Engineering (BLE).

Unlike the Effective FIRMs showing more coverage of the 0.2% (500-year) flood zone compared to the 1% (100-year) flood zone, the inverse applies here where there is more coverage of the 1% flood zone compared to the 0.2% flood zone.

While BLE data is not regulatory and does not replace FEMA Effective FIRMs, it can support "best available data" for planning purposes. This information is valuable for informing ordinances, planning documents, and future development considerations

More information about BLE can be found at:
webapps.usgs.gov/infrm/estbfe.

Combined Comments from Table 1 and Table 2, North, Bastrop

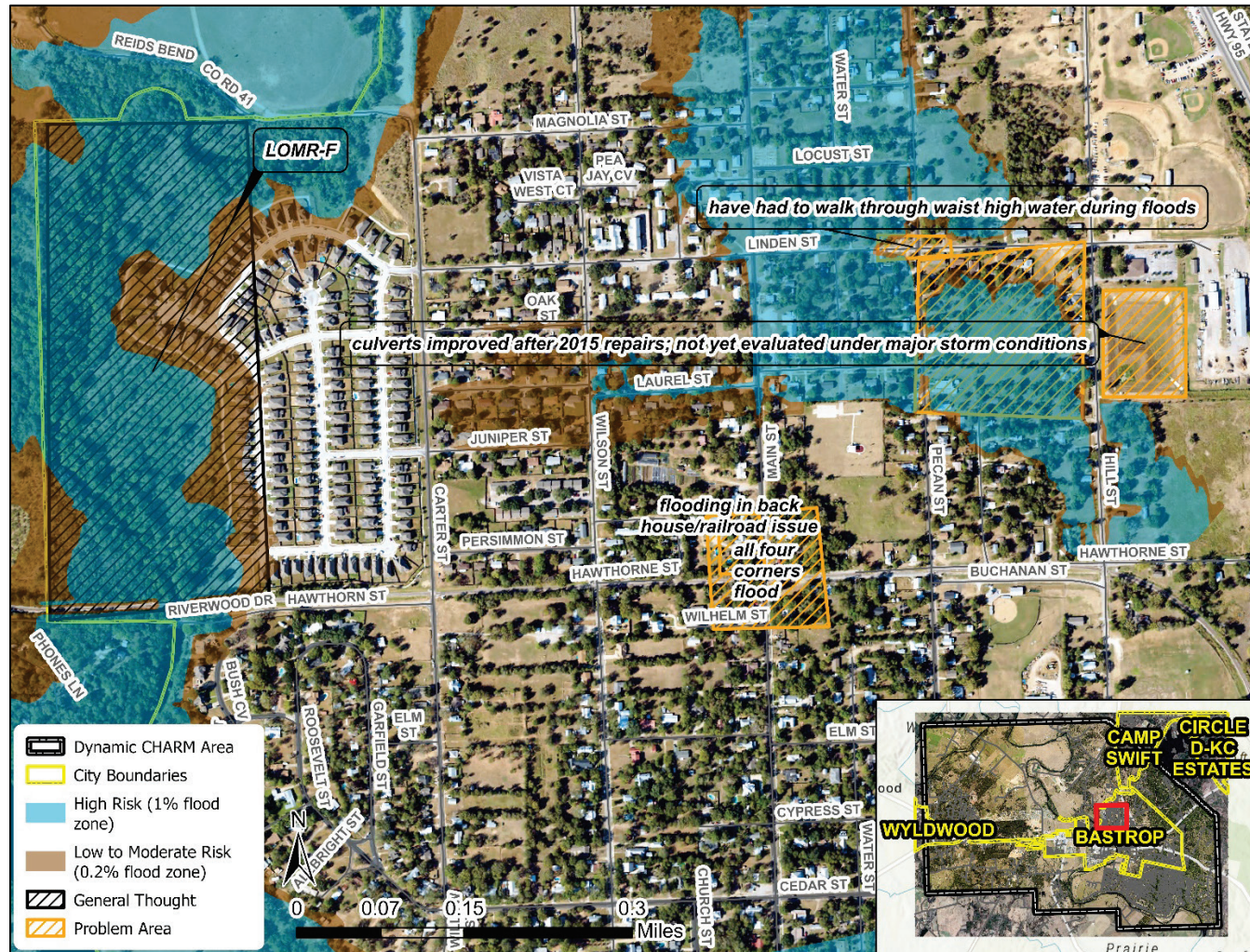


Figure 5: Combined Comments from Table 1 and Table 2, North, Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the north side of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points included known problem areas impacted by flooding, ongoing flood and infrastructure issues, and proposed or planned drainage and infrastructure projects. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Combined Comments from Table 1 and Table 2, West, Bastrop



Figure 6: Combined Comments from Table 1 and Table 2, West, Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the west side of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points included new residential developments and proposed or planned drainage and infrastructure projects. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Figure 6: Combined Comments from Table 1 and Table 2, West, Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the west side of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points included new residential developments and proposed or planned drainage and infrastructure projects. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Combined Comments from Table 1 and Table 2, South (1), Bastrop

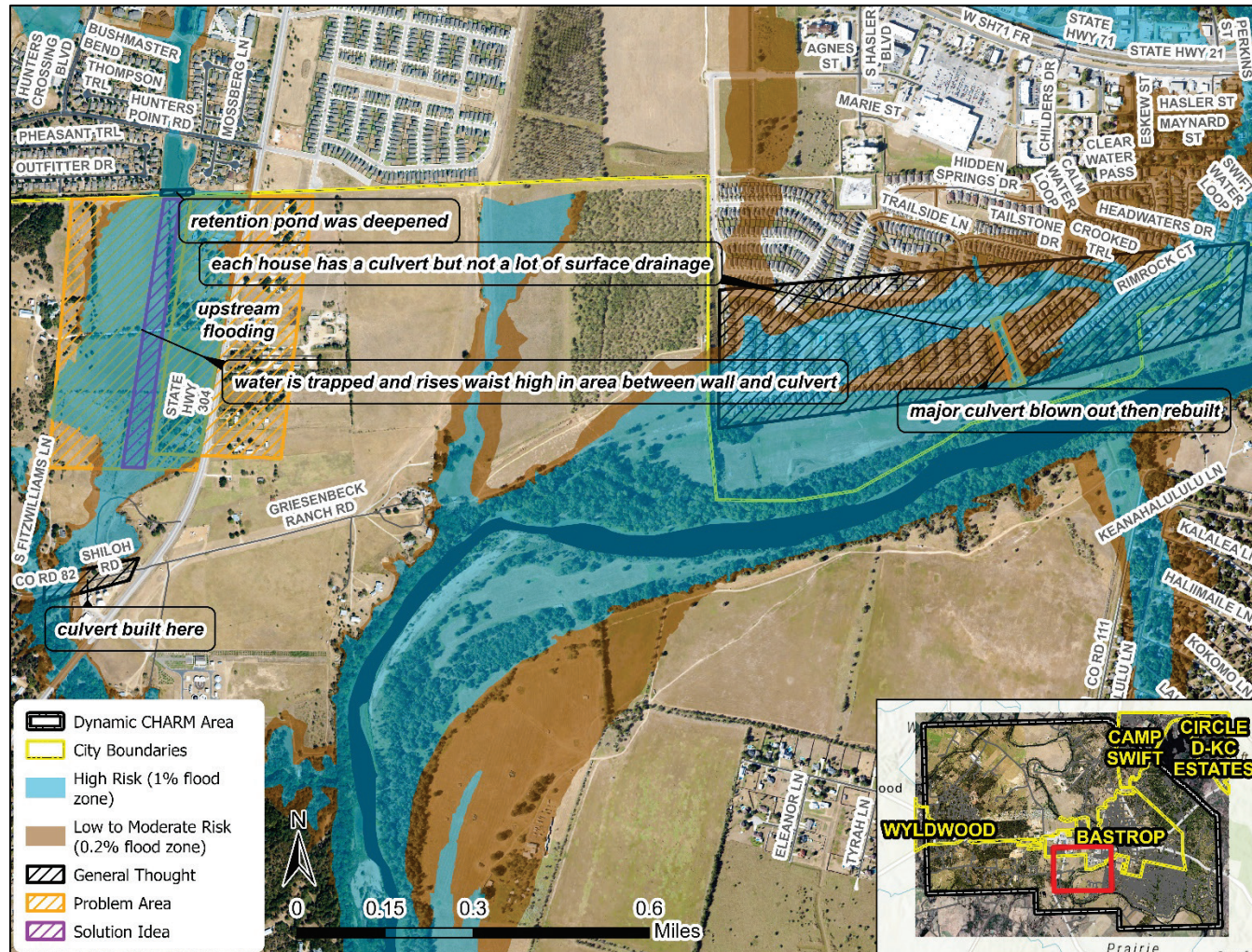


Figure 7: Combined Comments from Table 1 and Table 2, South (1), Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the south side (1) of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points included known problem areas related to flooding, issues with drainage infrastructure, and improvements proposed or existing to support flood mitigation efforts. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Combined Comments from Table 1 and Table 2, South (2), Bastrop

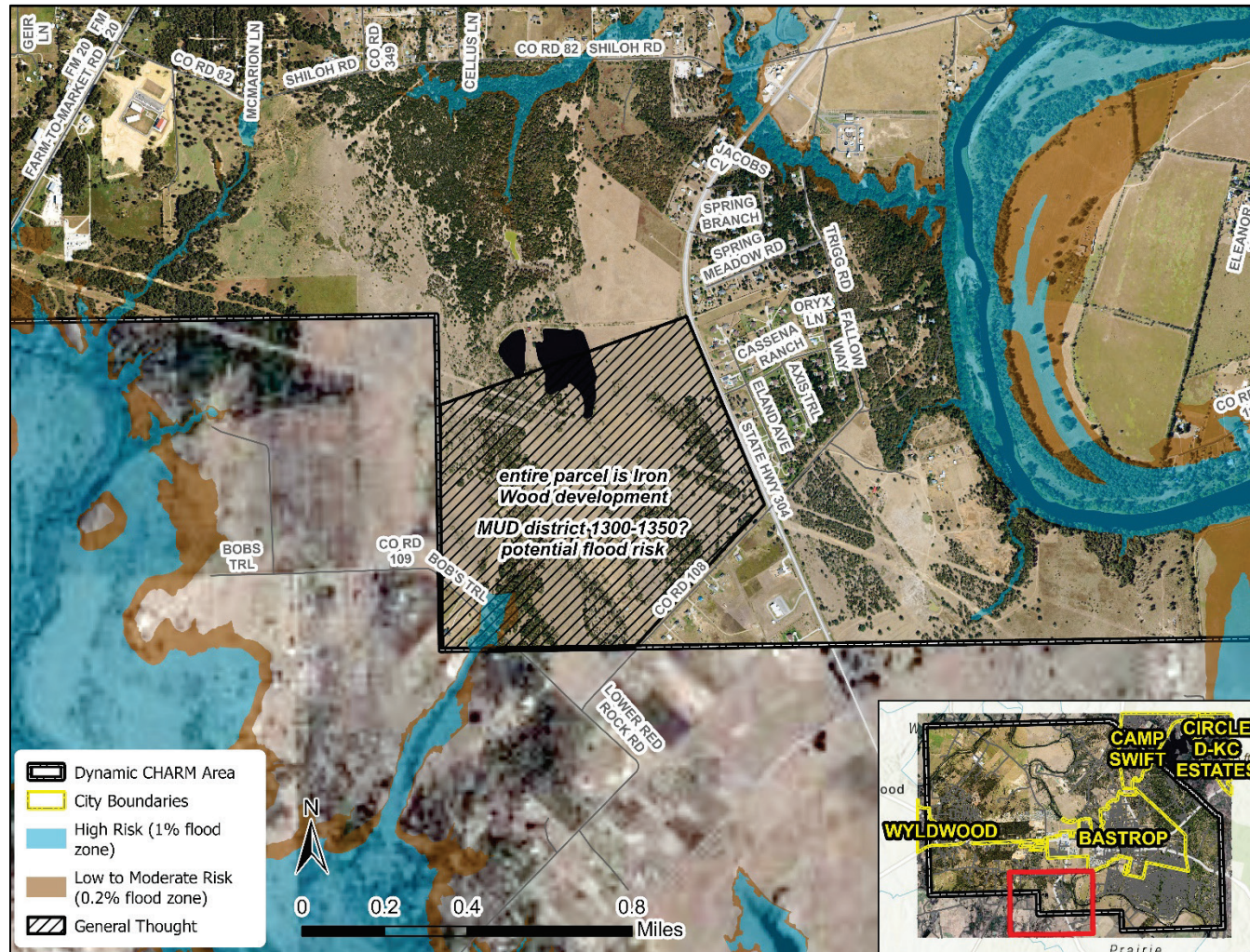


Figure 8: Combined Comments from Table 1 and Table 2, South (2), Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the south side (2) of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points here focused on development and potential associated flood risk. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Combined Comments from Table 1 and Table 2, Central, Bastrop

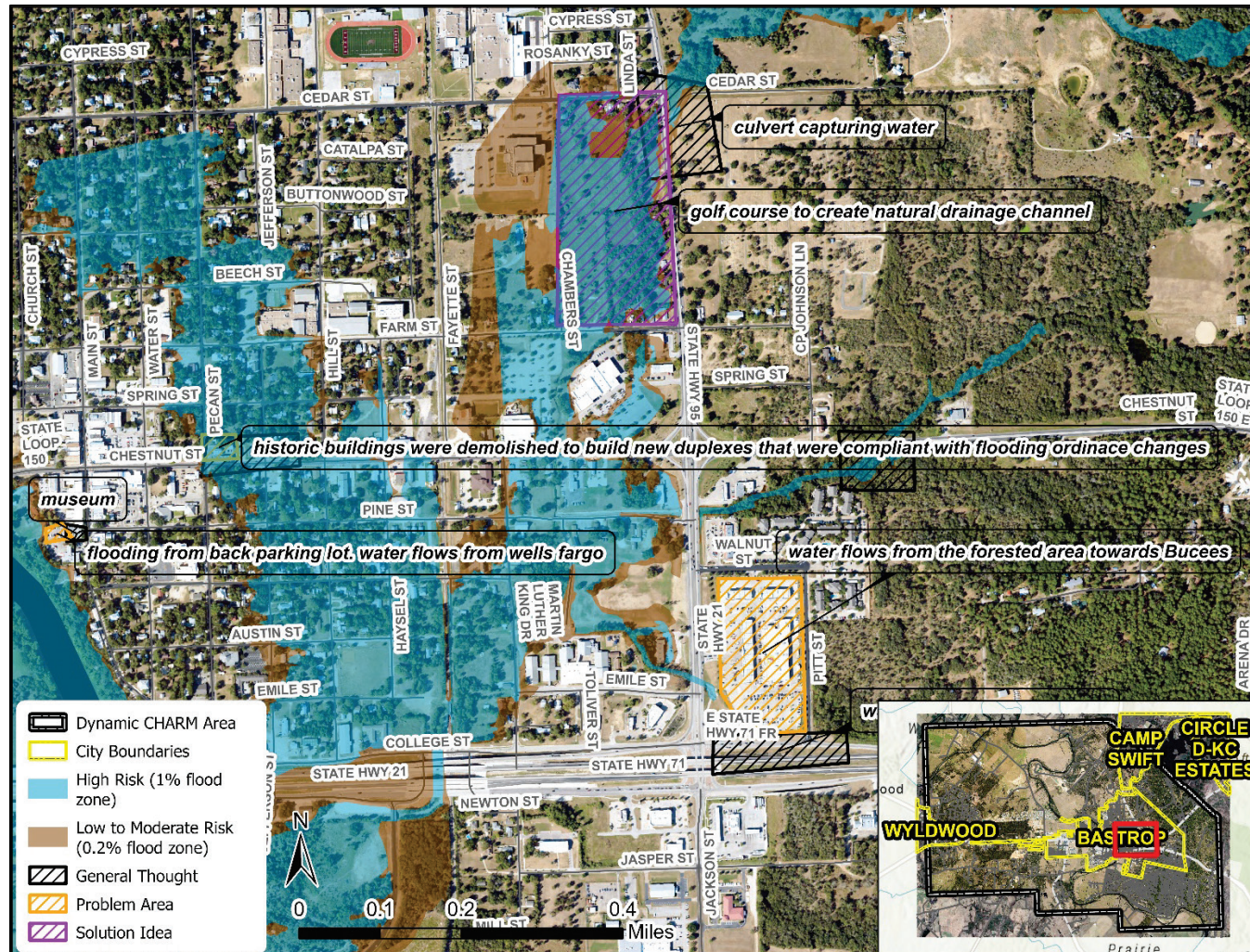


Figure 9: Combined Comments from Table 1 and Table 2, Central, Bastrop

This map captures the combined comments from discussions at Table 1 and Table 2, focusing on the south side (2) of Bastrop. Comments are only shown against the FEMA BLE data. Key discussion points here focused flooding issues and impacts, changes to residential infrastructure, and potential solutions to support flood mitigation efforts. This map provides a comprehensive view of the shared insights and priorities identified during the workshop discussions for this part of Bastrop.

Issue Summaries and Identified Projects



Project Identification Overview

Three projects were identified based on the discussions and priority areas recognized during the Bastrop PIE Workshop. The workshop discussion focused on key issues such as previous areas of flooding and drainage challenges, the differences between Base Level Engineering (BLE) data and FEMA Flood Insurance Rate Maps (FIRM), and opportunities for public education on flooding and drainage issues. These projects are designed to help Bastrop take initial steps towards addressing risks and enhancing community resilience.

Please note, identified projects are conceptional and not fully developed. They provide a foundation of resources and recommendations to guide the planning process.

Each project includes the following components:

- Issue Overview: Detailed description of the issue that led to the project's identification, based on discussions and input from workshop participants.
- Recommended Action Items and Supporting Resources:
 - Recommended Actions: List of potential actions for Bastrop to consider in their continued path towards addressing community risks.
 - Supporting Resources:
 - Tools and Technical Guidance: List of tools and resources to support planning and implementation efforts.
 - Potential Funding Sources: Potential funding opportunities to assist with implementing the recommended actions.

Identified Project #1 – Comprehensive Floodplain Administration Education for Local Leaders

Issue Overview:

As the City of Bastrop faces continued growth and development pressure, a strong understanding of floodplain management principles among local leadership, including, City Council, Planning and Zoning Commission, and City Staff, will be increasingly important. Although individual expertise across the board is not necessary, building a shared foundation of knowledge across leadership roles can support more consistent decisions, improve communication with the public, and help the City navigate future challenges with confidence.

Workshop discussions highlighted a range of perspectives on topics such as stormwater infrastructure, mapped floodplains, and best available data. There were several important discussions surrounding the differences between BLE data and FEMA FIRMs and how both datasets can be utilized in planning as well as development reviews. All these conversations reinforced the importance of clear, accessible training and resources to help leaders engage more effectively with both technical staff and community members.

Providing structured and ongoing floodplain management education will build internal capacity, increase alignment across departments and commissions, and prepare the City to more effectively implement future risk reduction strategies. Establishing a strong foundation now will ensure that future City leadership will be able to continue building and improving risk mitigation in the future.

Recommended Actions & Supporting Resources

Recommended Actions

Table 3: Identified Project #1 Recommended Actions

Action	Description
Training/Capacity Building for Leadership	Offer foundational floodplain management training to elected officials, board and commission members, and relevant city staff. The content should cover basic concepts of floodplain management, the National Flood Insurance Program (NFIP), Community Rating System (CRS), No Adverse Impact principles, local ordinance administration, and floodplain mapping (FIRM and BLE).
Quick-Guide for Bastrop	Develop a quick-reference guidance document specific to Bastrop that clearly explains local regulations, planning documents, and roles/responsibilities. This guide could include: <ul style="list-style-type: none"> • A visual crosswalk showing how documents like the Comprehensive Plan, Stormwater Drainage Manual, Zoning Ordinances, etc., relate to each other. • An FAQ section on floodplain terms and regulatory processes. • Can also consider incorporating tie-ins into the State Flood Plan and Regional Flood Plans.
Regional and Shared Partnerships	Explore local/regional partnerships for in-kind or shared training: Bastrop County, nearby jurisdictions/municipalities, regional planning organizations such as the Capital Area Council of Governments (CAPCOG).
Local Champion	Identify someone from Bastrop leadership who can help champion this initiative and ensure a strong foundation that will be able to be built upon by future leadership. At the time of this report, Bastrop city ordinances (Article 3.17 Flood Damage Prevention, Sec. 3.17.007 – Administration), designate the City Manager, or their designee, as the Floodplain Administrator. The designated Floodplain Administrator could potentially serve as the local champion as they should have greater knowledge surrounding floodplain management practices and better understand the flooding hazards that Bastrop faces. <ul style="list-style-type: none"> • Certified Floodplain Manager. Another step a local champion could take to expand their role is to become a Certified Floodplain Manager, through the Texas Floodplain Management Association (TFMA), a recognized and accredited chapter through the Association of State Floodplain Managers (ASFPM).

Supporting Resources:

Tools and Technical Guidance:

Table 4: Identified Project #1 Tools and Technical Guidance

Tool/Technical Guidance	Description	Resource Location
FEMA Floodplain Management Training for Local Elected Officials	This training helps explain floodplain management to community leadership, including how a strong floodplain management program enhances public safety before and during disasters as well as minimizes impacts to local tax bases after disasters.	www.fema.gov/floodplain-management/training/courses/local-elected-executive
Texas Water Development Board (TWDB) Floodplain Management Training Floodplain Management 101	This free online training provides attendees with an introduction to the NFIP, basic concepts of floodplain management, maps and studies, ordinance administration, and relationship between floodplain management and flood insurance.	www.twdb.texas.gov/flood/workshop
ASFPM In-Person Training EL0273: Managing Floodplain Development Through the National Flood Insurance Program	This course is intended to prepare participants to understand the roles and responsibilities of a local Floodplain Administrator.	www.floods.org/training-center/in-person-training/
ASFPM Flood Science Center: Elected Officials' Flood Guide	This guide is written to help elected officials gain a comprehensive understanding of the range of choices that are available as they evaluate how to prepare for - and respond to - flood events in their communities.	www.floods.org/training-center/in-person-training/
Capital Area Council of Governments (CAPCOG) Regional Planning Services - Water Central Texas	CAPCOG has compiled general information about water issues, plans and more throughout the region to help provide a better understanding of topics related to water planning.	www.capcog.org/divisions/regional-planning-services/water-central-texas/

Base Level Engineering Tools and Resources	FEMA provides a comprehensive source of tools, templates and resources to assist communities for the local review and incorporation of Base Level Engineering into their floodplain management activities. These resources can help local leaders better understand BLE.	BLE Tools/Resources: www.fema.gov/about/organization/region-6/base-level-engineering-ble-tools-and-resources estBFE (BLE) Viewer: webapps.usgs.gov/infrm/estBFE/
Texas Water Development Board (TWDB) Flood Programs	TWDB hosts a suite of information regarding flood programs within the State, as well as other resources.	www.twdb.texas.gov/flood
Texas Floodplain Management Association (TFMA)	TFMA is an established chapter of the Association of State Floodplain Managers (ASFPM). TFMA is an organization of professionals involved in floodplain management, flood hazard mitigation, the NFIP, flood preparedness, warning and disaster recovery. This organization offers any member in good standing to apply for and take an exam to become a Certified Floodplain Manager.	www.tfma.org/

Potential Funding Resources:

Table 5: Identified Project #1 Potential Funding Resources

Funding Source	Description	Resource Location
ASFPM/TWDB	The ASFPM Managing Floodplain Development Through the National Flood Insurance Program is offered in-kind, and can be set up through the Texas Water Development Board NFIP Coordinator.	www.floods.org/training-center/in-person-training
TWDB	Texas Water Development Board hosts free, online training geared towards local elected officials. Coordinate with TWDB for training opportunities.	https://www.twdb.texas.gov/flood/workshop

Identified Project #2 – Public Comprehensive Education and Outreach Campaign

Issue Overview:

Participants at the PIE workshop shared recurring concerns about limited public understanding of floodplain management, development impacts, and local drainage issues. Multiple data sources, unknown personal risk, and confusing drainage decisions all suggest a need for improved education and outreach between city officials and the general public. There is a visible and growing desire in Bastrop for transparency in local governance, and the City is already taking steps to address this. This project provides an opportunity to use flood education to continue working towards Bastrop's transparency goals.

Generally, when there is a lack of public education efforts, it is not uncommon to see misinformation, strained trust between residents, city leadership, and the development community and friction during review of new projects. A coordinated and sustained public education and outreach campaign could help address issues, while building shared understanding and improving community resilience overall. Although the City of Bastrop does not currently participate in the CRS program under the NFIP, the development of an outreach campaign can aid in pursuit of CRS participation and gain credit for transparency-focused activities.

Recommended Actions & Supporting Resources

Recommended Actions

Table 6: Identified Project #2 Recommended Actions

Action	Description
Comprehensive Campaign	<p>Design and launch a comprehensive flood risk education campaign, focused on raising awareness around:</p> <ul style="list-style-type: none">• The difference between BLE and FIRM maps, how to interpret them, and how they can be utilized in the community.• Explaining local drainage challenges and responsibilities, to help the community understand priorities and procedures.• The importance of flood insurance options and affordability. Participating in the NFIP CRS program would lead towards lowered insurance premiums for policy holders.• Regional and local risk mitigation measures, including what residents themselves can do in support of a more resilient community.• Highlight regional efforts and coordination (i.e., Texas State Flood Plan, Region 10 and 11 Flood Planning Group Plans, Bastrop County Hazard Mitigation Plan) to show residents that Bastrop is actively engaged in broader flood resilience efforts.

CRS Participation and Outreach Activities	<p>Link outreach and education campaigns to future CRS participation - use this effort to meet selected CRS public information and outreach activities. Selected CRS activities, identified in the CRS Coordinator's Manual, are intended to provide the public with information needed to increase flood hazard awareness and to motivate actions to reduce flood damage, encourage flood insurance coverage, and protect the natural functions of floodplains.</p> <ul style="list-style-type: none"> • 330 Outreach Projects. • 340 Hazard Disclosure. • 350 Flood Protection Information. • 370 Flood Insurance Promotion.
Communication Channels and Methods of Outreach	<p>Provide a variety of communication channels and formats to reach a broad audience. This may include:</p> <ul style="list-style-type: none"> • Virtual town halls and Q&A sessions. • Printed mailers and handouts in utility bills. • Interactive web content and social media. The City of Bastrop already has a Floodplain Management dedicated web page - consider using this as a space to provide resources and major updates (e.g., when FIRMs are updated).
Local Champion	<p>Identify a staff or community champion to lead the campaign and coordinate messaging across departments and platforms. This could also be the local champion identified for Identified Project #1 Comprehensive Floodplain Administration Education for Local Leaders</p>

Supporting Resources:

Tools and Technical Guidance:

Table 7: Identified Project #2 Tools and Technical Guidance

Tool/Technical Guidance	Description	Resource Location
FEMA Flood Risk Communication Toolkit for Community Officials	This toolkit includes templates and guides for designing a communication plan, effective public meetings, and a social media strategy for addressing flood risk.	www.fema.gov/floodplain-management/manage-risk/communication-toolkit-community-officials
TWDB Effective Flood Awareness Communication	This guidance document identified end-users for flood awareness campaigns, created a flood awareness outreach campaign and developed best practices for effective flood risk communication specific to identified end-users.	www.twdb.texas.gov/flood/research/Flood-Awareness-2022
TWDB Community Official Flood Resource Guide	This guidance document provides resources to assist local flood officials with conducting effective flood education and communication with the public. It also provides online resources that can be shared with various stakeholders to better prepare them for flooding events in Texas.	www.twdb.texas.gov/flood/research/Flood-Resource-Guide-2022
CRS Resources	FEMA hosts information about the CRS program and provides resources on forms, participating communities, discounts available for flood insurance, data visualizations, case studies, blogs and fact sheets. The CRS Resources website provides reference materials related to CRS and hosts information on CRS documents, worksheets, and tools relevant to the activities credited under the CRS Coordinator's Manual.	www.fema.gov/floodplain-management/community-rating-system crsresources.org/

State and Regional Flood Plans	<p>The State Flood Plan brings together the findings of the 15 river-basin-based regional flood plans and makes legislative and floodplain management recommendations to guide state, regional, and local flood control policy. Bastrop County is split into 3 Flood Planning Groups - Region 8, 10 and Region 11, however, the City of Bastrop is located within Region 10 specifically.</p>	<p>State Flood Plan (2024): www.twdb.texas.gov/flood/planning</p> <p>Lower Colorado-Lavaca Regional Flood Planning Group (Region 10) www.lowercoloradolavacaflood.org/</p> <p>Region 10 Flood Plan (2023): www.lowercoloradolavacaflood.org/2023-flood-plan3</p>
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Potential Funding Resources:

Table 8: Identified Project #2 Potential Funding Resources

Funding Source	Description	Resource Location
Texas Flood Information Clearinghouse	<p>This is Texas' "one-stop-shop" for information on flood mitigation funding opportunities for communities in Texas. Green infrastructure, nature-based solutions, and other related activities are eligible for funding through the programs listed below. Not all sources are available for every activity (e.g., some may include requirements like Presidential Disaster Declarations). Funding varies per program.</p>	<p>texasfloodclearinghouse.org/</p> <p>Hazard Mitigation Grant Program (administered by the Texas Department of Emergency Management (TDEM)). www.tdem.texas.gov/mitigation/hazard-mitigation-section</p> <p>Flood Insurance Fund (administered by TWDB). www.twdb.texas.gov/financial/programs/fif</p> <p>Texas Water Development Fund (administered by TWDB). www.twdb.texas.gov/financial/programs/twdf</p> <p>Development Block Grants – Disaster Recovery (administered by GLO). www.glo.texas.gov/disaster-recovery</p>

Texas General Land Office (GLO) Resilient Communities Program (RCP)	<p>This program provides grants up to \$300,000 for eligible entities to develop, adopt, and implement modern and resilient building codes and flood damage prevention ordinances to ensure that structures built within the community can withstand future hazards. Public service activities are not considered standalone eligible options, but can support the plan, ordinance, code, or zoning that is being funded under the program. If the City of Bastrop decides to pursue any eligible activities under this program, public education and outreach can be supported as well.</p>	<p>www.glo.texas.gov/disaster-recovery/mitigation/resilient-communities-program</p>
American Flood Coalition Flood Funding Finder	<p>This interactive website simplifies federal grants to help communities identify and prioritize opportunities to fund resilience. This resource may over time include funding opportunities for projects such as this, as well as many others.</p>	<p>floodcoalition.org/fundingfinder/</p>

Identified Project #3 – Establish Framework for Resilient Development with Green Infrastructure Opportunities

Issue Overview:

As Bastrop continues to grow, decision makers will be increasingly challenged by development proposals in areas with complex flood risk characteristics. While many new developments meet minimum drainage requirements, there is still a potential concern for any cumulative impacts that are not visible right now. During this period of growth, it is important to reduce and mitigate downstream impacts and infrastructure strain now with pending developments, near-term and long-term.

The workshop participants highlighted a need for clearer guidance, policy tools or tool improvements, and design practices that help steer future development toward outcomes that protect the floodplain, reduce runoff, and maximize long-term resilience. Participants expressed an interest in using open space, natural features, and potentially city-owned land to support drainage and environmental benefits.

The City has already made steps towards implementing resilient measures, such as reducing impervious cover requirements, no adverse impacts, and best data available, adding to this will continue to improve resilience around the community. An opportunity exists to develop (or continue to improve) a flexible framework for resilient development that can encourage voluntary best practices as well as integration of green stormwater infrastructure practices.

Recommended Action Items & Supporting Resources

Recommended Actions

Table 9: Identified Project #3 Recommended Actions

Action	Description
Encourage Resilient Practices	Develop a Resilient Development Guidance document that encourages several practices. For example it may include: <ul style="list-style-type: none">• Cluster development and conservation subdivision designs.• Low Impact Development (LID) approaches (e.g., permeable pavements).• Voluntary drainage standards that exceed minimums, including detaining stormwater to reduce runoff and improve water quality.
Establish a Framework	Develop a Nature-Based Infrastructure Planning Framework to: <ul style="list-style-type: none">• Identify opportunities for natural drainage, passive detention, or floodplain restoration where feasible.• Evaluate city-owned and county-owned land for pilot projects to demonstrate green infrastructure practices that work for the community.• Prioritize integration of green infrastructure practices into Capital Improvement Plans and other future land use decisions, where feasible.

Education and Guidance Opportunities	<p>Provide guidance and opportunities for local developers and engineers to learn about green infrastructure practices that can be incorporated into new developments in a way that supports the City. Potential examples could include:</p> <ul style="list-style-type: none"> • Hosting technical design charrettes/workshops with local developers and engineers to build shared understanding and explore implementation pathways that make sense for all parties involved. • Develop sample site plans and visual renderings to illustrate identified best practices and alternatives to conventional subdivision layouts. This could be structured similarly to the B3 Pattern Book for various stakeholders.
CRS Participation and Green Infrastructure Activities	<p>Link green infrastructure practices to future CRS participation - use this effort to meet selected CRS open space and nature-based activities. Certain CRS activities, identified from the CRS Coordinator's Manual, are intended to provide the public with information needed to increase flood hazard awareness and to motivate actions to reduce flood damage, encourage flood insurance coverage, and protect the natural functions of floodplains.</p> <ul style="list-style-type: none"> • 420 Open Space Preservation. • 450 Stormwater Management. • 540 Drainage System Maintenance.

Supporting Resources:

Tools and Technical Guidance

Table 10: Identified Project #3 Tools and Technical Guidance

Tool/Technical Guidance	Description	Resource Location
Texas A&M AgriLife Extension Green Infrastructure for Texas (GIFT)	This program provides resources and programming about nature-based solutions for stormwater management through outreach, coalition-building, education, and on-the-ground projects.	agrillife.org/gift/
The North Central Texas Council of Governments (NCTCOG) Integrated Stormwater Management Program (iSWM)	With the support of the NCTCOG, the iSWM Program was established to help communities within that region achieve their goals of water quality protection, streambank protection, and flood mitigation. iSWM has a Criteria Manual that provides design guidance and a framework for incorporating effective and environmentally sustainable stormwater management into site development and construction processes. There is also a Technical Manual available that focuses on Planning, Water Quality, Hydrology, Hydraulics, Site Development Controls, Construction Controls, and Landscape. The iSWM Program and associated documents are useful sources to understand how to implement a framework across a region - something that Bastrop could consider with nearby municipalities and counties, and regional council of governments (CAPCOG).	www.iswm.nctcog.org/ iswm.nctcog.org/criteria-manual iswm.nctcog.org/technical-manual
U.S. Army Corps of Engineers (USACE) Engineering with Nature (EWN)	This program applies science and engineering to deliver infrastructure solutions that are effective, resilient, and operationally efficient. With the integration of natural and built systems, EWN enhances infrastructure performance while strengthening resilience, potentially reducing costs, and creating lasting value for communities and ecosystems. This program has developed several resources for use, including implementation, research, tools, designs, and more.	ewn.erdc.dren.mil/

CRS Resources	FEMA hosts information about the CRS program and provides resources on forms, participating communities, discounts available for flood insurance, data visualizations, case studies, blogs and fact sheets. The CRS Resources website provides reference materials related to CRS and hosts information on CRS documents, worksheets, and tools relevant to the activities credited under the CRS Coordinator's Manual.	www.fema.gov/floodplain-management/community-rating-system crsresources.org/
TWDB Nature-based Solutions for Flood Mitigation in Texas	This guidance document will synthesize guidance on the use of nature-based flood mitigation solutions into a single, statewide manual for Texas communities. The intent is to help address flood risk, water quality, groundwater recharge, habitat improvement, and community enhancement goals as independent nature-based solutions or in combination with traditional flood mitigation and infrastructure. A public draft of this document is expected in Fall 2025, with a completed version at the end of 2025.	www.twdb.texas.gov/flood/research/Nature-based-Solutions-2022

Potential Funding Resources:

Table 11: Identified Project #3 Potential Funding Resources

Funding Source	Description	Resource Location
Texas Flood Information Clearinghouse	This is Texas' "one-stop-shop" for information on flood mitigation funding opportunities for communities in Texas. Green infrastructure, nature-based solutions, and other relative activities are eligible for funding through the programs listed below. Not all sources are available for every activity (e.g., some may include requirements like Presidential Disaster Declarations). Funding varies per program.	texasfloodclearinghouse.org/ Hazard Mitigation Grant Program (administered by TDEM). www.tdem.texas.gov/mitigation/hazard-mitigation-section Pre-Disaster Mitigation (administered by TDEM). www.tdem.texas.gov/mitigation/hazard-mitigation-section Flood Mitigation Assistance (administered by TWDB). www.twdb.texas.gov/financial/programs/FMA

		<p>Flood Insurance Fund (administered by TWDB). www.twdb.texas.gov/financial/programs/fif</p> <p>Clean Water State Revolving Fund (administered by TWDB). www.twdb.texas.gov/financial/programs/CWSRF</p> <p>Texas Water Development Fund (administered by TWDB). www.twdb.texas.gov/financial/programs/twdf</p> <p>Development Block Grants - Disaster Recovery (administered by GLO). www.glo.texas.gov/disaster-recovery</p>
Texas General Land Office (GLO) Resilient Communities Program (RCP)	<p>This program provides grants up to \$300,000 for eligible entities to develop, adopt, and implement modern and resilient building codes and flood damage prevention ordinances to ensure that structures built within the community can withstand future hazards. While green infrastructure planning and implementation alone is not a standalone activity, if Bastrop decides to incorporate these measures into codes, ordinances, and plans, the RCP may be able to fund a comprehensive project</p>	<p>www.glo.texas.gov/disaster-recovery/mitigation/resilient-communities-program</p>
U.S. Department of Transportation (USDOT) Better Utilizing Investments to Leverage Development (BUILD) Grant Program	<p>Capital projects (including projects to replace or rehabilitate a culvert or prevent stormwater runoff for the purpose of improving habitat for aquatic species while advancing the goals of the BUILD program), and planning projects (which include planning, preparation, or design) are considered eligible under this program. For FY25, capital grants for rural areas were required to request at least \$1 million in BUILD funding; there was no minimum funding request for planning grant applications; and grants were capped at \$25 million.</p>	<p>www.transportation.gov/BUILDgrants</p>

National Fish and Wildlife Foundation - Five Star and Urban Waters Restoration Grant Program	<p>This program seeks to develop nationwide community stewardship of local natural resources, preserving these resources for future generations and enhancing habitat for local wildlife. Grants seek to address water quality issues in priority watersheds, such as erosion due to unstable streambanks, pollution from stormwater runoff, and degraded shorelines caused by development. Projects awarded through this program provide environmental education and training through projects that restore wetlands and streams. Grants awards are around \$10,000 - \$40,000.</p>	<p>www.epa.gov/wetlands/five-star-wetland-and-urban-waters-restoration-grants</p> <p>www.nfwf.org/programs/five-star-and-urban-waters-restoration-grant-program</p>
U.S. Army Corps of Engineers (USACE) Flood Plain Management Services (FPMS)	<p>This program offers technical services that include urbanization impacts, stormwater management, natural and nature-based solutions, and other flood-specific efforts. Efforts under this program are funded at 100% federal cost to local, regional, state, and other non-federal governmental partners. Funding varies by district, availability, and eligibility of project.</p>	<p>www.usace.army.mil/Missions/Civil-Works/Technical-Assistance/FPMS/</p> <p>www.swf.usace.army.mil/ (Bastrop is located within the Fort Worth USACE District)</p>
National Park Service (NPS) Rivers, Trails, and Conservation Assistance Program (RTCA)	<p>This program supports locally-led conservation and outdoor recreation projects by assisting communities and public land managers in developing or restoring parks, conservation areas, rivers, and wildlife habitats, as well as creating outdoor recreation opportunities. Financial assistance and monetary grants are not provided as part of this program - instead, as a collaborative partner NPS-RTCA will provide professional services to help achieve conservation and outdoor recreation project visions.</p>	<p>www.nps.gov/orgs/rtca</p>

Texas Commission on Environmental Quality (TCEQ) Nonpoint Source Program Grant	<p>This program provides funding to projects that address the objectives, goals, or priorities addressed in the Texas Nonpoint Source Management Program. Priority is given to projects that lead to water quality improvements and develop and implement EPA-accepted watershed protection plans. Although there is no defined maximum or minimum grant amount, recent awarded projects ranged from \$60,000 to \$480,000 in federal dollars, with total costs ranging from \$100,000 to \$800,000. Projects must include a non-federal match for 40% of total project cost.</p>	<p>www.tceq.texas.gov/waterquality/nonpoint-source/grants</p>
American Flood Coalition Flood Funding Finder	<p>This interactive website simplifies federal grants to help communities identify and prioritize opportunities to fund resilience. This resource may over time include funding opportunities for projects such as this, as well as many others.</p>	<p>floodcoalition.org/fundingfinder/</p>

Appendices



Appendix A: Bastrop PIE Workshop – Memo – June 2025

**Appendix B: Bastrop County CHARM Resiliency Workshop Report
(2022)**