SB3 Outdoor Warning Sirens
Post Planning Project Plan

Burnet County, Texas



10/26/2026

STREAMLINE
ENGINEERING

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San Antonio, Tx 78232
TBPELS FIRM NO. 24968
Project Number 26-231

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I Project Overview

The purpose of this report is to establish the parameters of the Outdoor Warning Siren System for Burnet County, including service area, proposed siren locations and related site control, recommended technology – including siren triggers, and project partners to support TWDB review and approval for advanced funding for construction and implementation purposes.

This project plan was submitted to request funding through the Senate Bill 3 (SB 3) grant program, which was established to assist municipalities, counties, and other governmental entities with the costs of installing outdoor warning sirens. On December 16, 2025, the TWDB authorized the executive Administrator to enter into grant agreements with the 30 counties included in the Governor's Disaster Declaration to provide grant funding.

Phase 1 of the Project Plan initiated planning activities under Tasks 1, 2, and 10 and established the framework for implementation. Planning activities will continue under Task 2 during the implementation phase, including civil design, easement coordination and acquisition support, hydrologic and hydraulic analyses, and emergency planning to support installation and operation of the flood warning system.

The proposed outdoor warning sirens are intended to serve the following at-risk populations within the identified flash flood risk areas:

1. Backbone Creek at Two Roosters Ranch RV Park
2. Backbone Creek at Johnson Park
3. Hamilton Creek at Burnet Housing Authority
4. Hamilton Creek at Cedar Stays RV Park
5. Whitman Branch at Nature Heights
6. Whitman Branch at Burnet Animal Shelter
7. Dry Creek at Camp Champion

The identification and prioritization of critical populations were developed through coordination with County staff, the City of Highland Haven, City of Granite Shoals, City of Marble Falls, and the City of Burnet, together with a comprehensive review and refinement of the Provisional Flash Flood Hazard Area (PFFHA) dataset.

i. Proposed

Based on the completed planning effort, the proposed implementation includes the following flood warning infrastructure:

- 7 proposed mechanical outdoor warning sirens
- 5 proposed stream gages

Together, these components will provide real-time hydrologic monitoring and targeted public warning capabilities to improve situational awareness and reduce flood risk for vulnerable populations throughout Burnet County.

The County, or its authorized representative, certifies that:

Option A:

☐ it has sufficient legal authority, permission, or ownership interest to install, operate, access, and maintain each proposed siren location identified in this Project Plan, including reasonable ingress and egress for installation and ongoing maintenance, or has contracted with another entity to install, operate, access, and maintain each proposed siren location identified in this Project Plan. The County, or its authorized representative, also certifies that for any development that occurs in the floodplain, all necessary permits have been obtained, including floodplain permits. The County, or its authorized representative, also certifies that all other necessary permits have been obtained and that all applicable regulations have been complied with as part of this project; or

Option B:

☒ it is in the process of acquiring all legal authority, permission, or ownership interest to install, operate, access, and maintain each proposed siren location identified in this Project Plan, including reasonable ingress and egress for installation and ongoing maintenance, or is in the process of contracting with another entity to install, operate, access, and maintain each proposed siren location identified in this Project Plan. The anticipated date of full acquisition is: March 2027. The County, or its authorized representative, also certifies that for any development that occurs in the floodplain, the necessary permits will be obtained, including floodplain permits. The County, or its authorized representative, also certifies that any other necessary permits will be obtained and that all applicable regulations will be complied with as part of this project. The anticipated date by which all necessary permits will be acquired is: March 2027. All access rights and permits must be acquired in time to meet the applicable deadlines for release of funds. The County must include updates on acquisition and permits in its monthly progress reports.

The estimated implementation cost to achieve SB3 compliance is **$899,600**. Combined with the **$400,000** allocated to Tasks 1, 2, and 10, the total estimated cost for planning and implementation is **$1,299,600**.

II Planning Phase Summary

This section outlines the scope completed to date to develop an Outdoor Warning Siren Implementation Plan.

i. Hydrologic and Hydraulic Modeling

Streamline utilized FEMA Base Level Engineering (BLE) two-dimensional hydraulic models for the Austin-Travis, and Buchanan-Lyndon Johnson, San Gabriel, and Lampasas HUCs as the foundation for the countywide hydrologic and hydraulic analysis. The existing BLE models included simulated flood extents for the 25-, 100-, and 500-year rainfall events.

Exhibit 1 contains the Model Repository Extents. **Exhibit 2** contains the Countywide 100-year BLE Floodplain Map.

To better support flash flood warning and emergency response planning, Streamline expanded the analysis by developing additional 2-year design storm simulations using HEC-HMS and NOAA Atlas 14 precipitation data for each watershed. Collectively, the analyses provide hydraulic coverage across the entirety of Burnet County and establish a consistent technical basis for evaluating flood hazards under both frequent and major storm events.

The resulting hydraulic datasets will be used to identify inundation extents, evaluate roadway and infrastructure impacts, establish flood warning thresholds, and prioritize critical populations requiring notification during flash flood events. These analyses will form the technical foundation for the recommended flood monitoring network, outdoor warning siren locations, and warning trigger criteria presented in this Project Plan.

ii. Threshold Analysis

Streamline will evaluate at-risk populations within the refined Flash Flood Hazard Areas (FFHAs) to develop actionable trigger thresholds that support timely and consistent emergency response. The analysis will involve establishing two tiers of emergency action, Warning and Siren Activation, giving emergency managers clear, objective criteria for issuing public notifications and activating outdoor warning sirens ahead of rapidly developing flood events. Site-specific thresholds will be assigned to each critical population by comparing the anticipated hydraulic response at that location to the corresponding storm return period in the surrounding watershed. These thresholds will be tied to upstream gage observations at a lead time sufficient to provide advance warning before peak flood stage downstream, with gages sited roughly 0.5 to 3 miles upstream of protected populations where feasible. The framework will also extend to rainfall-based criteria, correlating Atlas-14 depth-duration statistics at each location's critical return period with real-time data from the proposed rain gage network to drive the warning and siren system.

Final site-specific thresholds and warning triggers will be included in Llano County's Emergency Action Plan, along with thresholds exhibits for each site. The detailed

hydraulics and hydrology analysis used to determine the thresholds and triggers will be included with the final master plan including the calculations and models.

iii. Limitations

The recommended Warning and Siren Activation thresholds are intended to provide emergency managers with consistent, technically supported guidance based on observed conditions at upstream monitoring locations. These thresholds should be used as decision-support tools in conjunction with real-time weather forecasts, radar observations, field reports, and professional judgment.

The hydrologic and hydraulic analyses supporting these thresholds were developed using NOAA Atlas 14 24-hour design storm distributions. Actual storm events may exhibit substantially different rainfall intensities, temporal distributions, and spatial variability. High-intensity, short-duration storms may produce more rapid watershed responses than those represented in the design analyses, reducing the available warning time between an upstream gage reaching a trigger threshold and the onset of hazardous conditions at downstream critical populations. Accordingly, emergency managers should recognize that available lead times may be shorter during rapidly developing flash flood events and should consider activating warnings or sirens earlier when forecast conditions indicate an unusually intense or fast-moving storm.

iv. Siren Acoustics Analysis

Streamline developed an ArcGIS Pro-based acoustic modeling tool by expanding upon the open-source SPreAD-GIS model originally developed by the Department of Fish, Wildlife, and Conservation Biology at Colorado State University for evaluating sound propagation in natural environments. While the original application was intended for National Park noise studies, the underlying acoustic engine is based on the Nord2000/NMSim sound propagation framework, which incorporates methodologies consistent with ANSI S1.26-1995 and ISO 9613-2 standards.

The Streamline tool was adapted specifically for outdoor warning siren system design and includes three primary Python modules:

- **Physics Engine** – Models the physical processes affecting sound propagation, including geometric spreading, atmospheric absorption, terrain shielding, land cover attenuation, meteorological effects, and the cumulative acoustic effects of multiple sirens operating simultaneously.
- **Siren Source Library** – Defines siren-specific acoustic characteristics, including sound power levels, frequency spectra, mounting heights, and operational parameters.
- **Propagation Engine** – Computes sound pressure levels throughout the study area and generates spatial coverage maps for evaluating warning effectiveness.

For each analysis, the tool generates:

- Raster sound pressure level maps illustrating predicted A-weighted or C-weighted sound levels (dB) throughout the study area.
- Combined acoustic coverage maps showing the interaction and overlap of multiple sirens.
- Spatial datasets that can be used to evaluate warning coverage relative to populated areas, transportation corridors, and other critical infrastructure.

a. Modeling Assumptions

For consistency and planning-level analysis, all sirens were modeled as omnidirectional sound sources, radiating sound uniformly in all horizontal directions. This assumption is considered appropriate for system planning and provides a conservative representation of siren coverage. Although many commercially available sirens exhibit minor directional variability, these differences are typically within ±3 dB and do not materially influence overall coverage or siren placement decisions.

- The acoustic model utilized the following input datasets and assumptions:
- Texas Geographic Information Office (TxGIO) digital terrain data
- 2019 National Land Cover Database (NLCD) land cover dataset
- Ambient air temperature of 75°F
- 50 percent relative humidity
- No prevailing wind conditions

Siren coverage was evaluated using the 70 dB(C) sound pressure contour as the minimum design criterion for effective outdoor warning. Areas located within the 70 dB(C) contour were considered adequately covered by the proposed siren system. Based on the completed analysis, all identified Flash Flood Hazard Areas (FFHAs) fall within the modeled coverage provided by the proposed siren network.

b. Model Limitations

The acoustic model provides a planning-level representation of outdoor warning siren performance and does not explicitly account for several localized factors, including:

- Individual buildings acting as sound barriers (urban attenuation is approximated using land cover classifications)
- Vegetation height and canopy density (only generalized land cover effects are considered)
- Indoor sound levels
- Rotating siren heads. Sirens with rotating sound patterns are conservatively represented as omnidirectional sound sources to approximate long-term coverag

Despite these limitations, the model provides a technically sound and consistent methodology for comparing siren configurations, optimizing siren placement, and evaluating countywide outdoor warning coverage during project planning and design.

III Service Area

The critical populations are outlined below.

1. Backbone Creek at Two Roosters Ranch RV Park
2. Backbone Creek at Johnson Park
3. Hamilton Creek at Burnet Housing Authority
4. Hamilton Creek at Cedar Stays RV Park
5. Whitman Branch at Nature Heights
6. Whitman Branch at Burnet Animal Shelter
7. Dry Creek at Camp Champion

Exhibit 3 contains the Critical Populations and Proposed Infrastructure Map.

	Critical Pop	Type	Lat	Long	Owner	Jurisdiction	Power Source
1	CEDAR STAYS RV PARK	Siren	30.57928	-98.22996	TXDOT	BURNET COUNTY	AC/DC (SB3 Compliant)
2	TWO ROOSTER RANCH RV PARK	Siren	30.60766	-98.30325	TXDOT	BURNET COUNTY	AC/DC (SB3 Compliant
3	GRANITE SHOALS	Siren	30.59076	-98.38483	CITY OF GRANITE SHOALS	CITY OF GRANITE SHOALS	AC/DC (SB3 Compliant
4	CAMP CHAMPION	Siren	30.61080	-98.39640	HIGHLAND HAVEN POA INC	CITY OF HIGHLAND HAVEN	AC/DC (SB3 Compliant
5	BURNET HOUSING AUTHORITY	Siren	30.75324	-98.22845	CITY OF BURNET	CITY OF BURNET	AC/DC (SB3 Compliant
6	NATURE HEIGHTS RV PARK	Siren	30.59603	-98.27492	CITY OF MARBLE FALLS	CITY OF MARBLE FALLS	AC/DC (SB3 Compliant
7	MARBLE FALLS ANIMAL SHELTER	Siren	30.56793	-98.28314	CITY OF MARBLE FALLS	CITY OF MARBLE FALLS	AC/DC (SB3 Compliant
	Stage Gage						
8	Backbone Creek @ FM 1855 #1	Gage	30.64600	-98.26982	TxDOT	Burnet County	Solar
9	Backbone Creek @ FM 1855 #2	Gage	30.64108	-98.30486	TxDOT	Burnet County	Solar
10	Dry Creek @ FM1431	Gage	30.61900	-98.39339	TxDOT	City of Highland Haven	Solar
11	Hamilton Creek @ Oak St	Gage	30.76856	-98.23442	City of Burnet	City of Burnet	Solar
12	Whitman Branch @ Resource Pkwy	Gage	30.61797	-98.26432	City of Marble Falls	City of Marble Falls	Solar

Table 1. Infrastructure Matrix.

IV Implementation Approach

Burnet County will procure all equipment, software, professional services, and construction necessary to implement the SB3 Flood Warning System in accordance with the Texas Local Government Code, County purchasing policies, and all applicable Texas Water Development Board (TWDB) grant requirements. The County may utilize competitive sealed procurement, requests for proposals, cooperative purchasing programs, or other procurement methods authorized by state law to achieve the best value while maintaining compliance with applicable procurement regulations.

The County intends to leverage cooperative purchasing contracts where appropriate to expedite implementation and reduce procurement timelines. Technology-related components, including software, cloud services, communications equipment, and system integration services, may be procured through Texas Department of Information Resources (DIR) Cooperative Contracts or other approved cooperative purchasing programs, where applicable. Specialized flood warning equipment, including outdoor warning sirens, stream gages, rain gages, and associated installation services, may be procured through competitive solicitation or other authorized cooperative purchasing contracts, as appropriate.

a. Procurement Packages

To streamline implementation, the Project may be divided into the following procurement packages:

Flood Monitoring Equipment

- Non-contact radar stream gages
- Telemetry equipment
- Solar power systems
- Mounting hardware
- Communications equipment

Outdoor Warning Sirens

- Mechanical and electronic sirens
- Control equipment
- Solar power systems
- Mounting structures
- Foundations
- Installation and commissioning

Software and Communications

- Data hosting

- Flood warning software
- Dashboard configuration
- Alert notification services
- Communications integration
- System configuration and testing

Procurement activities are anticipated to proceed in the following sequence:

- Finalize technical specifications and bidding documents.
- Advertise or solicit procurement packages.
- Evaluate proposals or quotations.
- Obtain Commissioners Court approval, as required.
- Execute contracts.
- Procure long-lead equipment.
- Complete installation and commissioning.

Where practical, procurement activities will overlap to minimize the overall project schedule and accelerate system deployment. The procurement strategy described herein is intended to provide a framework for implementation. Procurement methods may be refined during project execution to respond to market conditions, equipment availability, technological advancements, or updated County priorities, provided all procurements remain compliant with TWDB requirements, applicable law, and County purchasing policies.

V Project Schedule

The Proposed Project Schedule is as follows:

Phase	Milestone	Estimated date
1	Project start	6/10/2026
2	Planning and design	4/1/2027
3	Procurement complete	1/1/2027
4	Right of way and necessary permits obtained	3/1/2027
5	Installation Complete	5/31/2027
6	Operational / testing complete	06/31/2027
7	Final report and certification	7/12/2027

VI Project Budget

The project budget will include all planning required to develop and implement a Siren Flood Warning System and Report compliant with SB3. An Opinion of Probable Construction Cost is provided in the table below.

BURNET COUNTY - OPINION OF PROBABLE CONSTRUCTION COST - SB3 IMPLEMENTATION					
TWDB TASK	**ITEM**	**UNIT**	**UNIT COST**	**QUANTITY**	**AMOUNT**
Task 1	Project Management	EA	$ 45,000	1	$ 45,000
Task 2	Planning and Design	EA	$ 335,000	1	$ 335,000
Task 3	Utility Evaluations	EA	$ 15,000	1	$ 15,000
Task 4	Non-Contact Point Radar Gage or Pressure Transducer Gage	EA	$ 20,000	5	$ 100,000
	Mechanical Siren, Hardware, AC/DC Power Connection	EA	$ 70,000	7	$ 490,000
	Base Station Primary/Secondary	EA	$ 10,000	2	$ 20,000
	Radio Repeater	EA	$ 30,000	1	$ 30,000
Task 5	Installation/ Construction	%	15%	-	$ 96,000
Task 6	Software and Communications Configuration	LS	$ 50,000	1	$ 50,000
Task 7	Testing and Monitoring	%	5%	-	$ 36,800
Task 8	System Inspection	%	5%	-	$ 36,800
Task 9	Education Training	EA	$ 25,000	1	$ 25,000
Task 10	Flood Early Warning System Master Plan Report	EA	$ 20,000	1	$ 20,000
				TOTAL COSTS	$ 1,299,600

VII Requirements Compliance

NOTE: Either the County or an entity that the County has contracted with may complete this section. Counties are required to certify that their outdoor warning siren systems will meet each of the minimum requirements specified below from the September 2026 Flash Flood Warning Siren Guide, Version 1.1. By initialing next to each of the requirements below, the authorized representative is certifying that the requirement is understood and will be met as part of this project plan.

#	Requirement	Initial
2.1	Communities must identify a primary and backup administrator responsible for their siren system with full oversight and awareness of the system and associated activities.	AS
2.2	Joint siren operations between municipalities, counties, and/or other government agencies must include a signed and/or adopted Memorandum of Understanding or similar written agreement with documented roles and responsibilities.	AS
3.1	Communities must follow and document a process for siren site selection.	AS
3.2	Sirens must produce an audible alert of no more than 123 dB(C) at a distance of 100 feet from the siren. The siren's coverage area is defined as the area in which the audible alert is at least 70 dB. Sirens should be sited to avoid exposing anyone to sound levels exceeding 123 dB(C); otherwise, warning signage must be posted within the affected noise contour.	AS
3.3	Sirens must have the following: • Both local and remote manual overrides for triggering the siren. • A primary power source capable of operating the siren continuously and reliably. • A backup power source different than the primary power source that is sufficient to operate the siren as designed in the absence of the primary power source (as detailed further below). • Automatic transition between primary and backup power in the event of failure. The backup power source must provide sufficient power for: • 24 hours of standby. ○ "Standby" refers to the operation state where the system is waiting for a trigger signal and is capable of alert when a trigger signal is received. • 30 minutes of alerting. ○ This requirement has been modified from the FEMA standard of 15 minutes to provide for a series of 10, three-minute audible alerts. Batteries used for power supply must: • Be automatically and fully recharged to at least 80 percent of maximum rated capacity from the fully discharged state in 24 hours or less. • Be a low-maintenance design with a vendor-specified lifespan of at least five years. Note that this value has been modified from the FEMA standard of three years based on industry experience and advancements in battery technology.	AS
3.4	Sirens must have a backup communications method that is sufficient to operate the siren as designed in the absence of the primary communication method. The siren must provide automatic transition between primary and backup communication methods in the event of failure.	AS
3.5	When used as a siren activation trigger, gauges must use at least one form of telemetry capable of transmitting data to a central location at a minimum of every 15 minutes.	AS
3.6	Sirens must be tested immediately after installation and the results must be documented.	AS

3.7	Sirens must include at least one stream gauge as an activation trigger. One gauge may serve as a trigger for multiple sirens.	AS
3.8	All siren electronic components necessary for remote activation and operation must be elevated to or above the 500-year, 24-hour maximum water surface elevation. A separate local manual activation device may be located below this elevation if the manufacturer or provider confirms that its inundation or failure will not impair remote siren operation.	AS
4.1	An operations plan must be assessed annually and include, at minimum, • Roles and responsibilities, including who is responsible for authorizing activation; • Detection protocols (i.e., trigger(s), threshold(s), etc.); • Activation protocols (i.e., how and when a siren is activated); • Notification protocols for officials, emergency managers, and the general public; • Testing protocols; and • A false alarm policy.	AS
4.2	Sirens must be tested daily using silent tests and monthly using audible activation to verify sirens are receiving communications and are operational. Primary and backup systems must be tested. The monthly audible activation can be cancelled if severe weather is present or forecasted. All tests must be conducted on a fixed, documented schedule, and test results must be documented. If a test fails, corrective action(s) must be initiated within 72 hours and retesting performed after corrective action(s) are completed. Corrective action(s) and retesting must be documented.	AS
4.3	A siren must produce clear, audible alert tone(s) with a minimum activation duration of three minutes per alert repeated at regular intervals.	AS
4.4	The siren system must be integrated with public messaging systems.	AS
5.1	The siren must be inspected annually following vendor guidelines. Inspection documentation must include, at a minimum, • Inspection findings and any corrective actions required, • Prior year maintenance records, and • Maintenance and inspection documentation for gauges used as activation triggers	AS
6.1	Communities must conduct public education and outreach to inform populations served by sirens about the system's purpose, testing schedule, alert tones and/or voice messages, and actions to take if activated.	AS

Requirements for compliance are also available at https://www.twdb.texas.gov/about/sb3/index.asp.

Disclaimer:

The Texas Water Development Board (TWDB) does not perform engineering or technical reviews of siren specifications, power sources, or communication methods. The applicant (County) is solely responsible for ensuring that all equipment and installation meet applicable engineering standards, local codes, and operational requirements.

VIII Advance Request (If applicable, up to 25% of the Project Plan)

Amount requested $324,900

Percent of total project estimate 25%

IX Signature of County Representative

The project plan must be signed and submitted by an official representative of the County who is authorized to submit this plan on behalf of the County. This signature affirms that the information provided is accurate to the best of their knowledge at the time of signing and acknowledges that the plan may be updated as necessary.

County Representative: _____

Name: _____

Title: _____

Signature/Date: _____

BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 1
MODEL REPOSITORY MAP

OCTOBER 2026

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Legend

- Austin-Travis
- Buchanan-Lyndon B. Johnson
- San Gabriel
- Lampasas
- Roadways
- Burnet County Limits

0 12,500 25,000 US Feet

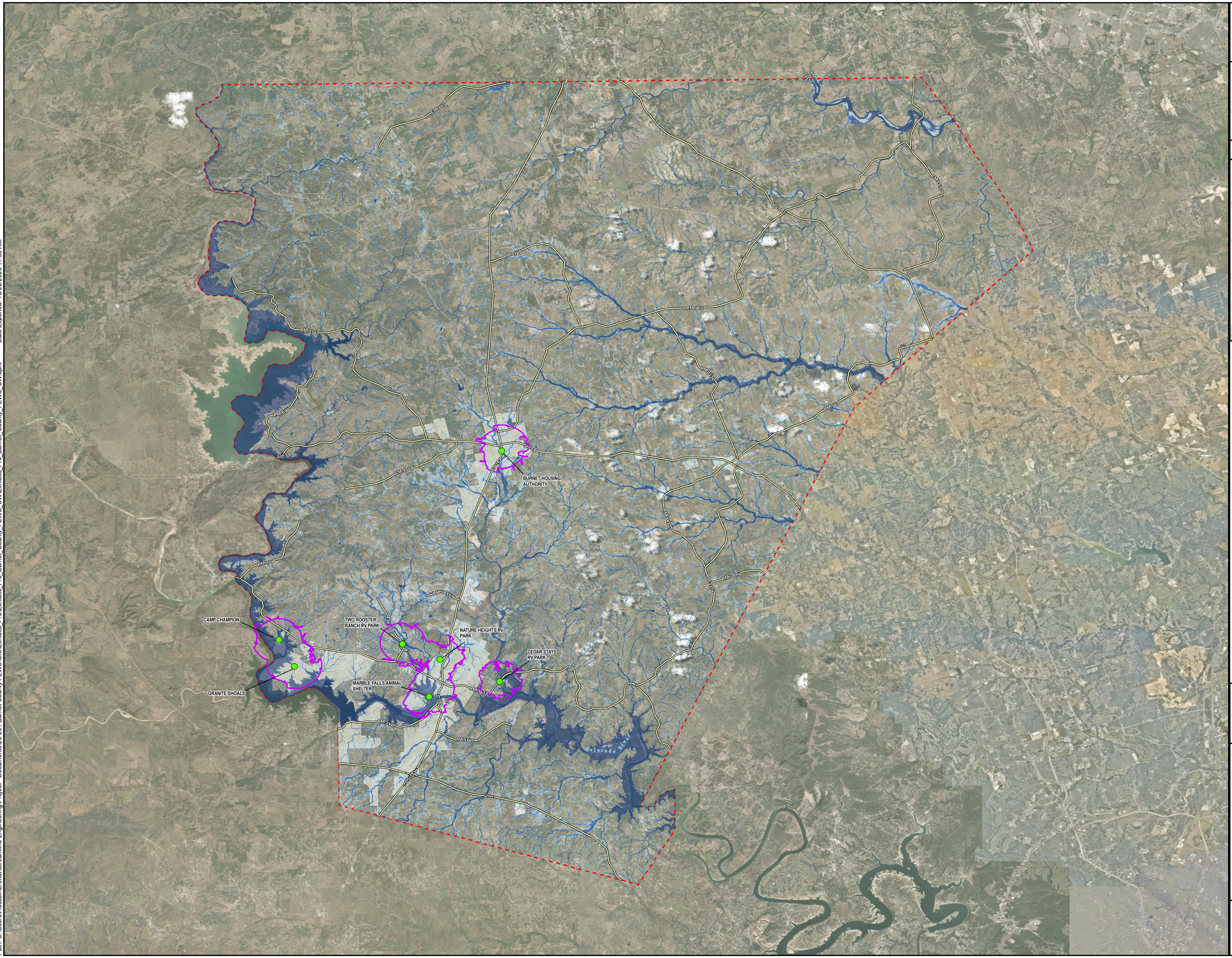
1 in =12,500 ft

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 2
COUNTYWIDE 100-YEAR FLOODPLAIN MAP

OCTOBER 2026

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Legend

- Acoustic 70db
- Rivers and Creeks
- Roadways
- Rivers and Creeks
- City Limits
- Burnet County Limits

Siren Locations

- Proposed

100YR FLOODPLAIN (BLE) DEPTH

Value

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 78.00

0 12,500 25,000 US Feet
1 in =12,500 ft
N

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 3
CRITICAL POPULATION AND PROPOSED INFRASTRUCTURE MAP

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Marble Falls Proposed Gage Locations
- Proposed Gage Location
- LCRA Gages
- Rivers and Creeks
- Acoustic 70db
- Roadways
- Rivers and Creeks
- Burnet County Limits
- City Limits

Siren Locations

- Proposed

0 12,500 25,000 US Feet

1 in =12,500 ft

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 4A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Roadways
- Parcels
- City Limits
- Acoustic 70db
- Siren Locations
- Proposed Gage Location
- Critical Population
- Rivers & Streams

Warning Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

N

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BACKBONE CREEK @ FM 1855 #1

BACKBONE CREEK @ FM 1855 #2

TWO ROOSTERS RV PARK

NATURE HEIGHTS RV PARK

RM1431

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 4B
CRITICAL POPULATION TRIGGERS
SIREN THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Roadways
- Parcels
- City Limits
- Acoustic 70db
- Siren Locations
- Proposed Gage Location
- Critical Population
- Rivers & Streams

Siren Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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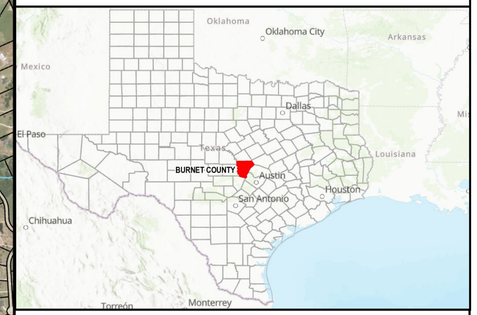
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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 5A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Roadways
- Parcels
- City Limits
- Acoustic 70db
- Siren Locations
- Proposed Gage Location
- Critical Population
- Rivers & Streams

Warning Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 5B
CRITICAL POPULATION TRIGGERS
SIREN THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Roadways
- Parcels
- City Limits
- Acoustic 70db
- Siren Locations
- Proposed Gage Location
- Critical Population
- Rivers & Streams

Siren Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

N

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SAN ANTONIO, TX 78232
TBPELS FIRM NO. 24968

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TWO ROOSTER RANCH RV PARK

NATURE HEIGHTS RV PARK

MARBLE FALLS ANIMAL SHELTER

RM 1431

RM 2147

BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 6A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Parcels
- City Limits
- Marble Falls Proposed Gages

Warning Threshold

Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 6B
CRITICAL POPULATION TRIGGERS
SIREN THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Parcels
- City Limits
- Marble Falls Proposed Gages

Siren Threshold
Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

N

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TWO ROOSTER RANCH RV PARK

NATURE HEIGHTS RV PARK

MARBLE FALLS ANIMAL SHELTER

RM1431

RM2147

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 7A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Parcels
- Marble Falls Proposed Gages

Warning Threshold

Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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Whitman Branch @ Resource Pkwy Gage

TWO ROOSTER RANCH RV PARK

NATURE HEIGHTS RV PARK

RM 1431

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 7A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Parcels
- Marble Falls Proposed Gages

Siren Threshold

Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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Whitman Branch @ Resource Pkwy Gage

TWO ROOSTER RANCH RV PARK

NATURE HEIGHTS RV PARK

RM 1431

DOGWOOD

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 8A
CRITICAL POPULATION TRIGGERS WARNING THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Marble Falls Proposed Gages
- Parcels
- City Limits
- LCRA Gages

Warning Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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Hamilton Creek near Marble Falls

CEDAR STAYS RV PARK

RM 1431

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BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 8B
CRITICAL POPULATION TRIGGERS
SIREN THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231



Legend

- Proposed Gage Location
- Rivers & Streams
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Marble Falls Proposed Gages
- Parcels
- City Limits
- LCRA Gages

Siren Threshold Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

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Hamilton Creek near Marble Falls

CEDAR STAYS RV PARK

RM 1431

US 281

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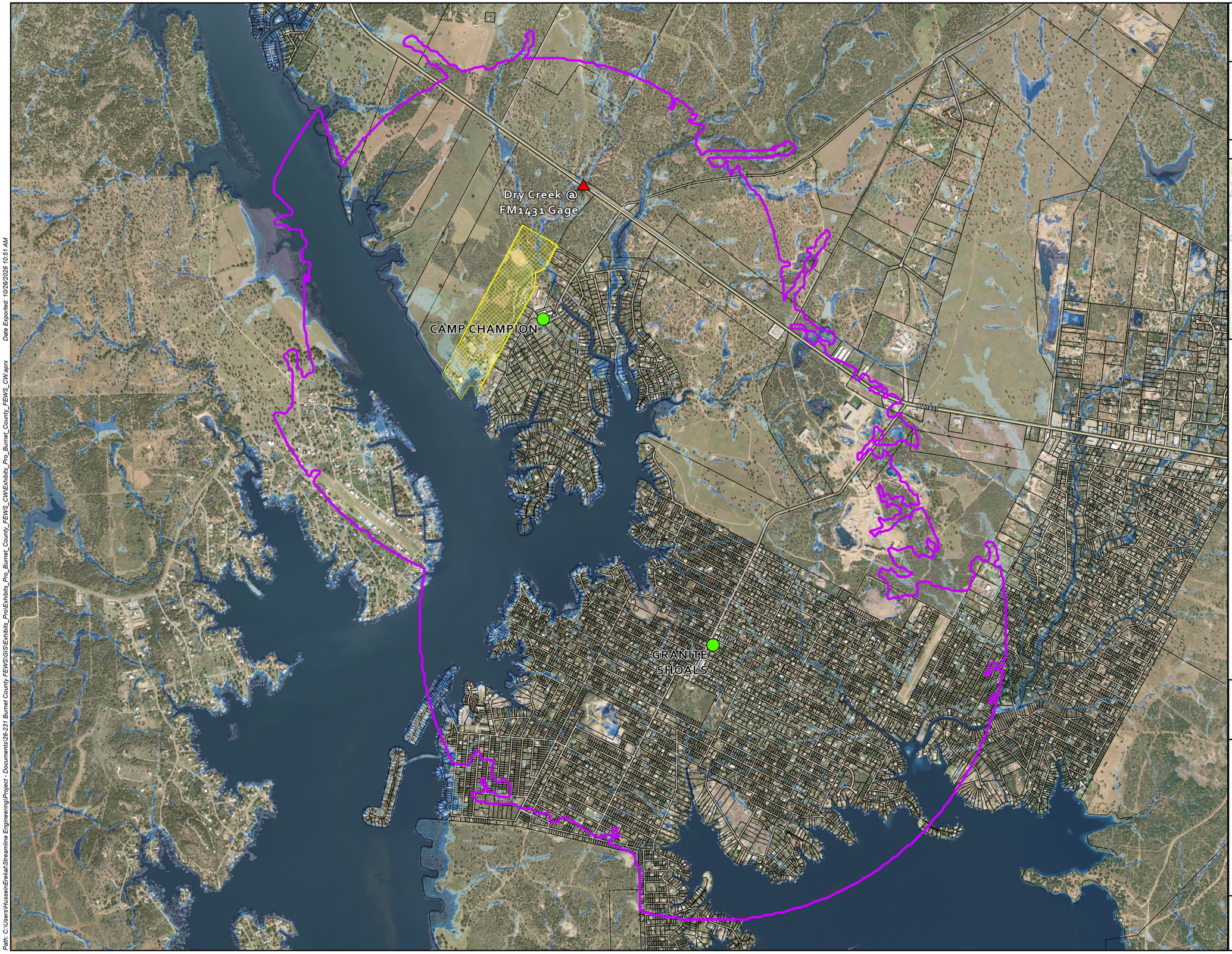
BURNET COUNTY
SB3 FLOOD EARLY WARNING SYSTEM PLANNING

EXHIBIT 9
CRITICAL POPULATION TRIGGERS
SIREN THRESHOLD

OCTOBER 2026

STREAMLINE ENGINEERING PROJECT NO: 26-231





Legend

- Proposed Gage Location
- Acoustic 70db
- Siren Locations
- Roadways
- Critical Population
- Marble Falls Proposed Gages
- Parcels
- City Limits
- LCRA Gages

Siren Threshold

Depth (ft)

- 0.00 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 5.00
- 5.00 - 137.00

0 1,000 2,000 US Feet

1 in =1,000 ft

N

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