



Martindale City and Regional Subdivision & Stormwater Standards Report

*Technical Assistance Project Final Report
October 2024*

*Community Technical Assistance Project
Texas Community Watershed Partners*



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Project Background

On April 3, 2024, Texas Community Watershed Partners (TCWP) conducted a Community Health and Resource Management (CHARM) Resiliency Workshop for communities in Caldwell County, Texas, supported by resources provided by the Federal Emergency Management Agency (FEMA). Thirty-seven stakeholders from Caldwell County and the cities of Lockhart, Luling, and Martindale, as well as regional, State, and federal partners attended the full-day workshop and collaborated to improve local understanding of how urban planning and development decisions can better prepare communities for the future through hazard mitigation.

One of the main issues discussed at the CHARM Workshop was that of development pressure outside of the City of Martindale limits. Some current and proposed development is within the City's Extraterritorial Jurisdiction (ETJ) – much of it outside the City's planning area but close enough to affect drainage in and around the city. To compound the issue, recent legislation has provided a legal path for landowners to opt out of ETJs and several large developers have already successfully petitioned to be removed from Martindale's ETJ to avoid higher standards in the city's subdivision and other ordinances.

At the CHARM Resiliency Workshop and through subsequent discussions with city staff and the River Advisory Board, representatives of the Martindale community expressed a need for a better understanding of what counties in Texas can do to implement high standards for development and stormwater management and a desire for increased collaboration with Caldwell County and neighboring Hays and Gaudalupe counties to address these issues. As a Cooperating Technical Partner for FEMA Region 6, TCWP is able to provide follow-up technical assistance to aid the City of Martindale in addressing these concerns.

The City of Martindale (hereinafter referred to as the City), Texas and Texas Community Watershed Partners (TCWP) agreed upon a scope of work to be completed in the fall of 2024. Per the agreed upon scope, TCWP would provide technical assistance services to the City in the form of a review of existing ordinances and regulations that apply to the City and surrounding areas.

This report summarizes regulations related to land development and stormwater management in the City, its ETJ, and within the neighboring counties of Caldwell, Hays, and Guadalupe. It also includes examples of best practices, options for counties and recommended next steps for the City of Martindale.

TCWP is a program of the Texas A&M AgriLife Extension Service. TCWP's technical assistance services are supported by the FEMA Cooperating Technical Partners (CTP) program.

Existing Options for Counties

Existing options for counties in Texas to implement higher development and stormwater management standards

Background: Senate Bill 2038

Prior to 2023, cities had authority to regulate all development within their Extraterritorial Jurisdiction (ETJ), or the buffer area surrounding the city limits. But in September 2023 the Texas legislature adopted SB 2038, allowing property owners to “opt-out” of the ETJ and its regulatory requirements.

Since the passage of SB 2038, and the subsequent piecemeal removal of properties from various ETJs, the area surrounding cities has become a complicated landscape. Some properties within the ETJ are eligible for city services, while others are not. Some properties are regulated by city ordinances related to tree preservation, regulating nuisances, impervious cover, and water quality protection; others are not. In addition to creating regulatory challenges for city and county governments, the ETJ releases have potentially put sensitive areas at risk of environmental degradation.

As of the preparation of the Greater Edwards Aquifer Alliance Report (GEAA Report, 2024), the constitutionality of SB 2038 was disputed. Multiple municipalities, including several in the Central Texas region, have filed a lawsuit against the State of Texas or have joined said lawsuit. While it is unclear what impact the lawsuit would have on ETJ releases, the Senate has already committed to analyzing the impacts of the bill as part of its Local Government Committee interim charges for 2024, which speaks further to the confusion surrounding the law and its varied impacts (GEAA Report, 2024).

The Greater Edwards Aquifer Alliance report recommends that SB 2038 be repealed, but states that “at a minimum, the law should be amended to ensure that land overlying the aquifer recharge and contributing zones must still adhere to protective municipal regulations, such as impervious cover limits and water quality protection ordinances.”

Impacts of County Development on Martindale

Significant development is proposed for the area within two miles of the Martindale city limits. That development includes the Mirada Business Park, Caldwell 681, and Cherryville. For a small city like Martindale, with a small ETJ, SB 2038 might not be of as significant a threat – but development in nearby counties is still booming and is expected to impact Martindale. According to the 2020 Martindale ETJ map, not all of the properties listed below are in the ETJ.

Recently-proposed and approved development in Caldwell County, outside Martindale:

- *Mirada Business Park*: This development, at the intersection of Highway 80 and County Road 130, is composed of 20 lots, totaling **500 acres**. <https://www.loopnet.com/Listing/Hwy-80-CR-110-Lockhart-TX/28778523/>; <https://www.cbre.com/properties/properties-for-lease/land/details/US-SMPL-121693/mirada-business-park-11842-san-marcos-highway-lockhart-tx-78644>

- *Caldwell 681*: A **3,500-acre** mixed use planned development with an existing municipal utility district (MUD). Plans include 4,000 single family homes, commercial, retail, and industrial components. Directly south of the property is the Cherryville development; just north is the Turner Crest tract, a 2,700-acre future master planned community.
<http://trecrei.com/listings/martindale-681-1314-west-ridge-road-martindale-tx-78655/>
- *Cherryville*: A **3,173-acre** mixed use development, also near the intersection of Highways 80 and 130, to include single family homes, hotel, industry, commercial district, and potential school. (Commissioners Court, February 8, 2022, pages 93- 109
(<https://www.co.caldwell.tx.us/upload/page/0068/2.08.2022%20Agenda%20Backup.pdf>).
- *Misty Farms Subdivision*, 4211 Misty Lane, off Highway 21: 550 single family lots on **99-acre** property. (Commissioners Court, February 8, 2022, pages 110- 119
(<https://www.co.caldwell.tx.us/upload/page/0068/2.08.2022%20Agenda%20Backup.pdf>).

The 17-county Texas Hill Country is one of the fastest growing regions in the country. Population growth can have negative impacts on natural resources, and when it occurs in metro regions outside of city boundaries, those impacts are amplified.

According to the 2022 “State of the Hill Country” report, when open spaces and ranchlands are converted to subdivision, the region experiences:

- More pressure on aquifers as a result of greater residential water consumption.
- More wastewater discharge, risking harmful algae blooms that make our waterways unsafe and unusable.
- A significant increase in impervious surface cover, leading to heightened flooding, and reduced land capacity to recharge the aquifer.
- The loss of land that might have been considered ideal for a regional park or wildlife area at the same time that the region is seeing increased need for outdoor recreational activities.
- Net losses for county budgets, as residential subdivisions tend to require more local government dollars to service and maintain than they generate in tax revenue, whereas open space and agricultural land is net positive for local budgets, even with agricultural and wildlife tax evaluations.

Because there are no broad or comprehensive growth management tools at the county level, counties must combine what authority they do have to creatively address issues related to growth and the need for resource conservation.

Existing Options

In 2023, Gap Strategies conducted a survey to understand how counties in Texas are using their existing authority to manage growth and protect natural resources. Their report, “Growth and Conservation in Texas 2023” examined 15 counties from across the State of Texas.

Although none of the counties have tree protection or landscaping regulations, almost all have subdivision regulations, many have stormwater detention and drainage regulations, and some have erosion/sedimentation/BMP, water quality, impervious cover, environmental setbacks. One county (Hays) has rules to regulate cluster development/minimum lot sizes.

Additionally, examples from counties across the region show that there are opportunities to manage growth in the following categories:

- **Long Range and Strategic Planning:** While counties may not have the direct authority to regulate most land use, a general strategic plan or a long-range transportation plan that incorporates natural resource protection and economic development can take advantage of the strong link between transportation and land use, directing county infrastructure investment to parts of the county that are most appropriate and/or most manageable.
- **Variable Lot Sizing:** TCEQ sets minimum lot sizes for On-Site Sewage Facilities (OSSFs, in most cases septic tanks) that are typically one-half acre or one acre over the Edwards Aquifer Recharge Zone. These rules do not address lots connected to an organized sewer system. Most Texas counties have either established no formal minimum lot size of their own and default to the state OSSF minimums or use the state OSSF minimums as the basis for minimum sizing. A relatively small number of counties have taken a different approach, especially in the Hill Country, using a combination of OSSF regulations, priority groundwater management areas (PGMA) rules, well-spacing requirements, culvert-spacing, and other patchwork authority to assert much larger minimum lot sizes, up to 10 acres in some cases, making lot sizing a stand-in for water protection (quantity and quality) and de facto density controls.
- **Exceptions to Zoning Prohibitions:** There are a few instances in the Texas Local Government Code where special authority is given to specific counties to allow for zoning-type authority, such as the protection of lake areas. Such instances include Hood County because the whole county is located within the watershed that drains into Lake Grandberry and the Brazos River. Much of this “lake legislation” is based on the findings in the statute that the area’s tourism value to the state requires orderly and healthful development to benefit the public, and therefore is granted special authority.
- **Roads and Transportation:** Counties have leeway to regulate road and lane widths. Because transportation, land use, and water act as compounding drivers for growth and resource management, roads can have a significant impact. Similar to variable lot sizing, variable road widths allow a county to influence the density and type of development that occurs.
- **Stormwater and Impervious Cover Limits:** State law does not explicitly give counties the power to regulate impervious cover, and most authority for county stormwater regulation is tied to road construction, or to the regulation of floodplains. However, there are some tools to affect impervious cover and stormwater indirectly:

- *Voluntary opt-in agreements with developers* – Counties may establish incentives or alternative development guidelines, giving developers a choice between standard subdivision procedures and a voluntary, incentivized alternative that protects water resources, open space, and advances other conservation goals. Examples include Conservation Developments or a Developer Agreements that incorporate other county goals. Hays County provides a good example of Conservation Development incentives.
- *Road design standards that incorporate Low Impact Design* features, such as rain gardens, or that allow for narrower roadways (meaning less impervious cover) under certain circumstances, such as large-lot subdivisions.
- *Minimum lot size*, lot width and/or road frontage requirements
- *Preservation of open space* and/or limiting impervious cover in certain watersheds or environmentally sensitive areas. A few counties, including Hays County, have addressed land conservation proactively by-passing voter-approved conservation bonds.

Senate Bill 873 Expanded County Tools

In 2001, Senate Bill 873 (SB 873) was passed and originally applied to urban counties and those immediately adjacent. In 2007, the law was expanded to all Texas counties.

Because SB 873 closely tracks the general authority given to cities in the Local Government Code, it can be construed to give counties a similar authority to that exercised by cities within their ETJ. But what the language of Subchapter E, the “promot[ion] of the health, safety, morals, or general welfare of the county and the safe, orderly, and healthful development of the unincorporated area of the county,” explicitly means in practice is not entirely clear.

Although SB 873 specifically prohibits counties from regulating use or dimensional requirements, it creates other opportunities for counties. Some tools or powers, such as regulation to protect natural resources, are implied by Subchapter E (although not explicitly authorized). County leaders can create regulations based on implied powers but will need to acknowledge that there are few clear precedents and courts could strike down regulations that push too far.

Texas Water Code: Priority Groundwater Management Areas (PGMAs)

To enable effective management of the state’s groundwater resources in areas where critical groundwater problems exist or may exist in the future, the Legislature has authorized the Texas Commission on Environmental Quality (TCEQ), the Texas Water Development Board (TWDB), and the Texas Parks and Wildlife Department (TPWD) to study, identify, and delineate PGMAs, and initiate the creation of groundwater conservation districts (GCDs) within those areas, if necessary.

“Critical groundwater problems” refer to shortages of surface water or groundwater, land subsidence resulting from withdrawal of groundwater, or contamination of groundwater. The PGMA process is implemented by TCEQ rules (Chapters 293 and 294 of Title 30, Texas Administrative Code) that outline procedures for the designation of PGMAs and address issues related to GCDs in areas designated as PGMAs. The study areas designated as PGMAs include parts of Bexar, Comal, Hays, and Travis counties.

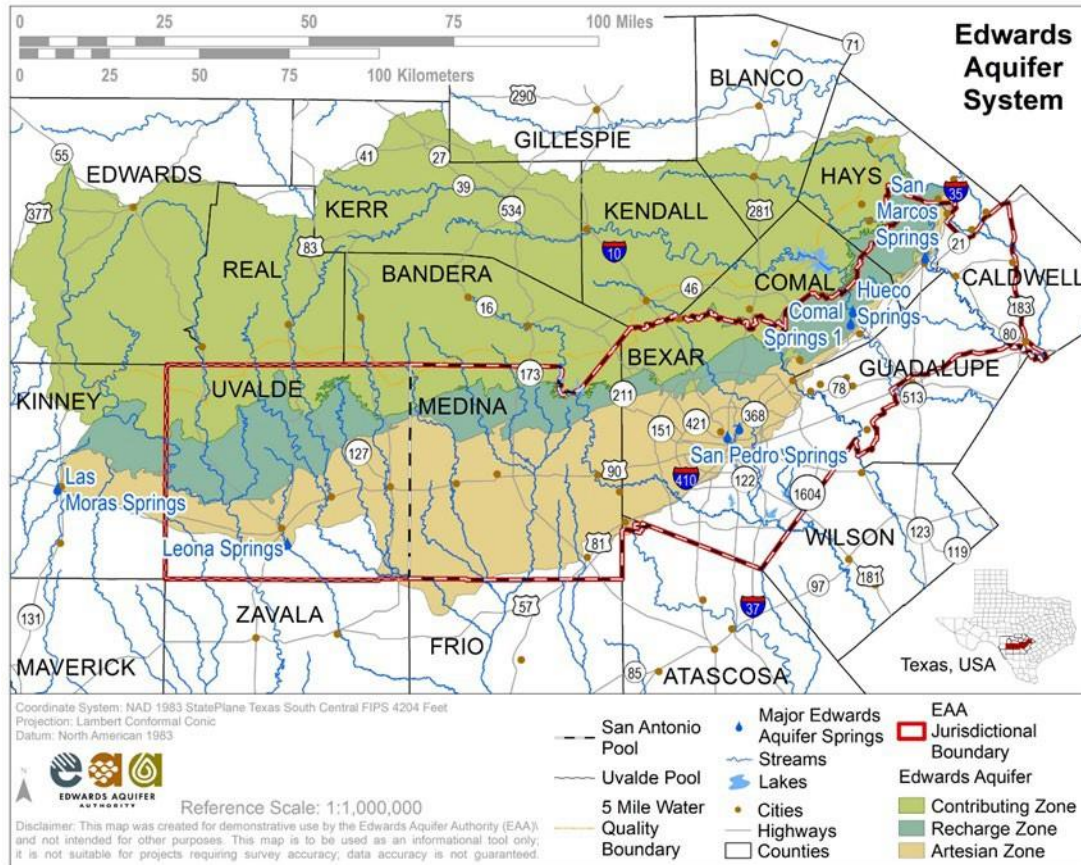
Lower Colorado River Authority (LCRA) Highland Lakes Watershed Ordinance: The Highland Lakes Watershed Ordinance, enabled by the Lower Colorado River Authority Enabling Act, directly applies to

development and quarry/mining activities “occurring above the Regulated Pool Elevation of the Highland Lakes” to manage runoff. This area includes the Lake Travis watershed, appropriate areas in Burnet and Llano Counties and other identified areas in the ordinance map. Nearby municipalities in identified areas, for example Lago Vista, have entered into interlocal agreements which allow communities to adopt the Highland Lake Watershed Ordinance directly into their codes to reinforce water standards.

It may be possible for Guadalupe Blanco River Authority (GBRA) to create a watershed ordinance like that of Highland Lakes. The GBRA currently partners with the TCEQ to administer the “Clean Rivers Program” (CRP) for Guadalupe River and Lavaca-Gudalupe Coastal Basins. The program, funded by fees from wastewater discharge and water rights permits, provides data to TCEQ for use in decision-making, identification of water quality issues, and cooperative watershed planning.

Edwards Aquifer Protection Program: The Edwards Aquifer Protection Program regulates several distinct zones, including the recharge, transition, and contributing zones, and is enabled by the Texas Administrative Code. The current map outlines the areas directly governed by the TCEQ rules.

In addition, the Barton Springs Edwards Aquifer Conservation District and the Edwards Aquifer Authority (EAA) are authorized to regulate wells, pumpage, and technical requirements under certain conditions. Overlapping rules work to protect and preserve hydrologically significant and contributory sources of water in Central-South Texas and the Hill Country. Counties are charged with regulating certain minimum lot sizes and wastewater regulations under the Edwards Rules (TCEQ).



Best Practices

Model Stormwater Ordinances

The two main methods of addressing stormwater are low impact development (LID) techniques and Best Management Practices (BMPs). The more significant the stormwater issue, the more likely the community will mandate the use of LID and stormwater BMPs

(<https://planningforhazards.com/stormwater-ordinance-model-and-commentary/>).

Most communities that mandate any type of low-impact development establish a requirement that post-development stormwater runoff rates be the same as or less than pre-development rates. To achieve that requirement, a variety of opportunities for integrating LID and stormwater BMPs into development codes exist. These may include:

- Requiring on-site stormwater management – with a requirement that the development infiltrate, control, or reduce runoff.
- Encouraging opportunities to reduce impervious surfaces through methods for infiltration.
- Directly limiting impervious cover or building coverage to improve infiltration and reduce total stormwater runoff.

- Adjusting minimum lot sizes to accommodate LID and achieve permitted densities for open space/landscaping

Other sections of the Code that can address stormwater include landscaping and screening, parking, subdivision and site design standards. Another option is to place the burden on the applicant to demonstrate why LID techniques cannot be pursued.

At the County Level

Table 1 represents best practices in county regulation in Travis, Waller, and Hays Counties. Hays County offers an option for developers to create conservation development, and Travis County has significant impervious cover controls. Although not captured in the table, the best practice used by Waller County is its unique approach to city-county planning in the process of developing a Comprehensive Plan.

Table 1: Elements of County Regulation

Counties	Sub-division	Stormwater Detention	Erosion/ Sediment BMPs	Park Dedication	Water Quality Ponds	Site Grading/ Drainage	Impervious Cover	Environmental Setbacks	Conservation Development/ Minimum Lot Sizes
Travis	Y	N	Y	Y	Y	Y	Y	Y	N
Waller	Y	Y	N	N	N	Y	N	N	N
Hays	Y	Y	Y	Y	Y	Y	Y	Y	Y

HAYS COUNTY

Conservation Development

Hays County development regulations include a “Conservation Development Ordinance” (Chapter 765), whereby developers can opt in to the regulations in return for incentives. The three types of Conservation Development are 1) subdivisions, 2) site plans, and 3) voluntary conservation easements.

The Conservation Development is designed to allow greater flexibility, preserve open space, ranch and agricultural lands, natural resources, aquifers, water bodies, and wetlands. It also has the benefit of encouraging a more efficient form of development that consumes less open land and conforms to existing topography, and to help provide community services in a more economical and efficient manner.

A Conservation Development must include “conservation space” that is at least 50% of the total acreage, is a single contiguous land area, at least 10 acres, and at least 150 feet in width. Conservation space cannot include impervious cover or the area 25 feet surrounding that impervious cover and cannot include rights-of-way or access easements (plus a 25-foot buffer). Conservation space within a conservation development must be designated in a conservation easement in perpetuity.

Conservation space must be managed under an Ecological Asset Management Plan that includes the following stipulations:

- 1) For property within the Edwards Aquifer Recharge Zone, impervious cover shall not exceed fifteen percent (15%);
- 2) For property outside of the Edwards Aquifer Recharge Zone impervious cover shall not exceed twenty percent (20%);

Developer Incentives

The 2017 Hays County Development Regulations document lists several activities for incentives with regard to development. The following examples are activities from the code:

Lots Larger than Five Acres

If the development consists of five or fewer lots and each lot is larger than five acres, no additional submittal materials are required to demonstrate compliance, provided that the plat includes a note limiting development to one single family residence per lot and prohibiting TCEQ Regulated Development.

Water Quality Protection Features

Water quality protection features must be sufficient non-structural and structural BMPs to achieve no net increase in pollutant levels. The Commissioners Court may authorize partial economic incentives for water quality protection measures with a lower design threshold.

Stream Offsets/Buffer Zones

Stream offsets or buffer zones are characterized as naturally vegetated corridors along streams and watercourses which provide for filtering pollutants, localized recharge to contribute to sustained base flow, flood flow attenuation, ecosystem habitat, and accept sheet flow from developed areas to minimize adverse impacts of runoff.

<https://irp.cdn-website.com/ca0063d4/files/uploaded/2017-Hays-County-Development-Regulations.pdf>

TRAVIS COUNTY

Impervious Cover

Of those studied, Travis County is the only county that has impervious cover limits; these limits are only applicable to subdivisions overlying portions of the Trinity and Edwards aquifers. Travis County is able to regulate impervious cover in portions of the county because it has an interlocal agreement with the City of Austin, which covers much of the county (GEAA Report, 2024).

Conservation Development

Conservation development standards have been adopted by Travis County. When implemented, conservation development preserves native vegetation, sensitive ecological habitat, and open space. (<https://www.traviscountytexas.gov/tnr/permits/low-impact-development/development-planning>).

The Travis County Development Regulations includes conservation area design requirements for conservation areas, creditable acreage, rural and historic buffers, impervious cover, roadways and driveways, landscaping and recreation space (482.226 – 482.230); design requirements for energy,

water, materials conservation (482.231 – 482.233); and design requirements for alternative standards (483.23).

Travis County has also implemented a Conservation Easement Program to conserve land to remain undeveloped in perpetuity (<https://www.traviscountytx.gov/tnr/nr/conservation-easement>).

Water Quality

The Travis County Land Development regulations subchapter 482.916 on water quality that sets forth a set of requirements to control, reduce, and eliminate the discharge of pollutants into the Travis County storm sewer system and water in the State through the proper management of storm water and drainage while achieving optimal management of floodplains to prevent the loss of property and human life. The code also lists and describes several statutes, rules, and regulations.

WALLER COUNTY

Waller County has been identified as an example of “Rural County Master Planning” (Gap Strategies). Waller County near Houston has implemented a Long-Term Comprehensive Strategic Plan with the understanding that the greater than 100 percent growth anticipated by 2050 required a guiding hand. The unique approach offers a framework that aspires for all cities in the county to work in tandem with the county government to achieve the plan’s stated goals. The comprehensive plan covers public involvement, land use, economic development, transportation infrastructure, and extra-territorial jurisdictions to establish clear goals and influence planning county-wide for a 10–15-year horizon. Future comprehensive plan efforts are expected to include coordination between city and county.

Regional Efforts

Kaufman County is a member of the Trinity River Common Vision program, meaning that the County subscribes to higher floodplain management standards along the Trinity River Corridor and the East Fork of the Trinity. Therefore, if a proposed project is in the Special Flood Hazard Area along the Trinity River Corridor or the East Fork of the Trinity, a Corridor Development Certificate (CDC) is necessary. The application requires a hydrology and hydraulics study of the stream using future flow rates. Additionally, the proposed project needs to meet the requirements for no-rise, storage capacity loss, and increased water velocities.

Another example of regional planning that is geographically closer to, and already connected to Martindale and its surrounding counties is the Edwards Aquifer Authority (EAA). The EAA Act (the Act) was adopted by the Texas Legislature in 1993 in response to the legal threat of federal takeover of the aquifer under the Endangered Species Act. The Act created the EAA as a political subdivision of the state to preserve and protect the Edwards Aquifer. By mandating a capped permitting system that limits withdrawals from the aquifer, the Act was intended to preserve the resource while also protecting threatened and endangered species in the aquifer-fed Comal and San Marcos springs to the extent required by federal law. (<https://www.edwardsaquifer.org/ea/>).

Existing Regulations in Study Area

A Review of Current Subdivision and Stormwater Ordinances for the City of Martindale; and Caldwell, Guadalupe and Hays Counties

The following section provides a summary of the current regulations related to flood damage prevention, the subdivision of land (in preparation for development), and stormwater management controls, for the city of Martindale and the counties of Caldwell, Guadalupe, and Hays counties. Table 2 (below) provides a quick comparison, and additional details for the ordinances and regulations organized by county is included as *Appendix A: Subdivision and Stormwater Ordinances for the City of Martindale, Caldwell County, Hays County, and Guadalupe County*.

Table 2: Ordinances/Regulations Related to Flooding, Subdivision, and Stormwater

	Flood Damage Prevention	Subdivision Ordinance	Stormwater Ordinance
Martindale	Yes	Yes, Title XV: Land Usage, Section 154	No separate ordinance; Stormwater elements in Section 153 of Flood Damage Prevention
Caldwell County	Yes, 2012 (separate ordinance)	Yes, Section 3.0, and Appendix A of Development Ordinance	No separate ordinance; Development Ordinance includes: Drainage Design requirements, Conservation Subdivision incentives Stream Setback Requirements
Hays County	Yes, Chapter 735, 2017 Hays Co. Development Regulations	Yes, Subdivision Ordinance (Chapter 705 of Development Regulations)	Yes, Stormwater Ordinance (Chapter 725 of Development Regulations)
Guadalupe County	Yes, Flood Damage Prevention Court Order, amended 2024	Yes, amended 1/9/24	No separate ordinance; Drainage study required

City of Martindale

The city of Martindale, population of 1,225, does not have a Stormwater Ordinance but contains water, drainage, and flood related regulations in sections of the city code. The Zoning Ordinance was recently modified to include higher impervious cover standards. Development regulations also provide for the option of creation of a Planned Unit Development, to conserve, protect and enhance the natural environment through flexibility of design and development.

Drainage and Open Space

Subdivision regulations include the requirement that there is no development within drainage easements (Section 154.042) and a dedicated open space requirement for subdivisions with the

restriction that areas of the floodplain can only be counted if uses within the floodplain are restricted to passive recreation-type uses (Section 154.060). An option for fee-in-lieu exists and goes into a fund for open space and parks. The efficacy of such an open space requirement can depend on how frequently the fee-in-lieu is used and whether it is used for open space.

Flood Damage Prevention

Chapter 153 of the city code, Flood Damage Prevention, is based on the Texas Water Development Board Model Ordinance, and includes a higher standard that construction be 12 inches above street curb or shall be provided with a drainage swale adjustment, so that the structure does not flood. The code also includes two-foot freeboard requirement for buildings, and other conditions related to development in flood hazard areas.

The Subdivision Ordinance (Section 154, Title XV Land Usage) indicates that development must be in compliance with the Comprehensive Plan and development policies, must be in conjunction with adequate public facilities, improvements, and to be approved by the Planning & Zoning Commission.

Recent Regulations

Although the city does not have a Stormwater Ordinance, recent regulations include a 2021 resolution to increase discharge limits for new wastewater treatment facilities (2021-10-19-02) and to modify land use impervious cover limits. Additional ordinances include a “River Protection Ordinance,” to prohibit single use containers on the San Marcos River, and a “Tree and Brush Removal Ordinance.”

Edwards Aquifer Authority Jurisdictional Boundary

Martindale is within the Edwards Aquifer Authority Jurisdictional Boundary. Although activities such as groundwater withdrawals or chemical storage are regulated within this boundary, it is not practically applicable to the city of Martindale and its surrounding area because groundwater in the area is somewhat saline, and there is little demand for such withdrawals.

Caldwell, Guadalupe, and Hays Counties

Of the three counties that surround the city of Martindale, each has a Flood Damage Prevention Subdivision and ordinance. Only Hays County has a separate stormwater ordinance. Hays County also has the most extensive and most stringent requirements, related to stormwater and land development.

Recommendations

Although Martindale is a small city, and direct development pressure within the city limits is minimal, this is likely to change in the coming years. With the assistance of more city staff and/or funding, the city may want to pursue additional regulations in the form of ordinances, incorporating additional stormwater features such as stream/creek buffers and/or conservation development.

Staying informed about the efforts of and communicating with surrounding counties will be critical in the future. And whether it be simply to promote the options listed in this report, or to enter into a partnership like that of Waller County and its cities, it will take a combined and concerted effort to maintain and preserve the water quality and other natural resources that this area has enjoyed for so many years.

Appendix A: Subdivision and Stormwater Ordinances for the City of Martindale, Caldwell County, Hays County, and Guadalupe County

Caldwell County Ordinances

Caldwell County Subdivision Ordinance

Plat requirements for a proposed drainage system must be signed and sealed by a professional engineer, and the application must include specification of Groundwater Districts with jurisdictional authority and a discussion of applicable rules and constraints associated with protection of local groundwaters.

Before building on the recharge, transition, or contributing zones of the Edwards Aquifer, a plan must first be reviewed and approved by the TCEQ Edwards Aquifer Protection Program.

In Appendix A of the Subdivision Ordinance, the minimum lot size for all lots in a Rural Subdivision is one (1) acre. This minimum lot size does not apply to lots designated by plat note for landscaping, drainage detention, parks, open space, or other common community uses.

Reduced minimum lot sizes and minimum lot frontages may be approved by the Commissioners Court as part of a development agreement addressing parks and open space requirements, accompanying alterations to road design standards, emergency services, light pollution and other factors agreed upon by the applicant and the Commissioners Court.

The minimum lot frontage and building setbacks along roadways in urban subdivisions are based upon roadway type, ranging from a 70' lot frontage requirement for local roads to a 375' lot frontage requirement for major arterials.

Appendix A of the ordinance also includes **Conservation Subdivision** incentives, whereby alternate standards are available for subdivisions that voluntarily implement the following provisions:

- Provide 40% of the original tract acreage as open space, conservation land, parks (public or private) and / or community amenities;
- Implement water quality best management practices achieving a total reduction of 80% of Total Suspended Solids (TSS) from post-development stormwater flows; and
- Incorporate an Integrated Pest Management Plan and Fertilizer Plan that minimizes use of Nitrogen and Phosphorus-based fertilizers.

For subdivisions meeting the above requirements the following incentives are available:

- Minimum lot sizes of this ordinance are waived; however, lots served by on-site water wells or OSSF must comply with applicable state and Caldwell County regulations for lot size and setbacks.
- Minimum lot frontages of this ordinance may be reduced by 40%.
- Minimum centerline radius and tangent length between reverse curves or compound curves is waived; however, minimum stopping sight distances and intersection sight distances must be maintained.

Caldwell County Stormwater Ordinance

Caldwell County has stormwater regulations within its Development Ordinance. These include Drainage Design Requirements (Appendix E), Erosion and Sediment Control Requirements (Appendix F), and Protection of Streambanks and Bluffs (Appendix G)

Drainage Design Requirements

The owner of the property to be developed is responsible for the conveyance of all stormwater flowing through the property, including present and future stormwater that is directed to the property by other developed property or naturally flows through the property because of topography.

Stormwater conveyance and drainage facilities shall be designed and constructed sufficient to assure that:

- 1) The effects of any proposed increase in stormwater flows, to, from, across, or along subdivision or site development properties is properly attenuated in a manner which will assure compliance with Texas Water Code Section 11.086.
- 2) All at-grade and subsurface drainage facilities shall be designed to convey at a minimum the storm runoff flows from the 25-year frequency storm. Storm runoff flows up to and including the 100-year frequency event shall be conveyed within defined public rights-of-way or drainage easements.
- 3) Proposed drainage facilities of all types shall be designed to prevent collection and pooling of storm flows which may become stagnant.
- 4) Stormwater discharge to natural channels shall be returned to a sheet flow condition before reaching the stream bank OR channel stabilization shall be utilized to prevent erosion caused by the discharge.
- 5) Erosion and sedimentation shall be controlled, both temporarily during construction and permanently thereafter, so as to prevent siltation of water courses.

Erosion and Sediment Control Requirements

This section of the ordinance includes requirement for temporary (construction phase) and permanent erosion control.

It also necessitates that stormwater discharges from all land development projects must conform to the National Pollutant Discharge Elimination System (NPDES) requirements of the Clean Water Act, administered through the U. S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality. Based on construction scope and total acreage of disturbed soil area, requirements may include compliance with NPDES General Permits for Industrial Activity, preparation and execution of a Storm Water Pollution Prevention Plan (SWPPP), and construction start and completion notifications. If applicable, the project SWPPP shall be submitted to the County prior to the pre-construction meeting or commencement of soil disturbing activities, whichever occurs first.

Protection of Streambanks and Bluffs

Stream Setback Requirements: Development activity, including grading, clearing and construction, shall

be set back from the centerline of waterways the following distances based upon the size of the contributing watershed:

A) Minor Waterways (64 to 320 acres) : 50 feet

B) Intermediate Waterways (320 to 1280 acres) : 100 feet

C) Major Waterways (greater than 1280 acres) : 150 feet

D) Setback distances shall in no case extend more than twenty-five (25') feet beyond the limits of the 100-year floodplain.

Development activity including clearing of natural vegetation shall be set back from the crest of a bluff (or top of bank) a distance of 75 feet from the top of the bluff OR a horizontal distance equal to three (3) times the height from the toe to the top of the bluff, whichever is less.

Caldwell County Development Ordinance: [https://www.co.caldwell.tx.us/page/open/822/0/CALDWELL%20COUNTY%20DEVELOPMENT%20ORDINANCE Rev.%2002.14.2023.pdf](https://www.co.caldwell.tx.us/page/open/822/0/CALDWELL%20COUNTY%20DEVELOPMENT%20ORDINANCE%20Rev.%202002.14.2023.pdf)

Guadalupe County Ordinances

Guadalupe County Subdivision Ordinance

Guadalupe County has special regulations for high density development. Condominiums shall be treated as high density development and shall meet all requirements for platting (to include boundaries and building locations, drainage, and utility easements). Condominiums shall be approved over non-Edwards Aquifer Recharge Zone areas only when both a state approved central water system and a county and state approved sewage disposal system is available and does not overly burden existing and proposed streets and other public facilities. Only one Condominium Regime shall be established per lot or tract as recorded by the Master Deed and Declaration as found in the Real Property Records of Guadalupe County.

Guadalupe County has minimum lot size and frontage requirements. The minimum frontage is 200 feet (on an existing county road). The minimum lot size is based on wastewater application (and is one acre, unless served by public water).

No structures are to be built until on-site sewage facility is granted or public sewer service has been provided. All property is subject to TCEQ on-site sewage facility regulations.

Guadalupe County Stormwater Ordinance (section of Subdivision Ordinance)

Runoff: Drainage and Storm water management shall be designed, constructed, and maintained to restrict the rate of drainage from the property to the rate of drainage of the land in its existing condition. The drainage plan must provide for necessary drainage to avoid concentration of storm drainage water from each lot to adjacent lots, provide positive drainage away from all structures, and coordinate individual lot drainage with the general storm drainage pattern for the area. The Plan shall be prepared, sealed, and signed by a Professional Engineer, currently registered in the State of Texas, and shall be reviewed by the Department.

Must use standards provided in the regulations to calculate and submit runoff estimates.

Other Drainage Requirements: Other requirements are related to impervious cover and drainage. A drainage study shall be prepared for all subdivisions of any size within or outside of the SFHA. Impervious cover assumptions must be clearly stated within the drainage report.

Applicants must show anticipated flow, including topographic features on or adjacent to property, including all water courses, 100-year flood zone boundaries, ravines, bridges and culverts, and design the plan **so there is no impact** on adjacent properties beyond pre-development conditions. Flood/storm waters shall not be allowed to drain from or pond within area described in higher quantities or flow rates than existed under pre-development conditions. This shall be accomplished by the proper design and construction of detention/retention ponds, and/or drainage systems and the delineation of any historically known ponding of flood/storm waters.

Depiction of all streams, rivers, ponds, lakes, other surface water features or any sensitive features (as defined by the Texas Commission on Environmental Quality (TCEQ) in 30 Texas Administrative Code 213.3) and a statement certified by the engineer under the professional seal that, to the best of his or her knowledge, the plat accurately reflects the general location (or absence) of all such features in accordance with the terms of these Regulations.

All drainage improvements including ditches, drainage pipes, street curbs, gutter inlets, driveways, road culverts, and storm sewers shall be designed to intercept and transport runoff from a 25 year storm event.

County Engineer's Letter: Drainage Plan Submittal Policy: https://www.co.guadalupe.tx.us/engineer/pdfs/Drainage_Plan_Submittal_Policy.pdf

"Guadalupe County Subdivision regulations require a drainage study to be prepared for all subdivisions of any size within or outside of the SFHA... except if the proposed subdivision has less than 2% impervious cover (and is not in the Special Hazard Flood Area)."

Hays County Ordinances

Hays County Subdivision Ordinance

Chapter 705 of the Hays County Land Development Code is the subdivision regulations, or the subdivision ordinance, which includes lot size requirements and parkland/open space requirements.

Lot Size: The lot size requirements are based on water supply systems, wastewater service, and whether the property is in the Edwards Aquifer Recharge Zone, the Edwards Aquifer Contributing Zone, or neither.

Parkland/Open Space: The applicant must provide parkland and/or open space if the subdivision is greater than 50 acres, includes more than 50 dwelling units, and where the average size of all lots is less than 5 acres. The required ratio of parkland and/or open space to be provided is one acre per 50 acres (0.2%).

Hays County Development Regulations: <https://irp.cdn-website.com/ca0063d4/files/uploaded/2017-Hays-County-Development-Regulations.pdf>

Hays County Stormwater Ordinance

The first requirement of Chapter 725 of the Hays County Land Development Code, “Storm Water Management Standards,” is that all drainage, flood control and storm water features must be approved by the Commissioners Court.

Stormwater management improvements shall be designed as part of a logical system that has continuity with adjacent properties, and all floodplain and stormwater management facility computations must be based on fully developed upstream conditions.

For storm events including the two (2), five (5), ten (10), twenty-five (25), and one hundred (100) year frequency, storm water runoff may be discharged under the post-development conditions at a rate no greater than the pre-development condition. All storm water management facilities, including ditches, drainage pipes, roadway curbs, gutter inlets, driveway or roadway culverts, and storm sewers shall be designed to intercept and transport storm water runoff to a public storm water management facility or a defined watercourse.

A drainage area of at least sixty-four (64) acres within a contributing watershed requires the identification of a local flood plain. For areas of flow with less than sixty-four (64) acres of contributing area, the identification of a local flood plain is not required; however, any concentrated flow necessitates the dedication of a drainage easement.

With relation to the construction and county maintenance of new roads, the county requires that permanent vegetation be established, or financial assurance must be provided to permanently stabilize any areas disturbed during construction.

The ordinance recognizes that cities’ water quality and environmental ordinances are effective in the ETJ portion of the county. The ordinance also refers to other regulations that apply, whether in the ETJ or not. These include: the Highland Lakes Watershed Ordinance (within the Highland Lakes watersheds), the TCEQ Edwards Aquifer Program (for those portions of the County designated as being within either the contributing zone or the recharge zone of the Edwards Aquifer), the TCEQ Construction Site Storm Water Permitting Program (regulating all construction activities disturbing more than one acre, anywhere in Hays County), the TCEQ Municipal Separate Storm Sewer System (MS4) Permitting Program (for those portions of the county designated as “Urbanized Areas” by the Census, as identified in the County’s “Storm Water Management Program.”

Various BMPs must be developed for the Minimum Control Measures (MCMs) that are expected to minimize or eliminate stormwater pollutants discharging into the storm sewer system and provide water quality protection for receiving water bodies. Five MCMs are required for all MS4s and a sixth MCM is required only for Level 4 MS4s.

[Appendix B: Growth and Conservation in Texas 2023: A Primer on County Tools and Paths Forward, Gap Strategies](#)

[Appendix C: GEAA Report, 2024, A Review of the Impacts of Senate Bill 2038 on Land Use and Water Supplies in Central Texas](#)

[Appendix D: Senate Bill 2038 \(as codified in the Texas Local Government Code, Title 2, Subtitle C, Chapter 42, Subchapter D\)](#)

DATE: July 26, 2024

RE: Community Technical Assistance and Workshop for the City of Martindale

The following memorandum outlines the intended scope of work and proposed timeline for technical assistance and workshop to be provided by Texas Community Watershed Partners (TCWP) as a FEMA Region 6 Cooperating Technical Partner (CTP) to the City of Martindale.

Background

On April 3, 2024, Texas Community Watershed Partners conducted a CHARM Resiliency Workshop for communities in Caldwell County, Texas, supported by resources provided by the Federal Emergency Management Agency (FEMA). Thirty-seven stakeholders from Caldwell County and the cities of Lockhart, Luling, and Martindale, as well as regional, State, and federal partners attended the full-day workshop and collaborated to improve local understanding of how urban planning and development decisions can better prepare communities for the future through hazard mitigation.

One of the main discussion topics at the City of Martindale's table during the workshop was in regard to development pressure outside of city limits. Some of new or proposed development is occurring within the City's Extraterritorial Jurisdiction (ETJ), however much of it is outside the City's planning area yet still close enough that it is or will likely affect drainage in and around the city. To compound the issue, recent legislation has provided a legal path for landowners to opt out of ETJ's and several large developers have already successfully petitioned to be removed from Martindale's ETJ to avoid higher standards in the city's subdivision and other ordinances. See *Attachment 1: Caldwell County CHARM Resiliency Workshop Summary Report*.

At the CHARM Resiliency Workshop and through subsequent discussions with city staff and the River Advisory Board, representatives of the Martindale community expressed a need for a better understanding of what counties in Texas can do to implement high standards for development and stormwater management and a desire for increased collaboration with Caldwell County and neighboring Hays and Gaudalupe counties to address these issues. As a Cooperating Technical Partner for FEMA Region 6, TCWP is able to provide follow-up technical assistance to aid the City of Martindale in addressing these concerns. The following scope of work outlines the proposed technical assistance.

Scope of Work

The TCWP Planning Team proposes a two-part project working with the City of Martindale to address the need for higher development/stormwater standards countywide and desire for increased collaboration that would include research with a written report and facilitated workshop as described in more detail below.

Task 1: Research and Report on Higher Standards for Development and Stormwater Management

The TCWP Planning Team will conduct research and develop a report to include, but not limited to:

- An explanation of what counties in Texas can do to implement higher development and stormwater management standards;
- Examples of best practices from around the State;
- An assessment of current subdivision and stormwater ordinances for the City of Martindale and Caldwell, Guadalupe and Hays Counties; and
- Recommendations

Deliverables:

- Written report
- One-pager based on report for outreach and education

Task 2: Workshop and Summary Report

The TCWP Planning Team will facilitate a workshop utilizing the CHARM table-top mapping platform and findings from the abovementioned research and report including, but not limited to, representatives from the following:

- City of Martindale including members of the River Advisory Board
- Caldwell County
- Guadalupe County
- Hays County
- Capital Area Council of Governments
- San Marcos River Foundation

Deliverables:

- Workshop
- Summary Report

Timeline

The following proposed timeline is contingent on cooperation from and availability of abovementioned partners.

Finalize project scope	By August 2, 2024
Complete Task 1	By September 30, 2024
Planning & logistics for Task 2 workshop	October 2024
Complete Task 2 Workshop	Late October/early November (date TBD)
Complete summary report for Task 2	By December 13, 2024

Attachments

Attachment 1: Caldwell County CHARM Resiliency Workshop Summary Report

Martindale CTAP Report Summary

- **Development Pressure in Martindale:**
 - Concerns over development outside Martindale's city limits affecting drainage.
 - Developers can opt out of Extraterritorial Jurisdiction (ETJ) regulations, lowering development standards.
 - Martindale seeks better collaboration with neighboring counties to address stormwater management.
- **Legislation and Its Impacts:**
 - Senate Bill 2038 (SB 2038) allows landowners to opt out of ETJ regulations, complicating county and city governance.
 - There are ongoing legal challenges disputing SB 2038's constitutionality, with recommendations to amend or repeal the law to protect sensitive areas.
- **Proposed and Approved Developments Near Martindale:**
 - Several large developments, including Mirada Business Park, Caldwell 681, and Cherryville, are proposed near Martindale.
 - These projects, outside Martindale's control, could impact natural resources and increase flooding risks.
- **Growth Impacts in the Texas Hill Country:**
 - Population growth and development outside cities place additional pressure on natural resources, particularly aquifers.
 - Negative effects include increased water use, wastewater, impervious surface cover, and loss of open spaces.
- **Existing County Growth Management Tools:**
 - Texas counties have limited authority for growth management, but some have regulations on subdivision, stormwater management, and minimum lot sizes.
 - Strategic planning, road and transportation regulations, and conservation agreements can help manage development indirectly.
- **Legislation for County Authority:**
 - Senate Bill 873 expanded county powers but leaves room for interpretation.
 - Counties can create regulations for resource protection but may face legal challenges.
- **Water Resource Management:**
 - Texas Water Code allows for Priority Groundwater Management Areas (PGMAs) to protect critical groundwater resources.
 - Other regulations, like the Edwards Aquifer Protection Program and local watershed ordinances, also aim to manage water resources in sensitive areas.

Best Practices

- **Stormwater Management Techniques:**
 - Two main methods: Low Impact Development (LID) and Best Management Practices (BMPs).

- Post-development stormwater runoff must be managed to equal or be less than pre-development levels.
- Common practices include:
 - On-site stormwater management.
 - Reducing impervious surfaces to improve infiltration.
 - Limiting impervious cover and adjusting lot sizes to support LID.
- **County-Level Best Practices:**
 - Travis, Waller, and Hays Counties serve as examples:
 - **Hays County:** Conservation Development Ordinance promotes preserving open spaces and natural resources, with incentives for developers who conserve at least 50% of the land.
 - **Travis County:** Impervious cover limits and conservation easements to protect water quality and native habitats.
 - **Waller County:** Comprehensive plan encouraging city-county cooperation in planning.
- **Developer Incentives (Hays County):**
 - Incentives include relaxed submission requirements for large lots, economic incentives for water quality protection, and stream buffer zones for ecological benefits.
- **Regional Cooperation:**
 - Kaufman County adheres to higher floodplain management standards through the Trinity River Common Vision program.
 - The Edwards Aquifer Authority (EAA) protects water resources, balancing development and conservation.
- **Existing Regulations in Martindale and Surrounding Counties:**
 - **Martindale:** Lacks a dedicated stormwater ordinance but has regulations related to drainage, impervious cover, and flood prevention.
 - **Caldwell, Guadalupe, Hays Counties:** Hays County has the most stringent stormwater and land development regulations, including a separate stormwater ordinance.
- **Recommendations for Martindale:**
 - Martindale should consider developing new stormwater ordinances with features like stream buffers and conservation development.
 - Collaboration with surrounding counties is crucial to protect water quality and natural resources as development pressures increase.

Appendix A - Subdivision and Stormwater Ordinances

- **Caldwell County Ordinances:**
 - **Subdivision Ordinance:**
 - Requires professional engineering plans for drainage, and compliance with local Groundwater District rules.
 - Minimum lot size in rural subdivisions is 1 acre.
 - Conservation Subdivision incentives include reduced lot sizes if 40% of land is conserved and water quality BMPs reduce Total Suspended Solids (TSS) by 80%.

- **Stormwater Ordinance:**
 - Developers must manage stormwater conveyance to avoid flooding and erosion.
 - Requires erosion control during construction and compliance with federal NPDES requirements.
 - Stream setbacks based on watershed size, with development prohibited within 50-150 feet of waterways.
- **Guadalupe County Ordinances:**
 - **Subdivision Ordinance:**
 - Special regulations for high-density developments, including condominiums, with water and sewer requirements.
 - Minimum lot frontage is 200 feet and lot size is 1 acre, unless served by public water and sewage.
 - **Stormwater Ordinance:**
 - Runoff must be managed to maintain pre-development drainage rates.
 - Drainage studies are required for all subdivisions, with detention/retention ponds to prevent increased flooding.
 - All stormwater systems must be designed for at least a 25-year storm event.
- **Hays County Ordinances:**
 - **Subdivision Ordinance:**
 - Lot size varies based on water and wastewater services and proximity to the Edwards Aquifer.
 - Subdivisions with over 50 acres or 50 dwelling units must provide parkland or open space.
 - **Stormwater Ordinance:**
 - Stormwater runoff must not exceed pre-development rates for up to 100-year storm events.
 - Requires coordination with adjacent properties and recognizes city water quality ordinances in the county's ETJ.
 - Establishes permanent vegetation after construction for county-maintained roads.

These ordinances guide subdivision planning and stormwater management in these counties, focusing on preventing erosion, managing stormwater, protecting water quality, and balancing development with conservation.