

Texas Land Trends

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25TH ANNIVERSARY



Status Update and Trends
of Texas Working Lands
1997-2022

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DIRECTOR'S DESK

Foreword

As we celebrate over two decades of applied research and extension outreach by the dedicated staff at the Texas A&M Natural Resources Institute (NRI), we reflect on the significant impact of the *Texas Land Trends* program. Since its inception, the program is a critical resource in understanding the complex landscapes of Texas' working lands—farms, ranches, and forests increasingly threatened by rapid economic and population growth.

With 25 years of trend data, this five-year report, in its sixth iteration, provides essential insights into the ongoing transformation of population growth, land value, ownership patterns, and land uses across the state. The Texas Land Trends program stands as a testament to the Institute's commitment to informing decision-makers and guiding conservation efforts.

The report serves not only as an updated snapshot of current conditions but also as a roadmap for future policies affecting our state's natural resources. Together, we continue our mission to conserve the integrity of Texas' wide-open places for generations to come.



Roel Lopez, Ph.D.
Director
Texas A&M Natural Resources Institute





Report Highlights

TEXAS POPULATION

- Texas contains 8 of the top 15 fastest growing cities in the U.S.
- From 1997 to 2022, the Texas population grew from 19M to 30M residents, a 55% increase, or over 1,100 new residents/day.
- The majority of the population increase (88%) occurred within the state's top 25 highest population growth counties.

LAND VALUES

- The largest land value increases were observed in proximity to major metropolitan areas.
- The average appraised market value rose 55% since 2017, from \$1,951/acre to \$3,021/acre, and 505% from \$499/acre in 1997.

LAND USES

- Texas lost nearly 3.7M acres of working lands to non-agricultural uses between 1997 and 2022, with a significant loss of over 1.8M acres in the last 5-year period.
- Grazing lands, which make up most of the state's working lands, have steadily declined since 1997, losing about 6.7M acres to other land uses over the last 25-years.
- Wildlife management land has significantly increased in recent years, growing from about 94,000 acres in 1997 to approximately 7.1M acres in 2022.

OWNERSHIP PATTERNS

- Texas lost over 17,000 operations in the last five-year period, though still has almost 2,500 more operations than in 1997, totaling over 230,000.
- Average ownership size increased from 509 to 541 acres between 2017 to 2022.
- Small operations (< 100 acres) represent 60% of all ownerships, but only account for 3% of all working land acreage in 2022.
- Large operations (> 2,000 acres) saw the sharpest five-year decline in the past 25 years, with more than 1,000 operations lost between 2017 and 2022.

About the Data

The Texas Land Trends program has informed state agencies, land managers, citizens and other decision-makers about our state’s working lands, serving as a guide for conservation efforts and natural resource policy development over the last 25 years. The program provides comprehensive datasets informing key issues through the power of a “good map” and examines the latest trends in urban development and working land loss to better understand changes to Texas’ rural landscapes.

This is the 6th iteration of the program’s *Status Update and Trends of Texas Working Lands* report, which describes the status and recent changes in **population, land value, land ownership, and land use** of Texas working lands. Primary data sources include the U.S. Census Bureau, the Texas State Comptroller of Public Accounts (Texas Property Tax Assistance Division) land value and land use data from independent school districts (ISDs) and the United States Department of Agriculture’s (USDA) National Agricultural Statistics Service (NASS) Census of Agriculture (Ag Census) dataset. Other data used in this report are not modified for our purposes and are cited in the *References* section. This report is generated every 5 years based on the Ag Census dataset availability (e.g., 1997, 2002, 2007, 2012, 2017, and 2022).

Due to its voluntary nature and statistical adjustments thereafter, the Ag Census dataset does not uniformly align with land use data reported by the Texas Comptroller. For example, total acres of operations reported by the Ag Census (124M acres) are historically lower than total acres of working lands reported by the Comptroller (139M acres). These discrepancies are evident in the land ownership and working lands figures reported here. The Texas Land Trends program uses the Ag Census to further define and illustrate operation trends across the state (see *Ownership Patterns* section), and uses the total acreages reported by the Comptroller to define working lands and land uses in Texas (see *Land Uses* section).



**TEXAS LAND TRENDS
STATUS UPDATE AND TRENDS
25TH ANNIVERSARY**



PRIMARY DATA SOURCES

USDA NASS CENSUS OF AGRICULTURE

Reports working lands as the number of operations and acres of operations by size class each census year (1997, 2002, 2007, 2012, 2017, and 2022) for every county in Texas. The Ag Census defines operations as any property from which \$1,000 or more of agricultural products were produced, sold, or normally would have been sold, during the census year and is ultimately a voluntary census aiming to provide valuable information on land use and ownership, operator characteristics, production practices, income, and expenditures of American farms and ranches. NASS conducts capture-recapture methodology to account for undercoverage, nonresponse, and misclassification.

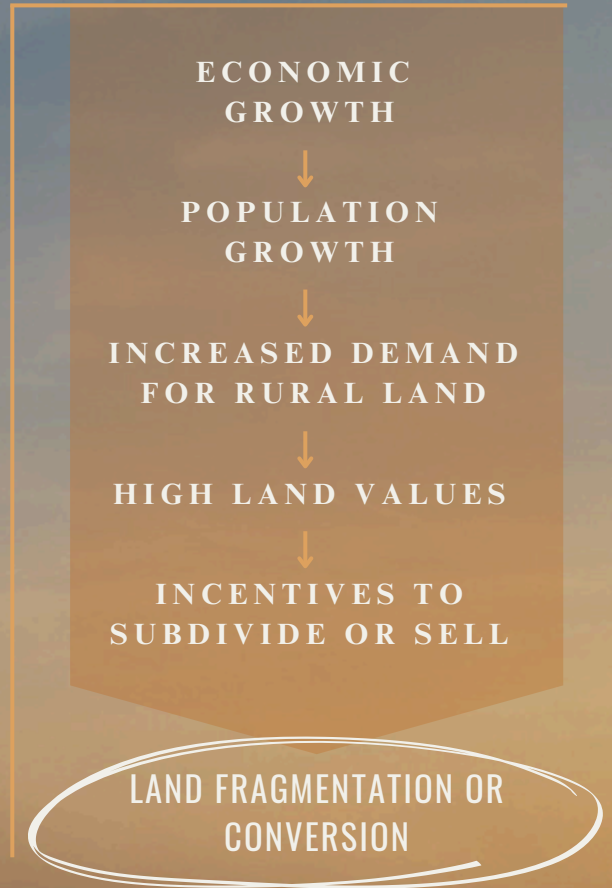
TEXAS COMPTROLLER OF PUBLIC ACCOUNTS

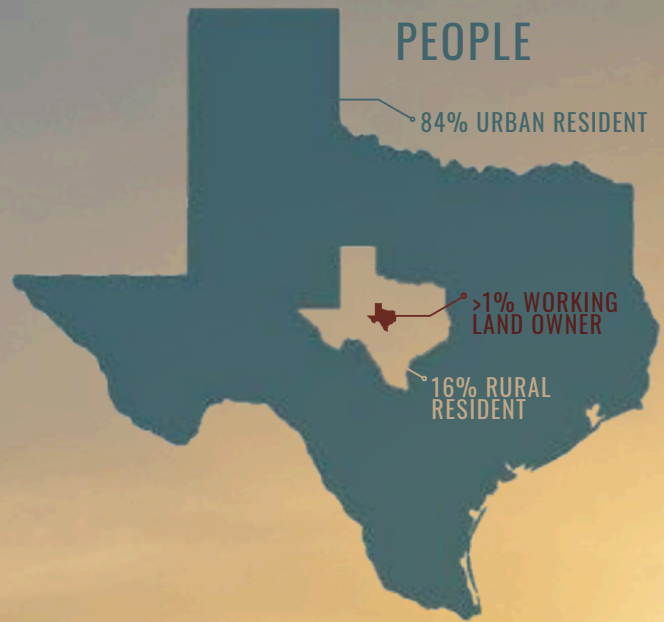
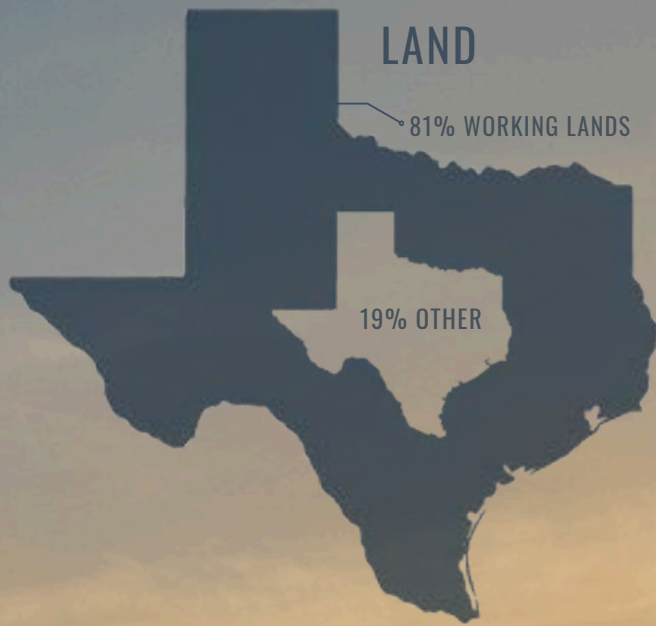
Produces an annual compilation of land use and land value data from all ISDs. This dataset represents all private lands designated as 1-D and 1-D-1 appraisal status for all Texas ISDs. A 1-D agricultural use (Assessments of Lands Designated for Agricultural Use) refers to lands devoted to full time agricultural operations where the owner's primary occupation and source of income is derived from agricultural enterprises. In contrast, a 1-D-1 open space status (Taxation of Certain Open Space Land) designates land based solely on the primary use of the land with no consideration for the landowner's income or occupation. In this report, we aim to quantify changes in working lands (private lands under 1-D and 1-D-1 appraisal status) over time.

Introduction

WORKING LANDS - PRIVATELY-OWNED FARMS, RANCHES, AND FORESTS

Texas working lands are under increasing land conversion (i.e., non-agricultural development) pressure driven by unprecedented economic and population growth. Shifting economies and new industry opportunities, byproducts of the global pandemic, magnified the downward trajectory of working land loss in our state. The last 5 years have seen continued loss of working lands and population increases unlike any other period. In this report, we summarize land use data related to Texas' changing working lands with regard to population growth, land value, ownership patterns, and land uses. This report is part of the 5-year, recurring series, updated with the release of the USDA Census of Agriculture data.





WITH OVER 30 MILLION TEXANS CONCENTRATED IN URBAN AREAS, THE STEWARDSHIP OF THE STATE'S REMAINING RURAL LANDSCAPES FALLS TO JUST 231,000 OWNERSHIPS—A **STRIKING CONTRAST BETWEEN URBAN DENSITY AND RURAL DOMINION.**



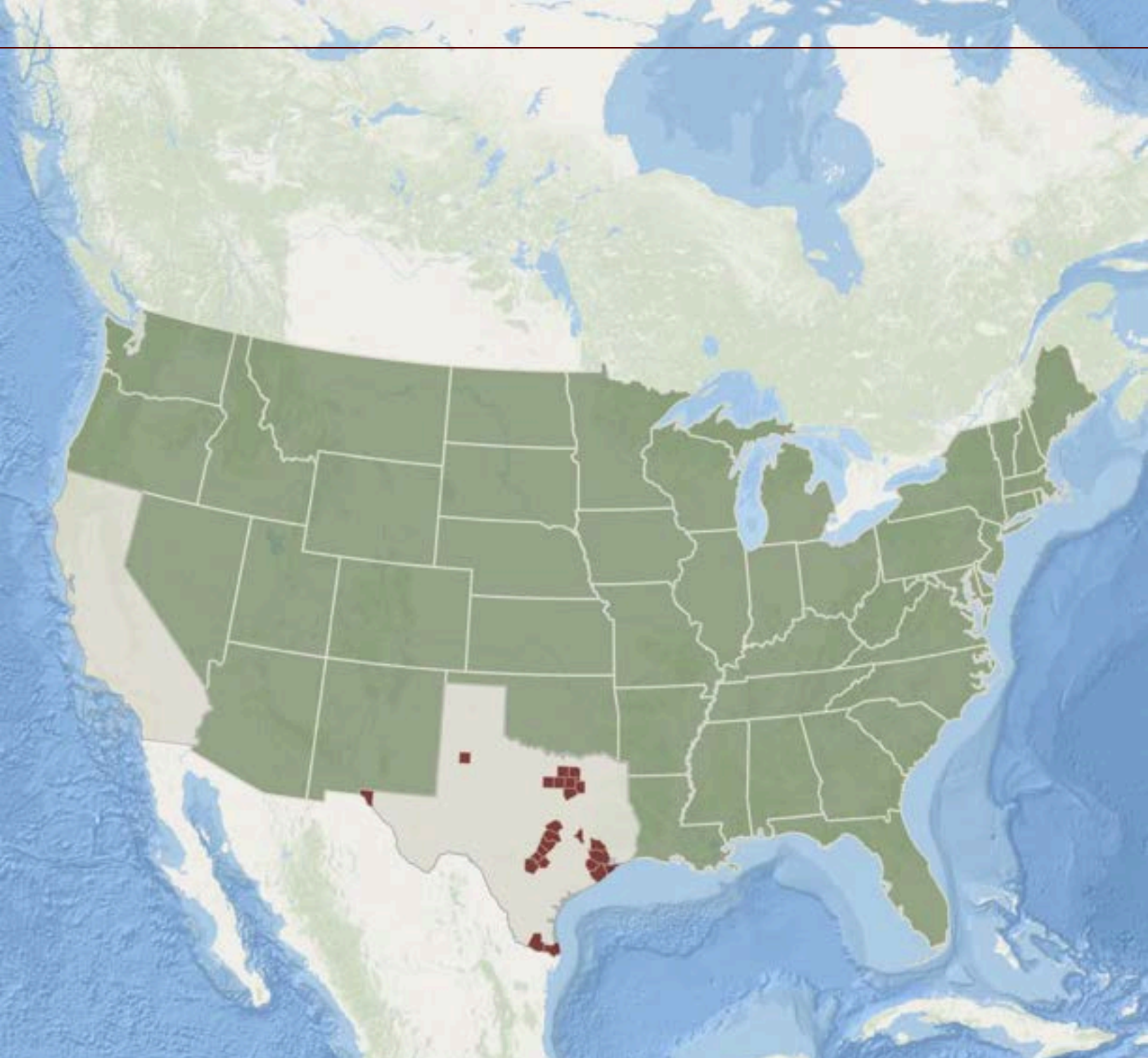
Texas Population

THE GROWING POPULATION IN TEXAS IS DRIVING **INCREASED DEMAND FOR RURAL LAND**, ESPECIALLY IN AREAS IN AND AROUND URBAN CENTERS.

Texas leads the nation in privately-owned working lands, accounting for 139M acres, or 81% of the state's total land area. These important lands provide substantial economic, environmental, and recreational resources that benefit both residents and visitors alike. According to a 2024 U.S. Census Bureau study, Texas also leads the nation in population growth with 8 of the 15 fastest growing cities in the U.S., a consistent trend over the last two updates.¹ From 1997 to 2022, Texas grew from 19M to over 30M residents, an increase of 55% over the last 25-year period. In the last five years alone, Texas gained over 1.7M residents or approximately 1,000 people per day. Texas Land Trends data shows 88% of the population increase (9M new residents) occurred within the state's 25 highest population growth counties.

These 25 counties account for only 9% of the total land area of the state yet contain 75% of Texas residents. With a total of over 22M residents, the population in these 25 counties alone is greater than 48 individual states in the U.S., highlighting the importance of land stewardship to both urban and rural communities.

By 2050, Texas is projected to house upwards of 40M residents.² In previous reports, it was discussed that projected population increases would lead to similar increases in demand for rural lands and subsequent land values, mainly within or surrounding urban centers. As predicted, there have been significant changes to land values across the state, especially in the last five years. High population growth areas are expanding the urban-rural interface, further impacting the state's rural working lands.

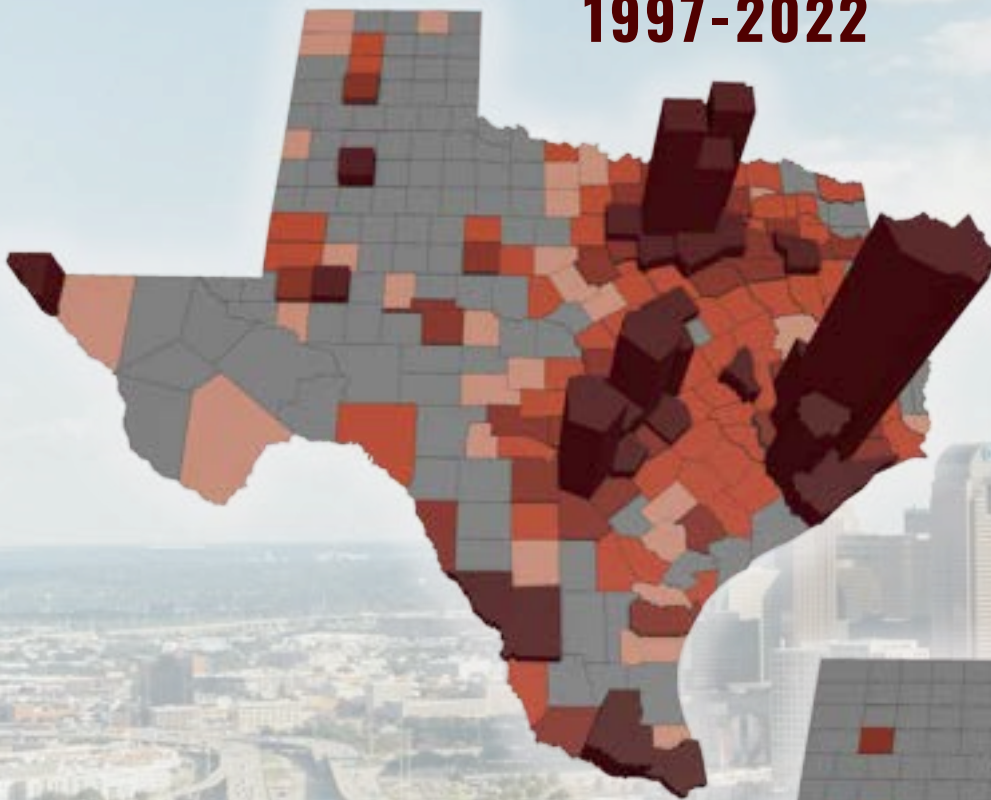


TEXAS POPULATION

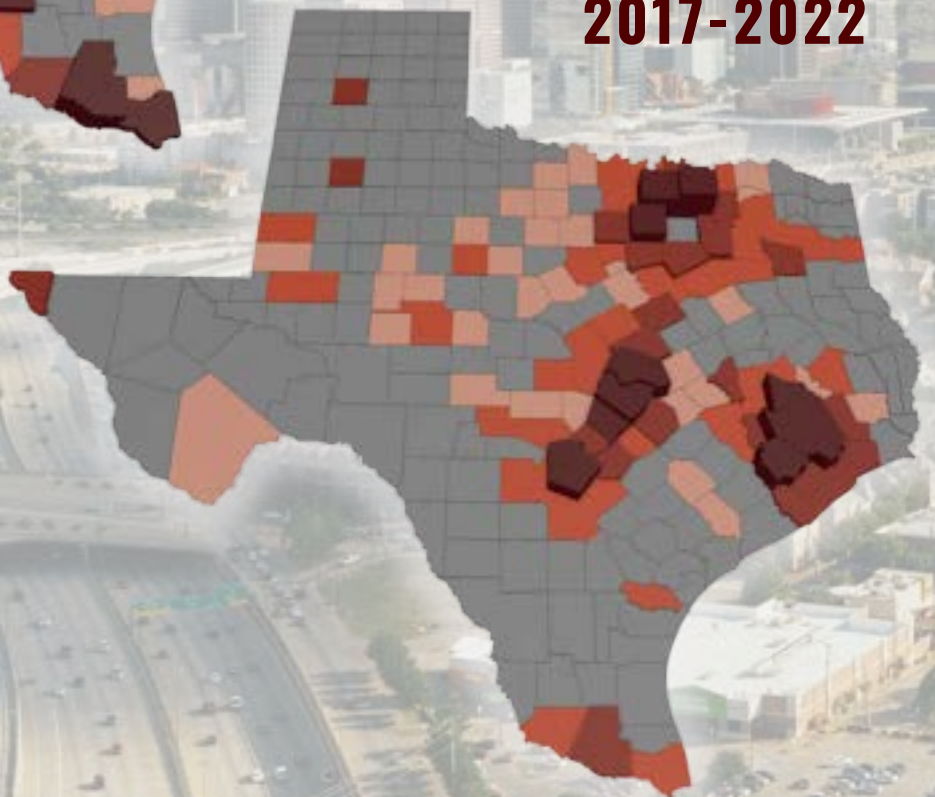
The combined population of the 25 highest growth counties in Texas (22M represented in maroon) is greater than the individual populations of every U.S. state with the exception of California.

CHANGE IN POPULATION NUMBER

1997-2022



2017-2022

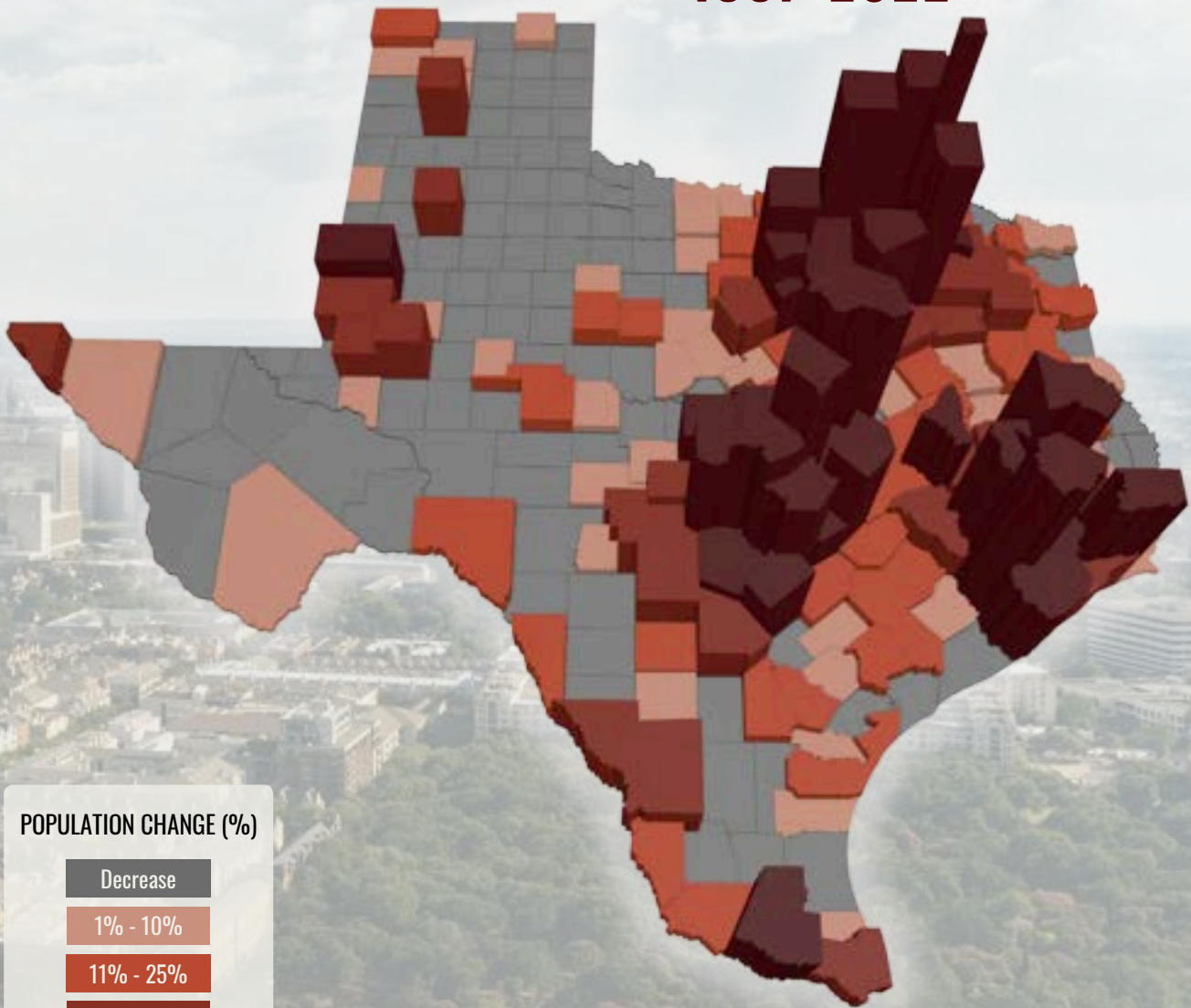


POPULATION CHANGE (#)

Decrease
1 - 1,000
1,001 - 10,000
10,001 - 50,000
> 50,000

CHANGE IN POPULATION PERCENT

1997-2022



POPULATION CHANGE (%)

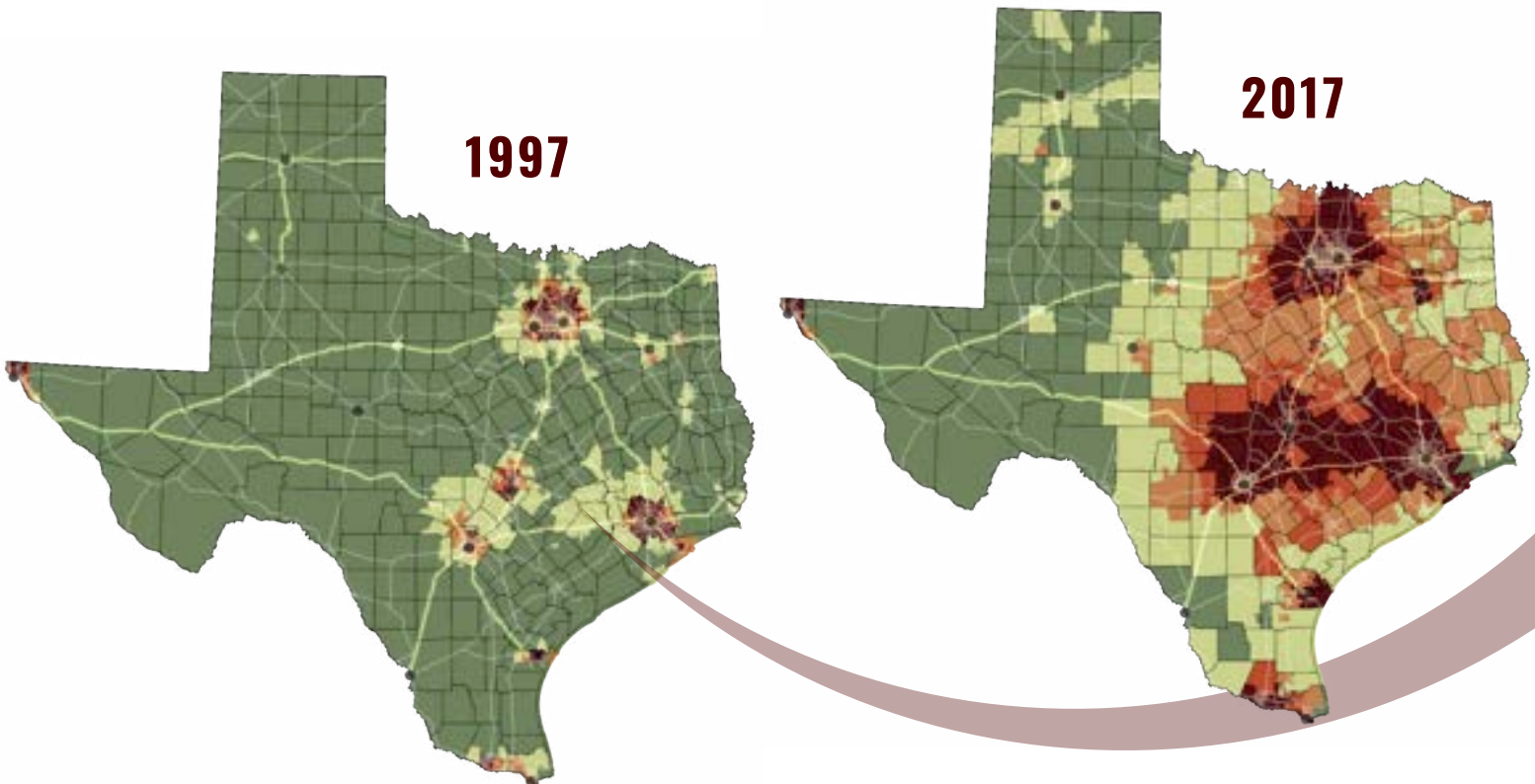
- Decrease
- 1% - 10%
- 11% - 25%
- 26% - 50%
- > 50%

Land Values

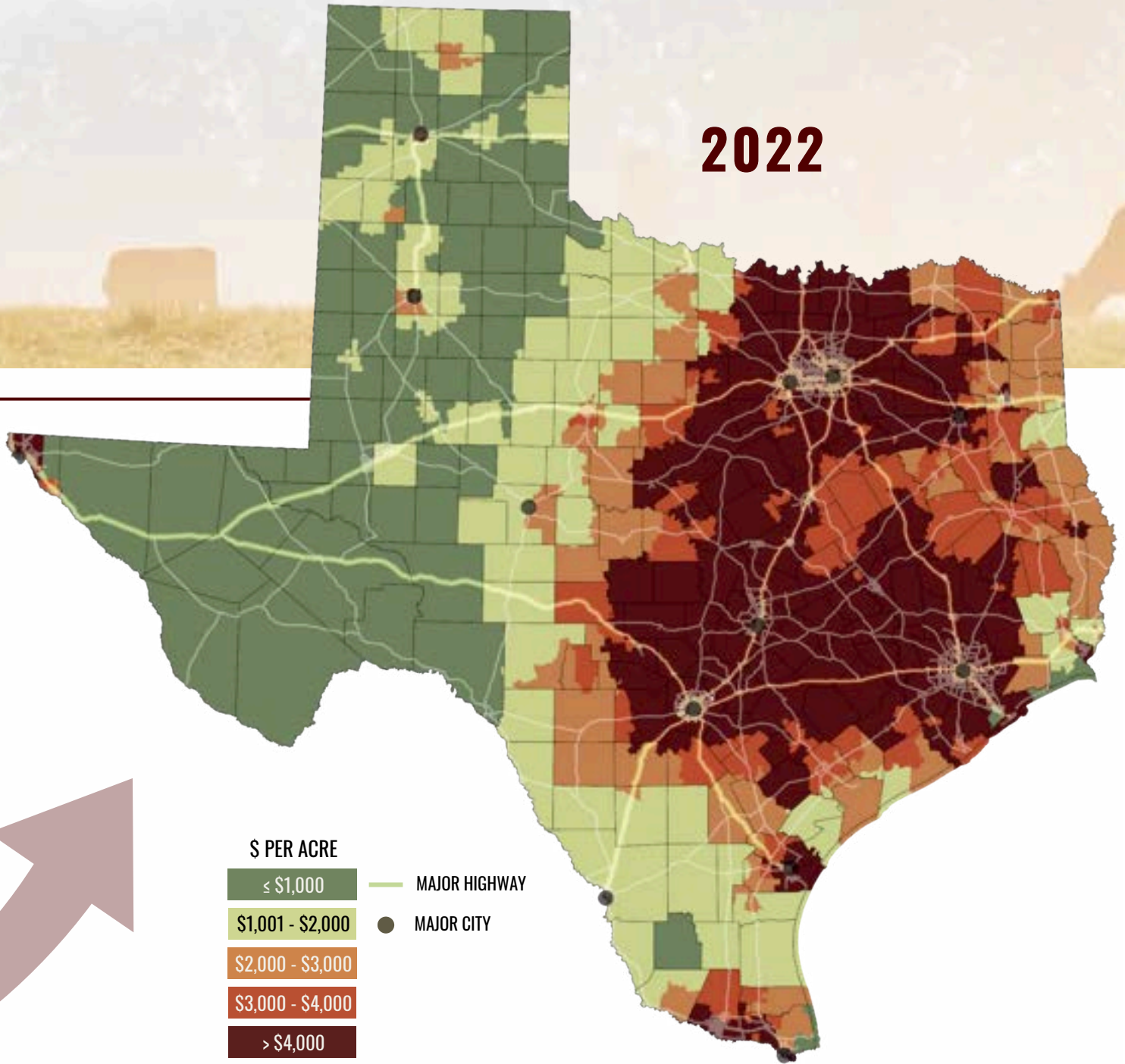
TEXAS WORKING LANDS HAVE SEEN A **505% INCREASE** IN AVERAGE MARKET VALUE SINCE 1997.

Historically, land market values served as a strong indicator of rural land demand. Like home real estate values, rural land market values vary by location, land use, and property size, among other factors. From Texas Land Trends data, the statewide average appraised market value for Texas working lands was \$3,021/acre in 2022. On average, this represents a 55% increase in land value since 2017 (\$1,951/acre), and a 505% increase over the 25-year period (\$499/acre in 1997). As in previous assessments, changes in land market value are closely tied to distance from major metropolitan growth areas, with price per acre generally increasing with proximity to major cities.

LAND MARKET VALUES \$/ACRE



2022



Ownership Patterns

Historically, the total number of operations increased over time while the number of acres classified as working lands decreased. Over the last 5 years, however, the total number of operations decreased by over 17,000 in conjunction with a decrease of over 1.5M acres of operations. This new pattern likely indicates a shift in the relative rates of fragmentation versus conversion, where operations are being lost to conversion more often, or faster, than they are being fragmented into smaller operations. The statewide average operation size also deviated from previous trends, which were steadily decreasing over time. The most recent period shows this average increased from 509 to 541 acres per operation from 2017 to 2022. This change is likely due to consolidation or conversion into non-agricultural use, particularly among the smallest size class, shifting acreage into larger operations.

As urban centers grow in population, the demand for surrounding rural land increases, raising land market values, and subsequently increasing landowners' incentive to subdivide or sell their working lands for suburban/urban use. This concept continues to play out in both small (tracts < 100 acres) and mid-sized (tracts 100 to 2,000 acres) ownerships near major urban centers and/or transportation corridors. Conversely, consolidation of working lands can also be driven by the ability of prospective buyers to capitalize on both lower land values and availability, as recently seen in certain regions of the state (e.g., High Plains and Rolling Plains Ecological Regions).

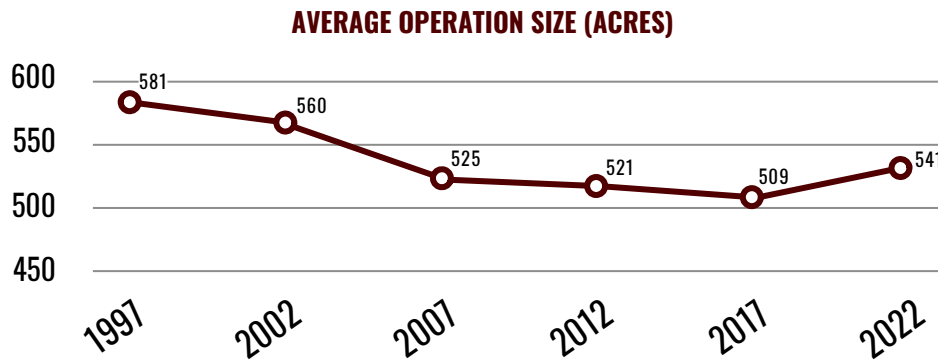
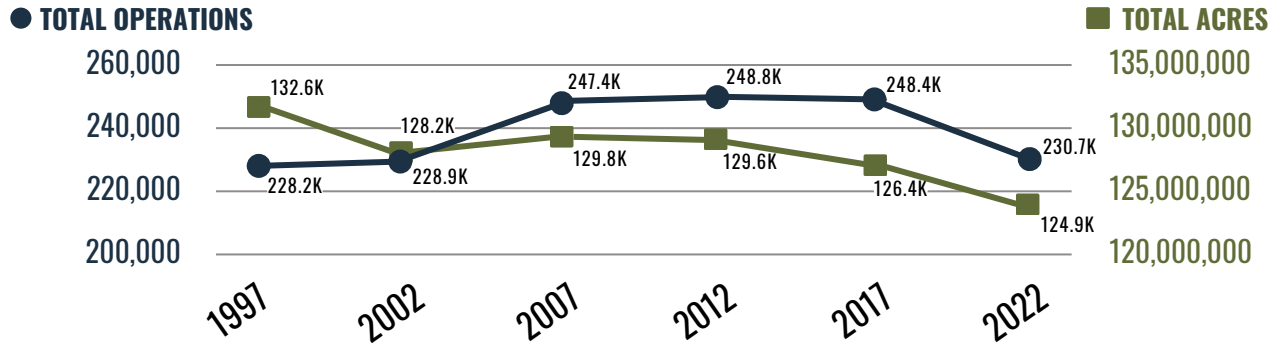
What sets the latest reporting period apart from previous periods is the widespread loss of operations across all size classes and throughout much of the state. Similarly, acres of operations decreased in all size classes except for large farms, likely an indicator of consolidation, especially in areas such as the Texas panhandle.



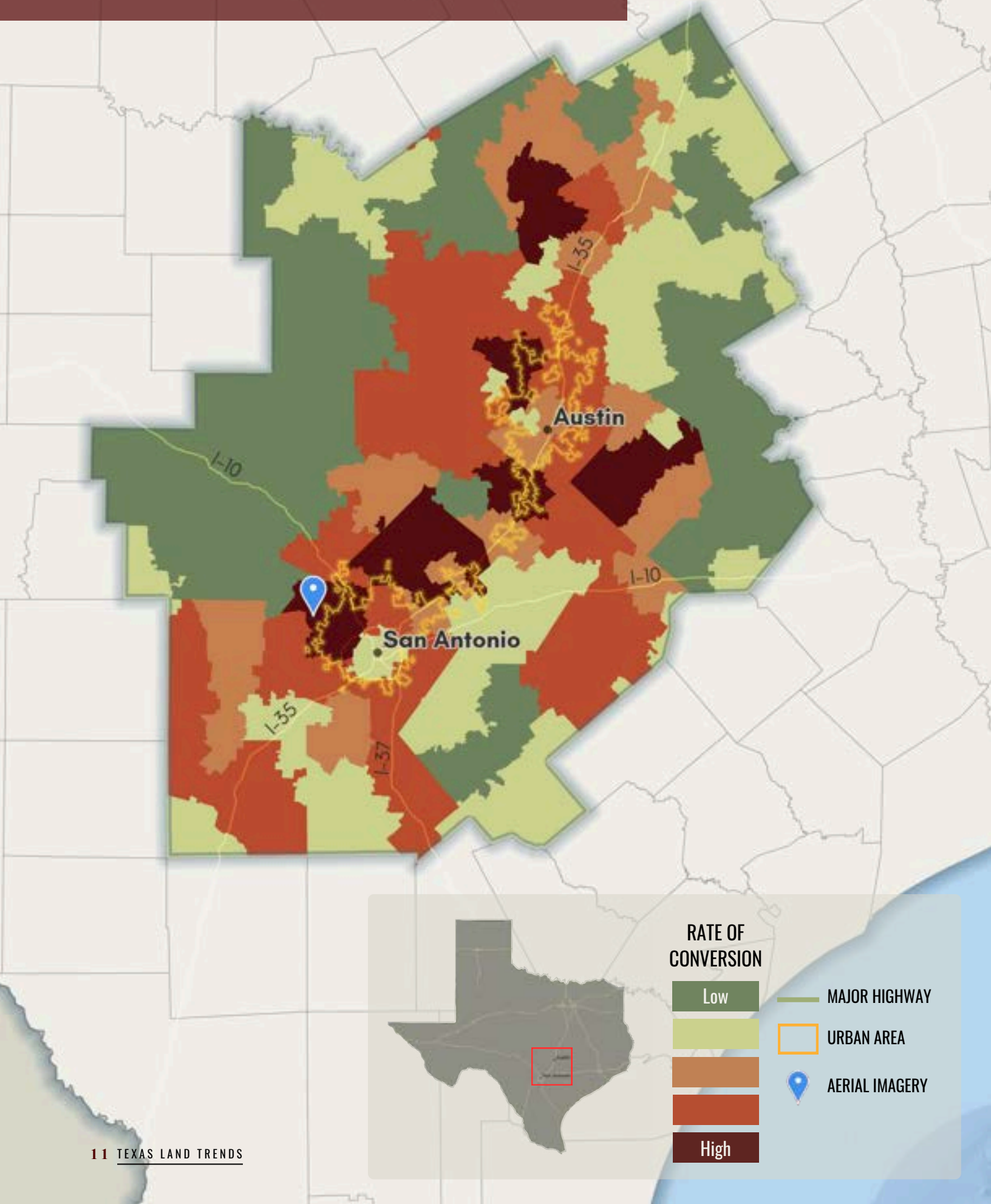
THE LAST 5-YEAR PERIOD EXPERIENCED LOSSES IN THE NUMBER OF OPERATIONS IN ALL SIZE CLASSES

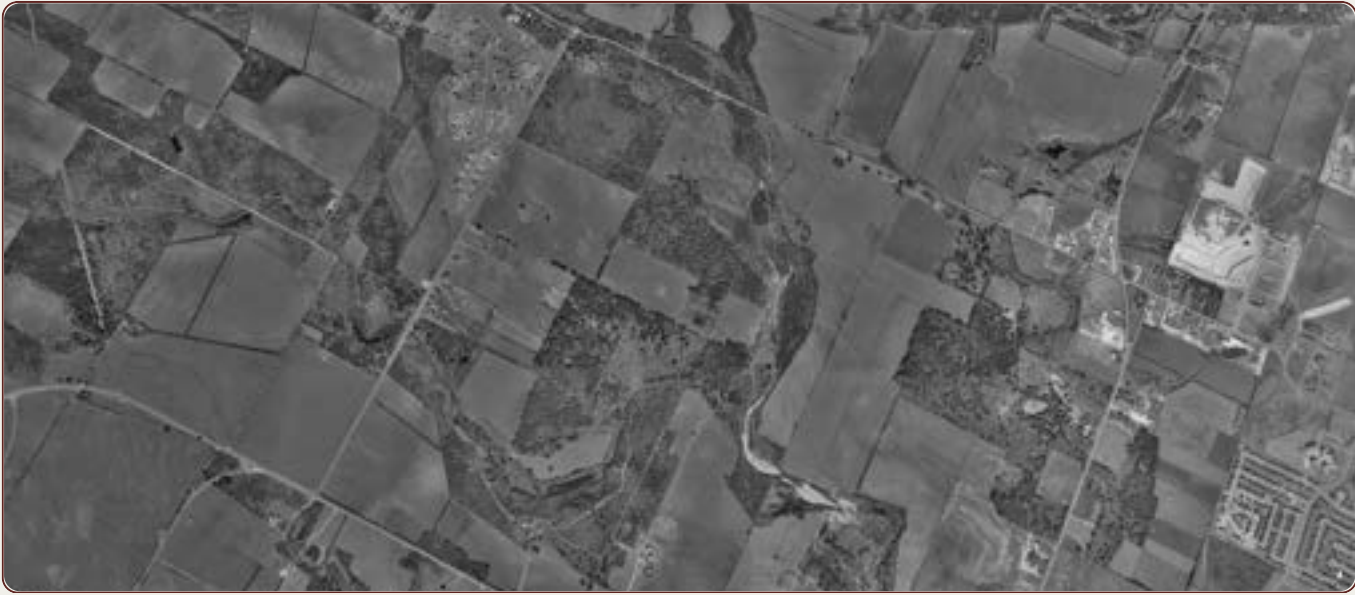


TRENDS IN OPERATIONS 1997-2022



THE HIGHEST RATE OF CHANGE OCCURS ON THE FRINGE OF URBAN CENTERS AND TAPERS MOVING INTO RURAL AREAS.





2004



2014



2024

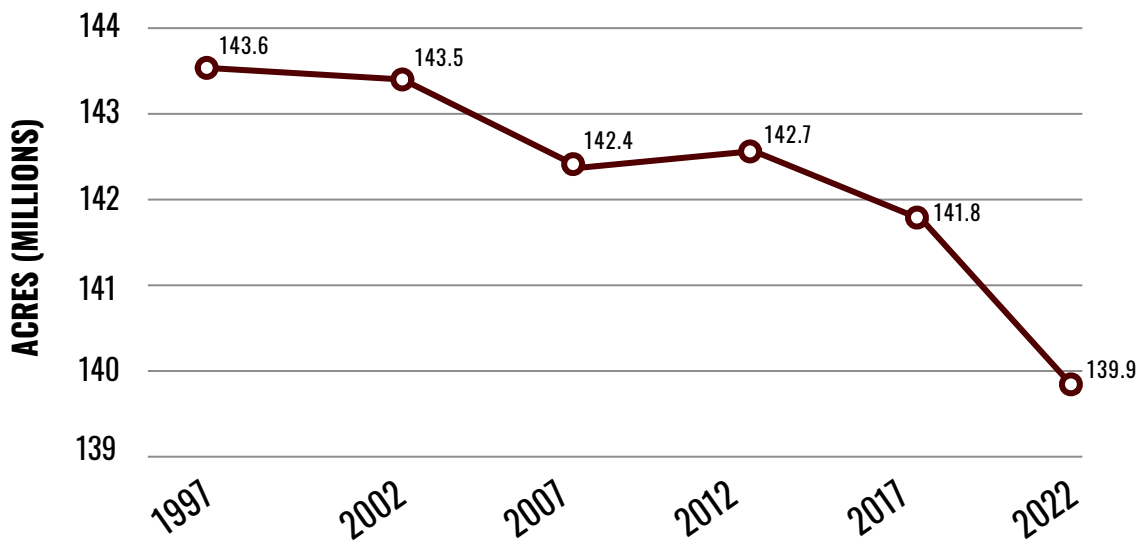
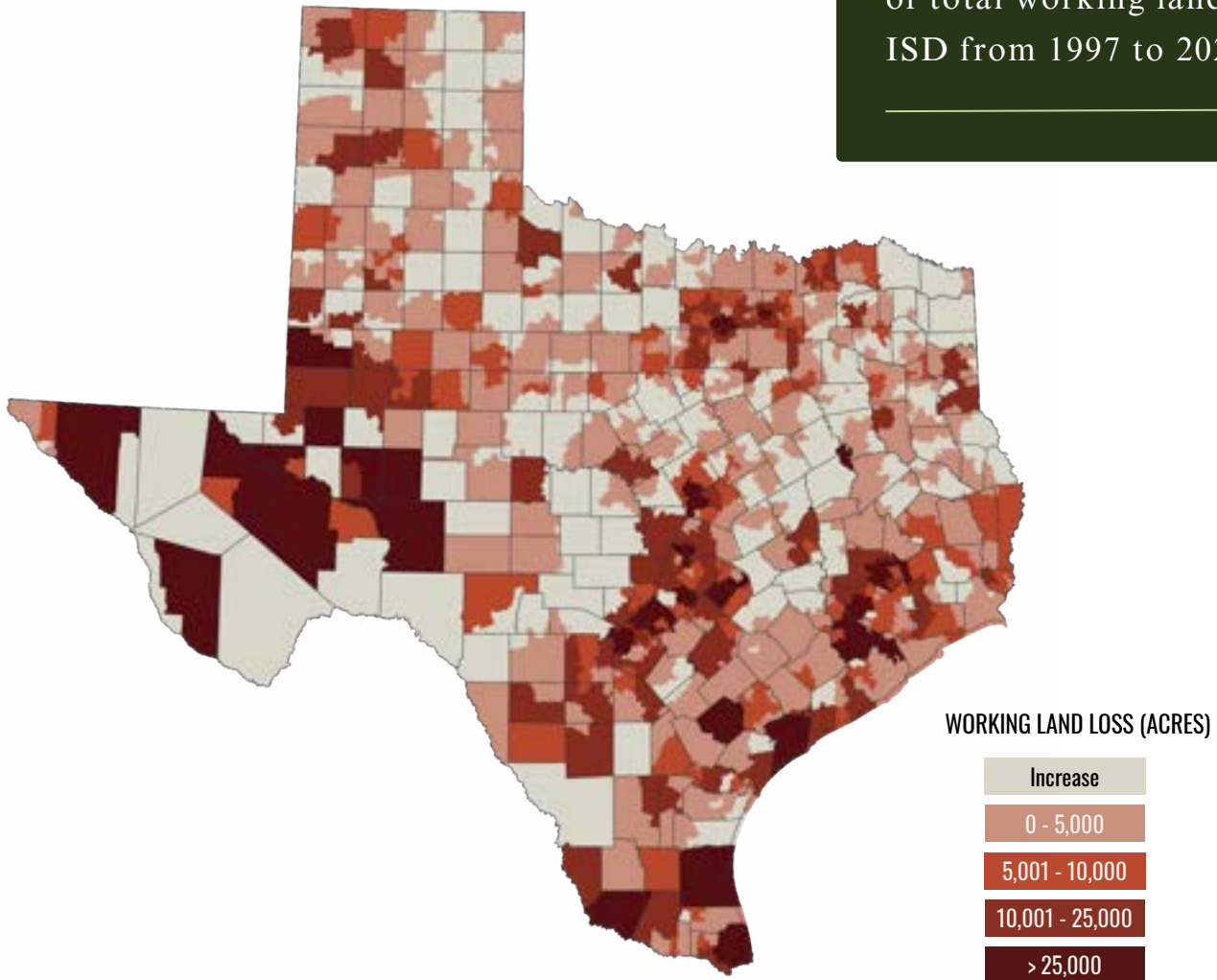
Land Uses

BETWEEN 2017 TO 2022, OVER 1.8M ACRES HAVE BEEN LOST, SIGNALING AN ACCELERATING LOSS RATE.

In the last 25 years, Texas lost nearly 3.7M acres of designated working lands, converted to non-agricultural uses. Despite losses in working lands over that period, 81% of the state continues to remain productive, open space in the form of farms, ranches, and forestlands. While nearly 140M acres of working lands support Texas' agricultural production and wildlife habitats, other land uses and vital activities, such as military training and renewable energy production, also rely on these lands.

WORKING LAND LOSS

Statewide change in acres of total working lands by ISD from 1997 to 2022.



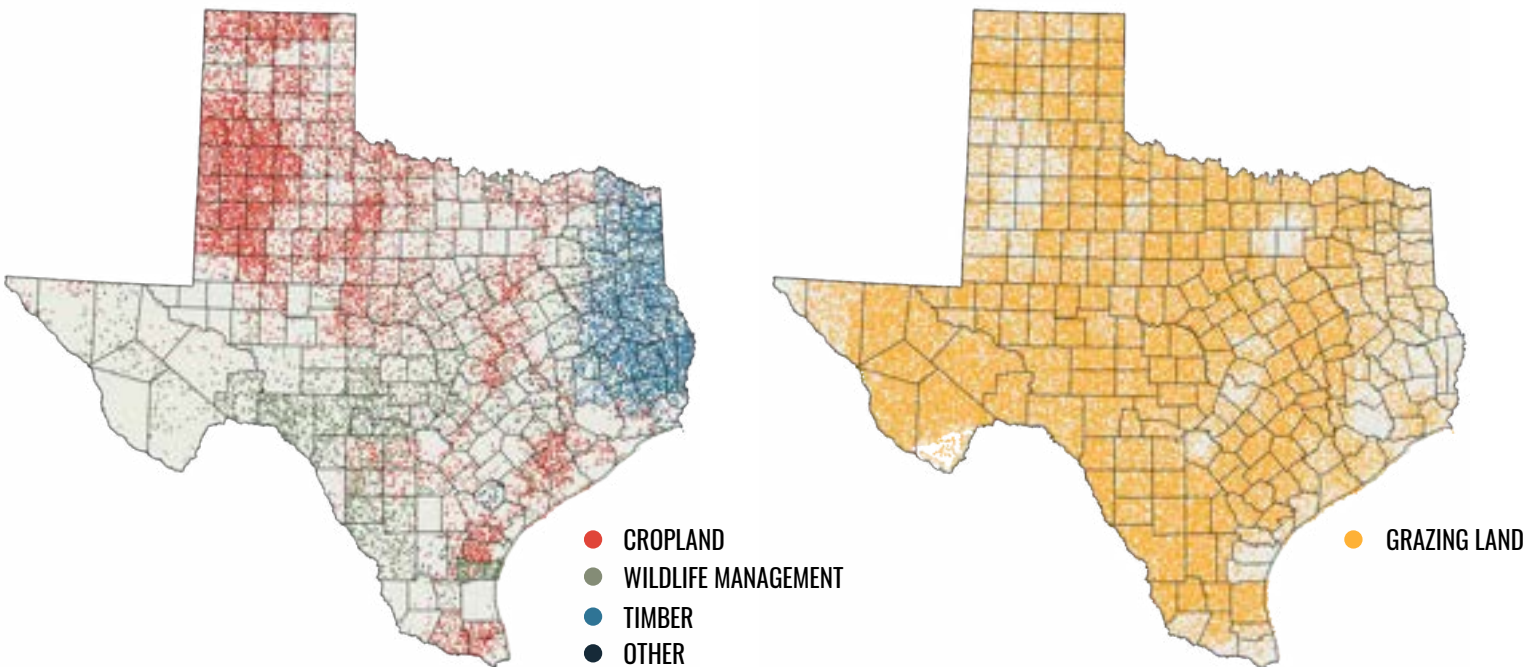
AGRICULTURE

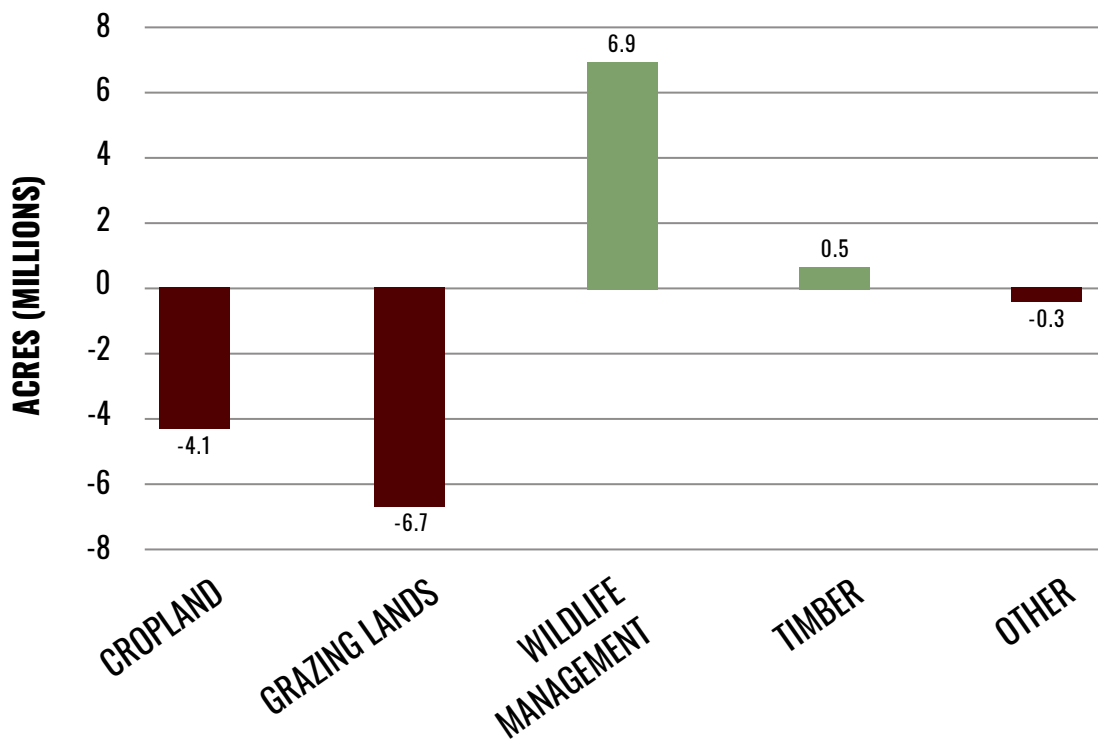
Grazing lands account for the majority of working lands (72%) in the state and has steadily declined since 1997. Trend data estimates grazing lands lost approximately 6.7M acres from 1997 to 2022 to other land uses, whether agricultural or non-agricultural. Croplands experienced similar declines over the same period, with a loss of more than 4.1M acres to other land uses.

Some acreage loss in the traditional agricultural valuation (1-D appraisal) categories is attributed to the transfer of acres into wildlife valuation (1-D-1 appraisal), another working lands category.

PRIMARY LAND USE

Relative density of primary land use by type and location, 2022. 1 dot = 2,500 acres

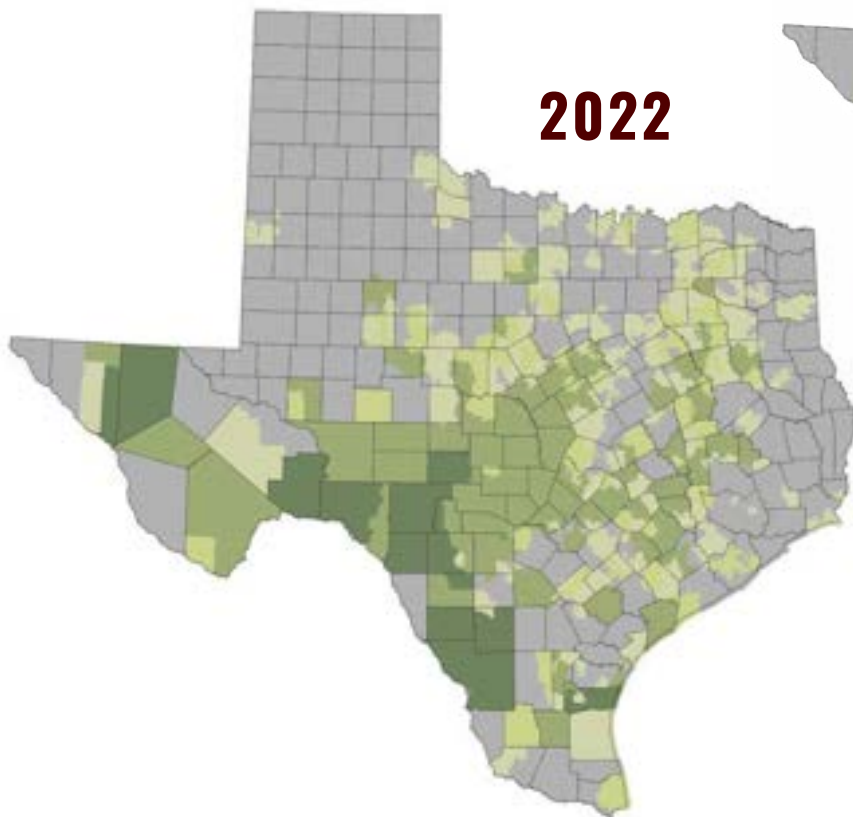
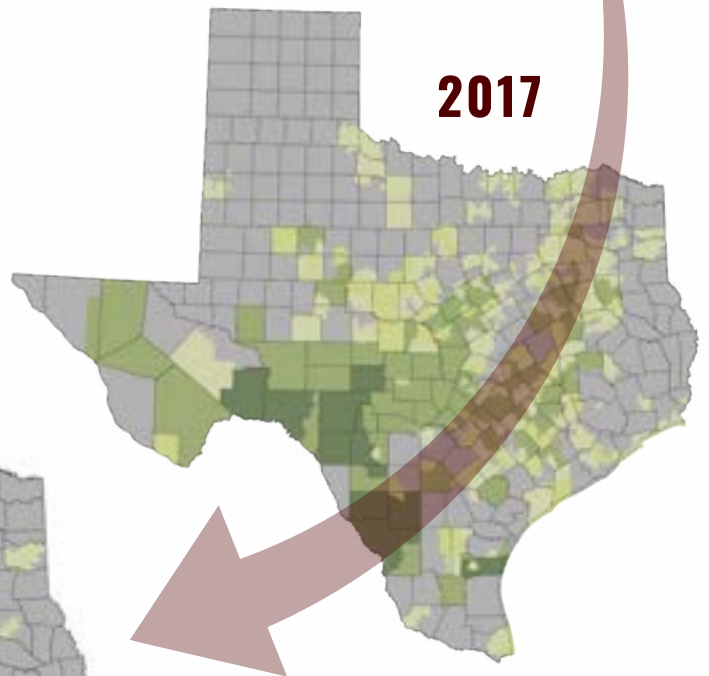
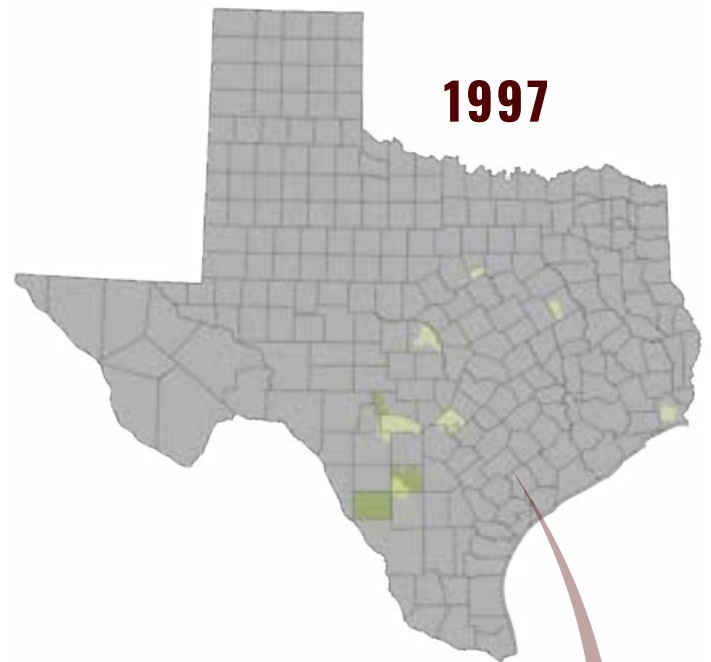




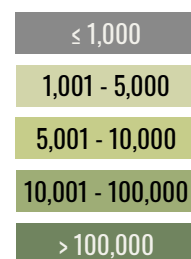
STATEWIDE CHANGE IN WORKING LAND ACRES BY LAND USE TYPE 1997-2022

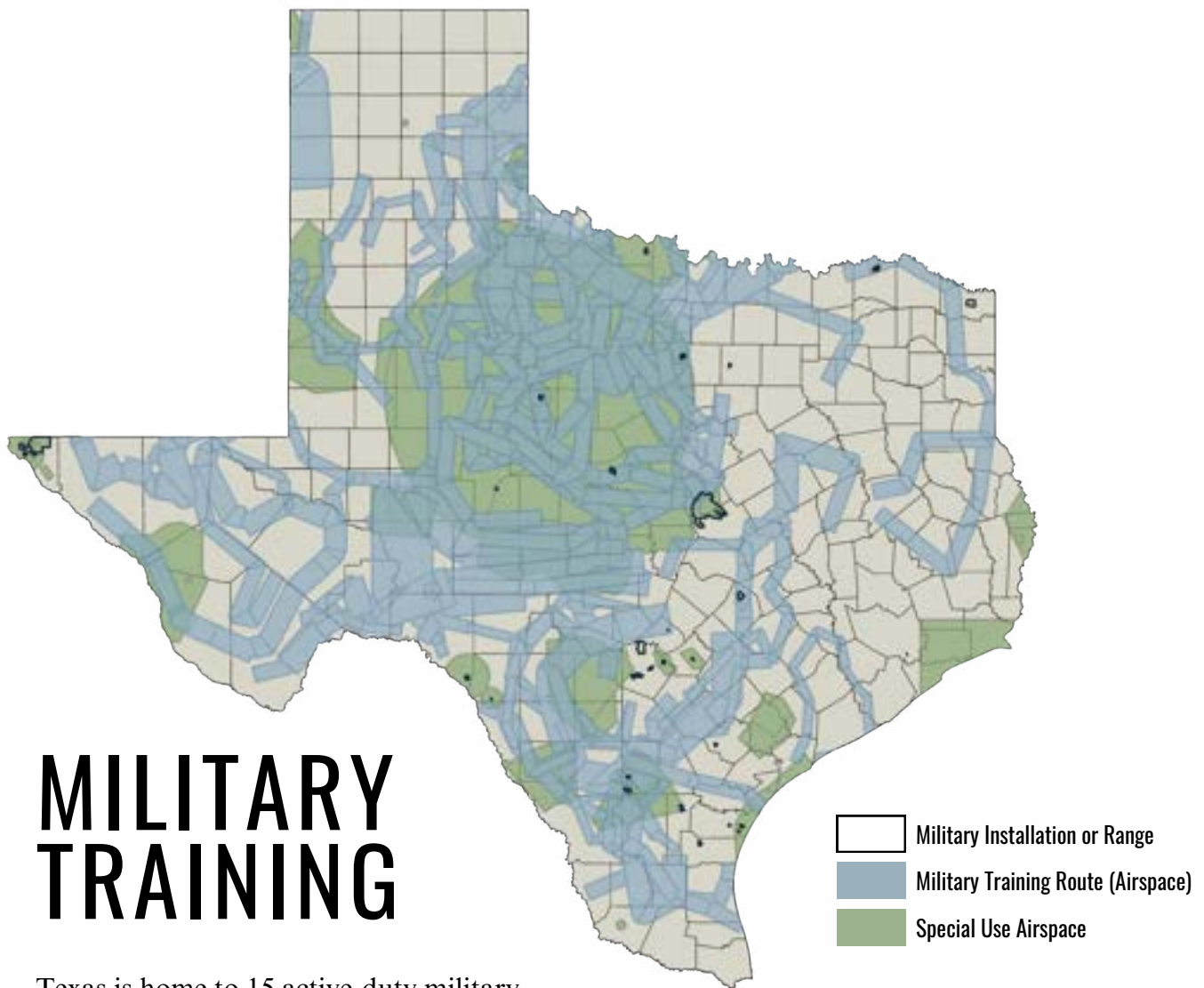
WILDLIFE MANAGEMENT

Beginning in 1995, wildlife management was included as a qualifying agricultural practice for obtaining open space appraisal status in Texas, offering an alternative form of agriculture that helps conserve family farms, ranches, and forestlands. This land use appraisal category gained popularity over the years, now totaling over 7M acres. Many attribute the large losses of grazing land and cropland to shifts to wildlife management; however, it is important to note that grazing practices can be included as a wildlife management action that some landowners opt to use in their selected practices to maintain 1-D-1 status.



WILDLIFE MANAGEMENT ACRES





MILITARY TRAINING

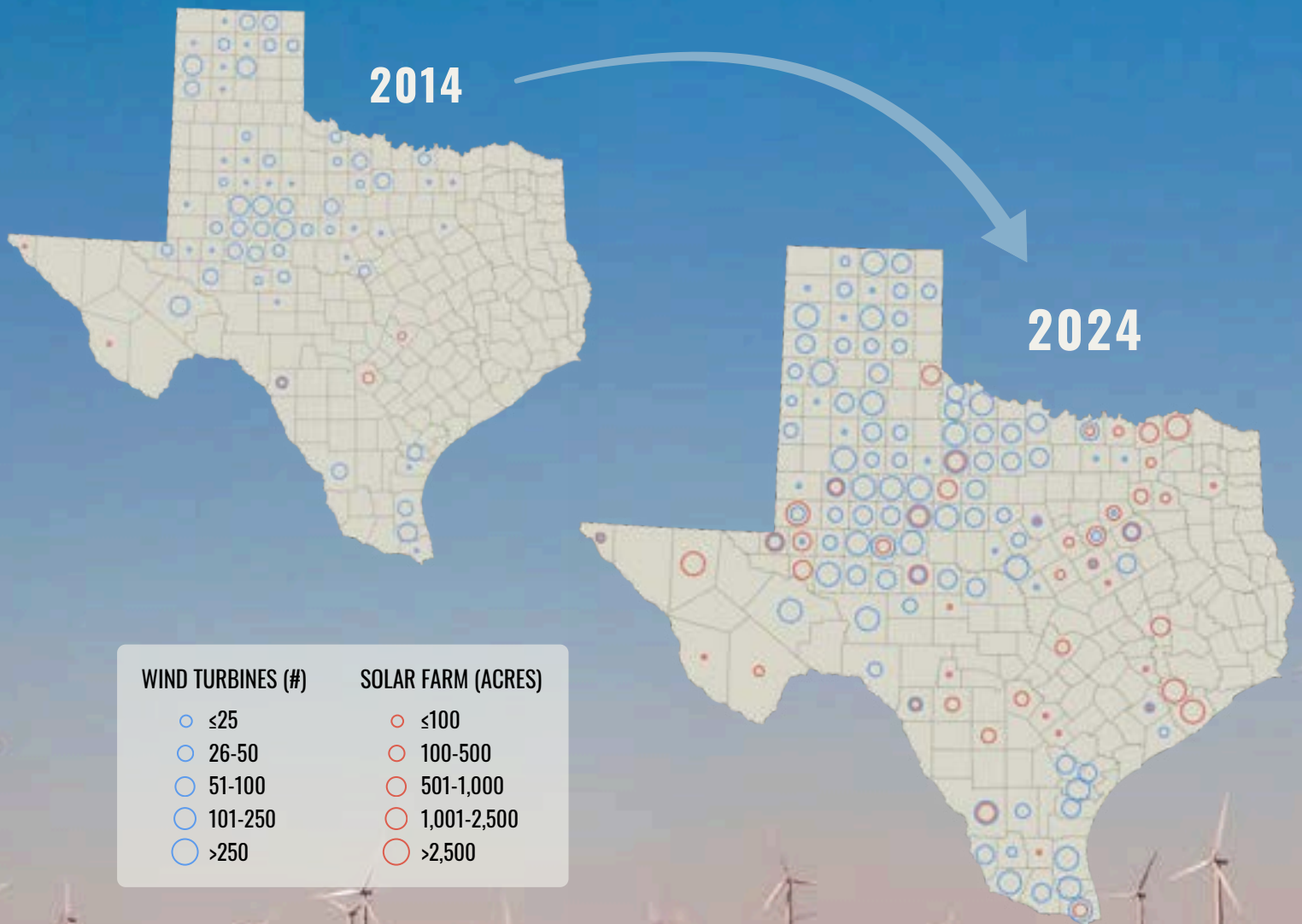
Texas is home to 15 active-duty military installations and the headquarters of Army Futures Command, with a footprint totaling over 1.5M acres across the state in associated facilities, ranges, and training areas representing the Departments of Army, Navy, and Air Force. With an economic impact exceeding \$151 billion, military operations are among the top contributors to the Texas economy.³ In addition to rugged terrain needed to conduct military training, the Department of Defense utilizes an extensive patchwork of military airspace routes, together covering nearly 54% of the landscape. Working lands play a crucial role in maintaining buffer zones for military operations, minimizing conflicts and safety concerns with civilian and private entities.

Many military communities are beginning to actively protect essential buffer zones by supporting rural landowners, as demonstrated by the *Texas Camp Bullis Sentinel Landscape* partnership. Through collaborative efforts with landowners, non-governmental organizations, and state and local governments, these communities help conserve and enhance working lands around military installations, reducing development encroachment while protecting military training capabilities. By fostering partnerships that promote compatible land uses, Camp Bullis and similar landscapes ensure both the resilience of military operations and the continuation of rural livelihoods.

RENEWABLE ENERGY

Texas leads the nation in domestically produced energy and is the nation's largest net energy supplier.⁴ While Texas produces more crude oil than any other state, it also leads the nation in wind energy production and is a top producer of solar energy. The energy sector provides jobs to Texans, income to landowners, and tax revenue for local and state government.

In 2023, renewable sources provided almost 30% of total state electricity net generation, with even more production anticipated with future developments.⁴ With an expansive land footprint, renewable energy can lead to a disproportionate impact on rural communities and landscapes. Recent trends have seen an increase of wind (164%) and solar (1,040%) in the last decade. Many community groups are developing plans that ensure decisions about energy development consider potential consequences of development on the values of the local community, and that appropriate steps are taken to minimize negative impacts and encourage responsible development.



Takeaways

SUPPORTING LANDOWNERS IN THE STEWARDSHIP OF WORKING LANDS IS CRUCIAL TO CONSERVING HEALTHY ECOSYSTEMS, FOSTERING RESILIENT COMMUNITIES, AND ENSURING SUSTAINABLE NATURAL RESOURCES FOR FUTURE GENERATIONS.

As Texas continues to grow in population and economy, the demand for rural land, especially in areas surrounding major urban centers and transportation corridors, will continue to increase, prompting the fragmentation and conversion of working lands at an accelerated rate. These lands are essential for supporting both the energy industry and military operations by providing open space for infrastructure, resource access, and vital training while helping prevent development encroachment and maintaining safety buffers. The loss of traditional benefits working lands provide, including food and fiber, valuable ecosystem services, like water storage and clean air, that rural and urban communities rely upon every day, will also be lost or greatly diminished. Ultimately, the future conservation of working lands is directly linked to private landowners who strategically steward these properties. Informed conservation and urban planning efforts should include and target these landowners, and explore methods to incentivize the continued stewardship of working lands in Texas over the next 25 years and beyond.



Definitions

1-D Appraisal: agricultural use status (Assessments of Lands Designated for Agricultural Use) for lands devoted to full time agricultural operations where the owner's primary occupation and source of income is derived from agricultural enterprises.

1-D-1 Appraisal: open space status (Taxation of Certain Open Space Land) for lands based solely on the primary use of the land with no consideration for the landowner's income or occupation.

Ag Census farm: any property from which \$1,000 or more of agricultural products were produced, sold, or normally would have been sold, during the census year.

Capture-recapture methodology: an accepted statistical methodology to account for undercoverage, nonresponse, and misclassification in survey-based research and studies.

Consolidation: the combining of smaller farms, ranches, and forests to create larger ownerships.

Conversion: the transition of 1-D and 1-D-1 qualified open space status to any other type of property tax classification, generally agricultural use to non-agricultural use (residential, commercial, etc.).

Fragmentation: the break-up of large farms, ranches, and forests into smaller ownership sizes.

Agricultural production: commodities produced on working lands, including crops, fiber, food, timber, and livestock.

Highest population growth counties: counties that showed the highest increase in total population (number of people).

Large ownerships: farms greater than 2,000 acres in size as reported by the USDA NASS Census of Agriculture.

Market value: the average appraised value of land, calculated as \$ per acre, as reported by the Property Tax Assistance Division of the Texas Comptroller.

Mid-sized ownerships: farms 100 to 2,000 acres in size as reported by the USDA NASS Census of Agriculture.

Productivity value: the average value of the land based solely on the ability to produce commodities such as food and fiber. Calculated as \$ per acre as reported by the Property Tax Assistance Division of the Texas Comptroller.

Small ownerships: farms less than 100 acres in size as reported by the USDA NASS Census of Agriculture.

Working lands: privately owned farms, ranches, and forests that produce food and fiber, support rural economies, and provide wildlife habitat, clean air and water, and recreational opportunities.

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3. Texas Comptroller of Public Accounts. 2023b. Military Installations Economic Impact/2023. Retrieved October 1, 2024, from <https://comptroller.texas.gov/economy/economic-data/military/2023/statewide-snapshot.php>
4. U.S. Energy Information Administration. 2024. Texas State Energy Profile. Retrieved October 23, 2024, from <https://www.eia.gov/state/print.php?sid=TX>

GIS DATA LAYER	SOURCE
Wind Turbines	Hoen, B.D., Diffendorfer, J.E., Rand, J.T., Kramer, L.A., Garrity, C.P., and Hunt, H.E., 2018, United States Wind Turbine Database v7.2 (November 20, 2024): U.S. Geological Survey, American Clean Power Association, and Lawrence Berkeley National Laboratory data release, https://doi.org/10.5066/F7TX3DN0 .
Solar Farms	Fujita, K.S., Ancona, Z.H., Kramer, L.A., Straka, M., Gautreau, T.E., Garrity, C.P., Robson, D., Diffendorfer, J.E., and Hoen, B., 2023, United States Large-Scale Solar Photovoltaic Database (v2.0, August, 2024): U.S. Geological Survey and Lawrence Berkeley National Laboratory data release, https://doi.org/10.5066/P9IA3TUS .
Military Installations, Military Training Routes, and Military Special Use Airspace	U.S. Department of Defense



Texas Land Trends

For over two decades, the *Texas Land Trends* program has informed the public about the status and trends of our state's farms, ranches, and forests, collectively known as working lands. Research and extension reports and geospatial tools from this effort provide critically important data for policy makers, conservation organizations, local, state and federal agencies, and residents to visualize the changing working land base in Texas, and to provide valuable information that describe rural land concerns. Such information serves to support data-driven decision-making to conserve and better steward these important rural working landscapes.

CONTACT US

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*Thank you for celebrating 25 years
of Texas Land Trends with us.*