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Texas Rural Land Prices, 1989

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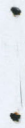
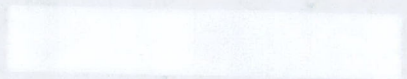
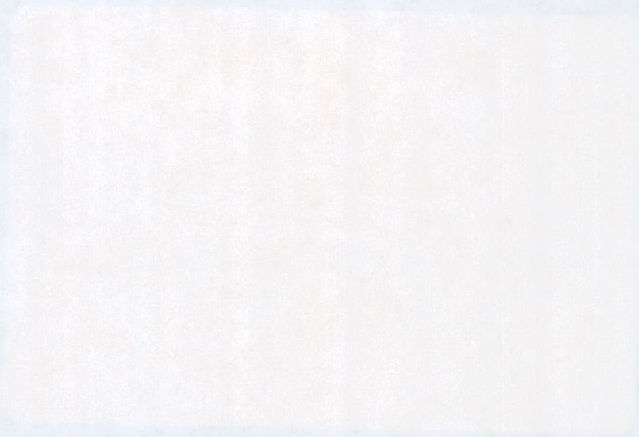
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Summary

This report analyzes 3,737 Texas rural land sales in 1989 to examine land price patterns. The study examines regional developments within the economic context.

- State-wide median price declines ended in 1989 as evidenced by the statistically nonsignificant 2 percent decline. The 1989 median of \$650 per acre equalled 1979-80 nominal prices.
- After adjusting for inflation, the real state-wide median price per acre of \$171 approximated the 1966 median land price.
- Prices improved in many farming areas, including much of the Texas High Plains.
- Prices in the Dallas-Houston corridor halted their decline.
- Rangeland prices generally continued to fall.
- Political and economic changes clouded prospects for a resurgence in Texas rural land prices.
- State-wide Texas rural land prices in 1989 settled at 62 percent of their 1985 peak in nominal terms. Regionally, some prices registered at less than 50 percent of their peak median nominal prices.

This analysis presents general trends in Texas land markets. The data are highly aggregated and do not represent land prices or values of any particular farm, ranch or tract. Efforts have been made to collect valid sales data within physical and financial limits. This report is made possible through the cooperation of knowledgeable individuals throughout Texas who choose to remain anonymous. The information provides a general guide to land market developments.

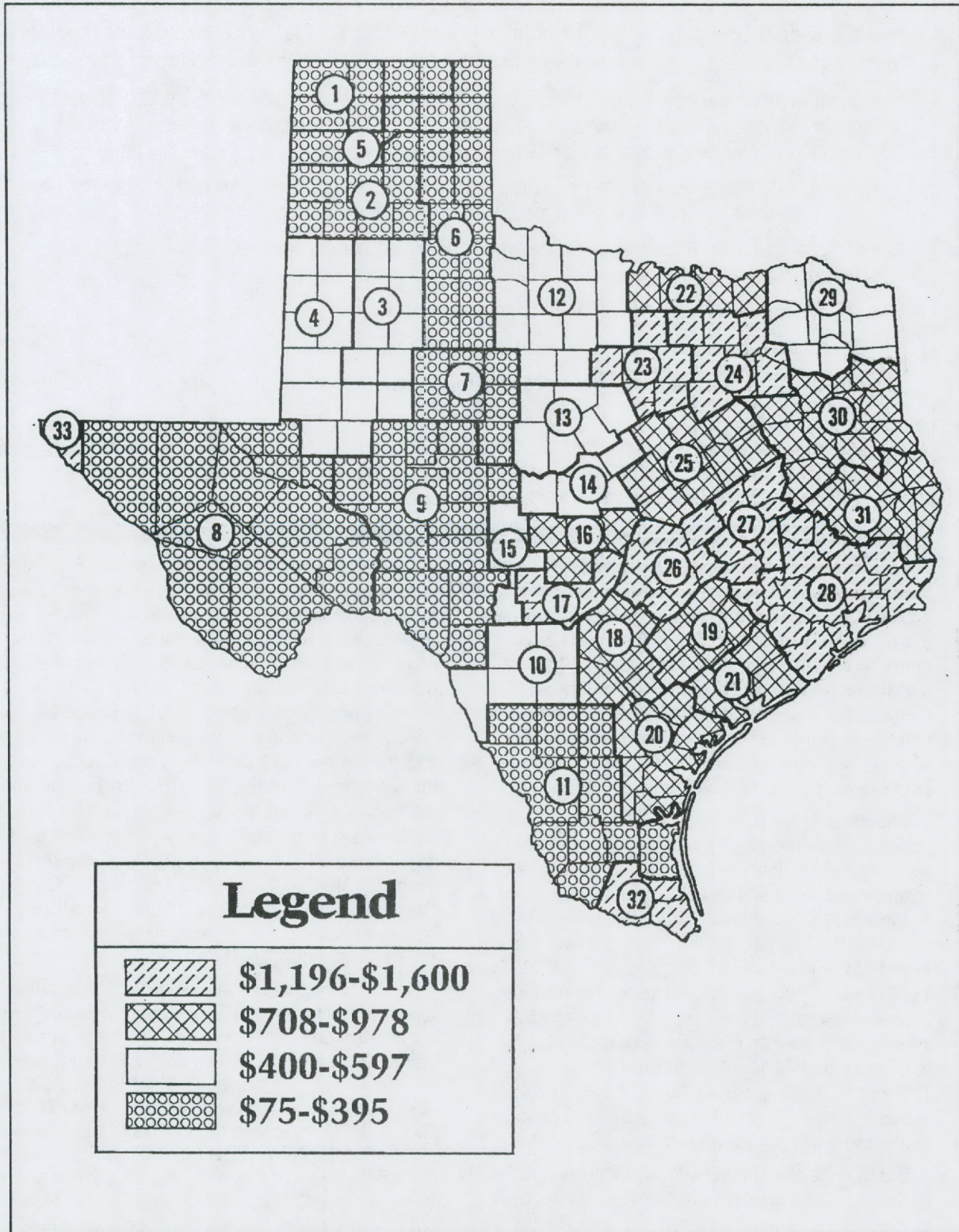
The geographic pattern of 1989 Texas rural land prices reflects the diversity of land uses across the state. Relatively low price levels prevailed in the region reaching east from the Trans-Pecos (area 8 in Figure 1) to the North Central Plains (12) and from the Panhandle—North (1) to the Rio Grande Plains (11) on the south (see Figure 1 and Table 1). Area-wide median prices ranged from \$75 per acre in the Trans-Pecos rangeland area to \$597 per acre in the Edwards Plateau—South (10) land market area (LMA). Most of the Panhandle (areas 1, 2 and 5), Rolling Plains (areas 6 and 7) and Edwards Plateau—West (9) registered median prices below the \$400-per-acre mark.

Bidding for the rich farmlands of the South Plains (3) and Permian—West (4) propelled median prices to more than \$400 per acre. These are the highest priced areas in the Panhandle. This price distribution follows the relative agricultural capabilities of the land in these regions.

The eastern edge of the lower-priced region reflects the presence of buyers with nonagricultural motives. For these buyers, land represents an investment or a recreational retreat. Land in these areas has unique characteristics or is found closer to the populous eastern third of Texas, causing median prices to rise above levels justified by agricultural potential alone. For example, native rangeland makes up more than 70 percent of the corridor stretching from the Red River to Lampasas and Junction (Land Market Areas 12, 13 14 and 15; see Appendix A). However, the median price ranges from \$400 to \$545 per acre. These prices are nearly double the median price in the Canadian Breaks (5) and Rolling Plains—North (6), even though rangeland composes a similar proportion of these latter areas.

In contrast, the highest priced land, exceeding \$1,196 per acre, primarily lies near cities or in areas with unique characteristics. In North Texas, the Dallas (24) and Fort Worth (23) LMAs register the highest median prices. In Central Texas, a band of high median prices stretches from Houston (28) to the Brazos area (27) through the Blacklands—South (26) to Kerrville (17) in the west. The eastern end of this band benefits directly from the presence of many urban buyers in the Houston and Bryan-College Station metropolitan statistical areas (MSAs). Austin and surrounding urban communities contribute to high prices in the Blacklands—South, while San Antonio, Austin, Houston

Figure 1. Median Price per Acre, 1989



Note: See Appendix B for list of counties in each area
 Source: Real Estate Center at Texas A&M University

**Table 1. Distribution of Nominal Prices per Acre
for Texas Rural Land, 1989**

Land Market Area	Number of Sales	Price per Acre		
		Lower Quartile*	Median	Upper Quartile**
1 Panhandle—North	76	\$ 175	\$ 300	\$ 428
2 Panhandle—Central	175	225	318	502
3 South Plains	170	325	450	550
4 Permian—West	167	275	425	550
5 Canadian Breaks	***	145	218	287
6 Rolling Plains—North	119	145	207	294
7 Rolling Plains—Central	124	316	378	540
8 Trans-Pecos	***	58	75	90
9 Edwards Plateau—West	107	213	281	425
10 Edwards Plateau—South	132	452	597	838
11 Rio Grande Plains	84	345	394	500
12 North Central Plains	194	325	400	500
13 Crosstimbers	128	350	428	570
14 Hill Country—North	126	430	541	700
15 Hill Country—West	47	401	545	705
16 Highland Lakes	64	746	943	1,219
17 Hill Country—South	***	1,500	1,835	2,122
18 San Antonio	83	600	900	1,500
19 Coastal Prairie—North	198	750	978	1,350
20 Coastal Prairie—South	113	550	761	969
21 Coastal Prairie—Middle	103	630	800	1,010
22 Texoma	120	504	700	977
23 Fort Worth Prairie	70	855	1,300	2,000
24 Dallas Prairie	134	824	1,225	1,987
25 Blacklands—North	214	642	850	1,064
26 Blacklands—South	157	820	1,200	1,700
27 Brazos	192	900	1,196	1,585
28 Houston	151	1,000	1,467	2,200
29 Northeast	208	400	516	813
30 Piney Woods—North	141	700	874	1,117
31 Piney Woods—South	***	617	803	1,229
32 Lower Rio Grande Valley	56	959	1,250	1,663
33 El Paso	***	2,609	4,109	7,500
State	3,737	\$ 400	\$ 650	\$1,003

*25 percent of the sales had prices equal to or less than this price

**75 percent of the sales had prices equal to or less than this price

***Fewer than 30 sales reported

Source: Real Estate Center at Texas A&M University

and other urban economies propel the Kerrville market to the west. The remaining high priced land markets occur in El Paso (33) and the Lower Rio Grande Valley (32). Extensive, sparsely populated lands separate both of these regions from the populous counties in East Texas. Both areas have

dense, growing populations. Further, competition for the rich farmland in both El Paso and the Lower Rio Grande Valley adds to the demand for this rural land. These factors translate into relatively high prices.

Land prices between the lowest and highest levels (\$708 to \$978 per acre) surround the high priced areas of central and east Texas. Land values in this tier mark the transition from urban-influenced markets to those dominated by agriculture. For example, demand for space and recreational amenities from Dallas and Fort Worth has moved the Texoma area into this moderately high priced range. The median rural land price in the Blacklands—North (25) market area, wedged between the Houston-Kerrville corridor and the Dallas-Fort Worth area, also falls into this class. The Highland Lakes (16) area, with many scenic and recreational attractions, falls naturally into this price category. The remainder of the transitional tier extends from San Antonio (18) through the Coastal Prairie region (19, 20 and 21).

This pattern of Texas rural land prices demonstrates that buyers have focused beyond agricultural potential. Population, location and special characteristics have produced an array of prices that tend to squeeze farmers and ranchers out of the market. To gain control of land for sale, producers must surpass bids made by urban buyers. Fewer farmers and ranchers buy and urban professionals dominate land markets. The normal Texas land market of the 1970s and early 1980s reflected this competition.

Changes in Texas Rural Land Markets

The rural land market has changed in the past decade as agricultural and urban recessions influenced plans to buy or sell land. Declines emerged at different times in the various areas, with emerging weakness relating directly to market composition. For example, prices peaked as early as 1981 in markets where farmers and ranchers were the primary buyers (the lowest priced category in Figure 1). The market then sustained losses for several years before other markets were affected. This early price break coincided with disastrous declines in agricultural incomes that leveled land prices throughout the Midwest (see Table 2). Prices in farmland areas (1, 2, 3 and 4) have increased since 1987, when farmers began to prosper once again (see Gilliland, C.E. and W.R. Garrett, *Texas Rural Land Prices, 1987* [College Station, Texas: Real Estate Center at Texas A&M University, 1988], technical report 661).

While farmland markets declined, prices in much of the remainder of Texas continued to rise. A rising state-wide median price per acre from 1966 through 1985 reflected this continuing prosperity (see Figures 2 and 3 and Table 3). Bolstered by

rising incomes, urban buyers of rural land could afford to ignore poor profits in agriculture as they bid prices ever higher. However, the recession following the 1986 oil price crash and simultaneous passage of income tax laws unfavorable to real estate induced the first absolute declines in the state-wide median price per acre since this research project was begun. The median began a precipitous decline (17 percent in 1986 followed by 20 percent in 1987) and buyers abandoned the rural land market. "For sale" signs dotted the countryside. The decline in the state-wide median continued in 1987 despite improved conditions in agricultural areas. In post-1985 markets, only farmers and ranchers continued to show much interest in rural land. Urban investors and consumers no longer competed with the rural community in the marketplace.

All of this combined to deflate the speculative bubble in land prices across the state (see Table 2). Median prices retreated to between 32 and 80 percent of their previous highs, with the state-wide median falling to 62 percent of its 1980s peak. Even after prices firmed in agricultural areas, prices in the remainder of Texas languished. However, the rate of decline slackened, and between 1987 and 1988 the median dropped a mere 6 percent. Statistical testing indicated that the 6 percent decline was based primarily in nonfarming areas and hinted that the overall decline had halted. The modest 2 percent decline registered between 1988 and 1989 confirms this conjecture (see Table 4). Moreover, the nonsignificant result in the statistical Mann-Whitney test reveals that the 2 percent drop could have resulted from chance rather than real market trends. In addition, testing in each land market area reveals few statistically verifiable trends. (See Table 4 for tests on LMA trends.) Thus, for the second year, transactions statewide have yielded no evidence of further declines in land prices, which suggests that markets have indeed reached a plateau.

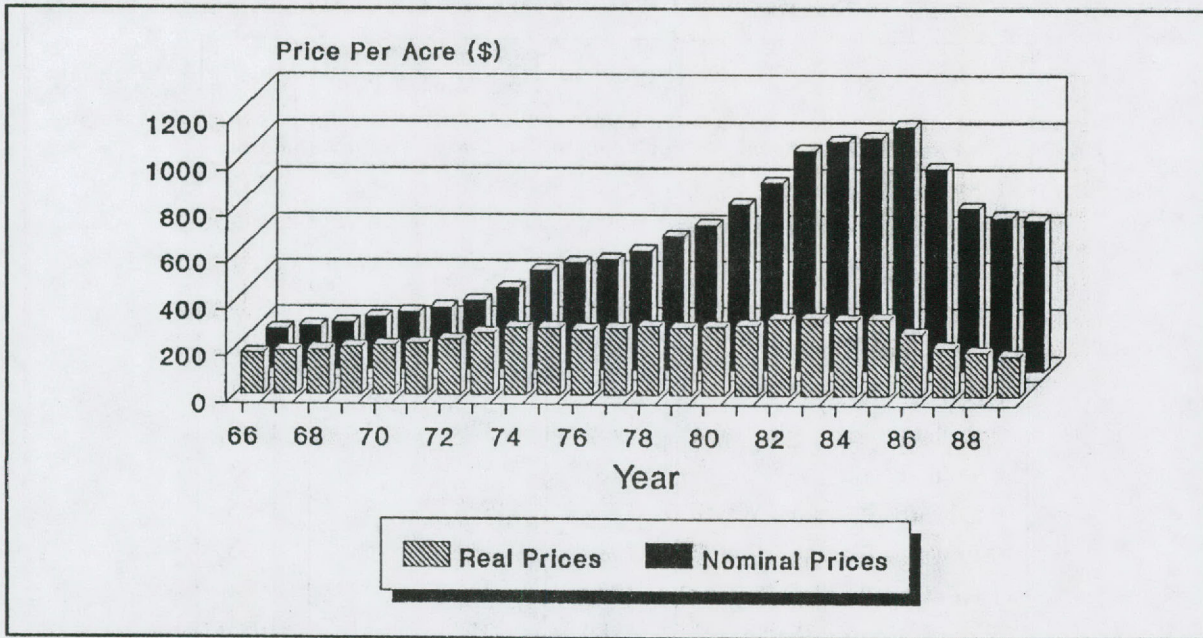
Following the 1980s distress, market participants have focused more squarely on a property's attributes than on financial or tax considerations. Looking for current property returns, the buyer knows and emphasizes quality. Buyers recognize that they have power in slack markets and negotiate effectively to minimize acquisition costs. Often, neighbors are the only bidders for the land. When tracts receive a bid from only one neighbor, the seller must accept the offered terms or not sell. In this kind of market, each sale reflects the unique characteristics of the buyer and seller. Extrapolating from specific sales to market-wide trends becomes difficult because prices indicate investment value rather than market value.

**Table 2. Cumulative Percentage Reductions in Texas
Rural Land Median Price per Acre, 1980s**

Land Market Area	Year of Trough	Percentage Change from Market Peak		Year of Peak
		To Low	To 1989	
1 Panhandle—North	1987	-57	-52	1981
2 Panhandle—Central	1987	-47	-36	1982
3 South Plains	1987	-54	-44	1982
4 Permian—West	1987	-55	-23	1983
5 Canadian Breaks	1988	-46	-27	1982
6 Rolling Plains—North	1987	-42	-40	1984
7 Rolling Plains—Central	1989	-37	-37	1982
8 Trans-Pecos	1987	-68	-65	1983
9 Edwards Plateau—West	1989	-52	-52	1985
10 Edwards Plateau—South	1989	-53	-53	1985
11 Rio Grande Plains	1989	-42	-42	1984
12 North Central Plains	1989	-31	-31	1985
13 Crosstimbers	1989	-40	-40	1985
14 Hill Country—North	1989	-40	-40	1985
15 Hill Country—West	1988	-43	-34	1986
16 Highland Lakes	1989	-53	-53	1985
17 Hill Country—South	1987	-37	-32	1985
18 San Antonio	1988	-45	-43	1984
19 Coastal Prairie—North	1989	-39	-39	1984
20 Coastal Prairie—South	1989	-41	-41	1984
21 Coastal Prairie—Middle	1988	-41	-38	1984
22 Texoma	1989	-30	-30	1985
23 Fort Worth Prairie	1989	-24	-24	1986
24 Dallas Prairie	1988	-34	-32	1986
25 Blacklands—North	1988	-20	-15	1986
26 Blacklands—South	1989	-52	-52	1985
27 Brazos	1988	-36	-32	1982
28 Houston	1988	-49	-48	1984
29 Northeast	1989	-42	-42	1985
30 Piney Woods—North	1989	-28	-28	1984
31 Piney Woods—South	1988	-52	-50	1984
32 Lower Rio Grande Valley	1988	-57	-56	1981
33 El Paso	1988	-52	-5	1984
State	1989	-38	-38	1985

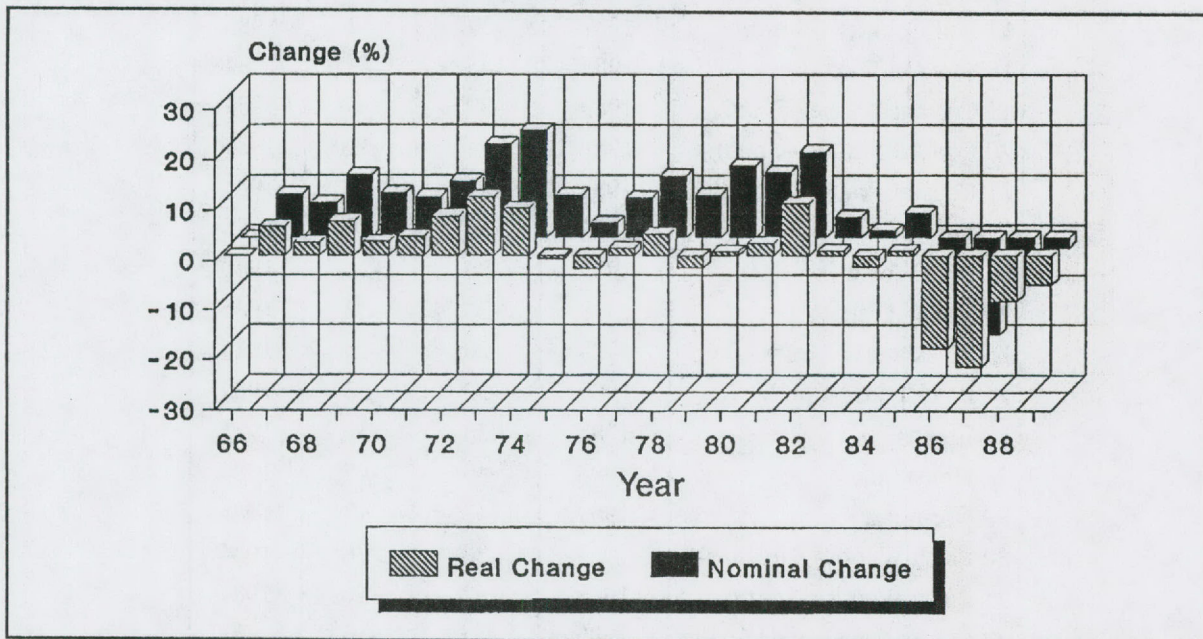
Source: Real Estate Center at Texas A&M University

Figure 2. Nominal and Real Median Price per Acre for Texas Rural Land, 1966-89



Source: Real Estate Center at Texas A&M University

Figure 3. Nominal and Real Year-to-Year Change in Median Price for Texas Rural Land, 1966-89



Source: Real Estate Center at Texas A&M University

Table 3. Nominal and Real Changes in Median Price of Texas Rural Land, 1966-89

Year	Median Tract Size In Acres	Nominal			Real		
		Median Price per Acre	Year-to-Year Percentage Change	Annual Compound Pretax Growth Rate from 1966	(Deflated) Median Price per Acre*	Year-to-Year Percentage Change	Annual Compound Pretax Growth Rate from 1966
1966	120	\$ 172	****	****	\$172	****	****
1967	110	187	9	9	182	6	6
1968	101	200	7	8	187	3	4
1969	100	225	13	9	199	6	5
1970	107	245	9	9	205	3	4
1971	110	265	8	9	212	3	4
1972	120	295	11	9	228	8	5
1973	153	350	19	11	256	12	6
1974	150	425	21	12	280	9	6
1975	126	461	8	12	278	-1	5
1976	128	475	3	11	271	-3	5
1977	121	513	8	10	275	1	4
1978	126	576	12	11	287	4	4
1979	132	625	9	10	279	-3	4
1980	138	715	14	11	282	1	4
1981	124	808	13	11	289	2	4
1982	105	946	17	11	318	10	4
1983	113	985	4	11	321	1	4
1984	125	1,000	2	10	314	-2	3
1985	118	1,050	5	10	317	1	3
1986	113	870	-17	8	258	-19	2
1987	130	700	-20	7	200	-22	1
1988	139	661	-6	6	181	-10	0
1989	141	650	-2	6	171	-6	0

*In 1966 dollars

Source: Real Estate Center at Texas A&M University

In rangeland markets, the ranks of potential buyers thin dramatically as the total price increases. Thus, there are relatively numerous buyers for smaller properties but few for large ranches where sales are infrequent. As this trend continues, markets will reflect pressure to subdivide existing larger tracts. The focus of market activity has returned to local factors. Therefore, understanding market movements requires an investigation of local market patterns.

Prices by Land Market Area

Marked price increases apply in the farmland areas where low prices magnify percentage changes (see Table 4 and Figure 4). Areas with little change are found throughout the state and especially in East Texas. Pronounced declines are

concentrated along the Red River and in ranching areas that struggled with extended drought in 1989.

The El Paso area (33) registered an enormous median price increase because of changes in market composition (see Figure 4). When few properties sell in an area, one or two extremely high or low prices can cause the median to move dramatically. This kind of change does not indicate market trends. The El Paso change does not reflect a market-wide trend but rather an insufficient number of sales to reveal the area's land prices adequately (see Figure 5).

Similarly, the indicated increase in the Canadian Breaks (5) was not statistically significant. Instead, the apparent market trend stems from a number of high sales prices concentrated in a few locations within the region (see Table 4). The remainder of

Table 4. Trends in Texas Rural Land Markets, 1988-89

Land Market Area	Median Price (\$/ac)		Trend Analysis			Volume of Sales Analysis			
	1988	1989	Change 1988-89			Number of Sales		Change 1988-89	
			(\$/ac)	(%)	Test	1988	1989	Number	(%)
1	\$ 350	\$ 300	-50	-14		76	76	0	0
2	325	318	-7	-2		172	175	3	2
3	400	450	50	13		167	170	3	2
4	350	425	75	21	**	196	167	-29	-15
5	161	218	57	35		***	***	***	***
6	214	207	-7	-3		121	119	-2	-2
7	400	378	-23	-6		125	124	-1	-1
8	80	75	-5	-6		***	***	***	***
9	300	281	19	-6	*	104	107	3	3
10	676	597	-79	-12	**	116	132	16	14
11	432	394	-38	-9		78	84	6	8
12	444	400	-44	-10	*	168	194	26	15
13	476	428	-48	-10		93	128	35	38
14	582	540	-42	-7		133	126	-7	-5
15	471	545	74	16		45	47	2	4
16	998	943	-55	-6		64	64	0	0
17	1,934	1,835	-99	-5		***	***	***	***
18	868	903	35	4		91	83	-8	-9
19	1,024	978	-46	-4	*	179	198	19	11
20	800	761	-39	-5		86	113	27	31
21	757	800	43	6		110	103	-7	-6
22	782	700	-82	-11	*	51	120	-31	-21
23	1,550	1,300	-250	-16		76	70	-6	-8
24	1,200	1,225	25	2		140	134	-6	-4
25	800	850	50	6		249	214	-35	-14
26	1,200	1,200	0	0		165	157	-8	-5
27	1,125	1,196	71	6		165	192	27	16
28	1,446	1,467	21	1		132	151	19	14
29	587	516	-71	-12		219	208	-11	-5
30	924	874	-50	-5		109	141	32	29
31	767	803	36	5		***	***	***	***
32	1,207	1,250	43	4		84	56	-28	-33
33	2,508	4,109	1,601	64		***	***	***	***
State	\$ 661	\$ 650	-11	-2		3,702	3,737	35	1

Note: Result of a Mann-Whitney test of the indicated changes

*Indicates significance at the 95 percent level

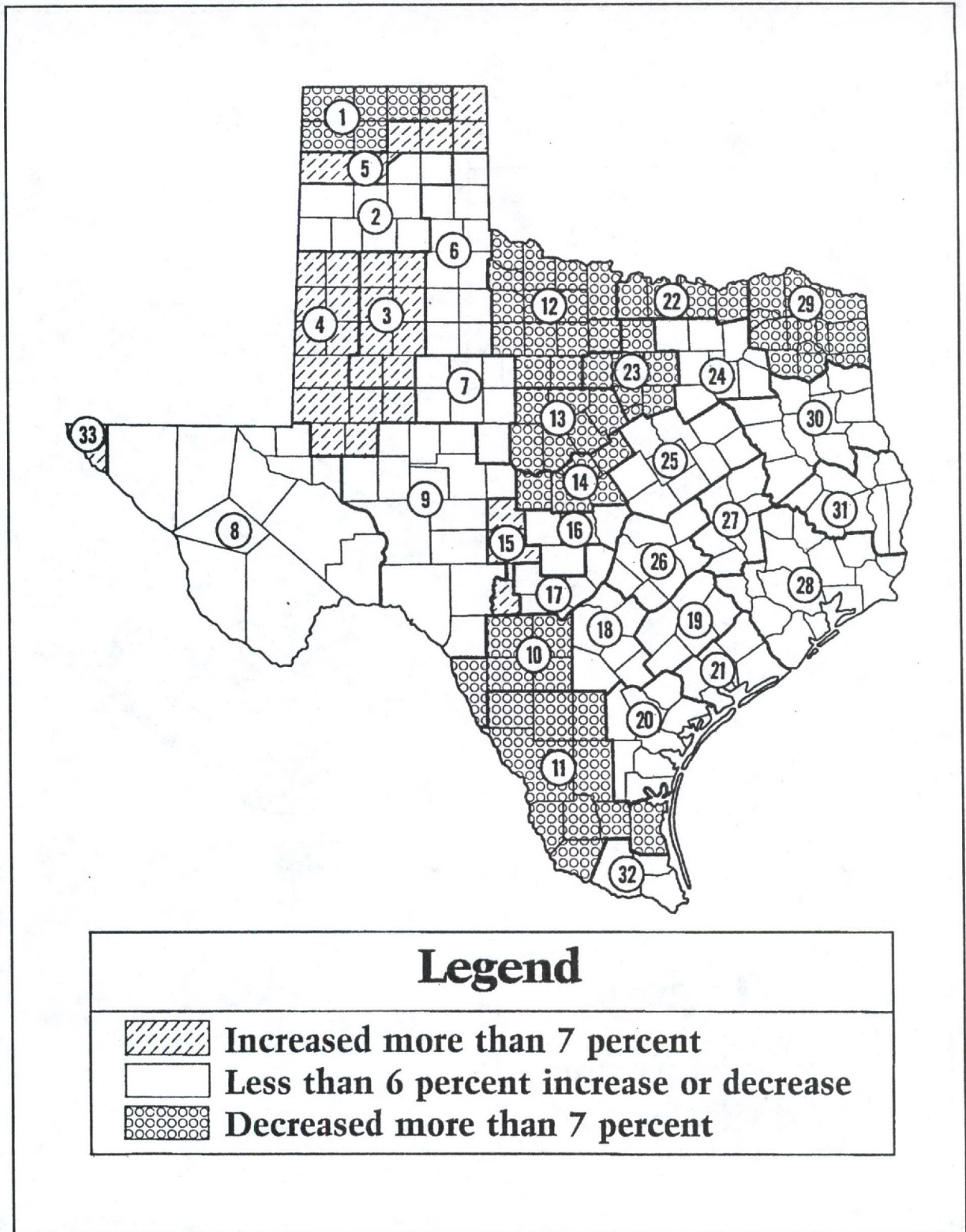
**Indicates significance at the 99 percent level

***Fewer than 30 sales reported

All others showed no statistically verifiable trend.

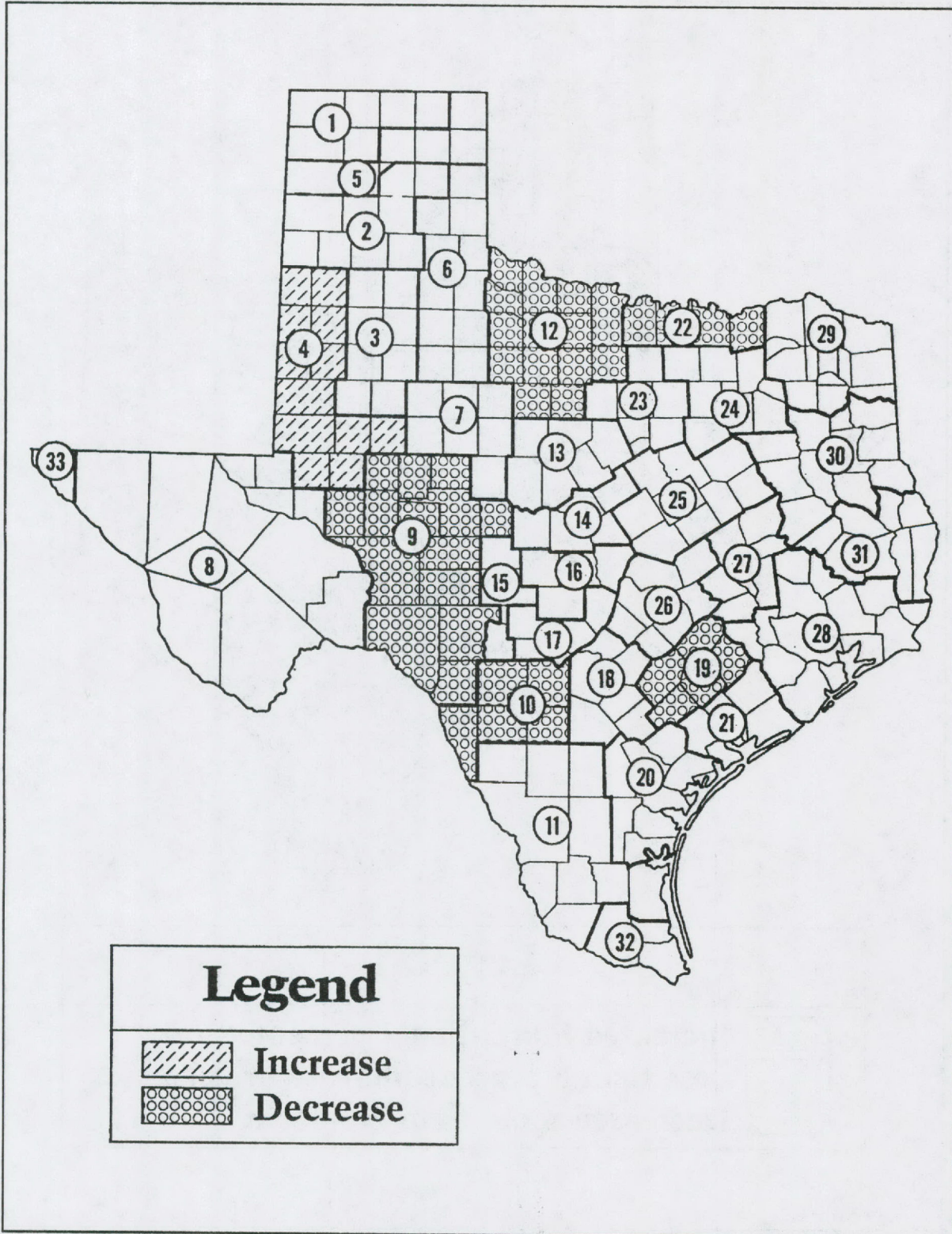
Source: Real Estate Center at Texas A&M University

Figure 4. Percentage Change in Median Price per Acre, 1988-89



Source: Real Estate Center at Texas A&M University

Figure 5. Statistically Significant Changes in Median Price per Acre, 1988-89



Source: Real Estate Center at Texas A&M University

the market area did not register higher prices. In contrast, the statistically significant 21 percent increase posted in the Permian—West (4) market originated from strong demand for irrigated farmland throughout the area. In the South Plains (3) area, the median price rose 13 percent from 1988 to 1989. However, the increase occurred primarily in the western half of this area where crops were profitable in 1988 and 1989. In the eastern portion of this area, crops have fallen short and land prices did not increase. Thus, statistical testing of this strong increase indicated a nonsignificant result.

Most of the state experienced price decreases or increases of less than 6 percent from 1988 to 1989 (see Table 4). Led by demand from improving urban economies, the Coastal Prairie—Middle (21), Blacklands—North (25) and Brazos (27) areas moved up 6 percent from 1988 to 1989. However, the increase was traceable to areas that traditionally attract urban buyers. Reflecting a stronger demand for timberland, the Piney Woods—South (31) area registered a 5 percent increase in median price. However, prices did not improve throughout this area.

The San Antonio (18), Lower Rio Grande Valley (32), Dallas Prairie (24) and Houston (28) land market areas recorded 1989 median prices that changed little from 1988 levels. In addition to these areas, the Blacklands—South (26) area posted the same median price in 1988 and 1989. Thus, despite some scattered increases, prices in these areas indicate emerging stability. All of these markets surround major population centers and enclose expanses of farmland that hold little appeal to the recreational buyer. In addition, many of these cities have suffered recent economic reverses that retarded growth and rendered them unattractive to investors. With demand thus weakened, markets are lackluster. Nonetheless, prices in these markets appear to have reached bottom.

Median prices slipped slightly in the Panhandle—Central (2) and Rolling Plains—North (6). Although the decline appears ominous, statistical testing reveals these changes as nonsignificant. In fact, the changes resulted more from unusual market conditions in the past two years than from a general movement in price. For example, from 1987 to 1988 the median price in the Panhandle—Central (2) jumped 23 percent because a greater than normal number of irrigated properties sold in 1988. As the area's property mix returned to normal in 1989, the median sagged slightly. Similarly, the Rolling Plains—North (6) median price also increased in 1988, only to fall narrowly in 1989. Thus, 1989 land markets reveal little proven price movement in these areas.

The Coastal Prairie—North (19) land market area declined modestly on a broad basis. Although the median price slipped slightly, from \$1,024 to \$978 per acre, the Mann-Whitney test indicates a region-wide drop. Market observers attribute the weakness primarily to a lack of financing. Lenders have focused on property cash flow, thus reducing effective demand in this and similar areas. Predominantly nonagricultural buyers fail to find willing lenders at current prices. Furthermore, the continuing drought also has contributed to weakness as potential buyers react unfavorably to ravaged landscapes.

The Coastal Prairie—South (20), Hill Country—South (17), Piney Woods—North (30), Highland Lakes (16), Rolling Plains—Central (7) and Trans-Pecos (8) land market areas all registered declines that were not statistically significant. These areas contain regions where prices fell in selected areas but no identifiable region-wide trends emerged.

The Edwards Plateau—West (9) median price declined a statistically significant 6 percent. In 1989, drought strangled much of this area and reduced the pool of funds available to ranchers who typically buy land there. Coupled with the dearth of third-party financing, this distress weakened prices throughout the area.

Drought and financial woes combined to drive down land prices in parts of the Rio Grande Plains (11), Crosstimbers (13) and Hill Country—North (14). However, the trends did not strike all of these land market areas with the same force. The western portions of the areas showed price declines and the remainder exhibited no particular trend.

The North Central Plains (12) and Texoma (22) areas displayed market-wide significant declines. Land markets in this area remain lackluster, largely because of prolonged weakness in local economies. Although weak prices prevailed throughout the region, declines hit the western portion of the North Central Plains market especially hard.

The Edwards Plateau—South (10) area recorded a significant median price decline in response to a large supply of properties for sale at distressed prices. The continuing drought throughout this region also contributed to the area-wide decline.

The median price fell in the Northeast (29) land market area as lenders disposed of acquired properties. However, the selling occurred in specific areas as evidenced by the nonsignificant result.

The median land price in the Panhandle—North (1) dropped 14 percent from 1988 to 1989. However, the decline resulted from a shift in the kinds

of land selling rather than from a real trend in prices. In 1988, irrigated properties constituted a large portion of the land sold in this area. Therefore, the 1988 median price rose dramatically above the 1987 price, only to fall back when the market returned to a more typical mix of properties in 1989. However, the 1989 median is more than 12 percent higher than the 1987 median price for this area.

The Fort Worth (23) land market area recorded a 16 percent drop under circumstances that parallel those in the Panhandle—North (1). However, speculative activity associated with the Northeast Tarrant County Regional Airport rather than with irrigated land apparently fueled a 1988 increase in median price. This rise occurred while the remainder of North Texas sustained declines. Thus, the pronounced downturn from 1988 to 1989 reflects a more modest 10 percent slide from 1987 price levels. On balance, this area suffered the same weakness plaguing the entire northeast region of Texas.

Sales Volume

Analysis of sales volume changes can provide insights into local market conditions. Contrasting 1989 volumes with 1988 volumes reveals four distinct market changes across the state (see Figure 6). First, in some areas both volume and prices increased, hinting that markets were springing to life. Second, in other areas volume increased while prices declined. These markets indicate that owners decided to sell despite weaker prices. Third, in some regions median prices climbed while sales volume dropped. These circumstances often reflect markets where good quality land or land with specialized capabilities has sold well while the general land market has seen either reluctant sellers or buyers. Fourth, in some markets both volume and price declined, reflecting hesitancy among buyers and sellers.

The number of transactions in land markets in the Brazos (27), Houston (28) and Piney Woods—North (30) areas increased in 1989 compared to 1988. A general strengthening of prices accompanied this boost in sales volume, indicating that land values in these areas have reached bottom. Contrasting these markets, the Edwards Plateau—South (10), Rio Grande Plains (11), Coastal Prairie—North (19) and Coastal Prairie—South (20) areas in South Texas and the North Central Plains (12) and Crosstimbers (13) areas of North Texas all had sales volume increases coincident with weaker prices. This combination suggests that landowners who avoided selling while hoping for market strengthening finally decided to liquidate. As increased sales activity depletes the inventory,

prices in these areas also will stabilize. *Those wanting to purchase in these regions may be well advised to begin shopping now.*

Prices in the Permian—West (4), San Antonio (18), Coastal Prairie—Middle (21), Blacklands—North (25) and Lower Rio Grande Valley (32) land market areas increased while sales volume declined. In the Permian—West area, landowner reluctance to sell may have induced the sales volume decline. However, in the other areas various negative factors conspired to reduce sales activity. For example, in the Lower Rio Grande Valley, lingering effects of the freeze have dampened buyer enthusiasm. The San Antonio area doldrums probably reflect weakness in the regional economy in 1989. Where the slowdown in volume resulted from negative factors, prices may weaken to balance supply with demand.

In the Texoma (22) and Fort Worth Prairie (23) areas, both volume and prices declined. Buyers in the Texoma area have driven hard bargains while sellers have avoided selling at current prices. The volume decline in the Fort Worth—Prairie area reflects the return to a more orderly market from the active market in 1988.

The remaining areas either showed no marked change in sale volume or the number of transactions was too small to report.

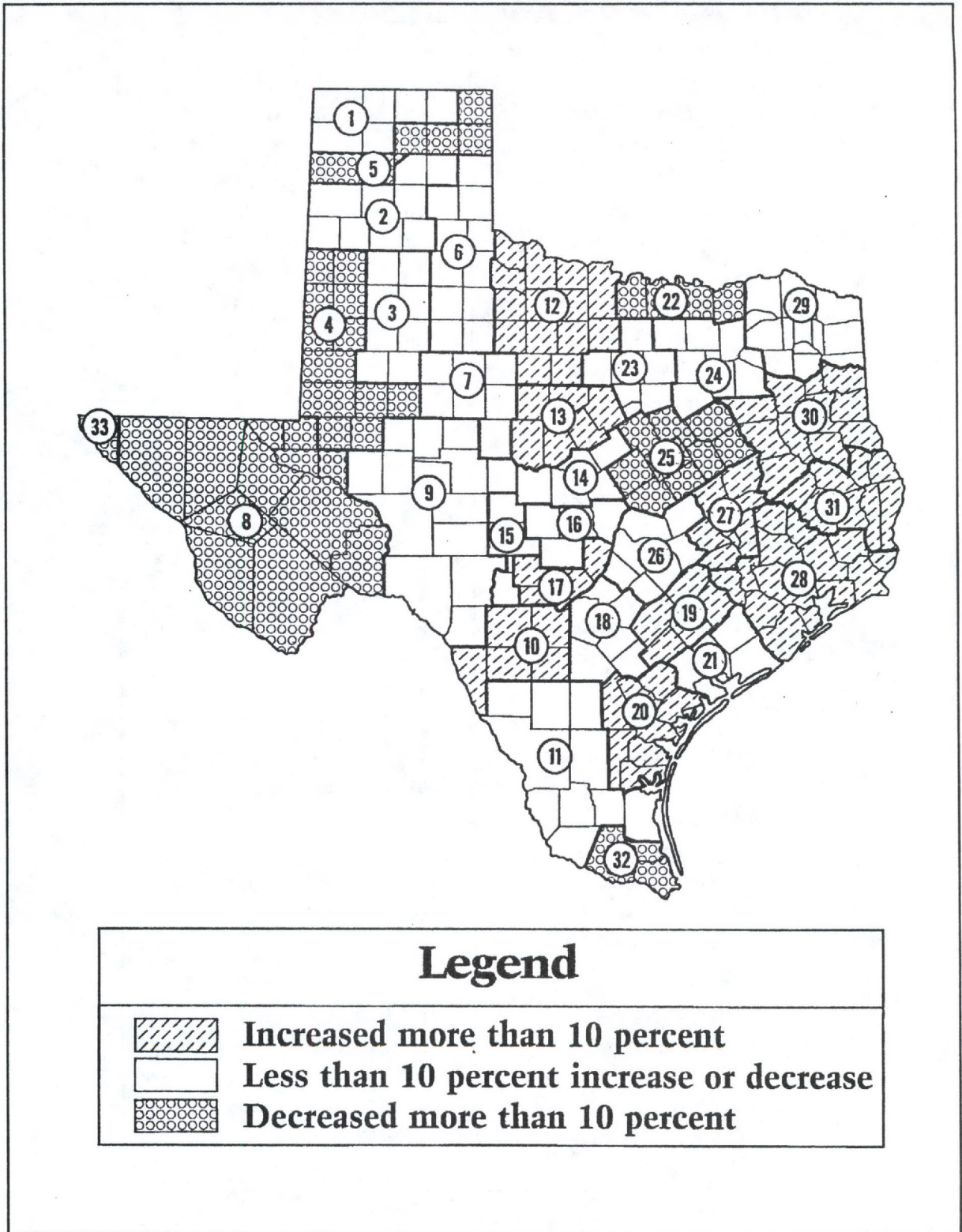
Confidence Intervals on 1989 Land Prices

The median price indicates typical market conditions for all lands sold. It serves as an estimate of the price an owner could expect to receive for ordinary land in the area. However, a particular median may not reflect actual price conditions. Statistical techniques indicate the precision with which a median estimates the expected land price in an area. The measure of precision, called a *confidence interval*, consists of a range of prices that contains the typical price with a stated level of probability. Thus, a 95 percent confidence interval means that odds are 19 to one that the median price for all land is within the interval.

For example, in the South Plains (3) land market the estimated median was \$450 per acre in 1989 (see Table 5). However, the median for all land in the area might range as low as \$400 per acre but no higher than \$450 per acre. Contrasting with this relatively tight interval, prices in the El Paso area with few sales range from \$2,000 to \$10,000 per acre with a median of \$4,109 per acre.

Some land market areas had statistically significant shifts in price from 1988 to 1989 (see Table 6). The percentages shown relate the confidence interval to the 1988 median price per acre. For

Figure 6. Changes in Volume of Sales, 1988-89



Source: Real Estate Center at Texas A&M University

Table 5. Confidence Intervals of 95 Percent for Median Price per Acre, Texas Rural Land, 1989

Land Market Area	Number of Sales	Price per Acre		
		Lower Limit	Median	Upper Limit
1 Panhandle—North	76	\$ 250	\$ 300	\$ 375
2 Panhandle—Central	175	275	318	366
3 South Plains	170	400	450	450
4 Permian—West	167	359	425	450
5 Canadian Breaks	***	145	218	275
6 Rolling Plains—North	119	187	207	246
7 Rolling Plains—Central	124	350	378	410
8 Trans-Pecos	***	53	75	84
9 Edwards Plateau—West	107	250	281	295
10 Edwards Plateau—South	132	547	597	689
11 Rio Grande Plains	84	375	394	438
12 North Central Plains	194	390	400	430
13 Crosstimbers	128	415	428	476
14 Hill Country—North	126	500	541	579
15 Hill Country—West	47	450	545	600
16 Highland Lakes	64	850	943	1,000
17 Hill Country—South	***	1,000	1,835	2,300
18 San Antonio	83	763	900	1,151
19 Coastal Prairie—North	198	900	978	1,057
20 Coastal Prairie—South	113	700	761	800
21 Coastal Prairie—Middle	103	714	800	900
22 Texoma	120	621	700	770
23 Fort Worth Prairie	70	1,025	1,300	1,589
24 Dallas Prairie	134	1,000	1,225	1,375
25 Blacklands—North	214	800	850	900
26 Blacklands—South	157	1,002	1,200	1,366
27 Brazos	192	1,040	1,196	1,255
28 Houston	151	1,344	1,467	1,650
29 Northeast	208	496	516	603
30 Piney Woods—North	141	800	874	973
31 Piney Woods—South	***	633	803	1,176
32 Lower Rio Grande Valley	56	1,001	1,250	1,500
33 El Paso	***	2,000	4,109	10,000
State	3,737	\$ 623	\$ 650	\$ 662

***Fewer than 30 sales reported

Source: Real Estate Center at Texas A&M University

Table 6. Limits of the 95 Percent Confidence Interval on Price per Acre as a Percentage of 1988 Median Price

Land Market Area	Percentage Change		
	Lower Limit	Median	Upper Limit
4 Permian—West	3	21	29
9 Edwards Plateau—West	-17	-6	-2
10 Edwards Plateau—South	-19	-12	2
12 North Central Plains	-12	-10	-3
19 Coastal Prairie—North	-12	-4	3
22 Texoma	-21	-11	-2

Source: Real Estate Center at Texas A&M University

example, for the Permian—West land market area, the estimate of percentage change in price varied from as little as 3 percent to as much as 29 percent. Markets worsened in the remaining areas with significant changes. *Thus, although state-wide statistical analysis shows little evidence of change, most areas with pronounced trends registered weaker prices.*

Tract Size

Tract size can influence price per acre. For example, price per acre normally falls as tract size increases. Thus, reported prices depend on the size of property in the transaction (see Tables 7, 8 and 9).

A statistically significant shift in tract size indicates that the mix of properties sold has changed from one year to the next. For those areas with statistically significant shifts in tract size, indicated price changes may reflect size changes as well as a general price trend.

The state-wide tract size has increased since 1986 (see Table 3). This expansion accompanying the decline in price implies that buyers now are purchasing more acreage than they did before prices fell. *Thus, buyers may be approaching the market with a total amount to invest and buying as much acreage as possible with that sum.*

Land Markets in 1989

The overall Texas land market firmed in 1989 with state-wide prices declining slightly. However, weak markets prevailed along the Red River border with Oklahoma, through Wichita Falls and south to the Laredo-Big Bend area. Many factors contributed to this lackluster performance. Sales of acquired properties reduced prices in some isolated areas. Drought and poor farming conditions reduced demand in other regions. *However, widespread lack of financing plagued markets throughout this distressed area, dampening effective demand.* Farming areas in the Texas High Plains experienced strong demand

and rising land prices. Stability returned to rural land markets in the rest of the state.

Conclusion and Outlook

Texas land market prices in 1990 should increasingly stabilize at levels substantially below the peak prices registered in the 1980s. Stocks of agricultural commodities have declined steadily during the past three years. That pattern will continue in the 1990s as the world consumes more than it produces. Declining stocks promise to support rising prices for future agricultural products. Crops were profitable in 1987 and 1988, adding to farmers' cash reserves. However, uncertainty stemming from federal governmental moves to alter agricultural policies may prompt caution among farmland buyers.

Horizontal drilling techniques have spurred an oil boom in some regions, and profit opportunities are emerging in natural gas production. Further, a modest recovery has begun in Houston, spreading some prosperity and inducing buying activity in some rural areas. These forces promise to positively affect land prices.

Further, events in Eastern Europe and the Middle East could affect values in two fundamental ways. First, by creating an atmosphere of uncertainty, events may induce investors to consider land as a low-risk addition to their portfolios. This would mark the return of investors to the land market. Second, oil price increases should encourage exploration and inject sizable income into local economies. Taken together, these factors point to widespread land price stability with the strong possibility of price increases.

Negative influences stem from continued drought, lack of financing and weak nonagricultural demand for less attractive types of land. The ominous but as yet unknown influence of sales by the Resolution Trust Corporation and other holders of foreclosed properties threatens to weaken

the market by increasing supplies of low-cost land. Finally, the threat of recession hangs over the U.S. economy. The latest expansion has persisted past historical expectations, causing many to doubt its ability to continue. Furthermore, the fragile nature of current economic activity and rising production costs traced to oil price increases in the wake of Middle East unrest compounds negative influences in the market.

Balancing positive and negative factors indicates that Texas rural land markets probably will remain steady or improve in farming areas in the long run. Demand in South Texas rangeland markets may strengthen as oil revenues prompt land buying. Additionally, improving urban economies likely will renew interest in recreational land, boosting the Hill Country. State-wide prices in 1990 should reveal little change from 1989.

Table 7. Acreage Distribution of Texas Rural Land Sales, 1989

Land Market Area	Number of Sales	Size in Acres		
		Lower Quartile*	Median	Upper Quartile**
1 Panhandle—North	76	316	471	647
2 Panhandle—Central	175	160	320	603
3 South Plains	170	160	178	320
4 Permian—West	167	160	189	354
5 Canadian Breaks	***	160	480	656
6 Rolling Plains—North	119	156	205	640
7 Rolling Plains—Central	124	89	154	254
8 Trans-Pecos	***	2,560	5,528	10,121
9 Edwards Plateau—West	107	214	452	1,395
10 Edwards Plateau—South	132	100	174	483
11 Rio Grande Plains	84	271	743	1,702
12 North Central Plains	194	84	160	320
13 Crosstimbers	128	104	165	321
14 Hill Country—North	126	122	186	317
15 Hill Country—West	47	108	235	700
16 Highland Lakes	64	100	156	262
17 Hill Country—South	***	99	155	200
18 San Antonio	83	44	99	207
19 Coastal Prairie—North	198	45	86	139
20 Coastal Prairie—South	113	98	152	321
21 Coastal Prairie—Middle	103	59	100	270
22 Texoma	120	40	80	130
23 Fort Worth Prairie	70	39	58	129
24 Dallas Prairie	134	45	74	110
25 Blacklands—North	214	53	96	174
26 Blacklands—South	157	45	82	138
27 Brazos	192	46	79	138
28 Houston	151	41	70	122
29 Northeast	208	51	94	182
30 Piney Woods—North	141	50	79	150
31 Piney Woods—South	***	45	55	94
32 Lower Rio Grande Valley	56	31	41	96
33 El Paso	***	33	79	127
State	3,737	69	141	310

*25 percent of the sales had prices equal to or less than this price

**75 percent of the sales had prices equal to or less than this price

***Fewer than 30 sales reported

Source: Real Estate Center at Texas A&M University

Table 8. Tract Size Changes in Texas Rural Land Sold, 1988-89

Land Market Area	Median Size Acres		Shifts in Size		
	1988	1989	Change 1988-89		
			Acres	Percent	Test
1 Panhandle—North	640	471	-169	-26	
2 Panhandle—Central	320	320	0	0	
3 South Plains	198	178	-20	-10	
4 Permian—West	177	189	12	7	
5 Canadian Breaks	320	480	160	50	
6 Rolling Plains—North	163	205	42	26	
7 Rolling Plains—Central	160	154	-6	-4	
8 Trans-Pecos	6,348	5,528	-820	-13	
9 Edwards Plateau—West	324	452	129	40	
10 Edwards Plateau—South	233	174	-59	-25	
11 Rio Grande Plains	575	743	167	29	
12 North Central Plains	160	160	0	0	
13 Crosstimbers	160	165	5	3	
14 Hill Country—North	174	186	13	7	
15 Hill Country—West	303	235	-68	-22	
16 Highland Lakes	147	156	10	7	
17 Hill Country—South	200	155	-45	-23	
18 San Antonio	100	99	-1	-1	
19 Coastal Prairie—North	60	86	26	43	**
20 Coastal Prairie—South	160	152	-9	-5	
21 Coastal Prairie—Middle	107	100	-7	-7	
22 Texoma	96	80	-16	-17	
23 Fort Worth Prairie	54	58	4	8	
24 Dallas Prairie	84	74	-9	-11	
25 Blacklands—North	93	96	3	3	
26 Blacklands—South	74	82	8	11	
27 Brazos	64	79	15	23	*
28 Houston	76	70	-6	-8	
29 Northeast	88	94	7	8	
30 Piney Woods—North	75	79	4	5	
31 Piney Woods—South	67	55	-12	-18	
32 Lower Rio Grande Valley	60	41	-19	-32	
33 El Paso	136	79	-57	-42	
State	139	141	2	1	

Note: Result of a Mann-Whitney test of the indicated changes

*Indicates significance at the 95 percent level

**Indicates significance at the 99 percent level

All others showed no statistically verifiable trend

Source: Real Estate Center at Texas A&M University

Table 9. Confidence Intervals of 95 percent for Tract Size of Texas Rural Land, 1989

Land Market Area	Number of Sales	Acres		
		Lower Limit	Median	Upper Limit
1 Panhandle—North	76	320	471	640
2 Panhandle—Central	175	288	320	320
3 South Plains	170	160	178	202
4 Permian—West	167	177	189	280
5 Canadian Breaks	***	160	480	650
6 Rolling Plains—North	119	160	205	320
7 Rolling Plains—Central	124	140	154	160
8 Trans-Pecos	***	2,560	5,529	9,563
9 Edwards Plateau—West	107	340	452	670
10 Edwards Plateau—South	132	137	174	250
11 Rio Grande Plains	84	467	742	1,121
12 North Central Plains	194	151	160	170
13 Crosstimbers	128	155	187	207
14 Hill Country—North	126	152	187	207
15 Hill Country—West	47	142	235	320
16 Highland Lakes	64	101	156	200
17 Hill Country—South	***	61	155	214
18 San Antonio	83	69	99	134
19 Coastal Prairie—North	198	70	86	99
20 Coastal Prairie—South	113	138	152	187
21 Coastal Prairie—Middle	103	80	100	127
22 Texoma	120	59	80	100
23 Fort Worth Prairie	70	45	58	90
24 Dallas Prairie	134	64	75	84
25 Blacklands—North	214	77	96	102
26 Blacklands—South	157	67	82	98
27 Brazos	192	65	79	92
28 Houston	151	54	70	88
29 Northeast	208	82	94	108
30 Piney Woods—North	141	65	79	94
31 Piney Woods—South	***	46	55	79
32 Lower Rio Grande Valley	56	38	41	80
33 El Paso	***	25	79	136
State	3,737	133	141	149

***Fewer than 30 sales reported

Source: Real Estate Center at Texas A&M University

Appendix A

Inventory of Texas Rural Land

The following tables contain statistics on land devoted to different agricultural uses. These estimates are derived from data collected by the State Property Tax Board and contain the total area in acres and square miles, median school property taxes based on both agricultural value and market value, median estimated income and median assessed value for each type of land. Because all Texas land is subject to school taxes, this inventory covers the entire stock of rural land devoted to agricultural uses.

Open space taxation is based on land productivity. Taxes depend on the estimated net income. Market value taxation ignores productivity and bases taxes on the land's current value. The assessed value serves as a base for this tax.

Table A-1. Texas Land Devoted to Specific Agricultural Uses

Panhandle—North Land Market Area 1	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space Value (\$/acre)		
Improved pasture	160	0	0	1.00	8.30	14	878
Irrigated cropland	530,716	829	12	1.89	4.29	27	425
Native pasture	2,442,005	3,816	54	0.33	0.74	4	79
Nonirrigated cropland	1,558,739	2,436	34	0.98	1.87	13	199
Total	4,531,620	7,081	100				

Panhandle—Central Land Market Area 2	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space Value (\$/acre)		
Barren land	9,963	16	0	0.09	0.11	1	12
Improved pasture	27,203	43	1	0.37	1.03	5	111
Irrigated cropland	778,280	1,216	15	2.38	4.62	34	508
Native pasture	2,136,859	3,339	43	0.35	1.10	5	101
Nonirrigated cropland	2,074,857	3,242	41	1.16	2.12	15	215
Total	5,027,162	7,855	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

South Plains Land Market Area 3	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	167,173
Improved pasture	11,487	18	0	0.33	1.78	4	205
Irrigated cropland	800,567	1,251	17	2.87	4.79	40	517
Native pasture	1,436,243	2,244	30	0.28	0.78	4	86
Nonirrigated cropland	2,306,976	3,605	49	1.60	2.73	21	305
Orchard	53	0	0	2.52	6.00	26	500
Other	810	1	0	0.99	0.00	18	0
Total	4,723,309	7,380	100				

Permian—West Land Market Area 4	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	175,364
Improved pasture	133,455	209	2	0.31	0.96	5	121
Irrigated cropland	912,870	1,426	14	2.24	4.39	30	495
Native pasture	2,589,977	4,047	41	0.20	0.74	3	76
Nonirrigated cropland	2,508,356	3,919	40	1.27	2.44	16	263
Orchard	1,270	2	0	2.98	10.43	33	1005
Other	1,467	2	0	1.88	0.02	25	3
Total	6,322,759	9,879	100				

Canadian Breaks Land Market Area 5	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	20,128
Irrigated cropland	49,394	77	2	1.27	3.81	18	391
Native pasture	2,652,025	4,144	81	0.25	1.15	4	126
Nonirrigated cropland	534,480	835	16	0.81	2.26	11	200
Other	5,438	8	0	0.03	0.00	1	0
Total	3,261,465	5,096	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Rolling Plains—North Land Market Area 6							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Barren land	124,157	194	2	0.04	0.22	1	43
Improved pasture	79,013	123	1	0.20	0.67	6	180
Irrigated cropland	69,693	109	1	1.12	2.52	17	288
Native pasture	4,421,205	6,908	70	0.18	0.62	3	93
Nonirrigated cropland	1,616,442	2,526	26	0.69	1.80	12	199
Total	6,310,510	9,860	100				

Rolling Plains—Central Land Market Area 7							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Barren land	32,109	50	1	0.04	0.08	0	10
Improved pasture	67,866	106	2	0.87	3.83	10	390
Irrigated cropland	5,750	9	0	1.67	4.99	17	427
Native pasture	2,292,127	3,581	57	0.34	2.12	4	172
Nonirrigated cropland	1,607,970	2,512	40	1.26	5.65	13	493
Orchard	277	0	0	1.39	5.83	14	586
Other	32,946	51	1	0.22	0.63	2	56
Total	4,039,045	6,311	100				

Trans-Pecos Land Market Area 8							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Barren land	2,609	4	0	0.01	0.12	0	10
Irrigated cropland	148,583	232	1	1.02	2.47	14	225
Native pasture	15,996,855	24,995	99	0.05	0.56	1	52
Orchard	2,363	4	0	1.34	1.84	19	191
Total	16,150,410	25,235	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Edwards Plateau—West Land Market Area 9							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Barren land	34,349	54	0	0.02	0.69	0	81
Improved pasture	25,514	40	0	0.33	3.00	5	376
Irrigated cropland	105,130	164	1	1.37	5.31	22	702
Native pasture	11,651,444	18,205	95	0.22	1.80	3	200
Nonirrigated cropland	474,688	742	4	0.92	3.59	10	400
Orchard	1,270	2	0	1.02	6.42	13	872
Total	12,292,395	19,207	100				

Edwards Plateau—South Land Market Area 10							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Barren land	327,449	512	0	0.21	5.25	3	621
Improved pasture	196,023	306	5	0.64	6.19	9	609
Irrigated cropland	199,947	312	5	2.63	8.73	31	941
Native pasture	3,183,241	4,974	75	0.38	5.20	5	505
Nonirrigated cropland	322,152	503	8	1.17	6.75	13	683
Orchard	8,334	13	0	3.04	15.47	47	1761
Total	4,237,146	6,621	100				

Rio Grande Plains Land Market Area 11							
Land Class	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)		
Improved pasture	377,560	590	4	0.74	5.07	7	390
Irrigated cropland	44,016	69	0	1.76	8.10	27	1000
Native pasture	8,668,438	13,544	93	0.51	4.05	5	336
Nonirrigated cropland	244,435	382	3	1.49	5.20	13	473
Orchard	1,111	2	0	3.41	9.20	31	666
Other	12,010	19	0	2.34	0.04	22	3
Total	9,347,570	14,606	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

North Central Plains Land Market Area 12				School Property Taxes		Estimated	Assessed
Land Class	Area			Open- Space	Market Value	Net Income	Value
	Areas	Square Miles	Percent of Total	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
Barren land	55,219	86	1	0.23	1.40	3	150
Improved pasture	126,881	198	2	0.66	3.49	9	350
Irrigated cropland	60,400	4	1	1.85	5.38	24	507
Native pasture	5,221,393	8,158	71	0.32	2.88	4	282
Nonirrigated cropland	1,841,818	2,878	25	1.24	4.45	16	420
Orchard	977	2	0	2.34	8.94	35	903
Other	5,772	9	0	0.43	0.04	6	4
Total	7,312,460	11,426	100				

Crosstimbers Land Market Area 13				School Property Taxes		Estimated	Assessed
Land Class	Area			Open- Space	Market Value	Net Income	Value
	Areas	Square Miles	Percent of Total	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
Barren land	1,367	2	0	0.27	0.29	2	20
Improved pasture	92,097	144	3	0.89	5.23	9	499
Irrigated cropland	25,723	40	1	2.76	6.26	33	781
Native pasture	2,922,045	4,566	80	0.49	4.29	6	404
Nonirrigated cropland	579,033	905	16	0.77	5.09	10	586
Orchard	11,324	18	0	2.30	7.24	37	926
Other	3,356	5	0	2.08	0.03	32	4
Total	3,634,945	5,680	100				

Hill Country—North Land Market Area 14				School Property Taxes		Estimated	Assessed
Land Class	Area			Open- Space	Market Value	Net Income	Value
	Areas	Square Miles	Percent of Total	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
Improved pasture	124,516	195	4	0.71	4.41	10	544
Irrigated cropland	7,562	12	0	1.54	6.17	23	770
Native pasture	2,354,778	3,679	83	0.47	4.00	7	493
Nonirrigated cropland	350,964	548	12	0.83	4.48	13	510
Orchard	5,623	9	0	2.88	9.80	40	1225
Total	2,843,443	4,443	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Hill Country—West Land Market Area 15	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Square Miles	Percent of Total	Open- Space	Market Value		
				Areas	(\$/acre)	(\$/acre)	
Improved pasture	98,971	155	7	0.48	5.14	6	600
Irrigated cropland	1,322	2	0	0.57	12.39	9	1692
Native pasture	1,340,340	2,094	91	0.28	3.08	5	397
Nonirrigated cropland	34,702	54	2	0.51	5.62	7	803
Orchard	967	2	0	2.97	21.49	35	2242
Total	1,476,302	2,307	100				

Highland Lakes Land Market Area 16	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Square Miles	Percent of Total	Open- Space	Market Value		
				Areas	(\$/acre)	(\$/acre)	
Barren land	86,439	135	4	0.23	4.83	3	560
Improved pasture	113,512	177	5	0.61	8.57	9	1050
Irrigated cropland	8,714	14	0	1.27	8.19	15	933
Native pasture	1,885,381	2,946	77	0.45	6.89	7	938
Nonirrigated cropland	63,260	99	3	0.74	8.24	9	950
Orchard	2,709	4	0	1.91	16.98	32	2161
Other	304,490	476	12	0.37	7.00	6	861
Total	2,464,505	3,851	100				

Hill Country—South Land Market Area 17	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Square Miles	Percent of Total	Open- Space	Market Value		
				Areas	(\$/acre)	(\$/acre)	
Barren land	1,831	3	0	0.09	3.44	1	386
Improved pasture	28,246	44	2	0.57	11.82	7	1320
Irrigated cropland	217	0	0	1.39	32.78	19	3558
Native pasture	1,497,671	2,340	90	0.36	7.54	5	1017
Nonirrigated cropland	41,067	64	2	0.71	11.87	10	1133
Orchard	818	1	0	2.11	11.96	27	1338
Other	88,970	139	5	0.44	1.10	6	112
Total	1,658,820	2,592	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

San Antonio Land Market Area 18							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	7,672	12	0	0.26	11.76	4	1037
Improved pasture	570,297	891	22	1.15	13.96	14	1367
Irrigated cropland	46,668	73	2	1.78	8.17	27	900
Native pasture	1,491,854	2,331	58	0.59	11.48	8	1272
Nonirrigated cropland	464,637	726	18	1.08	15.06	14	1558
Orchard	3,050	5	0	3.24	55.41	56	5678
Other	19	0	0	14.72	0.01	199	1
Total	2,584,197	4,038	100				

Coastal Prairie—North Land Market Area 19							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	63,456	99	2	0.32	5.72	3	659
Improved pasture	739,894	1,156	25	0.91	8.01	12	920
Irrigated cropland	150,757	236	5	1.74	7.98	22	726
Native pasture	1,830,610	2,860	62	0.66	6.88	8	807
Nonirrigated cropland	174,518	273	6	1.29	9.97	18	1077
Orchard	1,545	2	0	1.64	12.06	25	1469
Timber	1,576	2	0	1.06	12.46	13	1200
Other	275	0	0	2.49	0.02	37	2
Total	2,962,631	4,629	100				

Coastal Prairie—South Land Market Area 20							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	92,926	145	2	0.25	5.27	3	565
Improved pasture	504,296	788	12	0.96	9.69	11	792
Irrigated cropland	1,318	2	0	3.14	48.18	41	5077
Native pasture	2,318,622	3,623	56	0.41	6.21	5	723
Nonirrigated cropland	1,215,126	1,899	29	3.05	8.48	37	948
Other	2,516	4	0	4.77	40.43	53	3376
Total	4,134,804	6,461	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Coastal Prairie—Middle Land Market Area 21	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space Value (\$/acre)		
						Barren land	92,926
Improved pasture	70,036	109	3	1.05	9.14	12.45	901
Irrigated cropland	358,927	561	14	2.41	8.61	29.13	799
Native pasture	1,333,788	2,084	53	0.66	8.59	8.17	778
Nonirrigated cropland	595,416	930	24	2.28	9.29	26.83	852
Orchard	1,186	2	0	3.96	11.42	51.06	1,077
Other	73,310	115	3	0.69	0.71	8.91	130
Total	2,525,589	3,946	100				

Texoma Land Market Area 22	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space Value (\$/acre)		
						Barren land	52,567
Improved pasture	246,118	385	13	1.17	7.56	20	854
Irrigated cropland	1,274	2	0	2.12	4.99	37	560
Native pasture	1,105,966	1,728	56	0.61	5.44	9	634
Nonirrigated cropland	550,600	860	28	1.75	7.72	24	887
Orchard	745	1	0	1.72	8.87	27	771
Other	3,427	5	0	1.38	0.18	15	15
Total	1,960,697	3,063	100				

Fort Worth Prairie Land Market Area 23	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space Value (\$/acre)		
						Barren land	62,731
Improved pasture	361,307	565	16	1.06	17.31	11	1333
Irrigated cropland	4,110	6	0	1.87	20.55	28	2460
Native pasture	1,612,867	2,520	71	0.66	14.08	8	1200
Nonirrigated cropland	241,462	377	11	1.43	14.75	17	1317
Orchard	4,809	8	0	2.44	16.43	32	1476
Total	2,287,286	3,574	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Dallas Prairie Land Market Area 24	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	58,439
Improved pasture	610,134	953	22	1.11	25.01	13.07	2,196
Irrigated cropland	488	1	0	1.79	29.46	22.46	2,894
Native pasture	1,356,658	2,120	49	0.78	23.13	8.87	1,992
Nonirrigated cropland	744,766	1,164	27	1.96	24.36	22.74	2,105
Orchard	1,093	2	0	3.35	16.23	40.15	1,766
Timber	4,505	7	0	2.34	13.45	25.09	1,175
Other	482	1	0	4.14	0.04	51.50	4
Total	2,776,565	4,338	100				

Blacklands—North Land Market Area 25	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	34,125
Improved pasture	851,378	1,330	18	0.96	5.60	14.32	650
Irrigated cropland	2,050	3	0	1.92	6.80	28.64	800
Native pasture	2,560,942	4,001	55	0.62	5.06	8.21	561
Nonirrigated cropland	1,165,408	1,821	25	1.55	7.10	20.02	800
Orchard	3,464	5	0	2.05	8.97	28.64	1,096
Timber	209	0	0	0.30	8.52	4.36	1,001
Total	4,617,576	7,215	100				

Blacklands—South Land Market Area 26	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)		
						Barren land	13,286
Improved pasture	600,837	939	22	0.96	16.97	11.21	1,523
Irrigated cropland	1,540	2	0	2.66	25.12	27.16	2,284
Native pasture	1,635,433	2,555	59	0.56	18.97	5.43	1,477
Nonirrigated cropland	518,581	810	19	1.91	19.83	22.07	1,562
Orchard	1,767	3	0	3.80	24.04	39.56	2,099
Timber	20	0	0	0.37	9.65	4.73	1,000
Other	727	1	0	22.53	0.18	235.70	15
Total	2,772,191	4,332	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Brazos Land Market Area 27							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	4,296	7	0	0.26	4.44	3.75	510
Improved pasture	713,878	1,115	26	0.76	8.48	10.39	1,000
Irrigated cropland	33,172	52	1	2.78	8.31	41.62	938
Native pasture	1,876,539	2,932	67	0.51	7.52	6.21	848
Nonirrigated cropland	101,474	159	4	1.22	9.02	17.89	1,009
Orchard	1,462	2	0	2.46	13.47	30.90	1,606
Timber	55,373	87	2	1.64	9.01	21.29	1,122
Other	11	0	0	4.05	0.00	47.42	0
Total	2,786,205	4,353	100				

Houston Land Market Area 28							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	55,815	87	1	0.51	12.79	4.98	752
Improved pasture	296,277	463	7	1.55	27.47	15.20	2,434
Irrigated cropland	539,637	843	12	2.76	19.88	27.40	1,629
Native pasture	1,830,562	2,860	40	0.86	22.47	8.46	1,827
Nonirrigated cropland	439,957	687	10	1.73	26.41	18.68	2,140
Orchard	4,299	7	0	4.09	29.59	46.07	2,740
Timber	1,354,753	2,117	30	3.28	14.47	33.04	1,486
Other	15,336	24	0	5.56	0.43	56.07	31
Total	4,536,636	7,088	100				

Northeast Land Market Area 29							
Land Class	Area			School Property Taxes		Estimated	Assessed
	Areas	Square Miles	Percent of Total	Open- Space (\$/acre)	Market Value (\$/acre)	Net Income (\$/acre)	Value (\$/acre)
Barren land	35,894	56	1	0.07	0.41	1.00	50
Improved pasture	1,088,696	1,701	28	1.02	6.61	13.07	717
Irrigated cropland	4,376	7	0	2.49	2.90	37.35	350
Native pasture	1,299,649	2,031	33	0.57	5.74	7.96	667
Nonirrigated cropland	313,042	489	8	1.21	7.07	17.43	757
Orchard	2,351	4	0	2.30	10.20	28.27	1,060
Timber	1,153,680	1,803	29	1.13	5.65	16.07	670
Other	19,394	30	0	1.93	2.04	28.09	194
Total	3,917,082	6,120	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

Piney Woods—North Land Market Area 30	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space		
					(\$/acre)	(\$/acre)	
Barren land	71,188	111	1	0.44	7.26	4.98	754
Improved pasture	741,916	1,159	15	1.10	10.26	14.35	852
Irrigated cropland	4,942	8	0	1.74	12.98	21.66	1,154
Native pasture	1,948,924	3,045	40	0.67	8.01	8.14	772
Nonirrigated cropland	72,351	113	1	0.97	9.65	10.96	905
Orchard	3,086	5	0	2.33	12.71	27.41	1,232
Timber	2,044,676	3,195	42	1.56	7.35	20.05	702
Other	400	1	0	1.97	0.00	21.79	1
Total	4,887,483	7,637	100				

Piney Woods—South Land Market Area 31	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space		
					(\$/acre)	(\$/acre)	
Barren land	261	0	0	0.26	6.96	3.11	893
Improved pasture	142,542	223	4	1.40	10.23	17.43	992
Native pasture	518,741	811	15	0.88	8.93	11.22	913
Nonirrigated cropland	3,916	6	0	1.45	8.71	17.43	1,118
Timber	2,744,842	4,289	80	2.00	7.65	25.43	758
Total	3,410,302	5,329	100				

Lower Rio Grande Valley Land Market Area 32	Area			School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)
	Land Class	Areas	Square Miles	Percent of Total	Open- Space		
					(\$/acre)	(\$/acre)	
Barren land	28,410	44	2	0.16	1.25	2.49	147
Improved pasture	74,320	116	5	2.20	15.21	31.20	1,800
Irrigated cropland	446,386	697	29	4.11	19.90	61.62	2,072
Native pasture	567,815	887	37	0.59	8.16	8.37	900
Nonirrigated cropland	372,970	583	24	2.58	10.06	36.22	1,309
Orchard	42,026	66	3	4.54	25.83	70.34	2,992
Other	181	0	0	0.23	0.02	2.49	2
Total	1,532,108	2,394	100				
Total	4,887,483	7,637	100				

Table A-1. Texas Land Devoted to Specific Agricultural Uses (continued)

El Paso Land Market Area 33		Area		School Property Taxes		Estimated Net Income (\$/acre)	Assessed Value (\$/acre)	
		Land Class	Areas	Square Miles	Percent of Total			Open- Space (\$/acre)
	Irrigated cropland	43,759	68	39	6.52	75.19	80.85	6,531
	Native pasture	64,878	101	57	0.11	13.05	1.25	1,193
	Orchard	4,417	7	4	7.73	83.72	91.11	6,828
	Total	113,054	177	100				

Appendix B
Texas Land Market Areas by Counties

Land Market Area 1

Dallam
Hansford
Hartley
Moore
Ochiltree
Sherman

Land Market Area 2

Armstrong
Briscoe
Carson
Castro
Deaf Smith
Gray
Parmer
Randall
Swisher

Land Market Area 3

Borden
Crosby
Dawson
Floyd
Garza
Hale
Lubbock
Lynn

Land Market Area 4

Andrews
Bailey
Cochran
Ector
Gaines
Hockley
Howard
Lamb
Martin
Midland

Terry
Yoakum

Land Market Area 5

Hemphill
Hutchinson
Lipscomb
Oldham
Potter
Roberts

Land Market Area 6

Childress
Collingsworth
Cottle
Dickens
Donley
Hall
Kent
King
Motley
Stonewall
Wheeler

Land Market Area 7

Fisher
Jones
Mitchell
Nolan
Runnels
Scurry
Taylor

Land Market Area 8

Brewster
Crane
Culberson
Hudspeth
Jeff Davis
Loving
Pecos

Presidio
Reeves
Terrell
Ward
Winkler

Land Market Area 9

Coke
Concho
Crockett
Edwards
Glasscock
Irion
Kinney
Reagan
Schleicher
Sterling
Sutton
Tom Green
Upton
Val Verde

Land Market Area 10

Frio
Maverick
Medina
Uvalde
Zavala

Land Market Area 11

Brooks
Dimmit
Duval
Jim Hogg
Kenedy
LaSalle
McMullen
Starr
Webb
Zapata

Land Market Area 12

Archer
Baylor
Clay
Foard
Hardeman
Haskell
Jack
Knox

Shackelford
Stephens
Throckmorton
Wichita
Wilbarger
Young

Land Market Area 13

Brown
Callahan
Coleman
Comanche
Eastland
Erath

Land Market Area 14

Hamilton
McCulloch
Mills
Lampasas
San Saba

Land Market Area 15

Kimble
Menard
Real

Land Market Area 16

Burnet
Gillespie
Llano
Mason

Land Market Area 17

Bandera
Blanco
Kendall
Kerr

Land Market Area 18

Atascosa
Bexar
Comal
Guadalupe
Karnes
Wilson

Land Market Area 19

Colorado
Dewitt
Fayette

Gonzales
Lavaca

Land Market Area 20

Aransas
Bee
Goliad
Jim Wells
Kleberg
Live Oak
Nueces
Refugio
San Patricio

Land Market Area 21

Calhoun
Jackson
Matagorda
Victoria
Wharton

Land Market Area 22

Cooke
Fannin
Grayson
Montague

Land Market Area 23

Hood
Johnson
Palo Pinto
Parker
Somervell
Tarrant
Wise

Land Market Area 24

Collin
Dallas
Denton
Ellis
Hunt
Kaufman
Rains
Rockwall
Van Zandt

Land Market Area 25

Bell
Bosque
Coryell
Falls
Freestone

Hill
Limestone
McLennan
Navarro

Land Market Area 26

Bastrop
Caldwell
Hays
Lee
Milam
Travis
Williamson

Land Market Area 27

Brazos
Burlleson
Grimes
Leon
Madison
Robertson
Washington

Land Market Area 28

Austin
Brazoria
Chambers
Fort Bend
Galveston
Hardin
Harris
Jefferson
Liberty
Montgomery
Orange
San Jacinto
Walker
Waller

Land Market Area 29

Bowie
Camp
Cass
Delta
Franklin
Hopkins
Lamar
Marion
Morris
Red River
Titus

Upshur
Wood

Land Market Area 30

Anderson
Cherokee
Gregg
Harrison
Henderson
Houston
Nacogdoches
Panola
Rusk
Shelby
Smith

Land Market Area 31

Angelina
Jasper
Newton
Polk
Sabine
San Augustine
Trinity
Tyler

Land Market Area 32

Cameron
Hidalgo
Willacy

Land Market Area 33

El Paso

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