

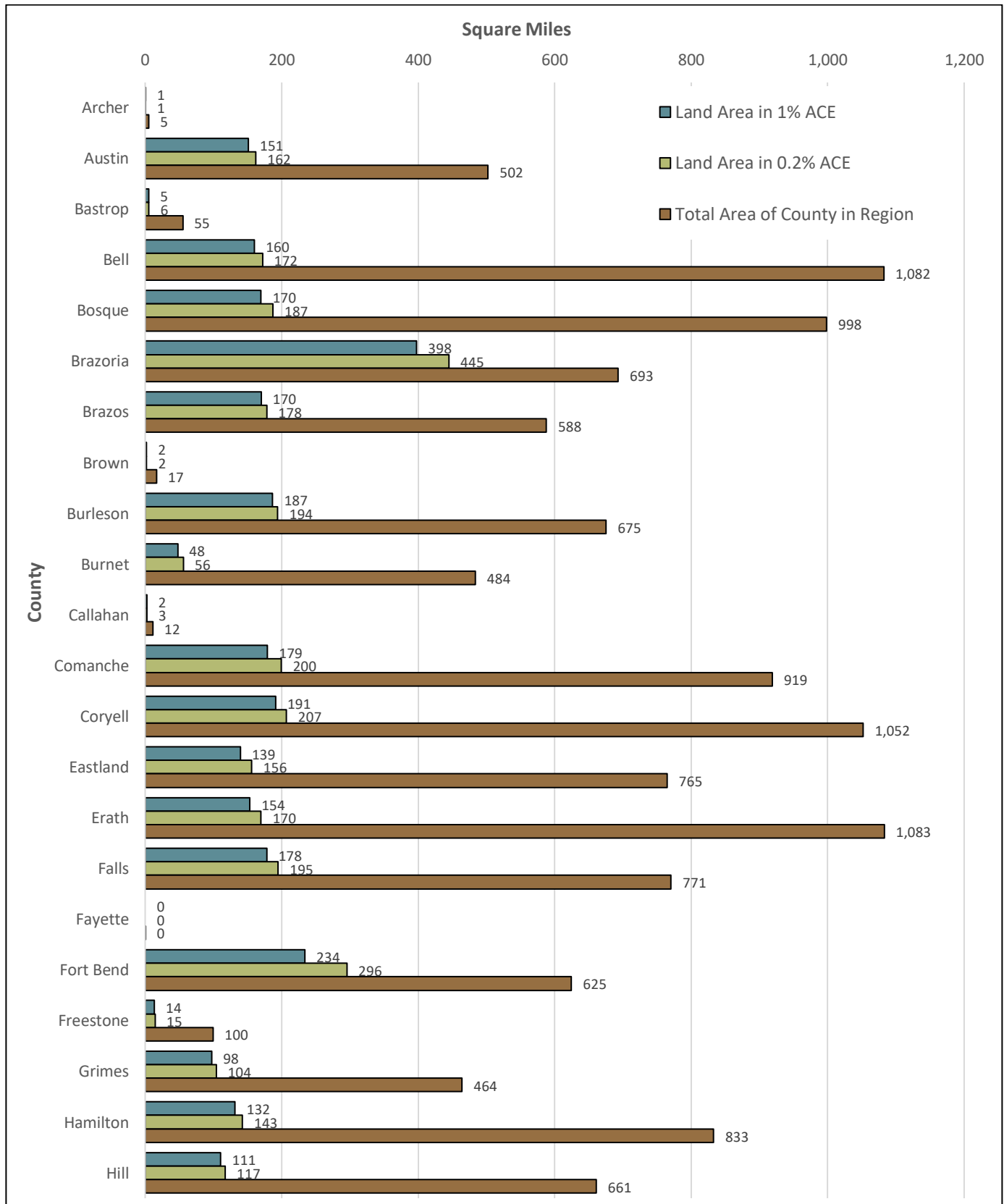
# Appendix 2A – Existing Conditions Flood Risk Analysis

# Appendix 2A.1



# Appendix 2A.1 – Existing Flood Exposure

**Figure 2A - 1 Land Use in Lower Brazos Planning Region**



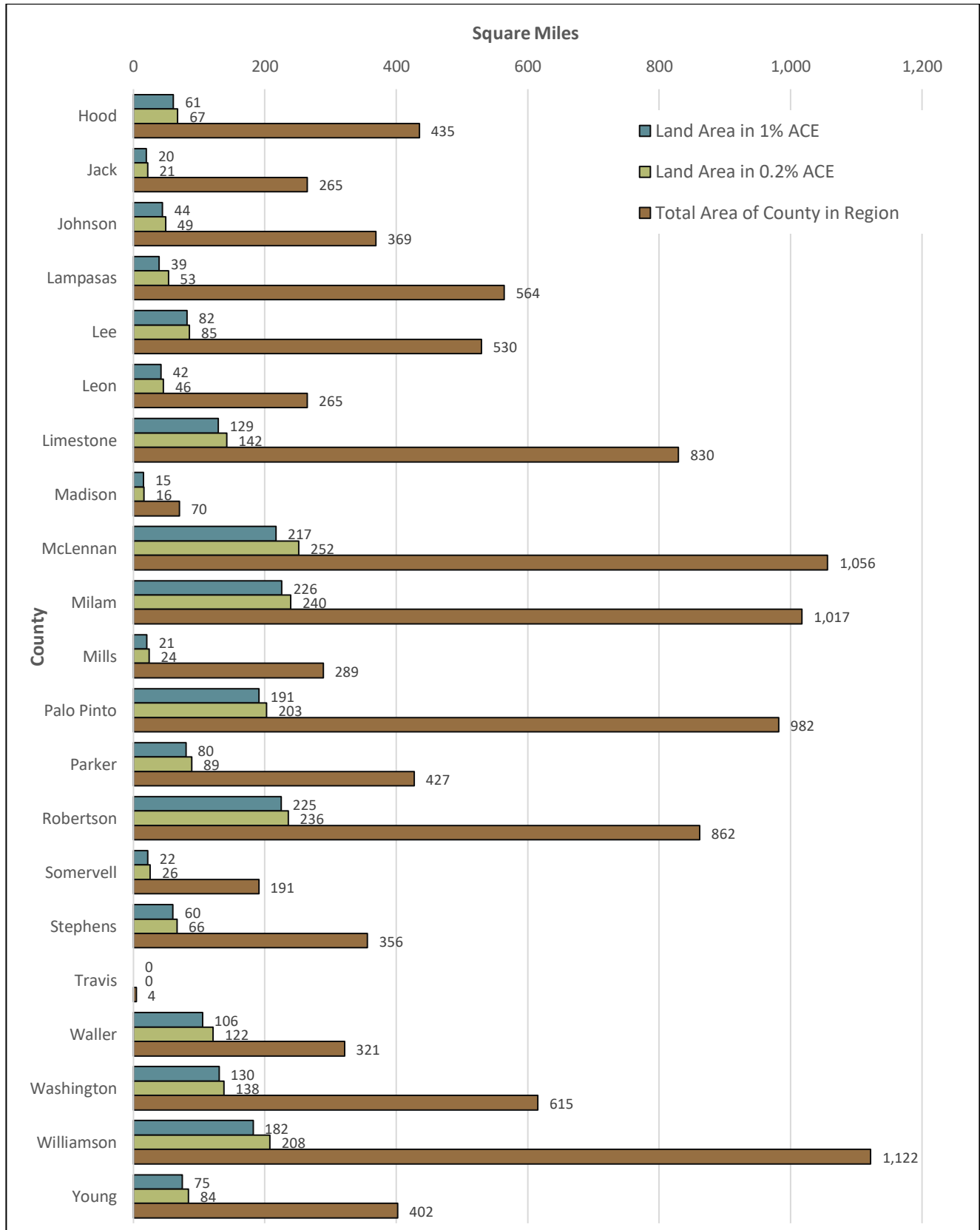


Table 2A - 1 Lower Brazos Region Area in Existing Floodplain Quilt by County

County	Square Miles of County in Region Exposed to 1% ACE Flood Event		Square Miles of County in Region Exposed to 0.2% ACE Flood Event*		Square Miles of Flood Prone Area of County in Region
	Riverine	Coastal	Riverine	Coastal	Riverine
Archer	0.6	0.0	0.1	0.0	0.0
Austin	151	0.0	11	0.0	0.0
Bastrop	5.2	0.0	0.2	0.0	0.0
Bell	160	0.0	12	0.0	2.7
Bosque	170	0.0	18	0.0	0.0
Brazoria	173	224	26	21	50
Brazos	170	0.0	8.2	0.0	0.0
Brown	2.0	0.0	0.2	0.0	0.0
Burleson	187	0.0	7.6	0.0	4.9
Burnet	48	0.0	8.3	0.0	0.0
Callahan	2.3	0.0	0.4	0.0	0.0
Comanche	179	0.0	20	0.0	2.2
Coryell	191	0.0	16	0.0	0.0
Eastland	139	0.0	17	0.0	0.0
Erath	153	0.0	16	0.0	0.0
Falls	178	0.0	17	0.0	0.0
Fayette	0.0	0.0	0.0	0.0	0.0
Fort Bend	234	0.0	61	0.0	46
Freestone	14	0.0	1.2	0.0	0.0
Grimes	98	0.0	6.4	0.0	0.0
Hamilton	132	0.0	11	0.0	0.0
Hill	111	0.0	6.6	0.0	0.0
Hood	61	0.0	6.7	0.0	0.0
Jack	20	0.0	1.5	0.0	0.0
Johnson	44	0.0	4.5	0.0	0.0
Lampasas	39	0.0	14	0.0	0.0
Lee	82	0.0	3.7	0.0	0.0
Leon	42	0.0	3.8	0.0	0.0
Limestone	129	0.0	13	0.0	0.0
Madison	15	0.0	0.9	0.0	0.0
McLennan	217	0.0	35	0.0	0.0
Milam	226	0.0	14	0.0	0.0
Mills	20	0.0	3.3	0.0	0.0
Palo Pinto	191	0.0	12	0.0	0.0
Parker	80	0.0	8.7	0.0	0.0
Robertson	225	0.0	11	0.0	0.0
Somervell	22	0.0	3.6	0.0	0.0
Stephens	60	0.0	5.9	0.0	0.0

County	Square Miles of County in Region Exposed to 1% ACE Flood Event		Square Miles of County in Region Exposed to 0.2% ACE Flood Event*		Square Miles of Flood Prone Area of County in Region
	Riverine	Coastal	Riverine	Coastal	Riverine
Travis	0.0	0.0	0.0	0.0	0.0
Waller	105	0.0	16	0.0	0.0
Washington	120	0.0	7.4	0.0	0.0
Williamson	182	0.0	26	0.0	0.0
Young	75	0.0	9.3	0.0	0.0

*\*The 0.2% Flood Hazard values do not include the area within the 1% Flood Hazard region to avoid overlapping polygons.*

Table 2A - 1. Proposed and Ongoing Flood Mitigation Projects

County	Project	Responsible Entity	Status
Brazos	B-FEWS Scalable Flood Early Warning System	City of Bryan	Ongoing
Fort Bend	Pump Station Upgrade and Replacement	Fort Bend LIDs 14 & 19	Ongoing
Fort Bend	Lost Creek Pump Station	Fort Bend LIDs 15 & 19	Proposed
Fort Bend	Main Channel Widening Along Sienna Point	Sienna LID	Ongoing
Fort Bend	Channel 4 Widening	Sienna LID	Ongoing
Fort Bend	Channel 1 Widening (Scanlan Road to Main Channel)	Sienna LID	Proposed
Fort Bend	Brazos River Erosion Project	Sienna LID & Fort Bend County	Proposed
Fort Bend	ATALS 14 Southern Colony Culvert	Sienna LID	Proposed
Fort Bend	ATLAS 14 Channel 3-4b Pipeline Culvert Replacement	Sienna LID	Proposed
Fort Bend	400,500 GPM Pump Station at Outfall No 2	Sienna LID	Ongoing
Fort Bend	Expand Working Area & Improve Access to Pump Station	Sienna LID	Proposed
Fort Bend	Structural Hardening of Brazos River Levee	Sienna LID	Ongoing
Fort Bend	Brazos Riverbank Stabilization	Fort Bend LID 7	Proposed
Fort Bend	Channel 1 Detention Facility	Sienna LID	Proposed
Fort Bend	FM 359 Regional Levee	Fort Bend MUD 140	Ongoing
Fort Bend	Additional Internal Flood Storage	Fort Bend LID 2	Ongoing
Fort Bend	Flood Diversion Canal	City of Weston Lakes	Proposed
Fort Bend	Flat Bank Cutoff Structure	Fort Bend County	Proposed
Fort Bend	600 Acre-Foot Regional Detention Facility	Sienna LID	Proposed
Fort Bend	Woods Acreage Estates Pump Station	Sienna LID	Proposed

County	Project	Responsible Entity	Status
Fort Bend	Settlers Park Drainage Improvements	City of Sugar Land	Ongoing
Fort Bend	Riverbend Drainage Improvements Phase I	City of Sugar Land	Ongoing
Fort Bend	Covington W & Imperial Woods Drainage	City of Sugar Land	Ongoing
Fort Bend	Avalon/Brazos Landing/ Commonwealth Drainage Improvements Phase 1	City of Sugar Land	Ongoing
Fort Bend	Austin Park and Chimneystone Drainage Improvements Phase 1	City of Sugar Land	Ongoing
Fort Bend	Telfair Drainage Improvements	City of Sugar Land	Ongoing
Limestone	Plummer's Creek Tributary Storm Sewer Improvements	City of Mexia	Proposed
McLennan	Barron's Branch Buyouts	City of Waco	Proposed
McLennan	Flat Creek Automatic Gate System Project	City of Hewitt	Proposed
Milam	Ditch One Regional Detention Drainage Improvements	City of Cameron	Proposed
Washington	Big Sandy Creek Lake Line Lowering	City of Brenham	Proposed
Williamson	City of Taylor Drainage Mitigation Project	City of Taylor	Proposed
Williamson	Dam 101	Upper Brushy Creek WCID	Ongoing
Williamson	Dam 14 Rehabilitation	Upper Brushy Creek WCID	Ongoing
Williamson	Ranchettes 2 and 3 Central	City of Taylor	Ongoing

*Table 2A - 2. Levee Risk Analysis by County*

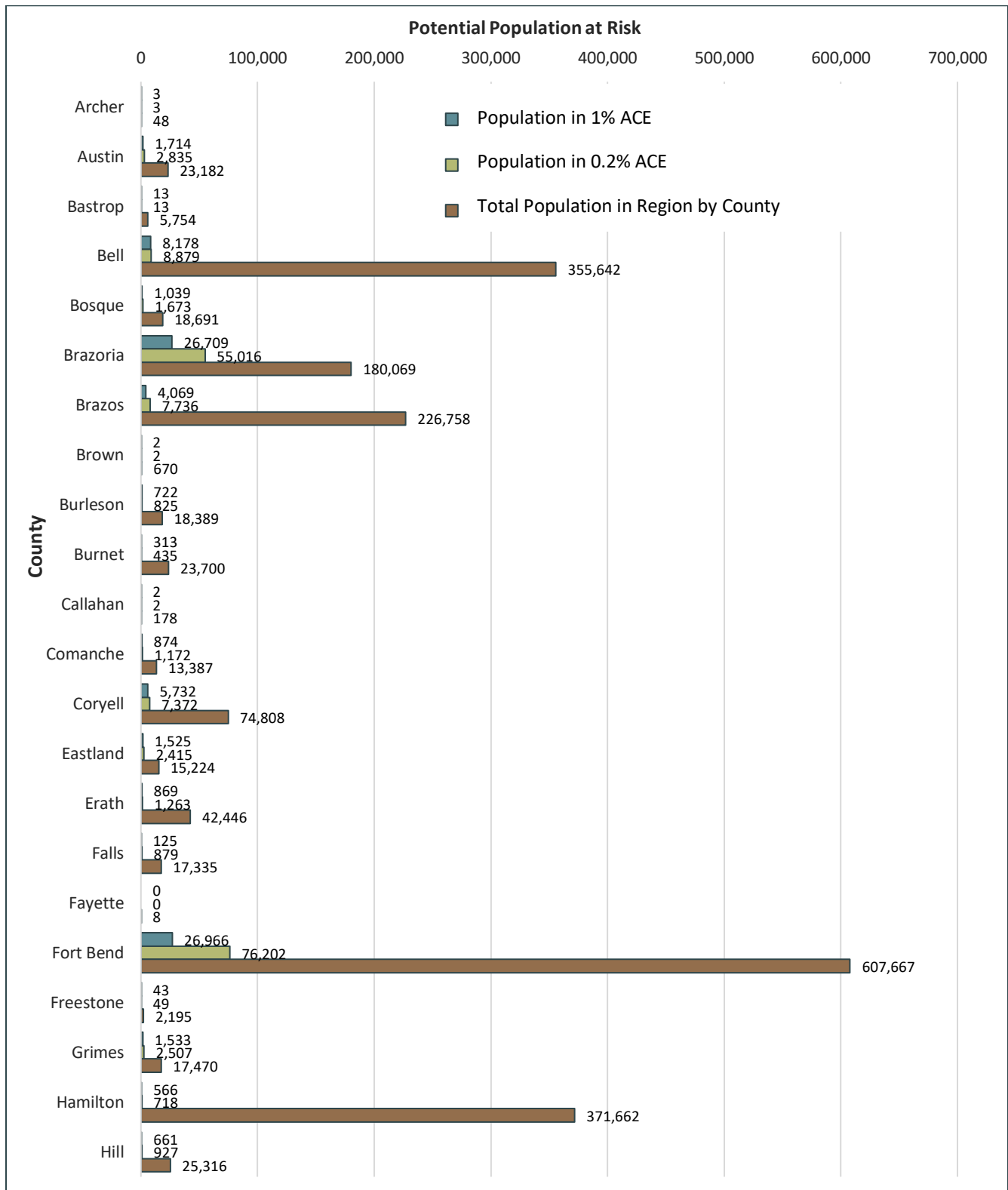
County	Number of Levees	Number of Accredited Levees	Population Protected	Length of Levees (mi)
Bosque	2	1	882	1
Brazoria	19	12	39,940	115
Brazos	1	0	0	1
Burleson	5	0	132	15
Coryell	4	0	35	7
Fort Bend	20	9	154,472	112
Hood	1	0	0	0.3
Lampasas	1	0	1349	0.8
McLennan	4	0	7	7
Milam	1	0	0	5
Robertson	1	0	8	2
Total	59	22	196,825	266

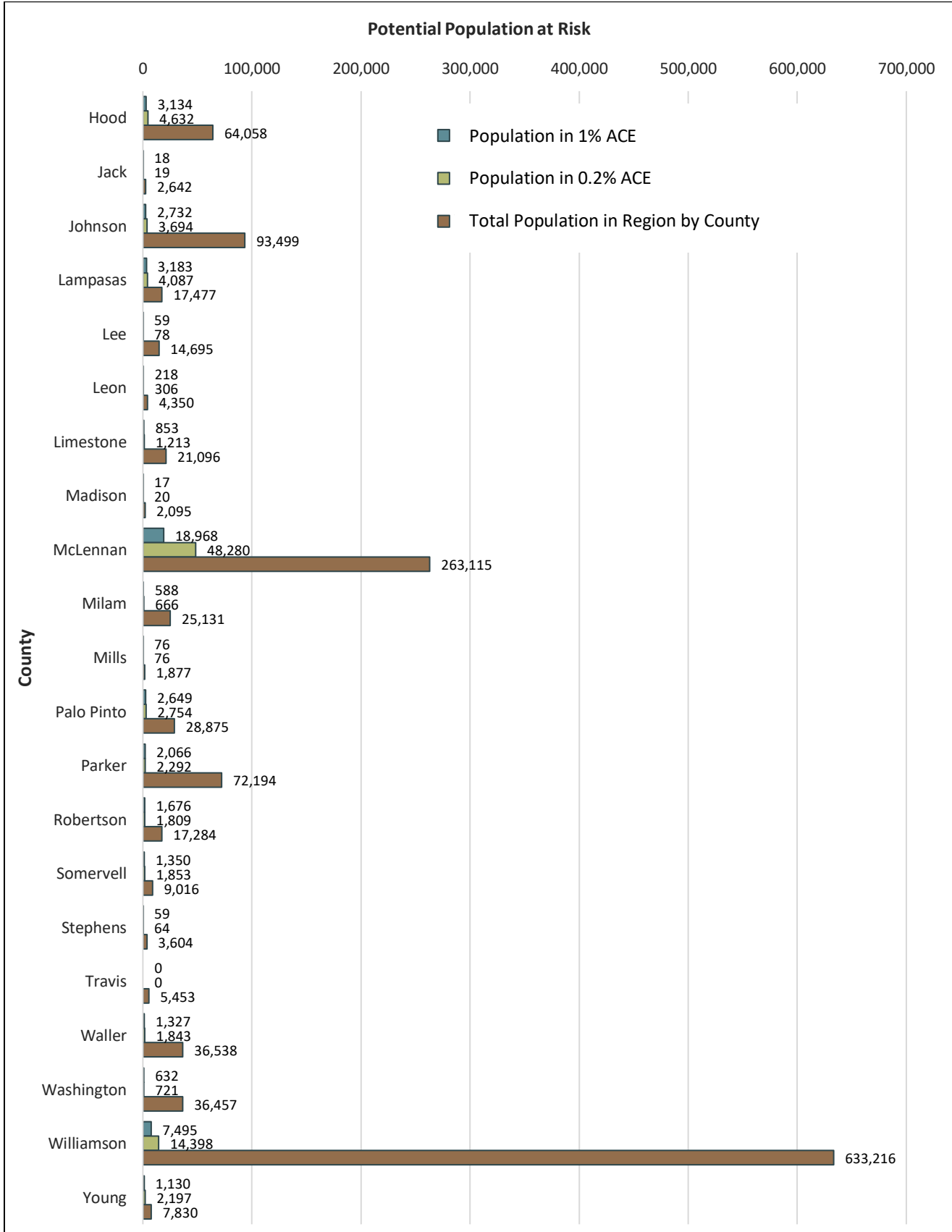


Table 2A - 3. Dam Flowage Easements Risk Analysis by County

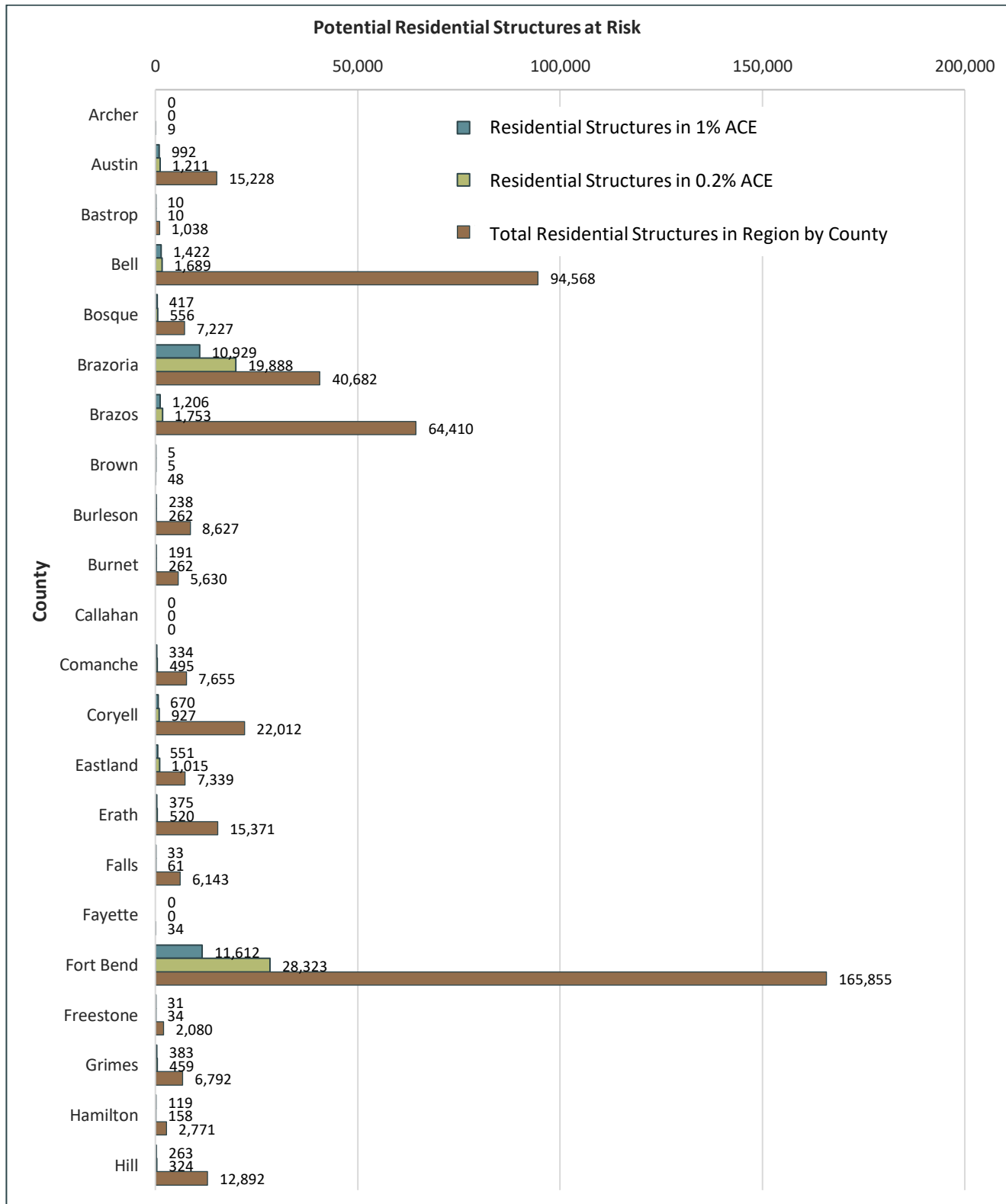
County	Number of Dams	Population Protected	Buildings Protected
Bell	57	42	61
Bosque	8	72	27
Brazoria	2	0	0
Brazos	6	0	0
Burleson	4	1	1
Burnet	1	0	0
Comanche	17	20	52
Coryell	44	5	8
Eastland	3	297	236
Erath	77	0	3
Falls	16	0	0
Fort Bend	11	0	0
Freestone	1	0	0
Grimes	15	0	0
Hamilton	7	0	0
Hill	31	48	98
Hood	4	0	0
Jack	9	0	0
Johnson	3	7	17
Lampasas	8	0	9
Leon	7	0	0
Limestone	3	0	0
McLennan	59	5	12
Milam	13	0	0
Mills	4	0	0
Palo Pinto	10	200	270
Parker	1	0	0
Robertson	1	32	65
Somervell	5	0	0
Washington	1	0	4
Williamson	48	52	42
Young	2	0	3
Total	478	781	908

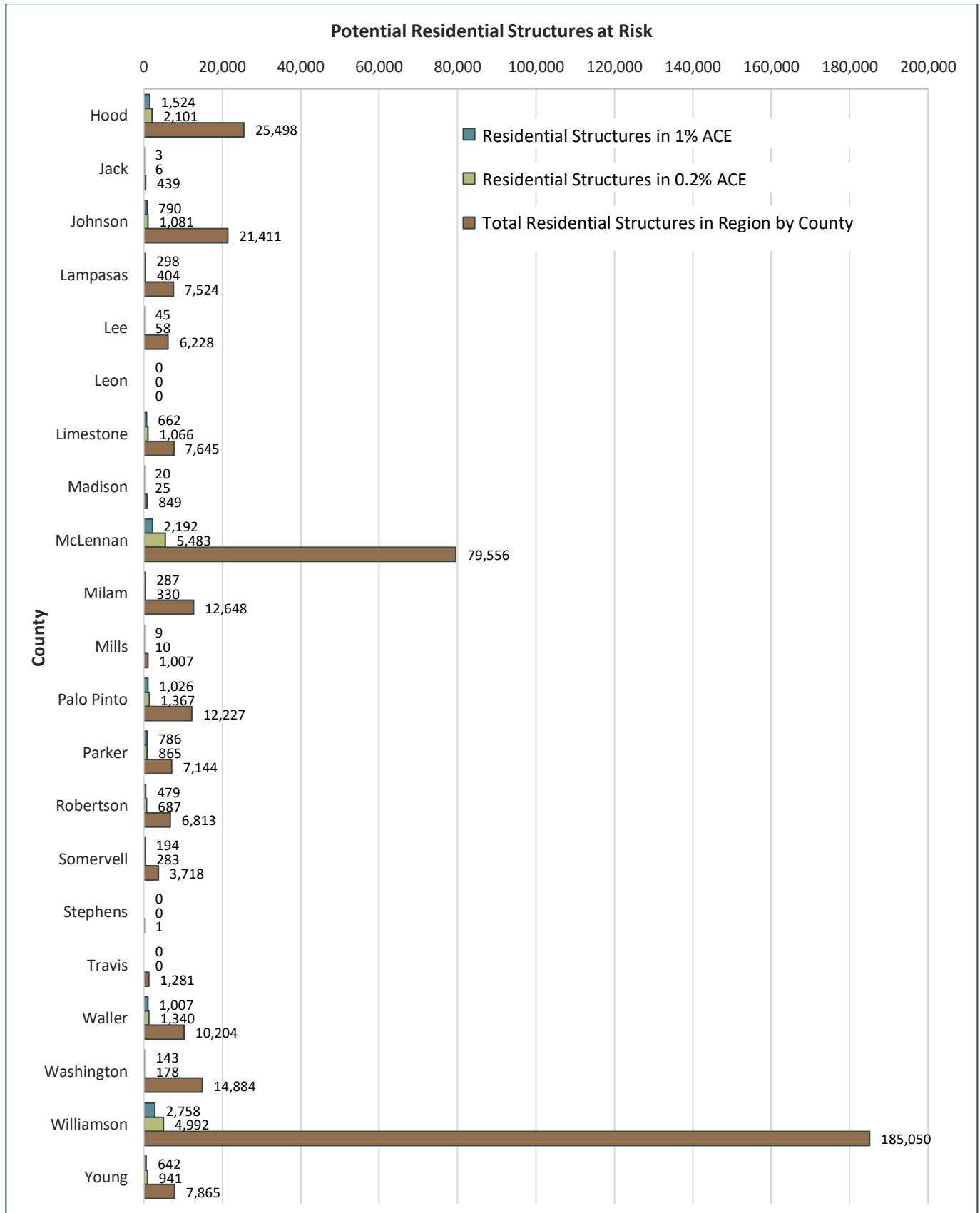
Figure 2A - 2 Potential Population at Flood Risk



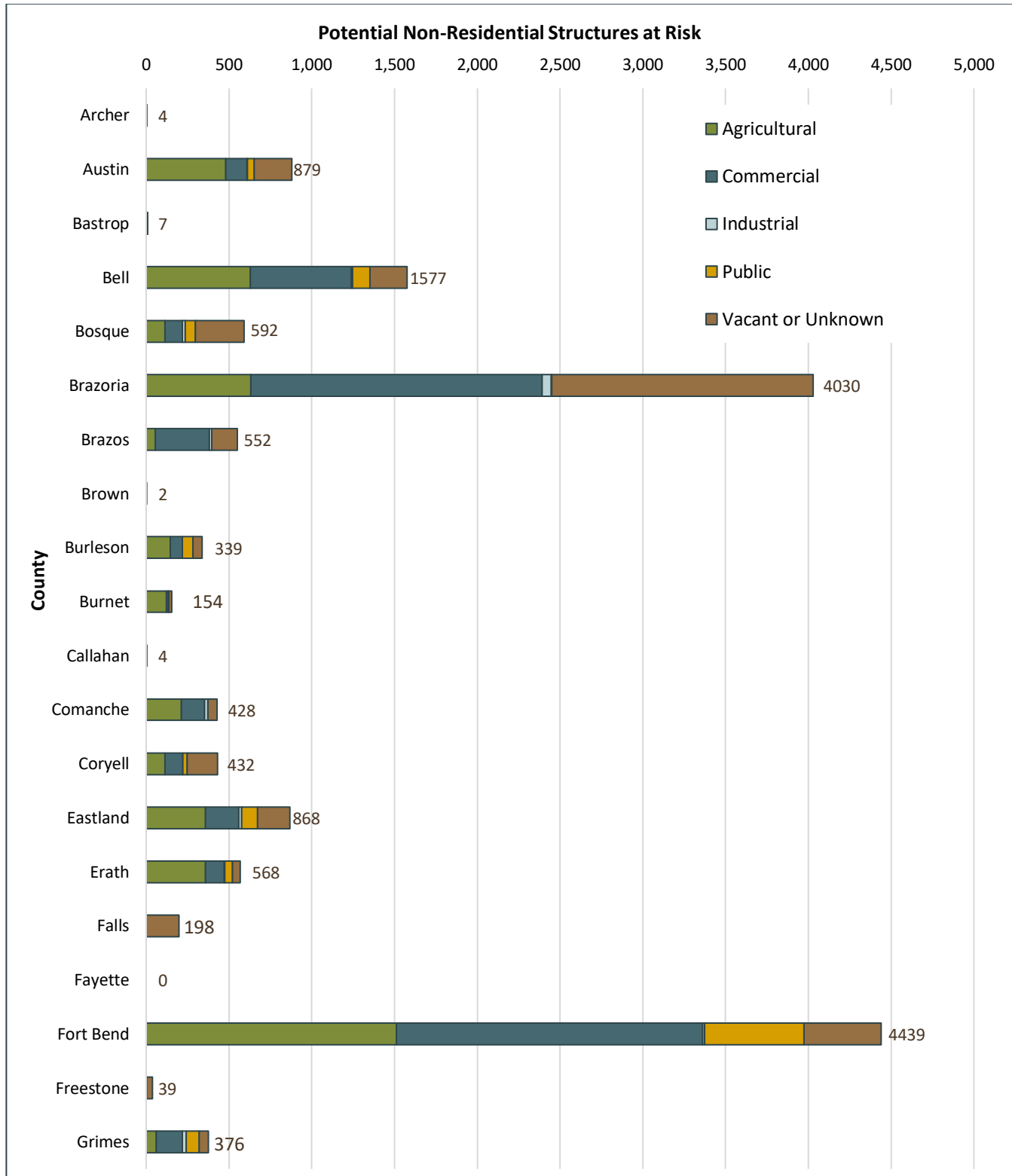


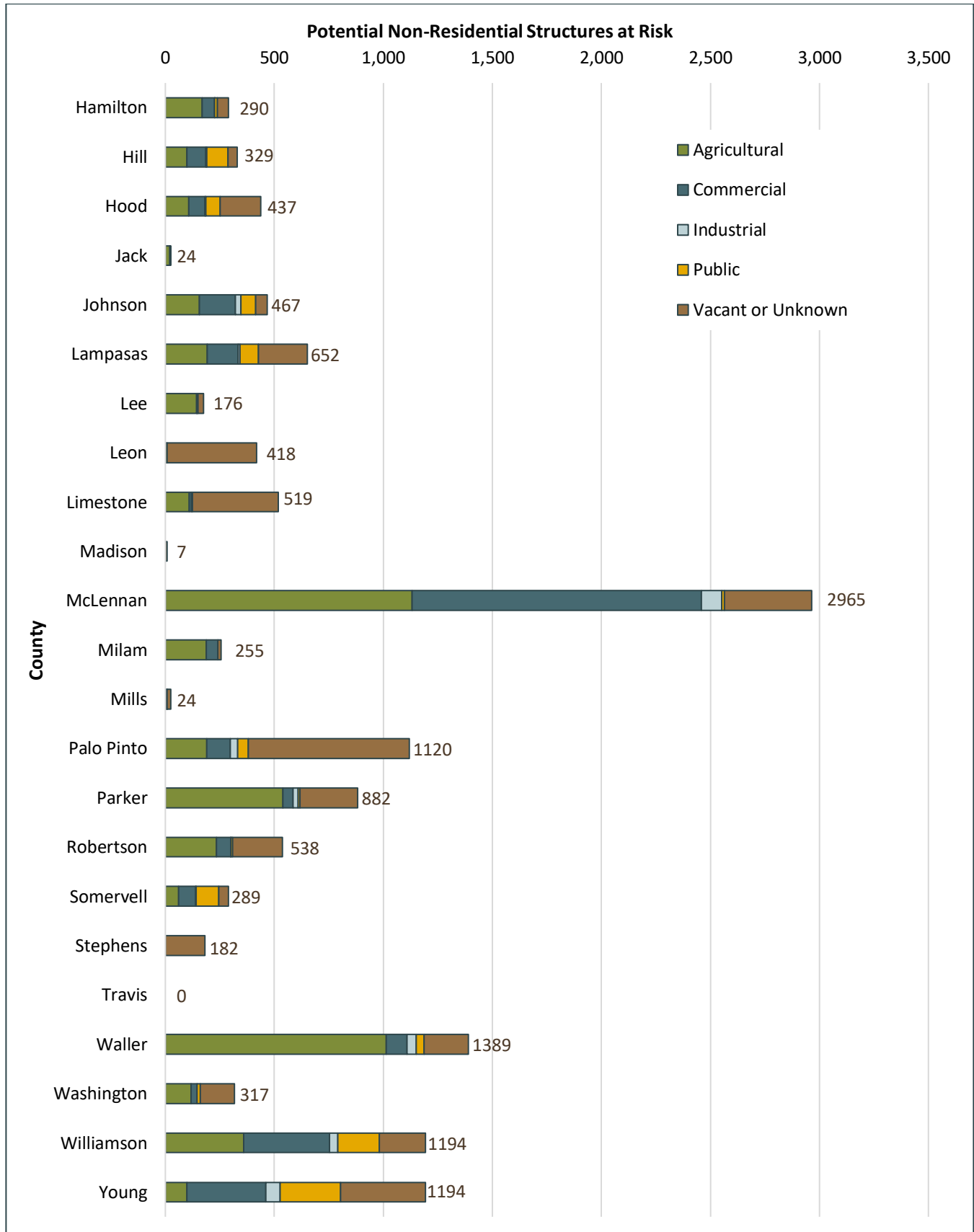
**Figure 2A - 3 Residential Structures Potentially at Flood Risk**



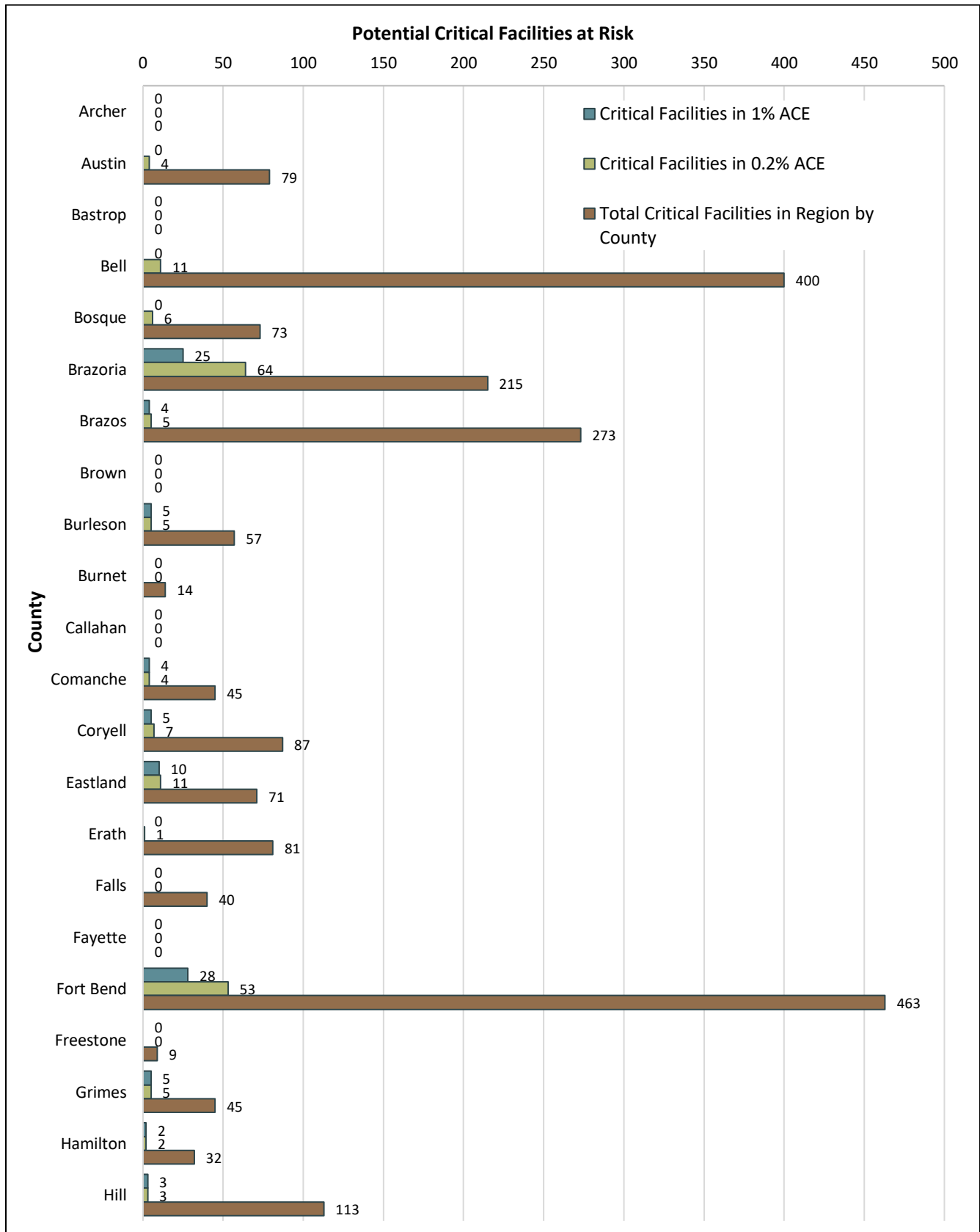


**Figure 2A - 4 Non-Residential Structures Potentially at Flood Risk**





**Figure 2A - 5 Critical Facilities Potentially at Flood Risk**





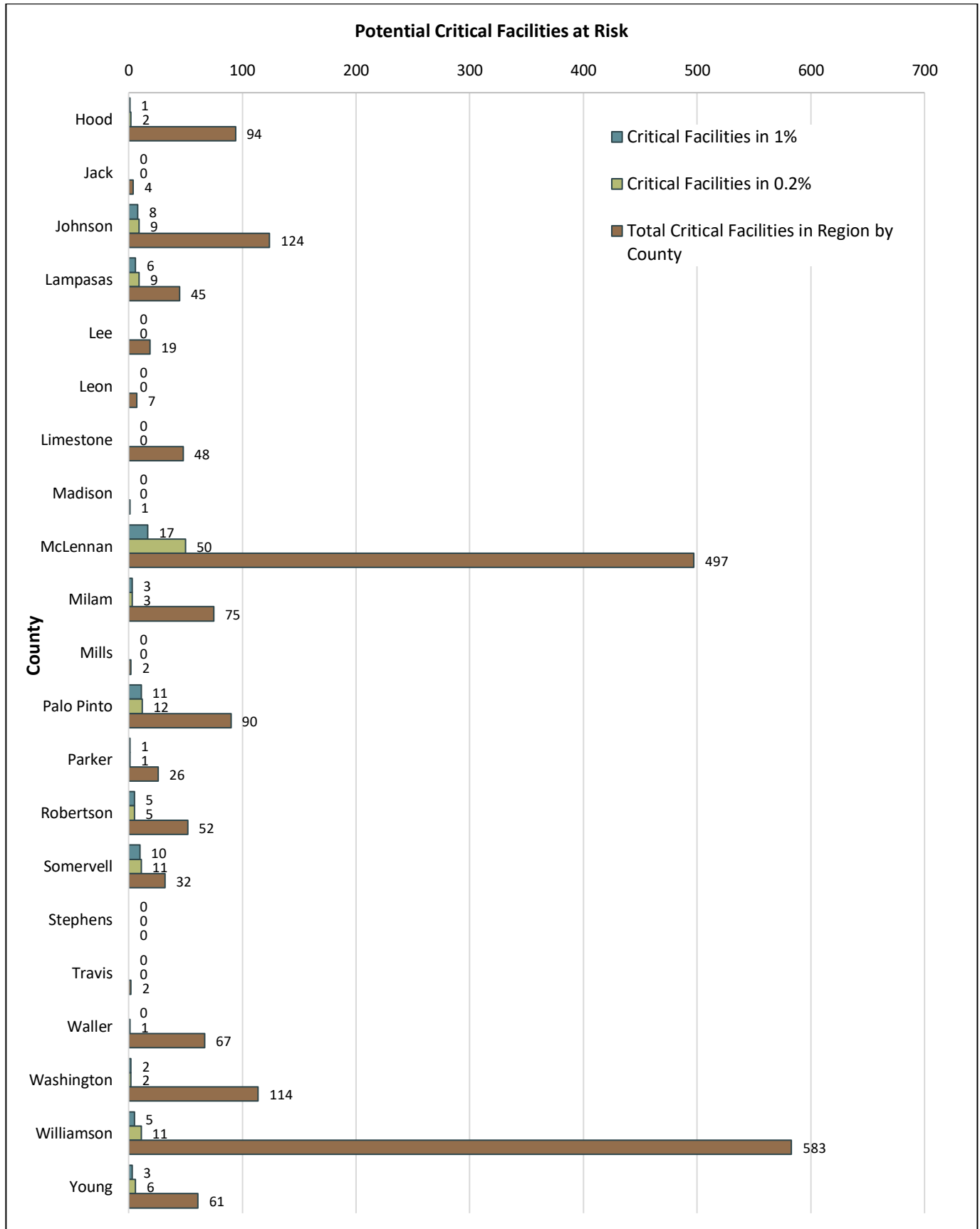
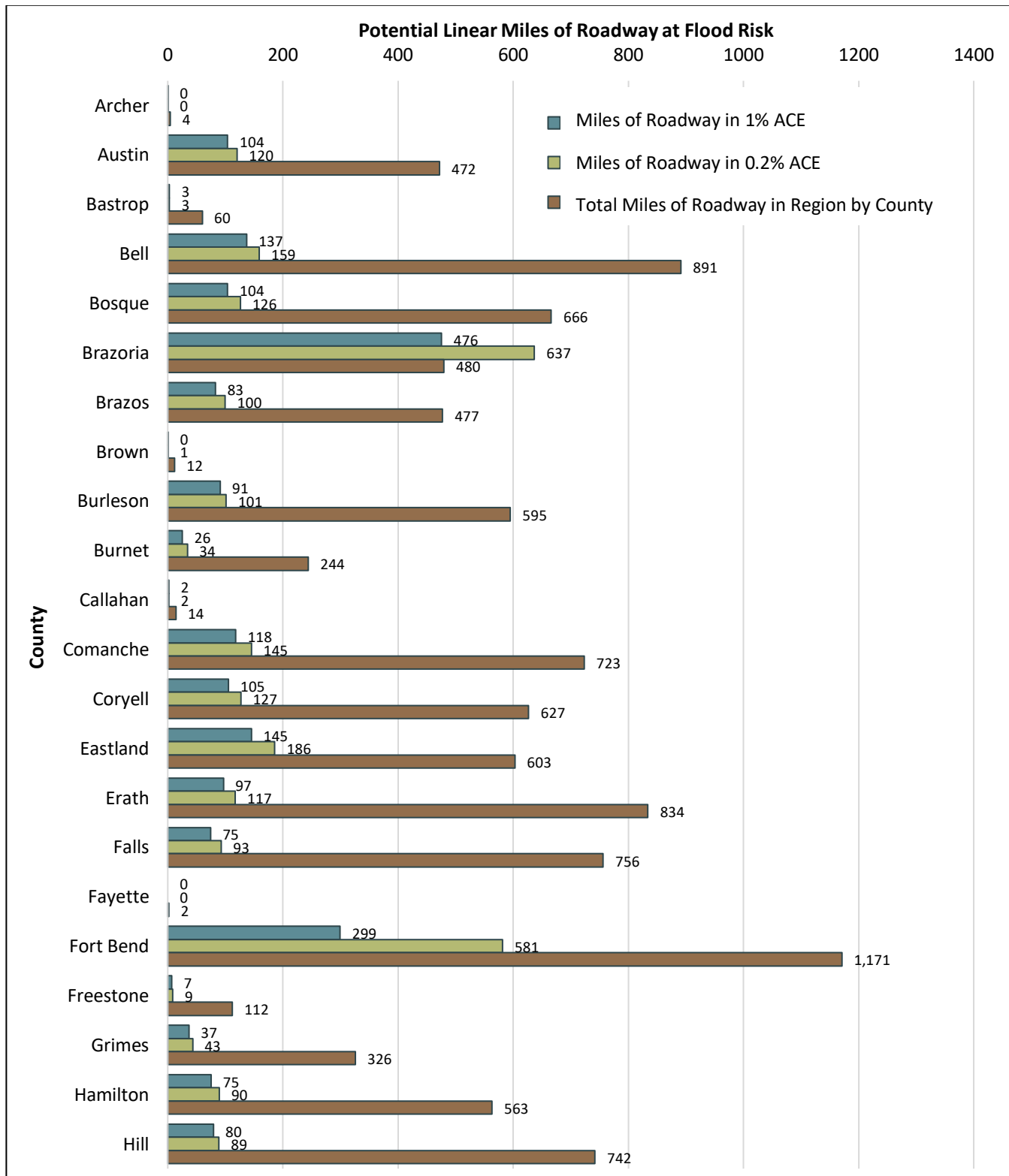


Figure 2A - 6 Linear Miles of Roadway Potentially at Flood Risk



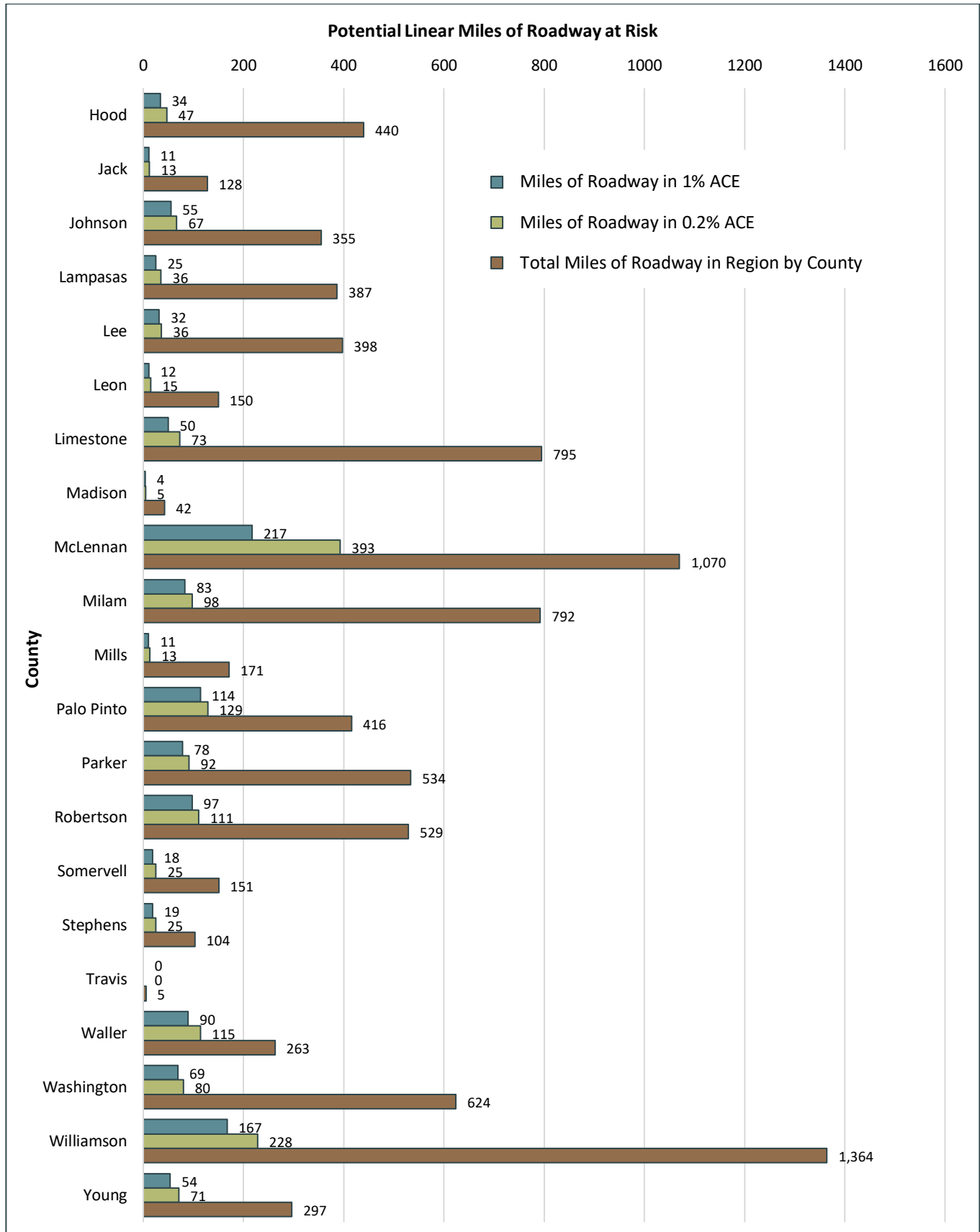


Table 2A - 4. Number of Potentially At-Risk Roadway Crossings per County

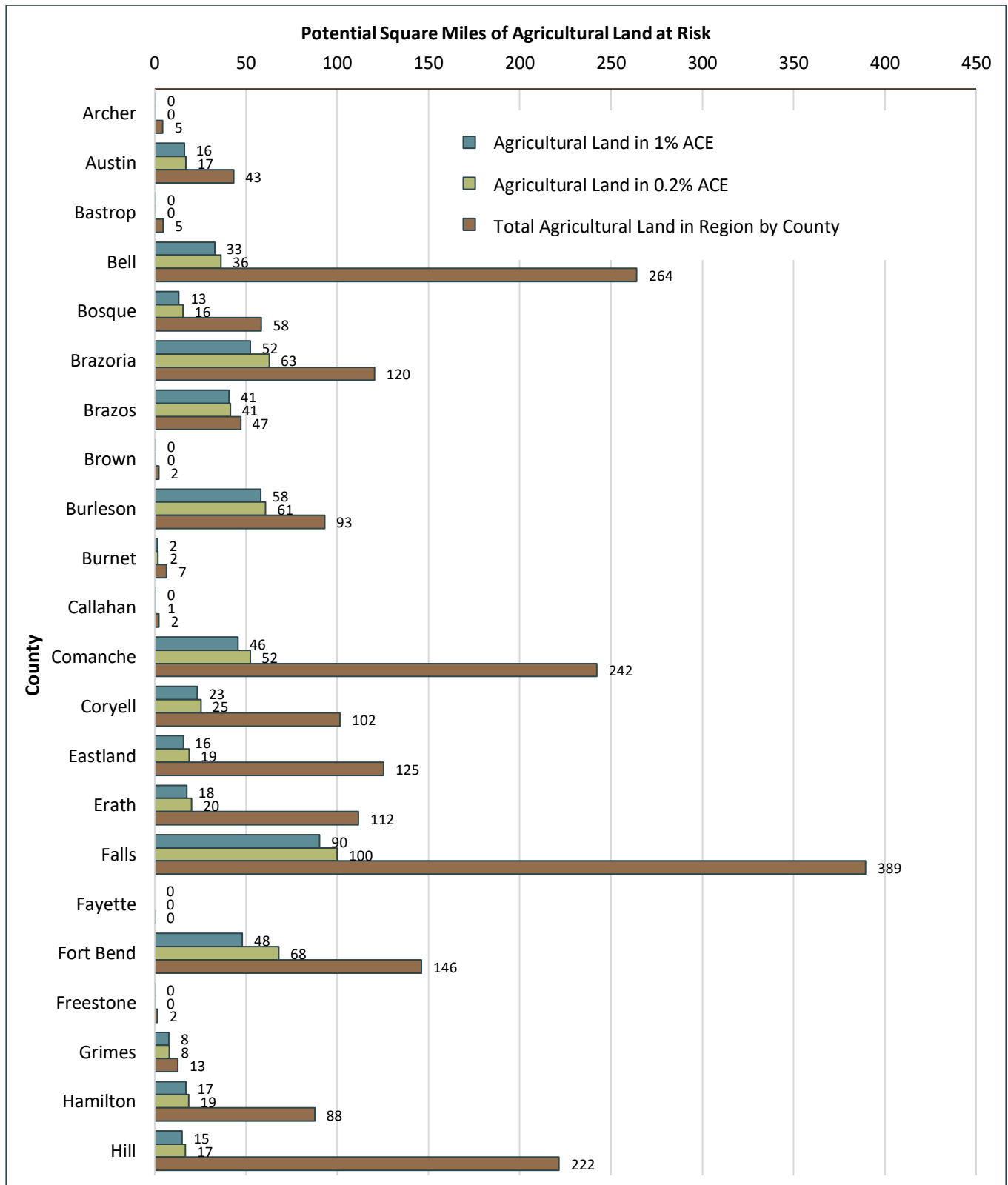
County	Number of Roadway Crossings	County	Number of Roadway Crossings
Archer	0	Hood	164
Austin	223	Jack	41
Bastrop	7	Johnson	162
Bell	548	Lampasas	150
Bosque	184	Lee	146
Brazoria	136	Leon	34
Brazos	320	Limestone	196
Brown	1	Madison	10
Burleson	115	McLennan	821
Burnet	112	Milam	193
Callahan	2	Mills	52
Comanche	201	Palo Pinto	280
Coryell	226	Parker	174
Eastland	204	Robertson	146
Erath	313	Somervell	80
Falls	246	Stephens	38
Fayette	0	Travis	0
Fort Bend	269	Waller	121
Freestone	33	Washington	246
Grimes	95	Williamson	897
Hamilton	190	Young	78
Hill	345	<b>Total</b>	<b>7,799</b>

**Table 2A - 5. Value of Agricultural at Flood Risk**

County	\$ Losses in Existing 100-yr Floodplain	\$ Losses in 500-yr Floodplain	Total Value of County Agriculture
Archer	\$24,826	\$33,101	\$72,439,000
Austin	\$1,046,353	\$1,097,708	\$33,148,000
Bastrop	\$25,237	\$25,237	\$44,650,000
Bell	\$3,330,211	\$3,674,366	\$77,032,000
Bosque	\$612,555	\$713,880	\$45,059,000
Brazoria	\$5,797,728	\$6,937,358	\$79,526,000
Brazos	\$8,215,718	\$8,357,021	\$91,638,000
Brown	\$16,143	\$21,524	\$45,971,000
Burleson	\$6,535,819	\$6,839,549	\$58,590,000
Burnet	\$31,271	\$37,525	\$14,104,000
Callahan	\$16,738	\$20,922	\$31,240,000
Comanche	\$10,407,084	\$11,910,076	\$173,264,000
Coryell	\$1,183,763	\$1,285,374	\$36,276,000
Eastland	\$482,507	\$580,852	\$23,519,000
Erath	\$5,623,195	\$6,485,844	\$312,277,000
Falls	\$23,316,722	\$25,741,248	\$157,940,000
Fayette	\$0	\$0	\$47,382,000
Fort Bend	\$9,363,862	\$13,237,892	\$85,013,000
Freestone	\$7,342	\$7,342	\$47,509,000
Grimes	\$997,879	\$1,010,672	\$68,131,000
Hamilton	\$1,394,823	\$1,526,100	\$62,025,000
Hill	\$2,078,333	\$2,343,355	\$114,001,000
Hood	\$64,924	\$106,239	\$18,943,000
Jack	\$31,722	\$34,895	\$23,176,000
Johnson	\$342,189	\$405,223	\$57,850,000
Lampasas	\$118,264	\$216,399	\$18,440,000
Lee	\$521,148	\$554,412	\$56,943,000
Leon	\$66,706	\$88,941	\$169,404,000
Limestone	\$438,996	\$525,073	\$66,257,000
Madison	\$32,335	\$32,335	\$124,061,000
McLennan	\$11,733,535	\$13,979,956	\$179,666,000
Milam	\$14,662,779	\$15,595,865	\$129,518,000
Mills	\$103,091	\$129,985	\$30,899,000
Palo Pinto	\$299,370	\$328,341	\$43,219,000
Parker	\$167,563	\$191,500	\$65,043,000
Robertson	\$16,201,176	\$16,371,715	\$158,143,000
Somervell	\$15,810	\$25,295	\$4,099,000
Stephens	\$31,814	\$39,044	\$10,624,000
Travis	\$0	\$0	\$28,109,000
Waller	\$3,674,374	\$4,321,271	\$102,369,000

County	\$ Losses in Existing 100-yr Floodplain	\$ Losses in 500-yr Floodplain	Total Value of County Agriculture
Washington	\$1,082,074	\$1,110,549	\$35,615,000
Williamson	\$6,286,375	\$7,470,002	\$114,923,000
Young	\$137,639	\$173,859	\$21,694,000
Total	\$136,519,990	\$153,587,847	\$3,179,729,000

**Figure 2A - 7 Agricultural Land Potentially at Flood Risk**



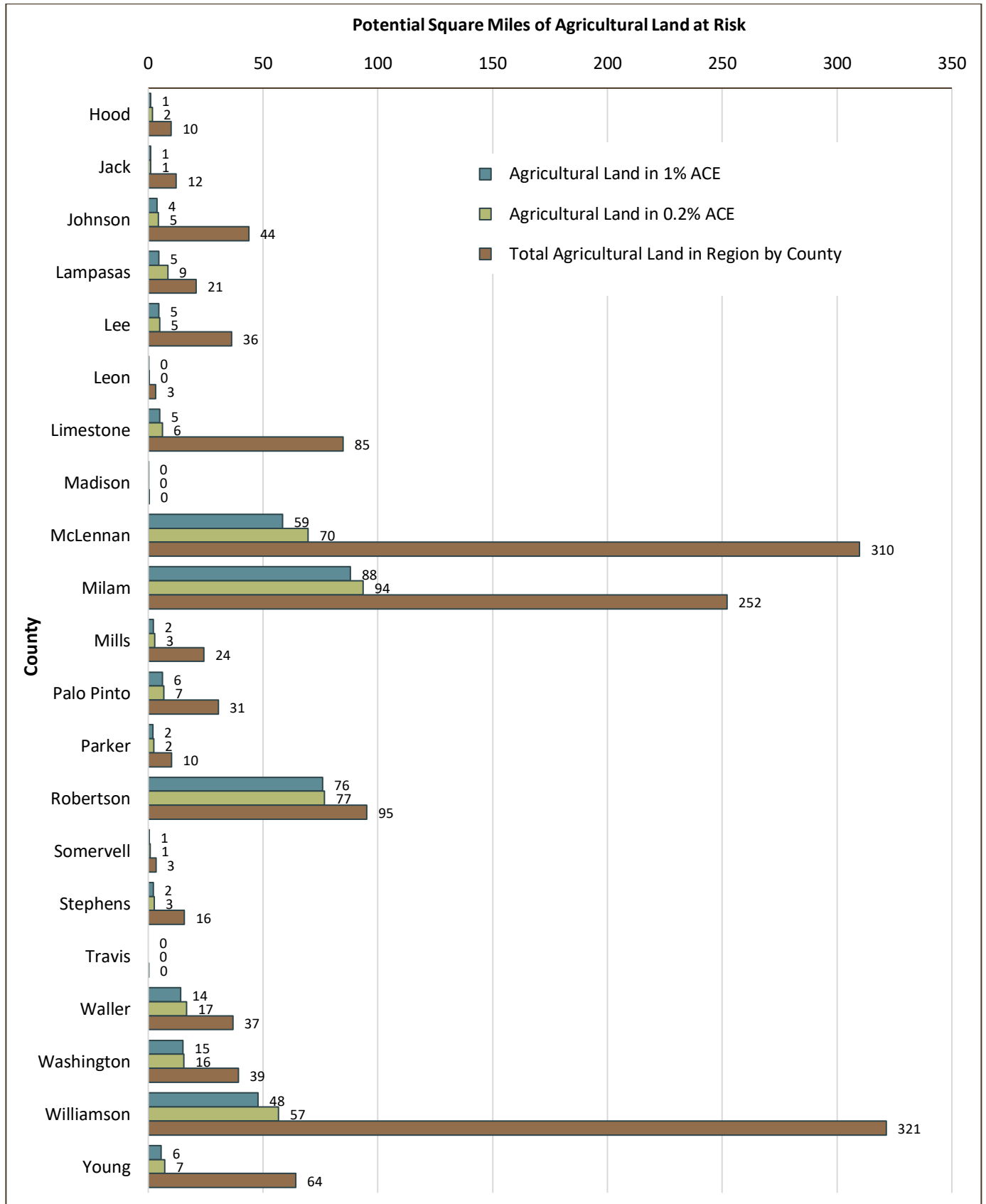


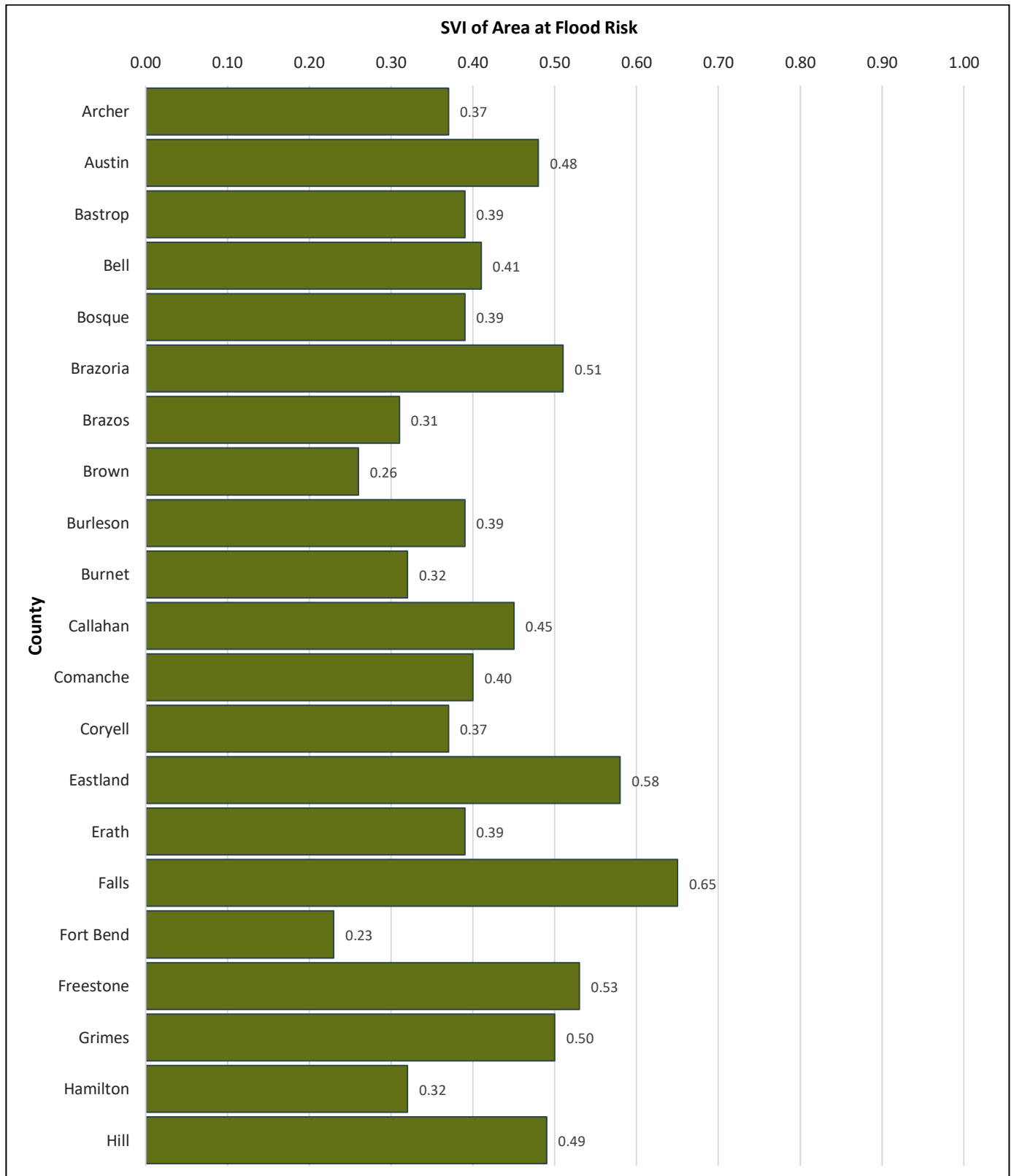


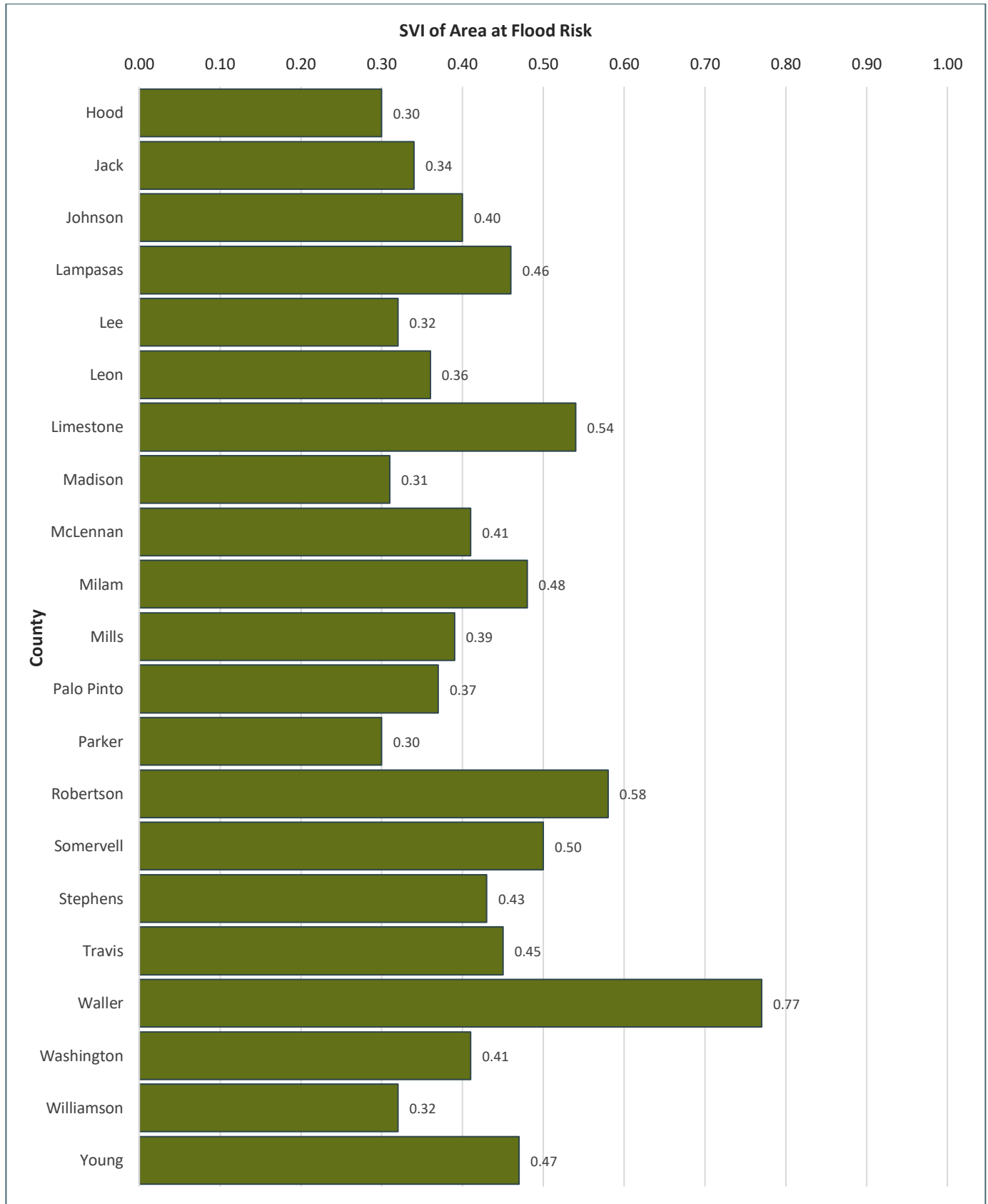
Table 2A - 6. Expected Loss of Function Analysis (1% ACE)

County	Residential Structures in 1% AEP Floodplain	Non-Residential Structures in 1% ACE Floodplain	Roadway Crossings in 1% ACE Floodplain	Health and Human Services in Floodplain	Water Wells in Floodplain	Wastewater Outfalls in Floodplain	Power Plants in Floodplain	Fire Stations in Floodplain	Emergency Shelters in Floodplain
Archer	0	3	0	0	0	0	0	0	0
Austin	992	718	139	0	6	6	0	1	0
Bastrop	10	5	7	0	0	0	0	0	0
Bell	1,422	1342	389	0	3	16	0	1	1
Bosque	417	464	165	0	3	10	3	0	0
Brazoria	10,929	2920	74	4	117	39	0	6	13
Brazos	1,206	425	163	0	5	15	0	0	7
Brown	5	2	1	0	0	0	0	0	0
Burleson	238	301	108	0	6	3	0	1	0
Burnet	191	114	70	0	0	0	0	0	0
Callahan	0	4	2	0	0	0	0	0	0
Comanche	334	313	186	0	0	2	0	0	0
Coryell	670	305	196	0	2	6	0	0	0
Eastland	551	666	145	0	1	5	0	1	0
Erath	375	459	242	0	1	4	0	0	1
Falls	33	137	190	0	0	3	0	0	0
Fayette	0	0	0	0	0	0	0	0	0
Fort Bend	11,612	2665	185	21	116	50	1	10	11
Freestone	31	31	28	0	0	2	0	0	0
Grimes	383	279	71	0	8	8	0	1	1
Hamilton	119	234	169	0	1	1	0	0	0
Hill	263	288	159	0	5	9	0	1	0
Hood	1,524	350	106	1	15	12	0	0	2
Jack	3	22	31	0	0	1	0	0	0
Johnson	790	345	123	0	5	7	0	0	2
Lampasas	298	489	114	1	1	1	0	1	1

County	Residential Structures in 1% AEP Floodplain	Non-Residential Structures in 1% ACE Floodplain	Roadway Crossings in 1% ACE Floodplain	Health and Human Services in Floodplain	Water Wells in Floodplain	Wastewater Outfalls in Floodplain	Power Plants in Floodplain	Fire Stations in Floodplain	Emergency Shelters in Floodplain
Lee	45	159	108	0	0	5	0	0	0
Leon	0	303	32	0	1	3	0	0	0
Limestone	662	393	159	0	4	12	0	1	0
Madison	20	4	7	0	0	0	0	0	0
McLennan	2,192	1534	346	7	6	13	0	3	4
Milam	287	208	178	0	2	3	0	1	0
Mills	9	19	48	0	0	0	0	0	0
Palo Pinto	1,026	935	114	0	3	11	1	2	0
Parker	786	707	104	0	4	6	0	1	0
Robertson	479	449	125	1	3	6	0	0	0
Somervell	194	201	61	2	2	12	0	0	4
Stephens	0	153	34	0	0	1	0	0	0
Travis	0	0	0	0	0	0	0	0	0
Waller	1,007	1030	74	1	2	9	0	1	0
Washington	143	266	187	0	2	3	0	0	2
Williamson	2,758	759	461	4	27	12	0	0	4
Young	642	409	73	0	0	4	0	1	1
<b>Total</b>	<b>42,646</b>	<b>20,410</b>	<b>5,174</b>	<b>42</b>	<b>351</b>	<b>300</b>	<b>5</b>	<b>33</b>	<b>54</b>

**Figure 2A - 8 SVI of Areas at Flood Risk**





## Appendix 2A.2

## Appendix 2A.2: TWDB Table 3 - Existing Condition Flood Risk Summary Table

TWDB Table 3 - Existing Conditions Flood Risk Summary														
	General Information				1% Annual Chance Flood Risk									
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area in Floodplain	Number of Structures in Floodplain	Residential Structures in Floodplain	Population (daytime)	Population (nighttime)	Population	Roadway Crossings	Roadways Segments	Agricultural Areas	Critical Facilities
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(#)	(#)	(miles)	(sqmi)	(#)
1	8	Lower Brazos	Archer	5.9	0.6	3	0	1	3	3	0	0.1	0.3	0
2	8	Lower Brazos	Austin	509.3	151.1	1,710	992	1,714	1,439	1,714	214	104	16.3	3
3	8	Lower Brazos	Bastrop	58.7	5.2	15	10	4	13	13	7	2.7	0.3	0
4	8	Lower Brazos	Bell	1082.2	159.9	2,764	1,422	8,178	6,540	8,178	531	136.8	32.9	10
5	8	Lower Brazos	Bosque	998.3	169.8	881	417	1,014	1,039	1,039	178	104.1	13.3	6
6	8	Lower Brazos	Brazoria	666.7	397.6	13,849	10,929	15,603	26,709	26,709	126	475.5	52.4	24
7	8	Lower Brazos	Brazos	587.9	169.9	1,631	1,206	3,501	4,069	4,069	297	82.8	40.7	4
8	8	Lower Brazos	Brown	19.2	2	7	5	0	2	2	1	0.4	0.3	0
9	8	Lower Brazos	Burleson	675.1	186.8	539	238	722	644	722	114	91.2	58.1	5
10	8	Lower Brazos	Burnet	482.4	47.9	305	191	114	313	313	109	25.6	1.5	0
11	8	Lower Brazos	Callahan	16.2	2.3	4	0	0	2	2	2	1.5	0.4	0
12	8	Lower Brazos	Comanche	919.1	179.1	647	334	874	570	874	200	117.7	45.7	4
13	8	Lower Brazos	Coryell	1052.2	191.3	975	670	5,732	1,771	5,732	219	105.3	23.3	10
14	8	Lower Brazos	Eastland	769.9	139.4	1,217	551	1,525	978	1,525	197	145.3	15.7	10
15	8	Lower Brazos	Erath	1083.1	153.5	834	375	640	869	869	302	96.8	17.6	0
16	8	Lower Brazos	Falls	770.5	178.3	170	33	90	125	125	236	74.5	90.4	0
17	8	Lower Brazos	Fayette	1	0	0	0	0	0	0	0	0	0	0
18	8	Lower Brazos	Fort Bend	608.7	234	14,277	11,612	13,886	26,966	26,966	250	299.1	48.1	28
19	8	Lower Brazos	Freestone	103.2	13.6	62	31	17	43	43	30	6.9	0.1	0
20	8	Lower Brazos	Grimes	455.1	97.7	662	383	1,533	729	1,533	88	36.9	7.8	5
21	8	Lower Brazos	Hamilton	832.7	131.8	353	119	566	432	566	186	75.2	17	2
22	8	Lower Brazos	Hill	661.4	110.7	551	263	661	586	661	345	79.6	14.9	3
23	8	Lower Brazos	Hood	436.1	60.7	1,874	1,524	2,139	3,134	3,134	161	33.8	1.1	1
24	8	Lower Brazos	Jack	260.1	19.9	25	3	18	14	18	41	11.2	1	0
25	8	Lower Brazos	Johnson	371.8	44.3	1,135	790	2,732	2,144	2,732	161	55	3.8	8
26	8	Lower Brazos	Lampasas	559.4	39.1	787	298	3,183	1,503	3,183	139	25.3	4.7	6
27	8	Lower Brazos	Lee	529.7	81.6	204	45	9	59	59	143	31.9	4.7	0
28	8	Lower Brazos	Leon	268.8	41.9	303	0	156	218	218	32	11.6	0.3	0
29	8	Lower Brazos	Limestone	833.3	129	1,055	662	386	853	853	185	49.8	5.1	0
30	8	Lower Brazos	Madison	69.5	15.3	24	20	5	17	17	9	4.2	0.1	0
31	8	Lower Brazos	McLennan	1056.4	217.3	3,726	2,192	18,968	8,314	18,968	807	217.2	58.5	18
32	8	Lower Brazos	Milam	1017.3	225.7	495	287	341	588	588	188	83.2	88	3
33	8	Lower Brazos	Mills	288.6	20.5	28	9	76	6	76	50	10.7	2.3	0
34	8	Lower Brazos	Palo Pinto	981.9	190.9	1,961	1,026	2,649	1,726	2,649	277	113.9	6.2	11
35	8	Lower Brazos	Parker	429.3	80	1,493	786	1,113	2,066	2,066	166	78.1	2.1	1
36	8	Lower Brazos	Robertson	861.7	224.7	928	479	1,676	1,184	1,676	136	97.3	76	5
37	8	Lower Brazos	Somervell	190.8	21.9	395	194	1,350	484	1,350	77	18.2	0.5	10
38	8	Lower Brazos	Stephens	357.1	60.2	153	0	21	59	59	35	18.5	2.2	0
39	8	Lower Brazos	Travis	1.9	0	0	0	0	0	0	0	0	0	0
40	8	Lower Brazos	Waller	322.7	105.5	2,037	1,007	1,306	1,327	1,327	116	89.7	14.2	0
41	8	Lower Brazos	Washington	617.7	130.3	409	143	632	347	632	238	68.9	15.2	4

## Appendix 2A.2: TWDB Table 3 - Existing Condition Flood Risk Summary Table

42	8	Lower Brazos	Williamson	1128.5	182.1	3,517	2,758	4,784	7,495	7,495	834	167.4	47.8	5
43	8	Lower Brazos	Young	407.5	74.5	1,051	642	1,130	942	1,130	73	53.8	5.7	3
<b>Total</b>				<b>23,349</b>	<b>4,688</b>	<b>63,056</b>	<b>42,646</b>	<b>99,049</b>	<b>106,322</b>	<b>129,888</b>	<b>7,500</b>	<b>3,302</b>	<b>837</b>	<b>189</b>

General Information				0.2% Annual Chance Flood Risk										
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area in Floodplain	Number of Structures in Floodplain	Residential Structures in Floodplain	Population (daytime)	Population (nighttime)	Population	Roadway Crossings	Roadway Segments	Agricultural Areas	Critical Facilities
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(#)	(#)	(#)	(miles)	(sqmi)
1	8	Lower Brazos	Archer	5.9	0.7	4	0	1	3	3	0	0.1	0.4	0
2	8	Lower Brazos	Austin	509.3	162.1	2,090	1,211	2,835	1,795	2,835	223	120.2	17.1	4
3	8	Lower Brazos	Bastrop	58.7	5.5	17	10	11	13	13	7	2.8	0.3	0
4	8	Lower Brazos	Bell	1082.2	172	3,266	1,689	8,879	7,492	8,879	548	158.7	36.3	11
5	8	Lower Brazos	Bosque	998.3	187.3	1,148	556	1,673	1,415	1,673	184	125.9	15.5	6
6	8	Lower Brazos	Brazoria	666.7	445	23,918	19,888	42,862	55,016	55,016	136	636.8	62.7	72
7	8	Lower Brazos	Brazos	587.9	178.1	2,305	1,753	7,736	5,936	7,736	320	99.7	41.4	5
8	8	Lower Brazos	Brown	19.2	2.2	7	5	0	2	2	1	0.5	0.4	0
9	8	Lower Brazos	Burleson	675.1	194.3	601	262	825	702	825	115	101.2	60.8	5
10	8	Lower Brazos	Burnet	482.4	56.2	416	262	166	435	435	112	34.1	1.8	0
11	8	Lower Brazos	Callahan	16.2	2.7	4	0	0	2	2	2	1.7	0.5	0
12	8	Lower Brazos	Comanche	919.1	199.5	923	495	1,172	878	1,172	201	145.2	52.3	4
13	8	Lower Brazos	Coryell	1052.2	207.1	1,359	927	7,372	2,958	7,372	226	126.8	25.3	14
14	8	Lower Brazos	Eastland	769.9	156.3	1,883	1,015	2,415	1,714	2,415	204	185.5	18.9	11
15	8	Lower Brazos	Erath	1083.1	169.8	1,088	520	1,263	1,157	1,263	313	117.1	20.3	1
16	8	Lower Brazos	Falls	770.5	195	259	61	802	879	879	246	93	99.8	0
17	8	Lower Brazos	Fayette	1	0	0	0	0	0	0	0	0	0	0
18	8	Lower Brazos	Fort Bend	608.7	295.5	32,762	28,323	48,194	76,202	76,202	269	581.2	68	60
19	8	Lower Brazos	Freestone	103.2	14.8	73	34	19	49	49	33	8.7	0.1	0
20	8	Lower Brazos	Grimes	455.1	104.1	835	459	2,507	1,292	2,507	95	43.3	7.9	5
21	8	Lower Brazos	Hamilton	832.7	142.7	448	158	718	567	718	190	89.9	18.6	2
22	8	Lower Brazos	Hill	661.4	117.3	653	324	927	670	927	345	89.1	16.8	3
23	8	Lower Brazos	Hood	436.1	67.4	2,538	2,101	3,147	4,632	4,632	164	47	1.8	2
24	8	Lower Brazos	Jack	260.1	21.4	30	6	19	17	19	41	12.6	1.1	0
25	8	Lower Brazos	Johnson	371.8	48.8	1,548	1,081	3,694	2,991	3,694	162	66.8	4.5	9
26	8	Lower Brazos	Lampasas	559.4	53.1	1,056	404	4,087	1,994	4,087	150	35.5	8.6	9
27	8	Lower Brazos	Lee	529.7	85.2	234	58	11	78	78	146	36.3	5	0
28	8	Lower Brazos	Leon	268.8	45.7	418	0	195	306	306	34	15.1	0.4	0
29	8	Lower Brazos	Limestone	833.3	142.2	1,585	1,066	521	1,213	1,213	196	72.9	6.1	0
30	8	Lower Brazos	Madison	69.5	16.2	32	25	8	20	20	10	4.9	0.1	0
31	8	Lower Brazos	McLennan	1056.4	251.8	8,448	5,483	48,280	25,699	48,280	821	393	69.7	49
32	8	Lower Brazos	Milam	1017.3	239.6	585	330	400	666	666	193	97.5	93.6	3
33	8	Lower Brazos	Mills	288.6	23.8	34	10	76	6	76	52	13.2	2.9	0
34	8	Lower Brazos	Palo Pinto	981.9	202.8	2,487	1,367	2,754	2,119	2,754	280	129.2	6.8	12
35	8	Lower Brazos	Parker	429.3	88.7	1,747	865	1,446	2,292	2,292	174	91.5	2.4	1
36	8	Lower Brazos	Robertson	861.7	235.7	1,225	687	1,809	1,455	1,809	146	110.9	76.8	5
37	8	Lower Brazos	Somervell	190.8	25.6	572	283	1,853	689	1,853	80	25.1	0.8	11
38	8	Lower Brazos	Stephens	357.1	66.1	182	0	21	64	64	38	24.9	2.7	0

## Appendix 2A.2: TWDB Table 3 - Existing Condition Flood Risk Summary Table

39	8	Lower Brazos	Travis	1.9	0	0	0	0	0	0	0	0	0	0	0	
40	8	Lower Brazos	Waller	322.7	121.5	2,729	1,340	1,786	1,843	1,843	121	114.5	16.7	1		
41	8	Lower Brazos	Washington	617.7	137.7	495	178	721	433	721	246	79.8	15.6	4		
42	8	Lower Brazos	Williamson	1128.5	207.7	6,186	4,992	11,730	14,398	14,398	897	228.4	56.8	11		
43	8	Lower Brazos	Young	407.5	83.8	1,529	941	2,197	1,614	2,197	78	70.9	7.2	5		
<b>Total</b>				<b>23,349</b>	<b>5,173</b>	<b>107,719</b>	<b>79,169</b>	<b>215,132</b>	<b>221,706</b>	<b>261,925</b>	<b>7,799</b>	<b>4,432</b>	<b>945</b>	<b>325</b>		

General Information				Possible Flood Prone Areas											
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area	Number of Structures in Flood Prone Area	Residential Structures in Flood Prone Area	Population (daytime)	Population (nighttime)	Population	Roadway Crossings	Roadway Segments	Agricultural Areas	Critical Facilities	Average SVI of features in floodplain or flood prone area
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(#)	(#)	(#)	(miles)	(sqmi)	(#)
1	8	Lower Brazos	Archer	5.9	0	0	0	0	0	0	0	0	0	0	0.37
2	8	Lower Brazos	Austin	509.3	0	0	0	0	0	0	0	0	0	0	0.48
3	8	Lower Brazos	Bastrop	58.7	0	0	0	0	0	0	0	0	0	0	0.39
4	8	Lower Brazos	Bell	1082.2	2.7	4	0	1	1	1	0	4	0.1	0	0.41
5	8	Lower Brazos	Bosque	998.3	0	0	0	0	0	0	0	0	0	0	0.39
6	8	Lower Brazos	Brazoria	666.7	50.4	12,134	9,381	43,407	31,453	43,407	8	275.7	6.4	62	0.51
7	8	Lower Brazos	Brazos	587.9	0	0	0	0	0	0	0	0	0	0	0.31
8	8	Lower Brazos	Brown	19.2	0	0	0	0	0	0	0	0	0	0	0.26
9	8	Lower Brazos	Burleson	675.1	4.9	46	18	105	82	105	1	13.8	3.6	0	0.39
10	8	Lower Brazos	Burnet	482.4	0	0	0	0	0	0	0	0	0	0	0.32
11	8	Lower Brazos	Callahan	16.2	0	0	0	0	0	0	0	0	0	0	0.45
12	8	Lower Brazos	Comanche	919.1	2.2	21	18	7	20	20	0	8.9	0.4	0	0.4
13	8	Lower Brazos	Coryell	1052.2	0	0	0	0	0	0	0	0	0	0	0.37
14	8	Lower Brazos	Eastland	769.9	0	0	0	0	0	0	0	0	0	0	0.58
15	8	Lower Brazos	Erath	1083.1	0	0	0	0	0	0	0	0	0	0	0.39
16	8	Lower Brazos	Falls	770.5	0	0	0	0	0	0	0	0	0	0	0.65
17	8	Lower Brazos	Fayette	1	0	0	0	0	0	0	0	0	0	0	0
18	8	Lower Brazos	Fort Bend	608.7	46	51,497	50,178	117,923	154,104	154,104	94	547.4	0.9	109	0.23
19	8	Lower Brazos	Freestone	103.2	0	0	0	0	0	0	0	0	0	0	0.53
20	8	Lower Brazos	Grimes	455.1	0	0	0	0	0	0	0	0	0	0	0.5
21	8	Lower Brazos	Hamilton	832.7	0	0	0	0	0	0	0	0	0	0	0.32
22	8	Lower Brazos	Hill	661.4	0	0	0	0	0	0	0	0	0	0	0.49
23	8	Lower Brazos	Hood	436.1	0	0	0	0	0	0	0	0	0	0	0.3
24	8	Lower Brazos	Jack	260.1	0	0	0	0	0	0	0	0	0	0	0.34
25	8	Lower Brazos	Johnson	371.8	0	0	0	0	0	0	0	0	0	0	0.4
26	8	Lower Brazos	Lampasas	559.4	0	0	0	0	0	0	0	0	0	0	0.46
27	8	Lower Brazos	Lee	529.7	0	0	0	0	0	0	0	0	0	0	0.32
28	8	Lower Brazos	Leon	268.8	0	0	0	0	0	0	0	0	0	0	0.36
29	8	Lower Brazos	Limestone	833.3	0	0	0	0	0	0	0	0	0	0	0.54
30	8	Lower Brazos	Madison	69.5	0	0	0	0	0	0	0	0	0	0	0.31
31	8	Lower Brazos	McLennan	1056.4	0	0	0	0	0	0	0	0	0	0	0.41
32	8	Lower Brazos	Milam	1017.3	0	0	0	0	0	0	0	0	0	0	0.48
33	8	Lower Brazos	Mills	288.6	0	0	0	0	0	0	0	0	0	0	0.39
34	8	Lower Brazos	Palo Pinto	981.9	0	0	0	0	0	0	0	0	0	0	0.37
35	8	Lower Brazos	Parker	429.3	0	0	0	0	0	0	0	0	0	0	0.3

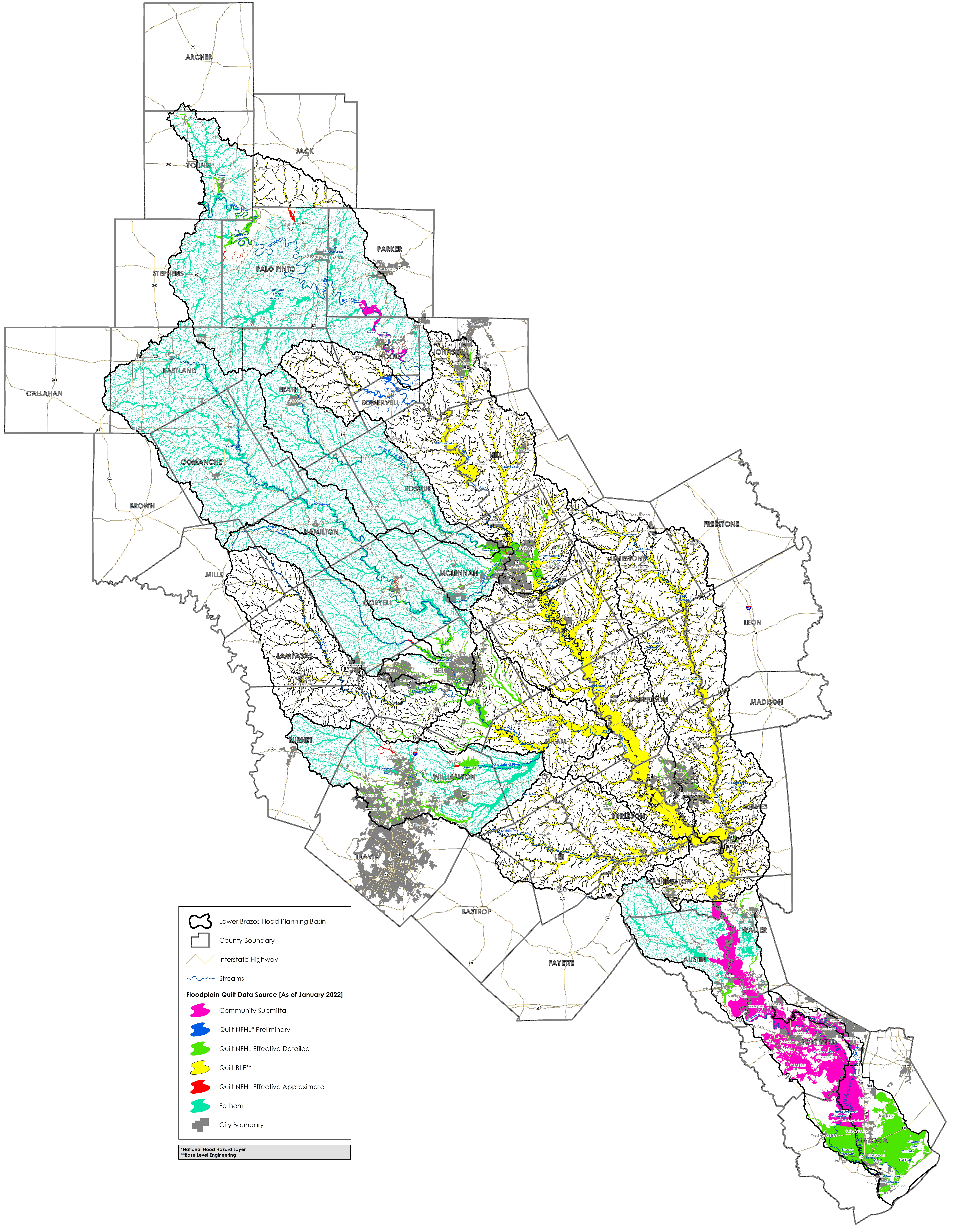


### Appendix 2A.2: TWDB Table 3 - Existing Condition Flood Risk Summary Table

36	8	Lower Brazos	Robertson	861.7	0	0	0	0	0	0	0	0	0	0	0.58
37	8	Lower Brazos	Somervell	190.8	0	0	0	0	0	0	0	0	0	0	0.5
38	8	Lower Brazos	Stephens	357.1	0	0	0	0	0	0	0	0	0	0	0.43
39	8	Lower Brazos	Travis	1.9	0	0	0	0	0	0	0	0	0	0	0.45
40	8	Lower Brazos	Waller	322.7	0	0	0	0	0	0	0	0	0	0	0.77
41	8	Lower Brazos	Washington	617.7	0	0	0	0	0	0	0	0	0	0	0.41
42	8	Lower Brazos	Williamson	1128.5	0	0	0	0	0	0	0	0	0	0	0.32
43	8	Lower Brazos	Young	407.5	0	0	0	0	0	0	0	0	0	0	0.47
<b>Total</b>				<b>23,349</b>	<b>106</b>	<b>63,702</b>	<b>59,595</b>	<b>161,443</b>	<b>185,660</b>	<b>197,637</b>	<b>103</b>	<b>850</b>	<b>11</b>	<b>171</b>	

## Appendix 2A.3





	Lower Brazos Flood Planning Basin
	County Boundary
	Interstate Highway
	Streams
<b>Floodplain Quilt Data Source [As of January 2022]</b>	
	Community Submittal
	Quilt NFHL* Preliminary
	Quilt NFHL Effective Detailed
	Quilt BLE**
	Quilt NFHL Effective Approximate
	Fathom
	City Boundary
*National Flood Hazard Layer	
**Base Level Engineering	



# Appendix 2B – Future Conditions Flood Risk Analysis

# Appendix 2B.1

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Table 2B - 1: Population Projection for Lower Brazos Region from State Water Plan by WUG**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
<b>Archer</b>	County-Other, Archer	16	14	13	13	-19%
<b>Austin</b>	Austin County WSC	1,509	1,747	2,005	2,307	53%
	Bellville	4,062	4,366	4,694	5,079	25%
	County-Other, Austin	13,728	16,491	19,482	23,011	68%
	Sealy	6,742	7,579	8,477	9,529	41%
	Wallis	15	16	18	19	27%
	West End WSC	2,205	2,515	2,801	3,105	41%
<b>Bastrop</b>	County-Other, Bastrop	1,122	1,296	1,522	1,829	63%
<b>Bell</b>	439 WSC	10,220	12,326	14,490	16,701	63%
	Armstrong WSC	2,616	2,809	2,994	3,168	21%
	Bell County WCID 2	2,239	2,535	2,835	3,130	40%
	Bell County WCID 3	7,403	10,072	13,930	16,468	122%
	Bell Milam Falls WSC	5,199	5,596	5,932	6,239	20%
	Belton	21,753	25,571	29,514	33,432	54%
	Central Texas College District	780	781	781	781	0%
	County-Other, Bell	2,696	2,972	3,248	3,526	31%
	Dog Ridge WSC	5,211	6,126	7,070	8,008	54%
	East Bell WSC	3,804	4,457	5,120	5,765	52%
	Elm Creek WSC	4,459	5,205	5,938	6,665	49%
	Fort Hood	30,950	31,210	31,296	31,296	1%
	Harker Heights	31,372	36,879	42,566	48,218	54%
	Holland	1,100	1,132	1,154	1,172	7%
	Jarrell-Schwertner	7,050	8,665	10,606	12,682	80%
	Killeen	144,243	169,560	195,712	221,696	54%
	Little Elm Valley WSC	1,583	1,859	2,147	2,429	53%
	Moffat WSC	4,019	4,242	4,440	4,621	15%
	Morgan's Point Resort	5,077	6,110	7,187	8,261	63%
	Pendleton WSC	2,284	2,430	2,564	2,691	18%
	Rogers	1,343	1,450	1,551	1,648	23%
	Salado WSC	6,001	6,648	7,288	7,913	32%
	Temple	81,736	96,082	110,899	125,626	54%
The Grove WSC	1,399	1,497	1,728	1,958	40%	
Troy	2,049	2,321	2,598	2,869	40%	
West Bell County WSC	4,911	5,321	5,348	5,348	9%	
<b>Bosque</b>	Childress Creek WSC	2,226	2,433	2,537	2,602	17%
	Clifton	3,859	4,215	4,398	4,513	17%
	County-Other, Bosque	5,644	6,189	6,441	6,564	16%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
	Highland Park WSC	585	638	669	693	18%
<b>Bosque</b>	Meridian	1,764	1,927	2,011	2,062	17%
	Mustang Valley WSC	2,131	2,330	2,429	2,492	17%
	Smith Bend WSC	751	820	856	878	17%
	Valley Mills	1,393	1,528	1,602	1,653	19%
<b>Brazoria</b>	Angleton	18,628	18,769	18,900	19,037	2%
	Brazoria	347	357	365	372	7%
	Clute	11,508	11,900	12,328	12,782	11%
	County-Other, Brazoria	28,424	38,413	48,022	58,852	107%
	Danbury	1,722	1,722	1,722	1,723	0%
	Freeport	13,184	13,985	14,712	15,393	17%
	Lake Jackson	26,948	27,725	28,551	29,450	9%
	Oyster Creek	1,170	1,193	1,222	1,258	8%
	Quadvest	2,512	3,303	4,238	5,341	113%
	Richwood	3,785	3,941	4,097	4,264	13%
	Surfside Beach	723	826	826	826	14%
	TDCJ Ramsey Area	1,863	1,863	1,863	1,863	0%
	Varner Creek UD	1,509	1,512	1,514	1,516	0%
	West Columbia	2,582	2,593	2,606	2,621	2%
<b>Brazos</b>	Bryan	84,196	99,959	118,713	140,827	67%
	College Station	100,854	129,102	165,261	195,852	94%
	County-Other, Brazos	2,687	2,687	2,687	2,687	0%
	Texas A&M University	11,851	12,000	12,000	12,000	1%
	Wellborn SUD	21,608	30,722	34,324	38,362	78%
	Wickson Creek SUD	15,833	18,122	20,414	23,119	46%
<b>Brown</b>	County-Other, Brown	45	46	46	46	2%
<b>Burleson</b>	Caldwell	4,896	5,060	5,276	5,312	8%
	County-Other, Burleson	5,502	6,273	6,488	7,021	28%
	Deanville WSC	3,186	3,244	3,379	3,357	5%
	Milano WSC	3,615	3,859	4,021	4,206	16%
	Snook	865	930	970	1,013	17%
	Somerville	1,530	1,686	1,848	2,033	33%
<b>Burnet</b>	Bertram	1,729	2,093	2,397	2,691	56%
	County-Other, Burnet	7,287	8,294	8,409	9,306	28%
<b>Callahan</b>	County-Other, Callahan	74	83	87	89	20%
<b>Comanche</b>	Comanche	4,491	4,670	4,791	4,947	10%
	County-Other, Comanche	7,613	7,915	8,118	8,384	10%
	De Leon	2,296	2,387	2,448	2,529	10%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
<b>Coryell</b>	Copperas Cove	36,253	41,386	47,053	52,061	44%
	Coryell City Water Supply District	5,712	6,535	7,415	8,203	44%
<b>Coryell</b>	County-Other, Coryell	2,474	4,863	7,600	9,943	302%
	Flat WSC	467	530	601	662	42%
	Fort Gates WSC	1,913	2,173	2,461	2,714	42%
	Gatesville	17,489	19,858	22,494	24,799	42%
	Mountain WSC	1,639	1,861	2,109	2,326	42%
	Multi County WSC	3,021	3,370	3,737	4,061	34%
	Oglesby	645	732	829	914	42%
<b>Eastland</b>	Cisco	2,897	2,959	2,962	2,964	2%
	County-Other, Eastland	4,532	4,632	4,636	4,636	2%
	Eastland	3,946	4,032	4,035	4,035	2%
	Gorman	1,082	1,106	1,107	1,107	2%
	Ranger	2,654	2,712	2,715	2,715	2%
	Rising Star	867	886	887	887	2%
	Staff WSC	1,684	1,720	1,722	1,722	2%
<b>Erath</b>	County-Other, Erath	18,611	20,849	22,698	24,810	33%
	Dublin	4,449	4,833	5,198	5,199	17%
	Stephenville	19,044	21,209	23,037	24,781	30%
<b>Falls</b>	Cego-Durango WSC	1,054	1,108	1,119	1,093	4%
	County-Other, Falls	6,108	6,379	6,083	5,796	-5%
	Marlin	6,772	7,115	7,189	7,020	4%
	Rosebud	1,553	1,632	1,648	1,610	4%
	West Brazos WSC	2,442	2,598	2,692	2,740	12%
<b>Fayette</b>	County-Other, Fayette	23	25	28	29	26%
<b>Fort Bend</b>	County-Other, Fort Bend	68,699	94,246	118,641	169,937	147%
	First Colony MUD 9	10,032	10,700	10,700	10,700	7%
	Fort Bend County FWSD 2	2,515	3,122	3,590	4,054	61%
	Fort Bend County MUD 115	1,890	2,099	2,099	2,099	11%
	Fort Bend County MUD 116	3,965	4,500	5,287	5,902	49%
	Fort Bend County MUD 121	3,762	3,762	3,762	3,762	0%
	Fort Bend County MUD 128	4,302	4,302	4,302	4,302	0%
	Fort Bend County MUD 129	4,671	4,671	4,671	4,671	0%
	Fort Bend County MUD 140	3,000	3,000	3,000	3,000	0%
	Fort Bend County MUD 149	1,969	2,447	2,814	2,814	43%
	Fort Bend County MUD 152	769	955	1,098	1,098	43%
	Fort Bend County MUD 155	2,366	2,938	3,379	3,379	43%
	Fort Bend County MUD 158	1,242	1,542	1,773	1,773	43%



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
	Fort Bend County MUD 162	2,740	3,402	3,912	3,912	43%
	Fort Bend County MUD 187	3,632	3,632	3,632	3,632	0%
	Fort Bend County MUD 23	11,694	12,465	12,885	13,306	14%
<b>Fort Bend</b>	Fort Bend County MUD 24	1,447	1,797	2,066	2,066	43%
	Fort Bend County MUD 25	11,954	12,068	12,254	12,474	4%
	Fort Bend County MUD 42	4,530	5,547	5,547	5,547	22%
	Fort Bend County MUD 46	2,207	2,704	3,191	3,191	45%
	Fort Bend County MUD 47	1,417	1,735	2,048	2,048	45%
	Fort Bend County MUD 48	3,493	3,493	3,493	3,493	0%
	Fort Bend County MUD 49	1,354	1,657	1,657	1,657	22%
	Fort Bend County MUD 5	3,333	4,084	4,084	4,084	23%
	Fort Bend County MUD 81	2,509	2,671	2,889	3,108	24%
	Fort Bend County WCID 2	24,919	30,941	35,581	40,175	61%
	Fort Bend County WCID 3	912	1,132	1,132	1,132	24%
	Fulshear	16,311	24,554	25,728	25,728	58%
	Meadowcreek MUD	968	1,185	1,185	1,185	22%
	Missouri City	2,540	3,153	3,626	4,095	61%
	Needville	1,305	1,322	1,344	1,378	6%
	North Fort Bend Water Authority	55,695	76,524	92,820	102,272	84%
	Palmer Plantation MUD 1	2,179	2,667	2,667	2,667	22%
	Palmer Plantation MUD 2	1,502	1,502	1,502	1,502	0%
	Pecan Grove MUD 1	13,078	13,107	13,159	13,203	1%
	Plantation MUD	4,084	4,084	4,084	4,084	0%
	Quail Valley UD	12,119	14,838	17,516	17,516	45%
	Richmond	12,916	13,426	14,072	14,973	16%
	Rosenberg	40,384	42,560	44,928	47,378	17%
	Royal Valley Utilities	2,046	2,539	2,919	2,919	43%
	Sienna Plantation	21,743	27,809	37,852	47,894	120%
	Sugar Land	124,493	134,048	140,618	147,048	18%
TDCJ Jester Units	3,675	3,675	3,675	3,675	0%	
Thunderbird UD	5,679	6,952	6,952	6,952	22%	
<b>Freestone</b>	County-Other, Freestone	473	470	432	539	14%
	Point Enterprise WSC	886	936	977	1,018	15%
	South Freestone County WSC	361	372	405	550	52%
	Teague	2,930	3,125	4,165	5,508	88%
<b>Grimes</b>	County-Other, Grimes	2,886	2,952	2,961	2,951	2%
	Dobbin Plantersville WSC	443	583	764	1,000	126%
	G & W WSC	3,822	5,155	6,413	7,772	103%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
	Navasota	7,529	7,771	7,955	8,149	8%
	TDCJ Luther Units	1,478	1,615	1,720	1,830	24%
	TDCJ W Pack Unit	1,687	1,845	1,964	2,089	24%
<b>Hamilton</b>	County-Other, Hamilton	3,609	3,657	3,657	3,657	1%
<b>Hamilton</b>	Hamilton	2,991	3,047	3,047	3,047	2%
	Hico	1,387	1,406	1,406	1,406	1%
<b>Hill</b>	Birome WSC	1,278	1,362	1,417	1,473	15%
	Brandon Irene WSC	1,109	1,194	1,260	1,334	20%
	Chatt WSC	654	695	726	754	15%
	County-Other, Hill	1,546	1,698	1,678	1,647	7%
	Files Valley WSC	845	940	1,030	1,148	36%
	Gholson WSC	2,437	2,708	2,947	3,187	31%
	Hilco United Services	5,264	5,671	5,966	6,286	19%
	Hill County WSC	3,446	3,669	3,820	3,976	15%
	Hillsboro	9,313	9,916	10,324	10,744	15%
	Itasca	1,528	1,628	1,694	1,762	15%
	Whitney	2,570	2,624	2,732	2,843	11%
	Woodrow Osceola WSC	3,406	3,625	3,775	3,929	15%
<b>Hood</b>	Acton MUD	19,608	31,620	39,531	43,668	123%
	County-Other, Hood	25,275	19,707	16,408	16,204	-36%
	Granbury	14,656	17,791	20,037	21,972	50%
	Lipan	946	1,098	1,206	1,299	37%
	Tolar	1,026	1,230	1,377	1,502	46%
<b>Jack</b>	County-Other, Jack	2,158	2,303	2,393	2,441	13%
<b>Johnson</b>	Bethesda WSC	864	987	1,113	1,246	44%
	Burleson	2	2	2	3	50%
	Cleburne	38,219	42,563	51,235	60,119	57%
	County-Other, Johnson	1,598	1,936	1,447	792	-50%
	Double Diamond Utilities	1,985	2,065	2,150	2,214	12%
	Godley	1,009	1,139	1,271	1,418	41%
	Johnson County SUD	12,338	13,495	15,058	16,622	35%
	Keene	2,725	3,191	3,672	4,199	54%
	Parker WSC	2,821	3,483	4,163	4,906	74%
Rio Vista	1,117	1,366	1,623	1,906	71%	
<b>Lampasas</b>	Corix Utilities Texas Inc	4,703	4,977	5,237	5,500	17%
	County-Other, Lampasas	856	893	787	676	-21%
	Kempner WSC	15,764	17,568	19,051	20,523	30%
	Lampasas	7,852	8,680	9,320	9,973	27%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
Lee	Aqua WSC	2,261	2,913	3,737	4,834	114%
	County-Other, Lee	992	1,114	1,185	1,208	22%
	Giddings	3,266	3,672	3,906	3,991	22%
	Lee County WSC	5,797	6,643	7,272	7,774	34%
	Lexington	1,373	1,545	1,642	1,679	22%
Leon	Concord-Robbins WSC	3,626	3,782	3,910	4,084	13%
	County-Other, Leon	290	278	252	243	-16%
	Hilltop Lakes WSC	1,298	1,392	1,468	1,573	21%
	Jewett	665	790	892	1,032	55%
	Normangee	514	551	581	622	21%
	Southeast WSC	52	55	58	63	21%
Limestone	Bistone Municipal Water Supply District	391	410	423	443	13%
	Coolidge	788	874	943	1,020	29%
	County-Other, Limestone	2,975	2,877	2,860	2,908	-2%
	Groesbeck	4,377	4,419	4,453	4,490	3%
	Mexia	5,593	6,237	6,760	7,335	31%
	Post Oak SUD	207	222	235	255	23%
	Prairie Hill WSC	1,457	1,555	1,639	1,725	18%
	SLC WSC	1,229	1,302	1,361	1,426	16%
	Tri County SUD	2,127	2,236	2,259	2,206	4%
Madison	White Rock WSC	2,130	2,255	2,356	2,468	16%
	County-Other, Madison	848	910	964	1,027	21%
	Madison County WSC	31	33	35	37	19%
McLennan	North Zulch MUD	214	230	244	260	21%
	Axtell WSC	1,378	1,487	1,584	1,681	22%
	Bellmead	10,398	11,037	11,602	12,170	17%
	Bold Springs WSC	1,935	2,087	2,219	2,350	21%
	Bruceville Eddy	5,583	6,023	6,414	6,806	22%
	Central Bosque WSC	856	925	985	1,045	22%
	Chalk Bluff WSC	2,646	2,646	2,646	2,646	0%
	County-Other, McLennan	9,912	8,377	7,333	6,004	-39%
	Crawford	727	739	749	759	4%
	Cross Country WSC	3,259	3,365	3,431	3,486	7%
	East Crawford WSC	967	1,044	1,111	1,179	22%
	EOL WSC	1,894	2,044	2,177	2,311	22%
	H & H WSC	1,607	1,734	1,846	1,961	22%
	Hewitt	17,373	19,949	22,225	24,513	41%
Hilltop WSC	819	885	941	999	22%	

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
	Lacy Lakeview	6,831	7,487	8,064	8,647	27%
	Leroy Tours Gerald WSC	1,371	1,480	1,576	1,673	22%
	Levi WSC	912	984	1,047	1,112	22%
	Lorena	1,968	2,218	2,440	2,662	35%
	Mart	2,375	2,566	2,734	2,903	22%
	McGregor	5,234	5,480	5,696	5,915	13%
<b>McLennan</b>	McLennan County WCID 2	1,762	1,902	2,025	2,149	22%
	Moody	1,567	1,690	1,801	1,911	22%
	North Bosque WSC	2,229	2,743	3,197	3,653	64%
	Riesel	1,241	1,279	1,314	1,348	9%
	Robinson	12,851	15,380	17,613	19,859	55%
	Ross WSC	2,336	2,520	2,684	2,849	22%
	Spring Valley WSC	1,934	2,088	2,223	2,359	22%
	Texas State Technical College	579	624	664	704	22%
	Waco	132,511	142,779	151,845	160,966	21%
	West	2,706	2,807	2,896	2,986	10%
	Windsor Water	636	687	731	776	22%
	Woodway	9,045	9,762	10,396	11,033	22%
<b>Milam Milam</b>	Cameron	5,904	6,254	6,504	6,820	16%
	County-Other, Milam	1,050	1,111	1,154	1,213	16%
	North Milam WSC	1,427	1,511	1,572	1,649	16%
	Rockdale	6,004	6,363	6,613	6,934	15%
	Salem Elm Ridge WSC	841	892	928	973	16%
	Southwest Milam WSC	9,155	10,090	10,990	11,997	31%
	Thorndale	1,418	1,502	1,563	1,639	16%
<b>Mills</b>	County-Other, Mills	1,068	1,103	1,133	1,177	10%
	Goldthwaite	93	96	99	102	10%
<b>Palo Pinto</b>	County-Other, Palo Pinto	3,022	3,184	3,283	3,335	10%
	Gordon	667	717	752	783	17%
	Lake Palo Pinto Area WSC	1,004	1,077	1,127	1,173	17%
	Mineral Wells	17,927	19,056	19,804	20,487	14%
	North Rural WSC	2,401	2,576	2,695	2,804	17%
	Palo Pinto WSC	864	928	971	1,010	17%
	Possum Kingdom WSC	2,026	2,172	2,269	2,359	16%
	Santo SUD	2,177	2,371	2,501	2,651	22%
	Sportsman's World MUD	123	132	138	144	17%
	Strawn	753	808	845	879	17%
Sturdivant Progress WSC	2,606	2,807	2,942	3,079	18%	

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

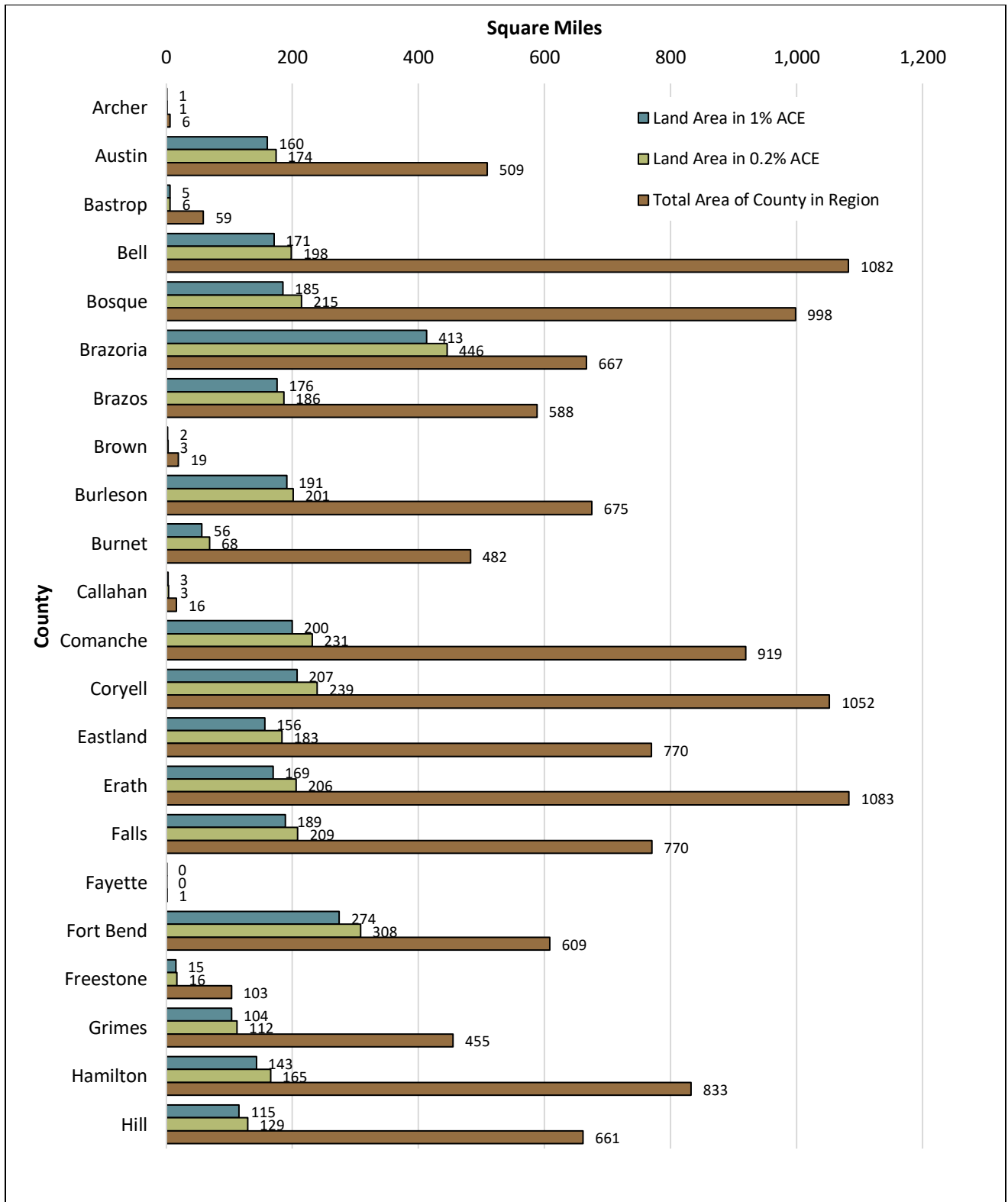
County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
<b>Parker</b>	County-Other, Parker	13,870	13,490	11,031	17,454	26%
	Horseshoe Bend Water System	1,655	2,112	2,409	3,035	83%
	Parker County SUD	6,822	10,812	14,804	18,800	176%
	Weatherford	4,512	5,404	5,808	9,715	115%
<b>Robertson</b>	Bethany Hearne WSC	323	354	384	414	28%
	Bremond	989	1,085	1,174	1,266	28%
	Calvert	1,193	1,193	1,193	1,193	0%
<b>Robertson</b>	County-Other, Robertson	1,354	1,354	1,354	1,354	0%
	Franklin	1,851	2,031	2,357	2,735	48%
	Hearne	4,474	5,454	6,648	6,648	49%
	Robertson County WSC	2,851	3,458	4,071	4,806	69%
	Twin Creek WSC	1,496	1,643	1,776	1,918	28%
<b>Somervell</b>	County-Other, Somervell	5,290	5,909	6,354	6,700	27%
	Glen Rose	2,836	3,169	3,409	3,593	27%
	Somervell County Water District	1,357	1,516	1,631	1,720	27%
<b>Stephens</b>	County-Other, Stephens	62	63	65	67	8%
	Stephens Regional SUD	421	436	441	445	6%
<b>Travis</b>	County-Other, Travis	52	52	52	52	0%
	Windermere Utility	179	179	179	179	0%
<b>Waller Waller</b>	Brookshire MWD	5,279	6,457	7,762	9,186	74%
	County-Other, Harris	-	17,910	21,305	25,009	68%
	County-Other, Waller	14,862	7,843	9,081	10,433	55%
	Hempstead	6,726	2,056	2,448	2,876	69%
	Pattison WSC	1,702	4,218	5,443	6,781	118%
	Prairie View	3,113	3,206	3,206	3,206	0%
<b>Washington</b>	Prairie View A&M University	3,206	20,048	21,155	22,256	21%
	Brenham	18,423	2,117	2,204	2,288	15%
	Central Washington County WSC	1,989	981	1,022	1,062	15%
	Chappell Hill WSC	922	10,874	10,994	11,108	4%
<b>Williamson</b>	County-Other, Washington	10,671	61,852	71,878	79,159	52%
	Austin	51,939	2,091	2,330	2,575	37%
	Bartlett	1,874	6,419	6,419	6,419	0%
	Block House MUD	6,419	20,248	20,248	20,248	0%
	Brushy Creek MUD	20,248	99,506	100,362	100,362	11%
	Cedar Park	90,115	26,167	60,995	93,270	136%
	County-Other, Williamson	39,467	5,793	5,793	5,793	0%
	Fern Bluff MUD	5,793	1,439	1,542	1,653	22%
	Florence	1,357	161,021	201,465	249,196	104%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

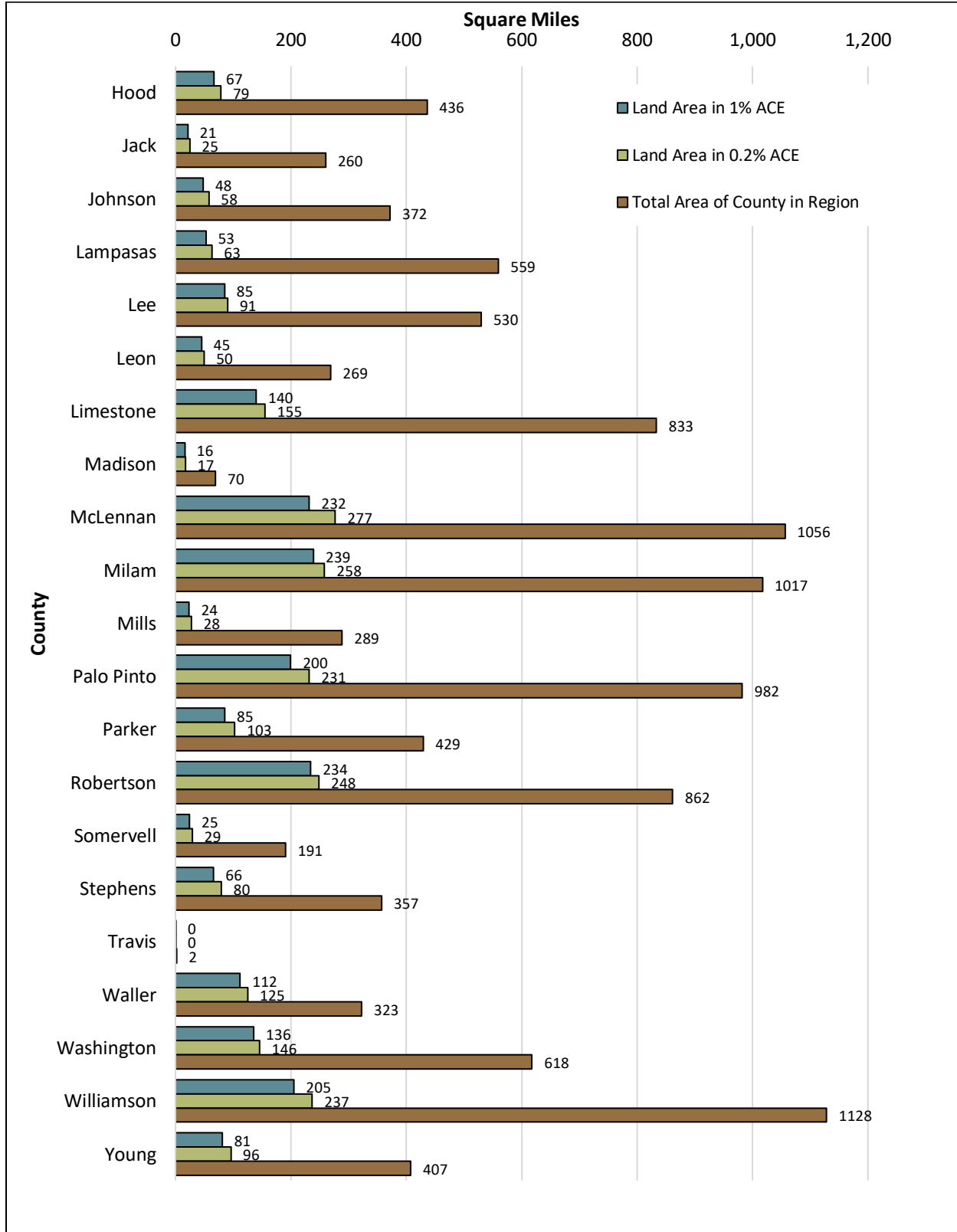
County	Water User Group Name	2020	2030	2040	2050	30-Year Growth
	Georgetown	122,109	1,659	1,796	1,942	25%
	Granger	1,551	35,646	37,963	56,194	224%
	Hutto	17,326	29,522	37,022	45,097	92%
	Jonah Water SUD	23,499	95,893	119,866	143,840	153%
	Leander	56,860	2,592	3,250	3,959	92%
	Liberty Hill	2,063	9,527	11,310	13,372	71%
	Manville WSC	7,822	7,313	7,313	7,313	0%
	North Austin MUD 1	7,313	3,210	3,210	3,210	37%
<b>Williamson</b>	Paloma Lake MUD 1	2,339	2,469	2,469	2,469	20%
	Paloma Lake MUD 2	2,058	22	27	32	78%
	Pflugerville	18	154,234	193,457	238,864	93%
	Round Rock	123,650	6,194	6,495	6,795	15%
	Sonterra MUD	5,895	18,728	20,589	22,594	31%
	Taylor	17,233	714	714	714	0%
	Walsh Ranch MUD	714	250	250	250	0%
	Wells Branch MUD	250	3,402	3,402	3,402	0%
	Williamson County MUD 10	3,402	4,084	4,094	4,104	1%
	Williamson County MUD 11	4,074	2,724	2,724	2,724	0%
	Williamson County MUD 9	2,724	6,665	6,907	7,148	15%
Williamson County WSID 3	6,235	4,203	4,203	4,203	0%	
<b>Young</b>	Williamson Travis Counties MUD 1	4,203	244	246	248	3%
	Baylor SUD	240	1,786	1,900	2,016	24%
	County-Other, Young	1,631	3,304	3,421	3,545	13%
	Fort Belknap WSC	3,139	10,242	10,626	11,032	14%
	Graham	9,708	3,485	3,568	3,655	8%

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 1 Land Area Potentially at Future Flood Risk**



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**



**Table 2B - 2. Lower Brazos Region Area in Future Flood Hazard Area by County**



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Square Miles of County in Region Exposed to 1% ACE Flood Event		Square Miles of County in Region Exposed to 0.2% ACE Flood Event*		Square Miles of Flood Prone Area of County in Region
	Riverine	Coastal	Riverine	Coastal	Riverine
Archer	0.7	0.0	0.1	0.0	0.0
Austin	156	0.0	18	0.0	0.0
Bastrop	5.5	0.0	0.0	0.0	0.0
Bell	168	0.0	32	0.0	2.1
Bosque	183	0.0	32	0.0	0.0
Brazoria	183	224	18	21	50
Brazos	175	0.0	12	0.0	0.0
Brown	2.2	0.0	0.5	0.0	0.0
Burleson	189	0.0	7.3	0.0	4.9
Burnet	56	0.0	12	0.0	0.0
Callahan	2.7	0.0	0.6	0.0	0.0
Comanche	196	0.0	35	0.0	2.1
Coryell	207	0.0	32	0.0	0.0
Eastland	156	0.0	28	0.0	0.0
Erath	169	0.0	37	0.0	0.0
Falls	185	0.0	23	0.0	0.0
Fayette	0.0	0.0	0.0	0.0	0.0
Fort Bend	247	0.0	61	0.0	46
Freestone	15	0.0	1.6	0.0	0.0
Grimes	102	0.0	11	0.0	0.0
Hamilton	143	0.0	23	0.0	0.0
Hill	114	0.0	16	0.0	0.0
Hood	65	0.0	14	0.0	0.0
Jack	21	0.0	3.7	0.0	0.0
Johnson	47	0.0	11	0.0	0.0
Lampasas	53	0.0	10	0.0	0.0
Lee	85	0.0	0.4	0.0	0.0
Leon	45	0.0	5.4	0.0	0.0
Limestone	136	0.0	19	0.0	0.0
Madison	16	0.0	1.2	0.0	0.0
McLennan	227	0.0	50	0.0	0.0
Milam	238	0.0	19	0.0	0.0
Mills	24	0.0	4.0	0.0	0.0
Palo Pinto	195	0.0	37	0.0	0.0
Parker	82	0.0	21	0.0	0.0
Robertson	231	0.0	17	0.0	0.0
Somervell	24	0.0	6.4	0.0	0.0
Stephens	65	0.0	15	0.0	0.0

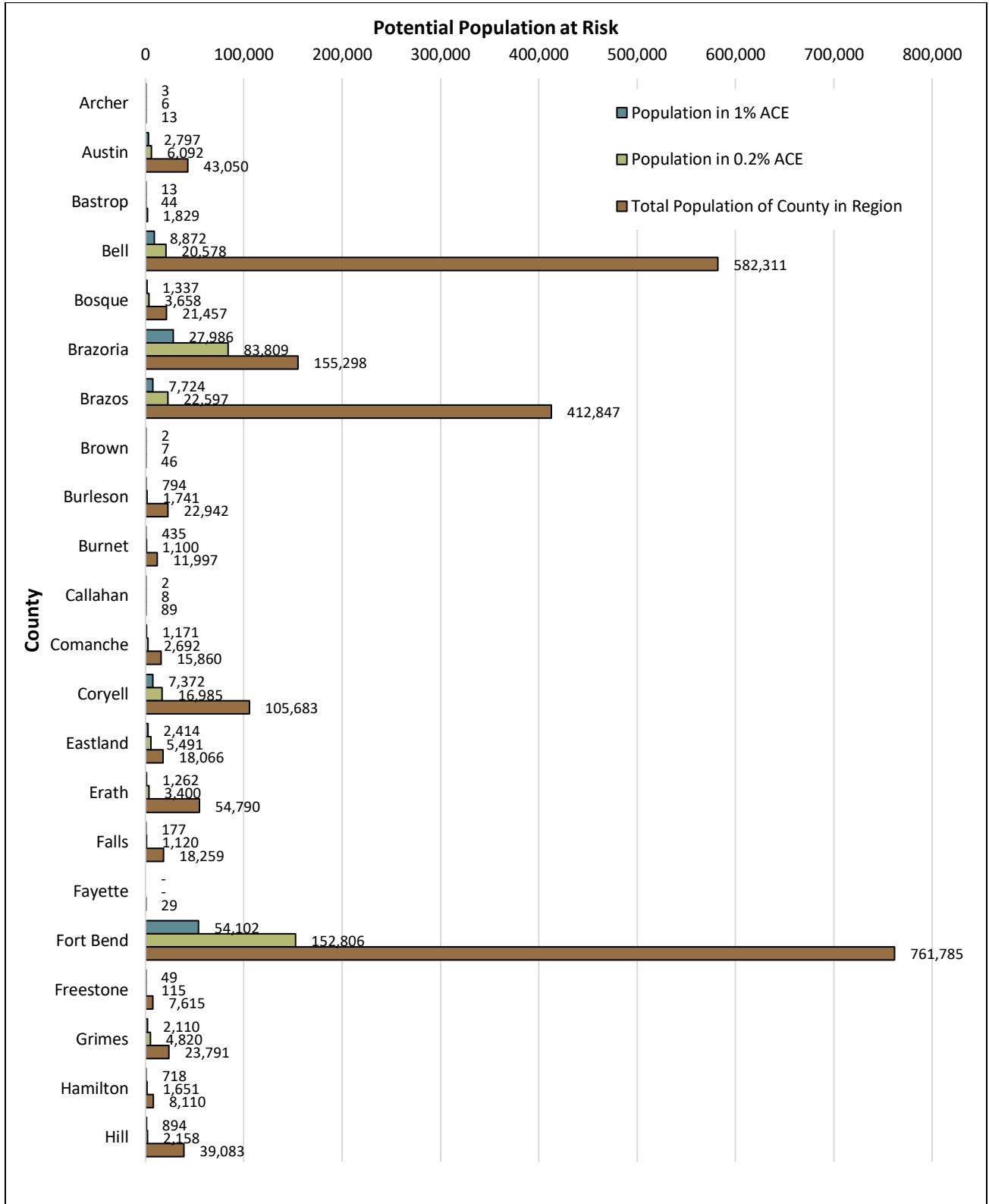
**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

County	Square Miles of County in Region Exposed to 1% ACE Flood Event		Square Miles of County in Region Exposed to 0.2% ACE Flood Event*		Square Miles of Flood Prone Area of County in Region
	Riverine	Coastal	Riverine	Coastal	Riverine
Travis	0.0	0.0	0.0	0.0	0.0
Waller	107	0.0	18	0.0	0.0
Washington	135	0.0	10	0.0	0.0
Williamson	203	0.0	34	0.0	0.0
Young	78	0.0	19	0.0	0.0

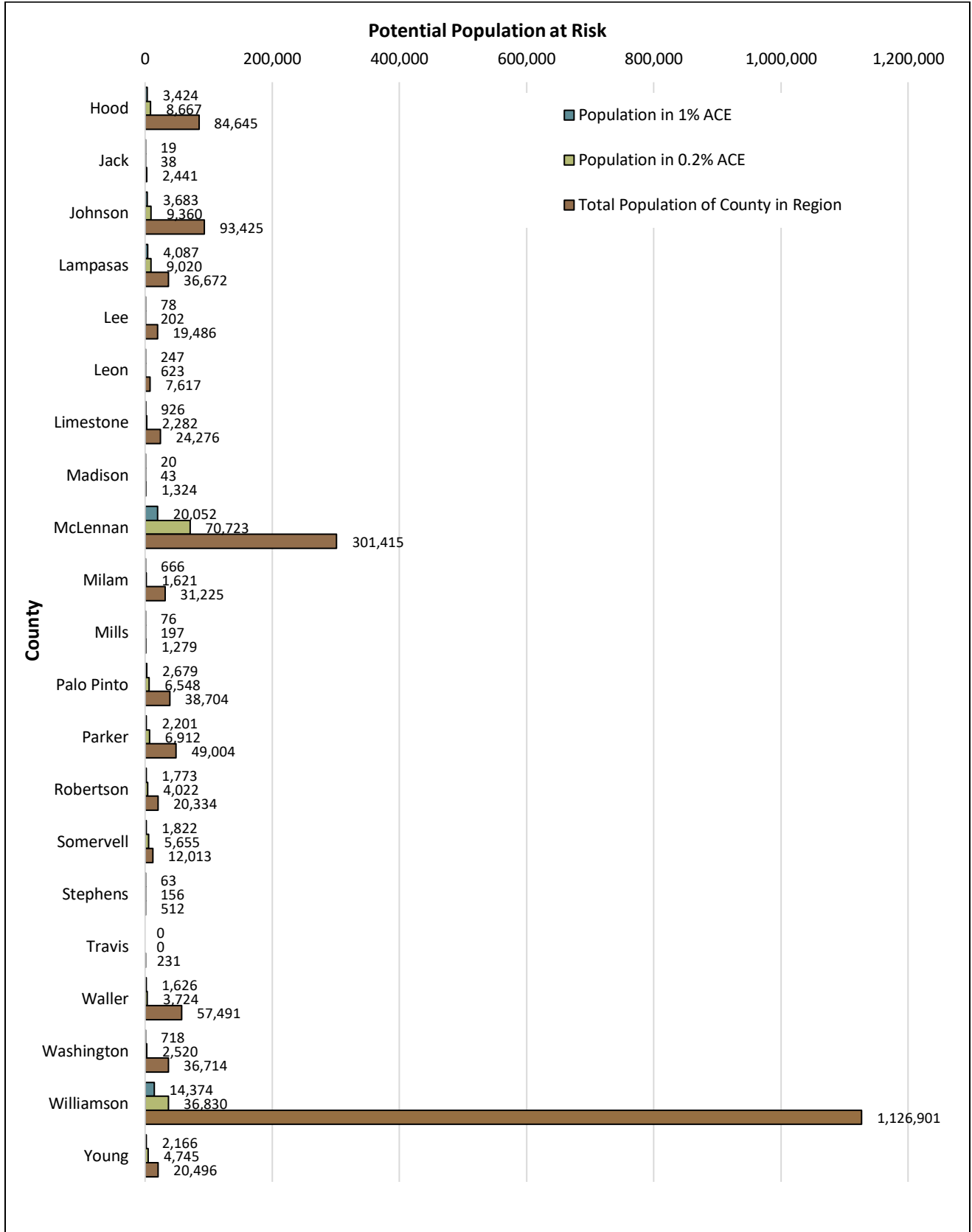
*\*The 0.2% Flood Hazard percentages do not include the area within the 1% Flood Hazard region to avoid overlapping polygons.*

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 2 Population Potentially at Future Flood Risk**

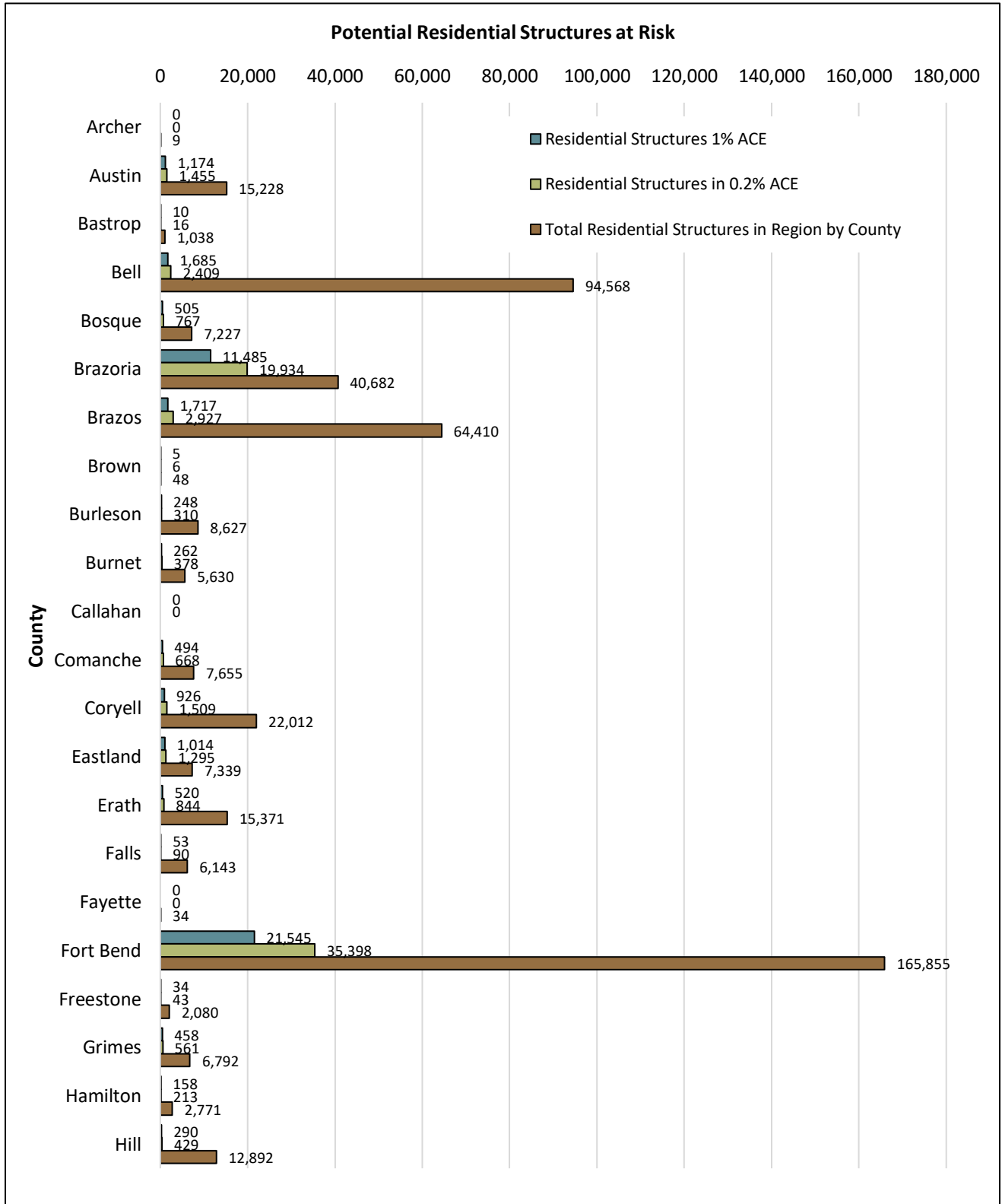


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

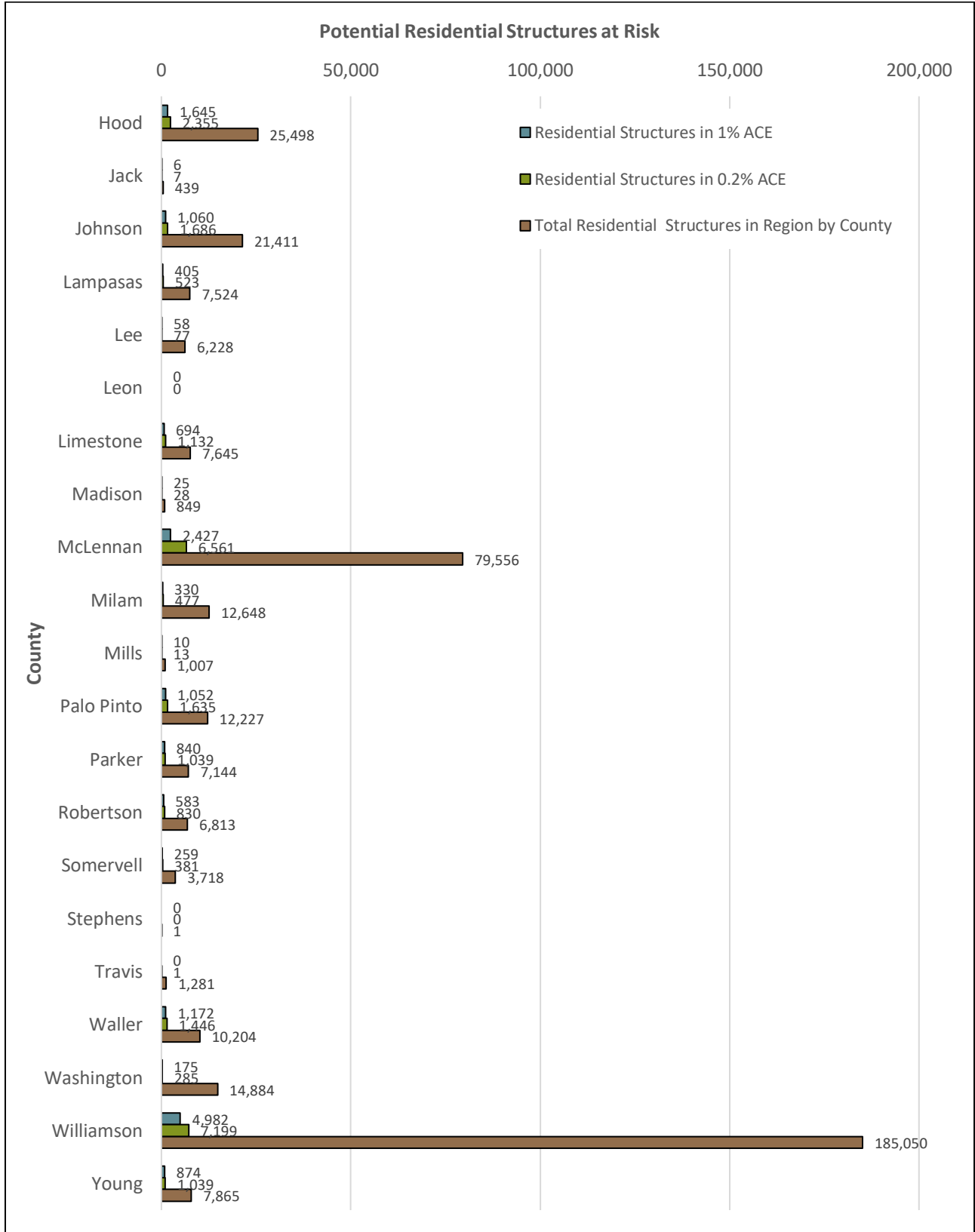


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 3 Residentially Structures Potentially at Future Flood Risk**

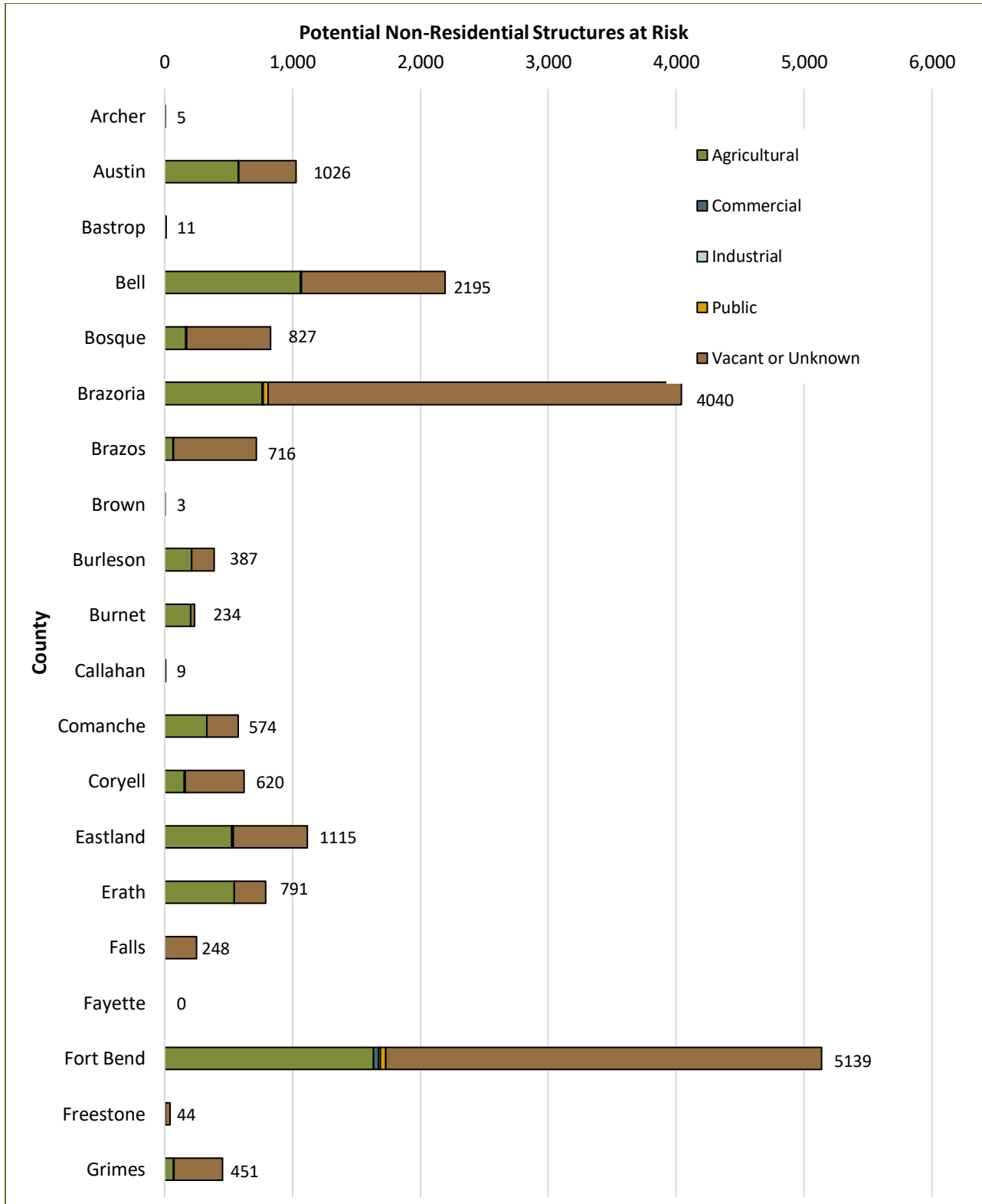


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

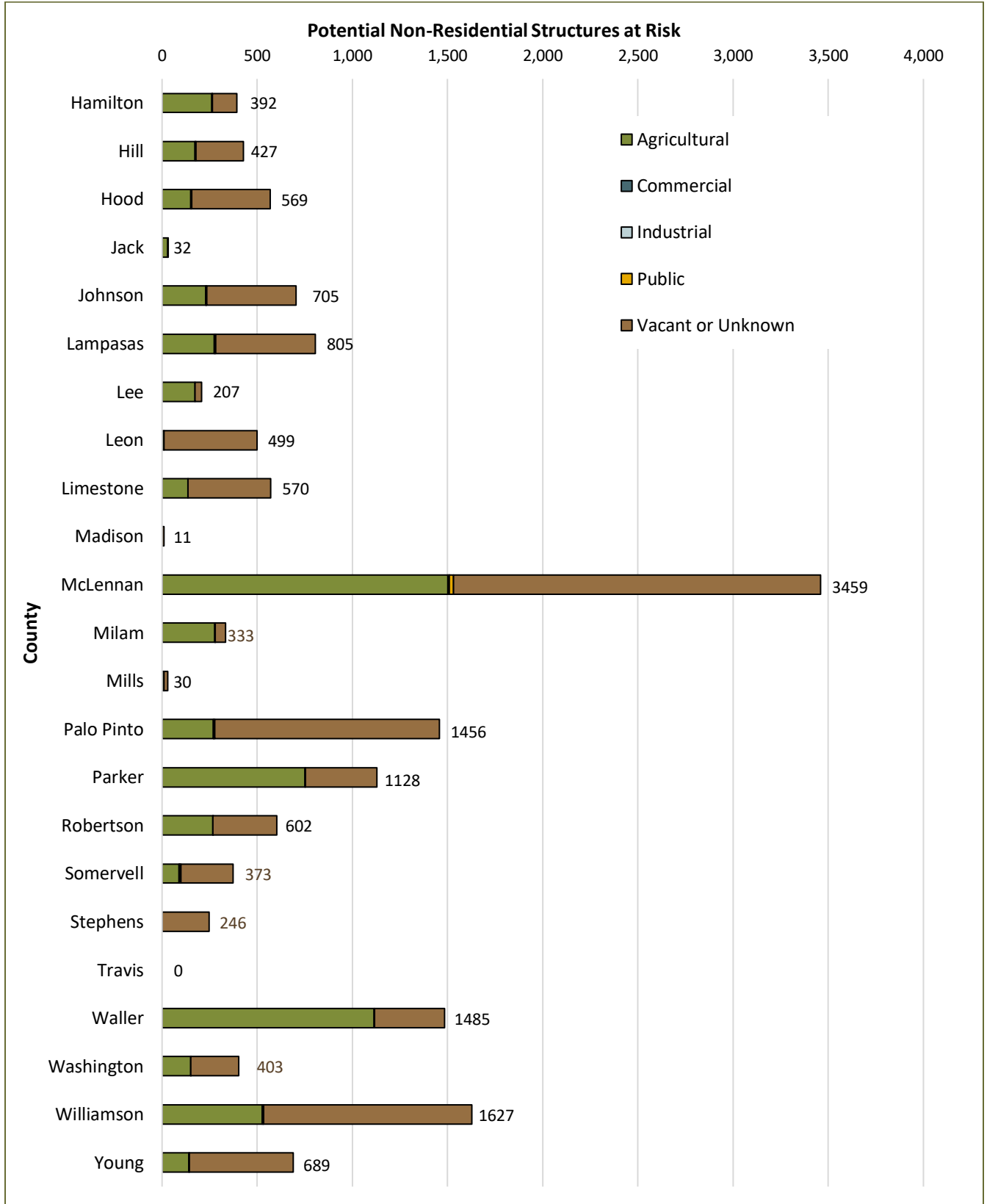


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 4 Non-Residential Structures Potentially at Future Flood Risk**



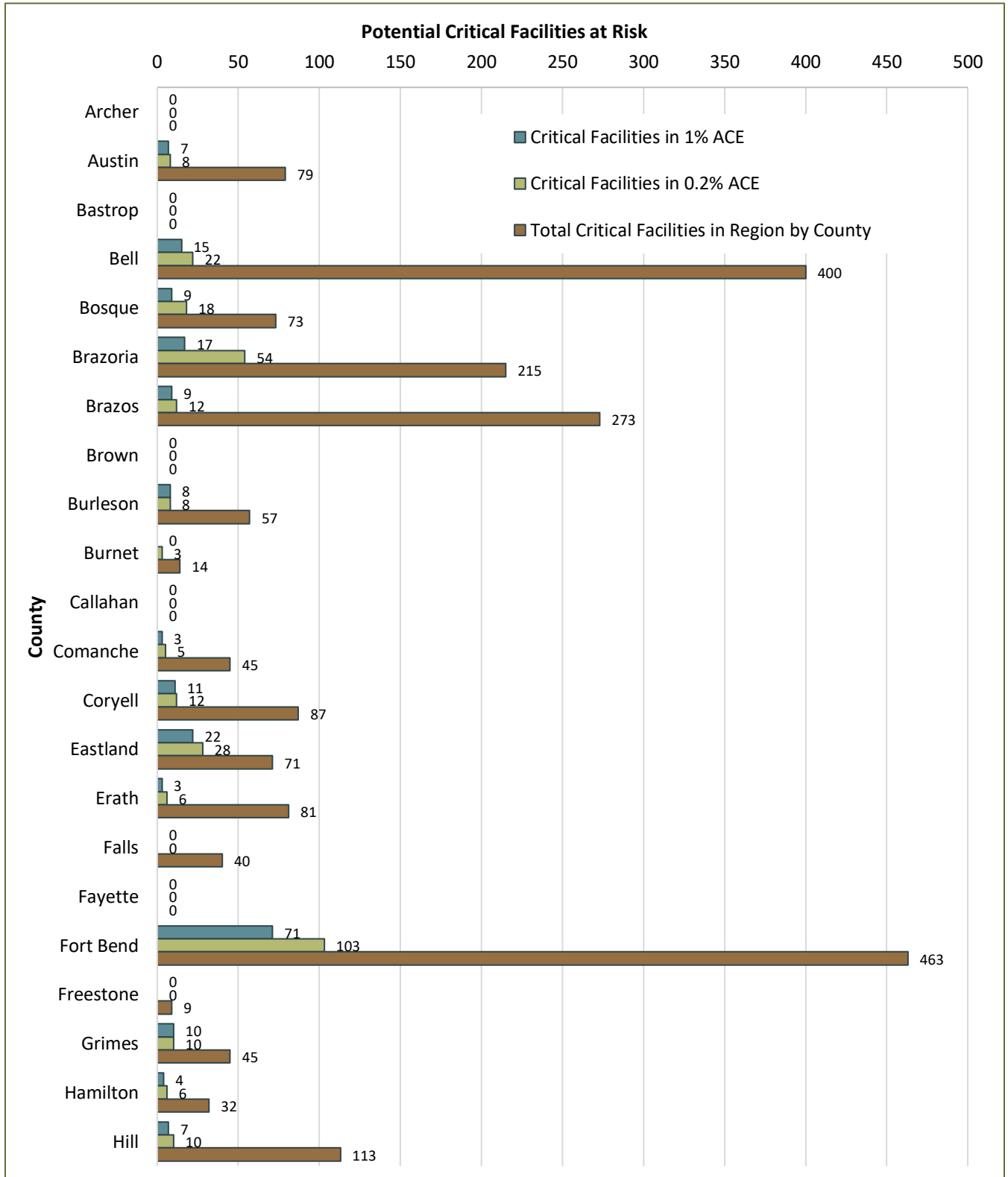
**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**



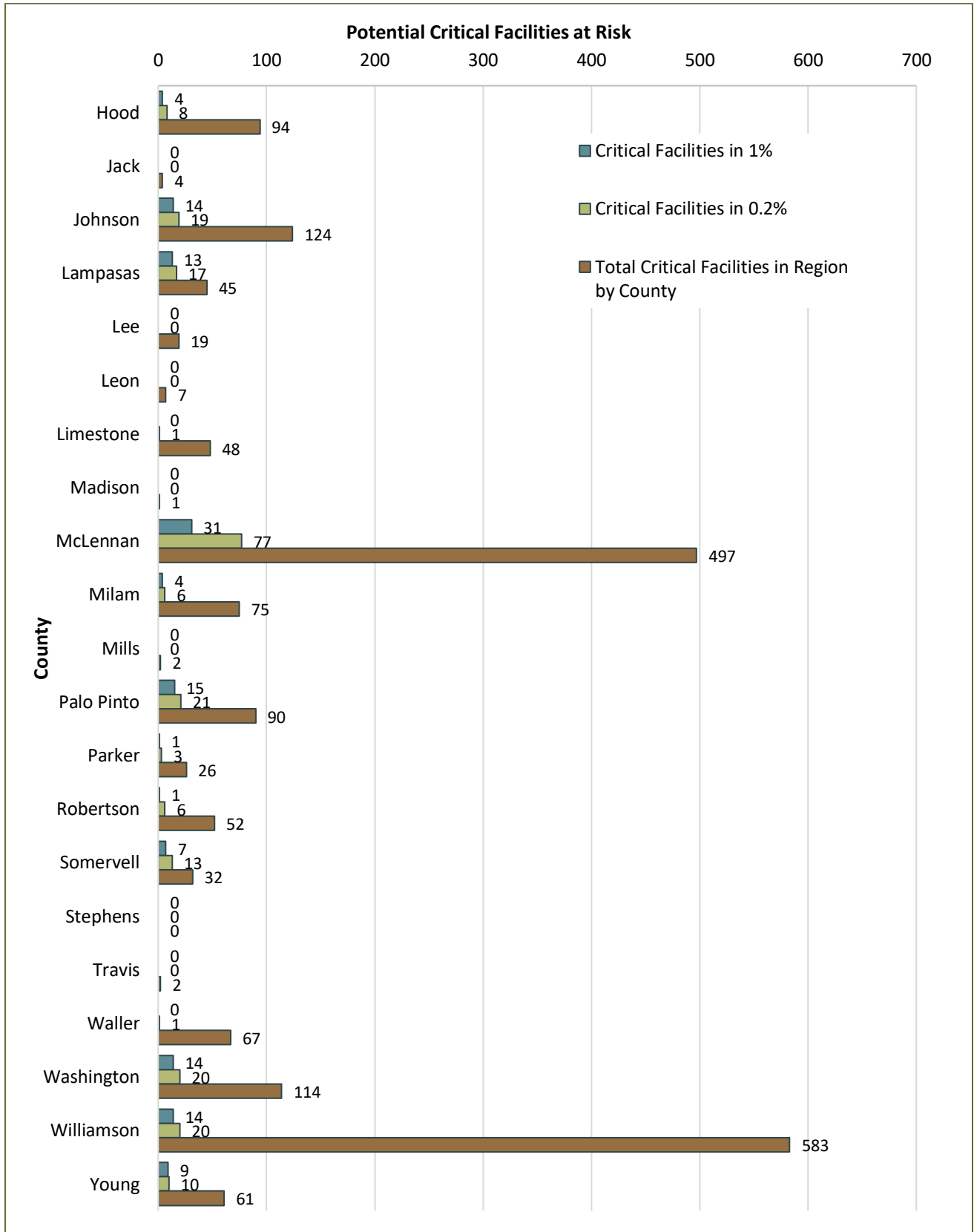


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 5 Critical Facilities Potentially at Future Flood Risk**

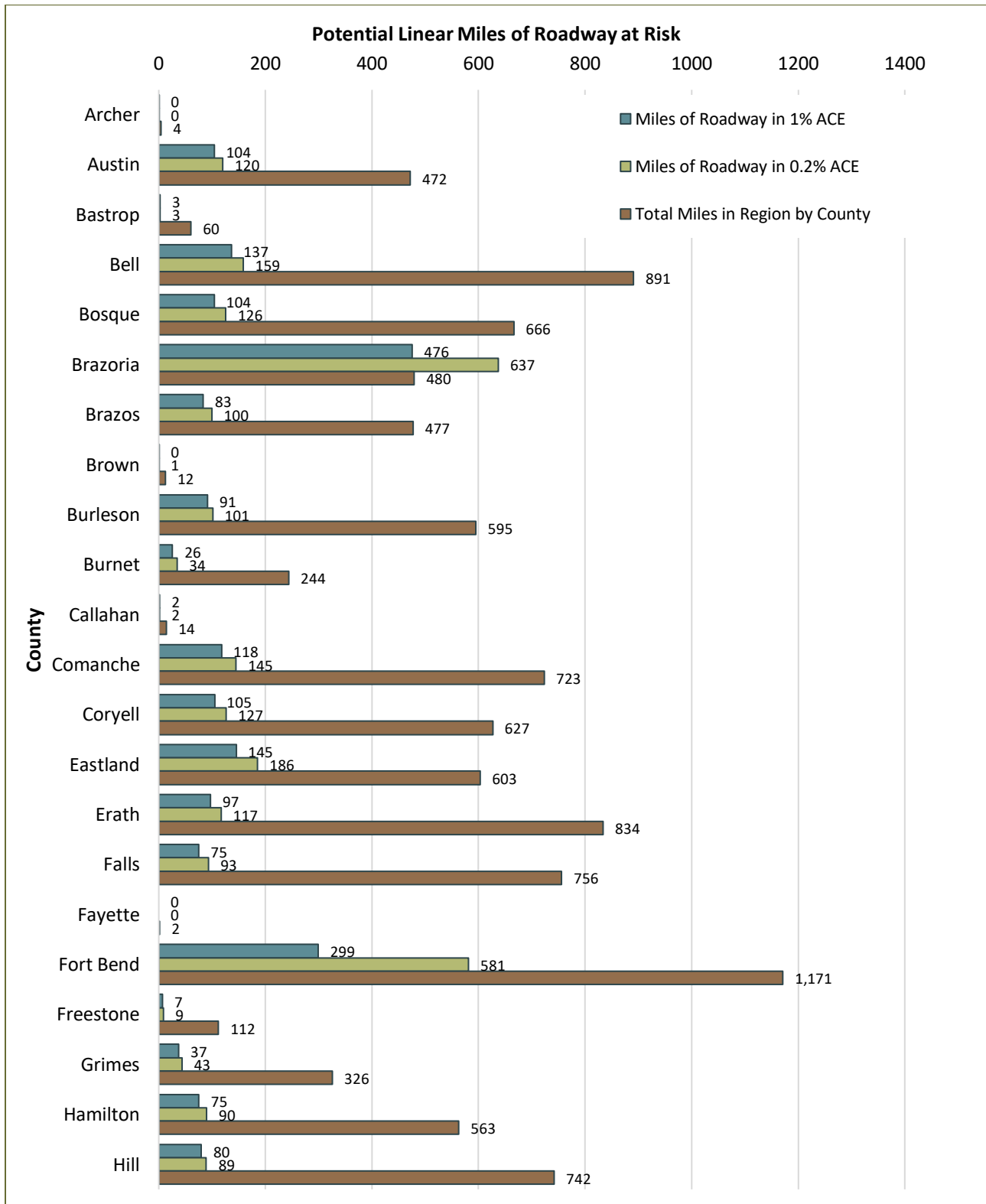


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

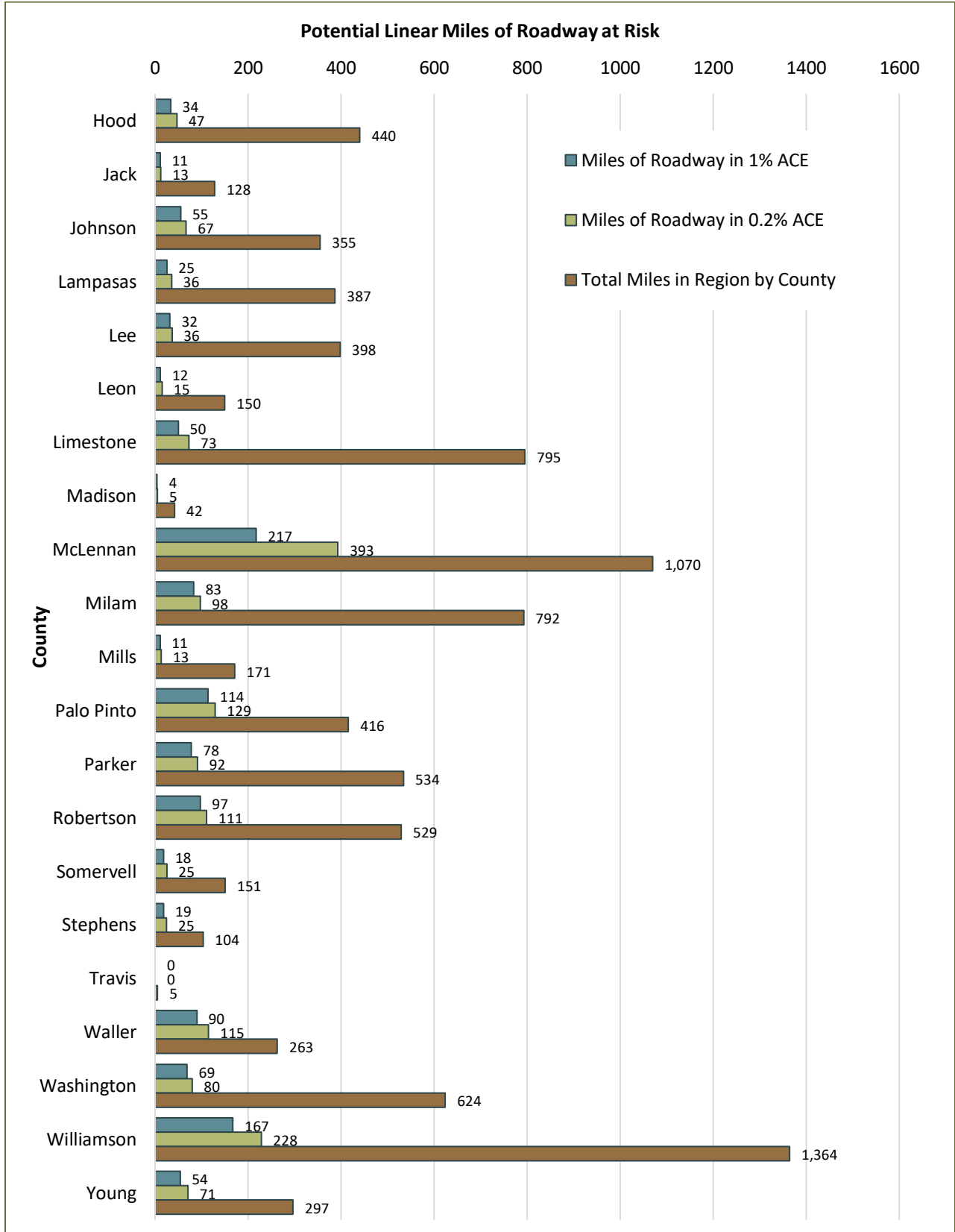


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 6 Roadway Potentially at Future Flood Risk**



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Table 2B - 3. Number of Potentially At-Risk Low Water Crossings per County**

County	Number of Low Water Crossings	County	Number of Low Water Crossings
Archer	0	Hood	109
Austin	146	Jack	31
Bastrop	7	Johnson	123
Bell	403	Lampasas	124
Bosque	171	Lee	111
Brazoria	77	Leon	34
Brazos	183	Limestone	169
Brown	1	Madison	8
Burleson	109	McLennan	357
Burnet	71	Milam	182
Callahan	2	Mills	50
Comanche	187	Palo Pinto	118
Coryell	201	Parker	109
Eastland	152	Robertson	135
Erath	251	Somervell	63
Falls	201	Stephens	37
Fayette	0	Travis	0
Fort Bend	200	Waller	76
Freestone	31	Washington	194
Grimes	76	Williamson	483
Hamilton	173	Young	78
Hill	160	Hood	109

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Table 2B - 4. Value of Agricultural at Flood Risk**

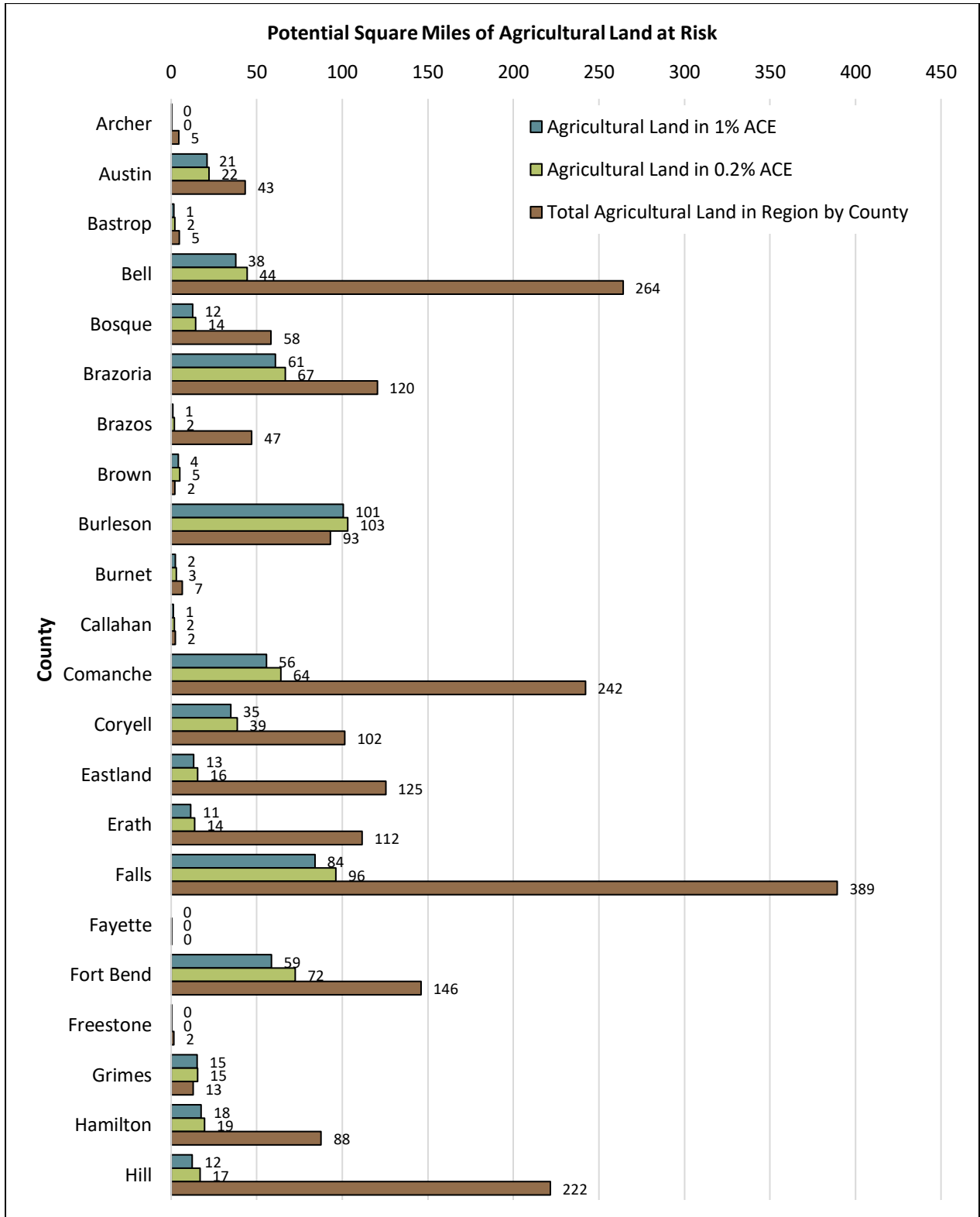
County	\$ Losses in Existing 100-yr Floodplain	\$ Losses in 500-yr Floodplain	Total Value of County Agriculture
Archer	\$34,533	\$41,475	\$72,439,000
Austin	\$1,076,394	\$1,117,002	\$33,148,000
Bastrop	\$28,460	\$32,099	\$44,650,000
Bell	\$3,654,054	\$4,536,968	\$77,032,000
Bosque	\$694,049	\$777,176	\$45,059,000
Brazoria	\$6,646,739	\$6,932,732	\$79,526,000
Brazos	\$8,195,341	\$8,333,441	\$91,638,000
Brown	\$20,766	\$24,824	\$45,971,000
Burleson	\$6,533,001	\$6,835,171	\$58,590,000
Burnet	\$38,322	\$46,025	\$14,104,000
Callahan	\$19,509	\$23,047	\$31,240,000
Comanche	\$11,918,203	\$13,549,153	\$173,264,000
Coryell	\$1,281,329	\$1,407,125	\$36,276,000
Eastland	\$576,938	\$678,516	\$23,519,000
Erath	\$6,353,660	\$7,464,717	\$312,277,000
Falls	\$24,369,756	\$27,335,020	\$157,940,000
Fayette	\$0	\$0	\$47,382,000
Fort Bend	\$12,838,824	\$13,786,663	\$85,013,000
Freestone	\$9,238	\$10,298	\$47,509,000
Grimes	\$1,002,591	\$1,025,391	\$68,131,000
Hamilton	\$1,518,474	\$1,673,650	\$62,025,000
Hill	\$2,304,030	\$2,876,240	\$114,001,000
Hood	\$102,109	\$138,584	\$18,943,000
Jack	\$34,223	\$40,098	\$23,176,000
Johnson	\$404,025	\$547,649	\$57,850,000
Lampasas	\$214,611	\$252,324	\$18,440,000
Lee	\$546,762	\$578,345	\$56,943,000
Leon	\$85,566	\$98,088	\$169,404,000
Limestone	\$520,937	\$627,550	\$66,257,000
Madison	\$24,333	\$26,721	\$124,061,000
McLennan	\$12,629,656	\$15,283,778	\$179,666,000
Milam	\$15,519,576	\$16,262,356	\$129,518,000
Mills	\$130,746	\$151,543	\$30,899,000
Palo Pinto	\$325,393	\$365,786	\$43,219,000
Parker	\$187,481	\$219,044	\$65,043,000
Robertson	\$16,175,278	\$16,343,102	\$158,143,000
Somervell	\$22,520	\$30,562	\$4,099,000

**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

<b>County</b>	<b>\$ Losses in Existing 100-yr Floodplain</b>	<b>\$ Losses in 500-yr Floodplain</b>	<b>Total Value of County Agriculture</b>
Stephens	\$38,537	\$45,916	\$10,624,000
Travis	\$93	\$125	\$28,109,000
Waller	\$3,891,967	\$4,383,040	\$102,369,000
Washington	\$1,093,862	\$1,125,964	\$35,615,000
Williamson	\$7,383,272	\$8,738,730	\$114,923,000
Young	\$161,047	\$209,415	\$21,694,000
<b>Total</b>	<b>\$148,606,207</b>	<b>\$163,975,458</b>	<b>\$3,179,729,000</b>

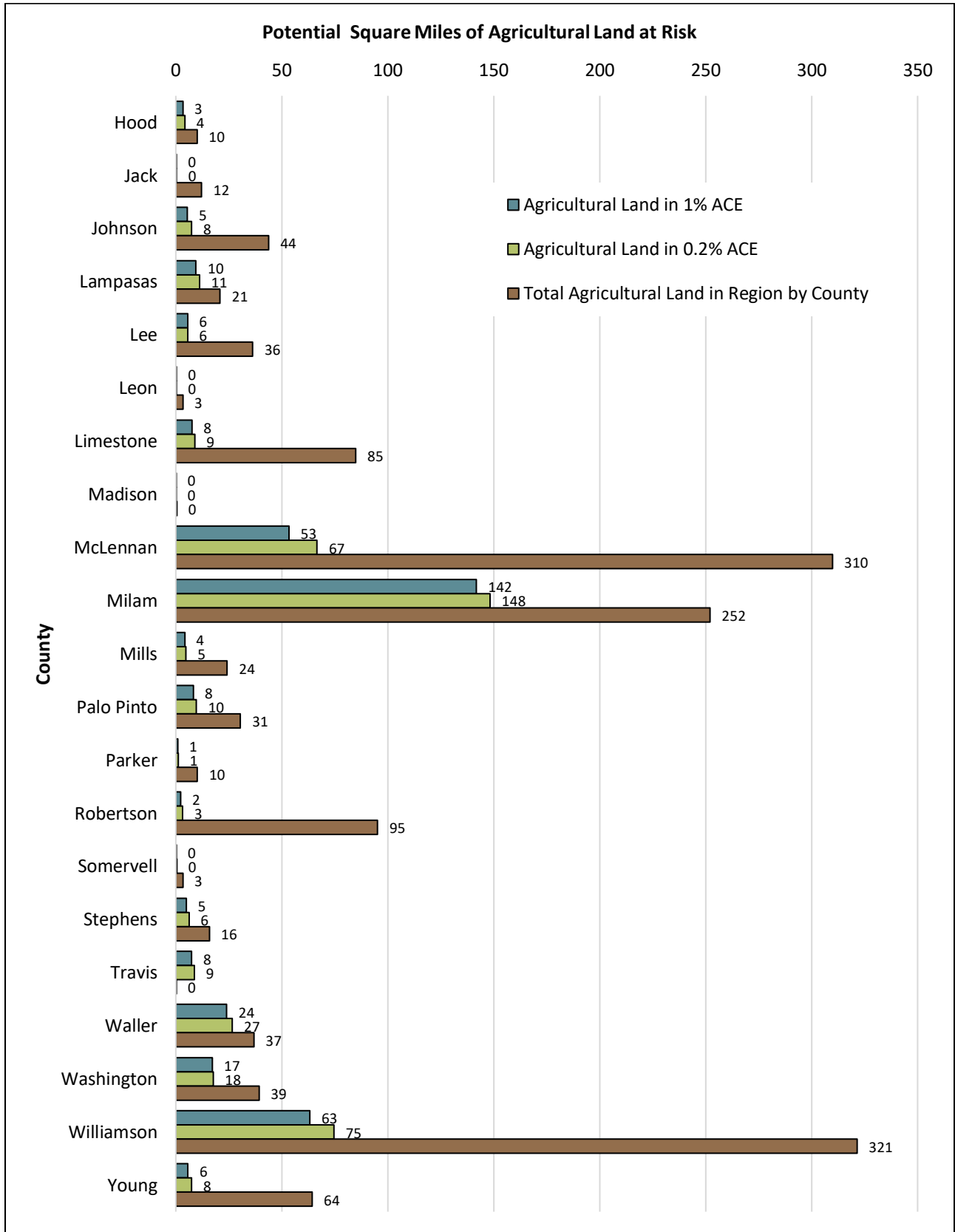
**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 7 Agricultural Land Potentially at Future Flood Risk**



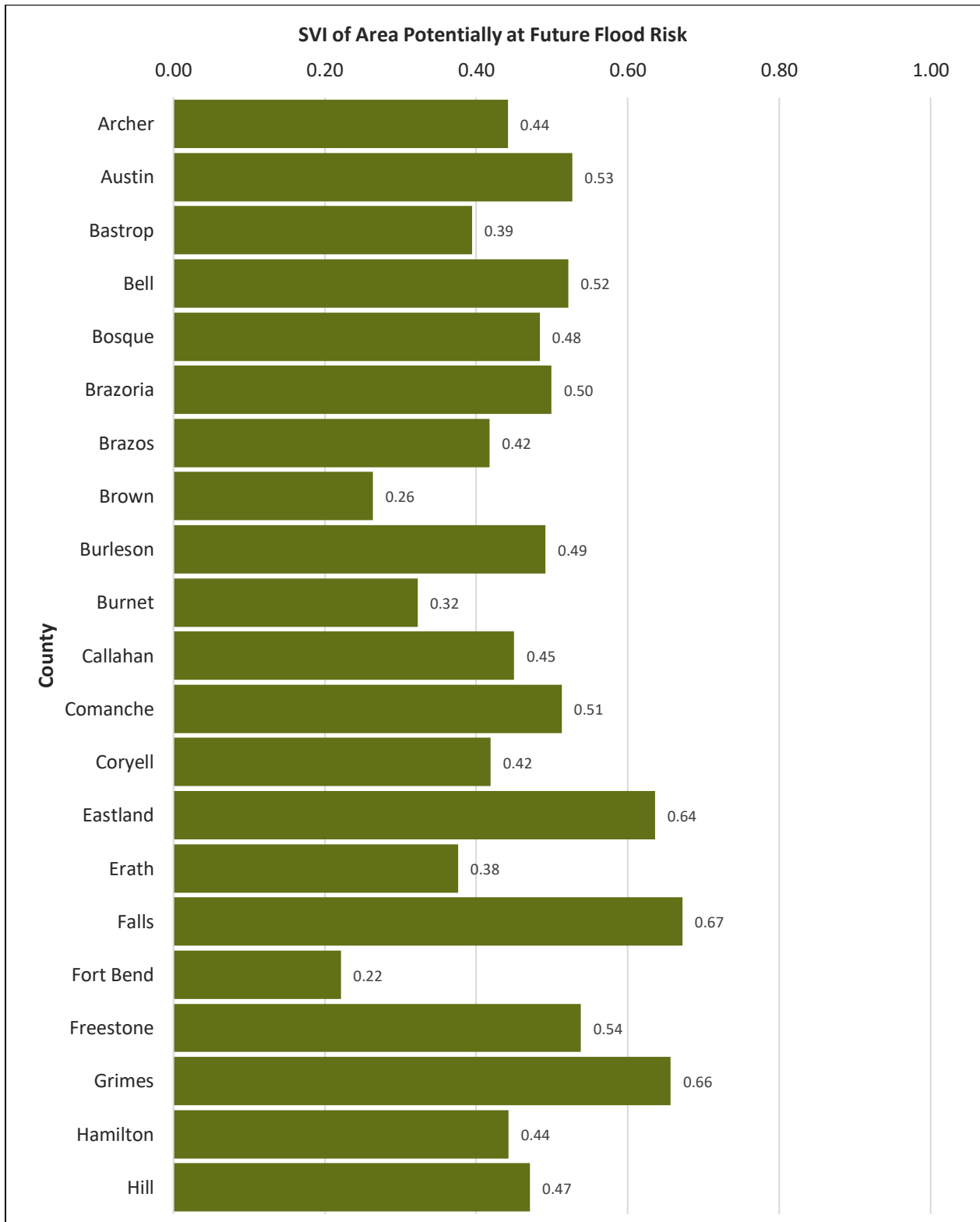


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

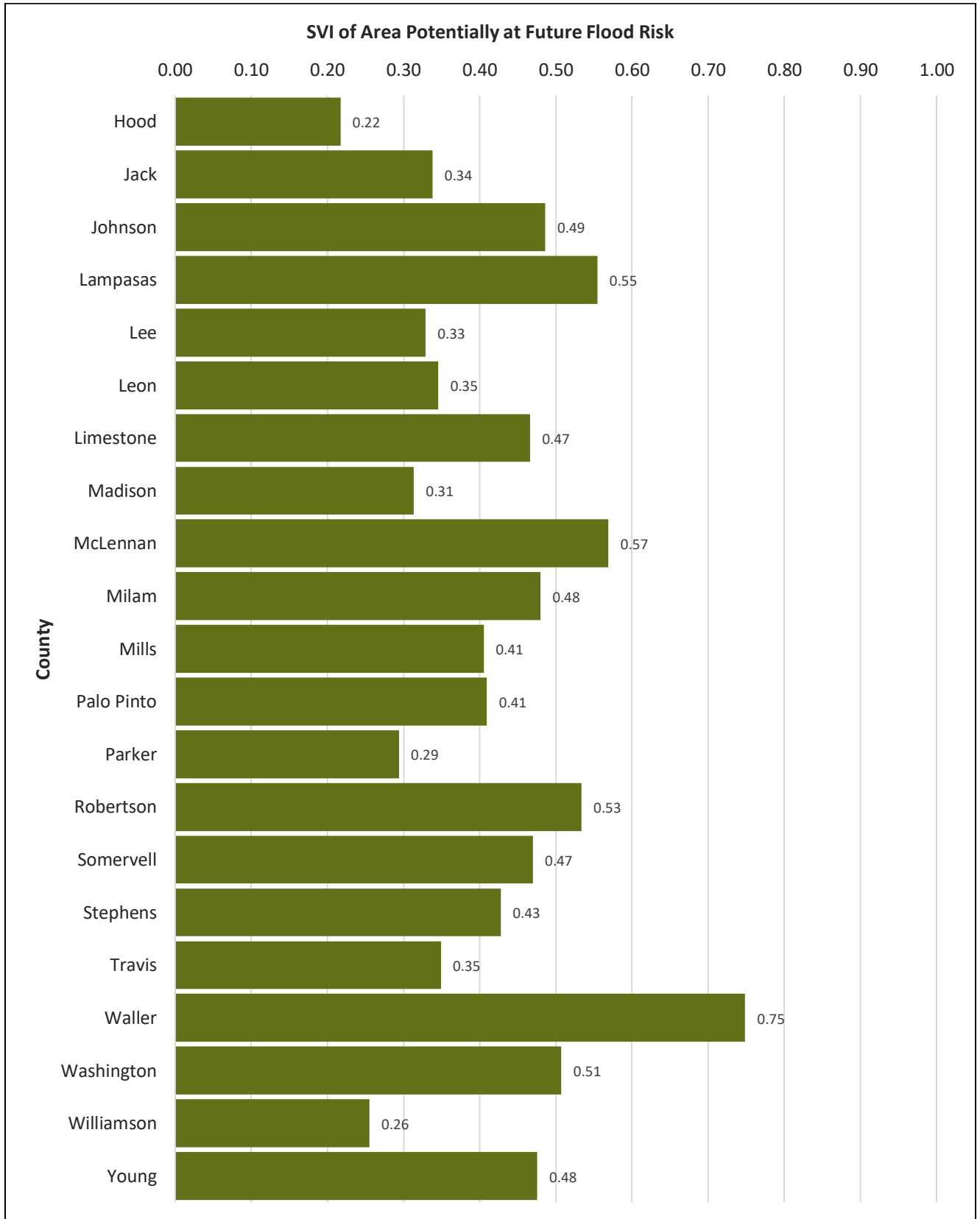


**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**

**Figure 2B - 8 SVI of Area Potentially at Future Flood Risk**



**TASK 2B: FUTURE FLOOD EXPOSURE ANALYSIS**



## Appendix 2B.2

## Appendix 2B.2: TWDB Table 5 - Future Condition Flood Risk Summary Table

TWDB Table 5 - Future Conditions Flood Risk Summary												
	General Information				1% Annual Chance Flood Risk							
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area in Floodplain	Number of Structures in Floodplain	Residential Structures in Floodplain	Population	Roadway Crossings	Roadways Segments	Agricultural Areas	Critical Facilities
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(miles)	(sqmi)	(#)
1	8	Lower Brazos	Archer	5.9	0.0	4	0	3	0	0.1	0	0
2	8	Lower Brazos	Austin	509.3	188.5	2,243	1,393	3,016	218	117.9	20.8	7
3	8	Lower Brazos	Bastrop	58.7	18.2	35	28	67	7	2.8	1.4	0
4	8	Lower Brazos	Bell	1082.2	186.3	4,792	3,215	11,886	481	155.2	37.7	15
5	8	Lower Brazos	Bosque	998.3	185.3	1,154	581	1,488	181	123	12.4	9
6	8	Lower Brazos	Brazoria	666.7	464.7	15,001	11,978	29,559	127	496.8	61	17
7	8	Lower Brazos	Brazos	587.9	68.4	4,964	4,419	12,637	285	97.7	0.9	9
8	8	Lower Brazos	Brown	19.2	16.5	7	5	2	1	0.8	4.1	0
9	8	Lower Brazos	Burleson	675.1	219.5	588	267	813	115	95.3	100.5	8
10	8	Lower Brazos	Burnet	482.4	61.1	475	321	612	93	34.5	2.4	0
11	8	Lower Brazos	Callahan	16.2	9.2	4	0	2	2	2.2	1.3	0
12	8	Lower Brazos	Comanche	919.1	209.0	940	517	1,193	193	144.6	55.7	3
13	8	Lower Brazos	Coryell	1052.2	221.1	1,839	1,407	7,850	216	126.8	34.9	17
14	8	Lower Brazos	Eastland	769.9	114.0	1,887	1,019	2,419	199	185.7	13.1	22
15	8	Lower Brazos	Erath	1083.1	100.2	1,360	790	1,797	283	116.9	11.3	3
16	8	Lower Brazos	Falls	770.5	173.4	224	53	177	221	86	84	0
17	8	Lower Brazos	Fayette	1	0.0	0	0	0	0	0	0	0
18	8	Lower Brazos	Fort Bend	608.7	212.9	34,844	31,013	83,195	241	468.2	58.7	71
19	8	Lower Brazos	Freestone	103.2	5.1	91	52	87	33	8.9	0.1	0
20	8	Lower Brazos	Grimes	455.1	172.7	881	515	2,223	89	43.1	15.3	10
21	8	Lower Brazos	Hamilton	832.7	151.7	457	167	727	175	89.9	17.6	4
22	8	Lower Brazos	Hill	661.4	62.1	637	315	922	339	87.4	12.3	7
23	8	Lower Brazos	Hood	436.1	97.6	3,586	3,175	6,584	147	40.4	3.3	4
24	8	Lower Brazos	Jack	260.1	11.3	30	6	19	41	12.8	0.3	0
25	8	Lower Brazos	Johnson	371.8	60.9	1,753	1,286	3,940	152	65.1	5.4	14
26	8	Lower Brazos	Lampasas	559.4	64.0	1,132	480	4,163	129	35.5	9.5	13
27	8	Lower Brazos	Lee	529.7	90.4	250	74	110	119	36.1	5.5	0
28	8	Lower Brazos	Leon	268.8	29.1	338	3	254	32	15.2	0.3	0
29	8	Lower Brazos	Limestone	833.3	139.8	1,123	700	941	165	61.5	7.6	0
30	8	Lower Brazos	Madison	69.5	6.8	32	25	20	11	5.3	0	0
31	8	Lower Brazos	McLennan	1056.4	202.4	4,504	2,759	20,380	780	241.7	53.3	32
32	8	Lower Brazos	Milam	1017.3	310.0	618	363	765	185	96.9	141.9	4
33	8	Lower Brazos	Mills	288.6	30.2	35	11	77	52	13.3	4.2	0
34	8	Lower Brazos	Palo Pinto	981.9	235.1	2,134	1,118	2,823	266	123.7	8.2	15
35	8	Lower Brazos	Parker	429.3	36.0	2,119	1,308	3,583	167	89	0.9	1
36	8	Lower Brazos	Robertson	861.7	114.0	1,171	668	1,863	141	113.8	2.3	1
37	8	Lower Brazos	Somervell	190.8	13.7	557	281	1,860	67	24.8	0.2	8
38	8	Lower Brazos	Stephens	357.1	116.6	175	1	66	38	25.2	5	0
39	8	Lower Brazos	Travis	1.9	17.3	0	0	0	0	0	7.5	0
40	8	Lower Brazos	Waller	322.7	118.5	2,525	1,367	2,211	111	97.9	24	0
41	8	Lower Brazos	Washington	617.7	135.5	505	194	737	225	77.4	17.2	4

## Appendix 2B.2: TWDB Table 5 - Future Condition Flood Risk Summary Table

42	8	Lower Brazos	Williamson	1128.5	228.8	14,029	12,847	36,530	792	224.5	63.2	14
43	8	Lower Brazos	Young	407.5	56.7	1,488	908	2,200	74	70.3	5.7	9
<b>Total</b>				<b>23,349</b>	<b>4,955</b>	<b>110,531</b>	<b>85,629</b>	<b>249,801</b>	<b>7,193</b>	<b>3,954</b>	<b>911</b>	<b>321</b>

General Information				0.2% Annual Chance Flood Risk								
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area in Floodplain	Number of Structures in Floodplain	Residential Structures in Floodplain	Population	Roadway Crossings	Roadway Segments	Agricultural Areas	Critical Facilities
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(miles)	(sqmi)	(#)
1	8	Lower Brazos	Archer	5.9	0.1	5	0	3	0	0.7	0.1	0
2	8	Lower Brazos	Austin	509.3	208.5	2,779	1,753	3,704	244	159.2	22.1	8
3	8	Lower Brazos	Bastrop	58.7	19.8	61	50	133	7	3.6	2	0
4	8	Lower Brazos	Bell	1082.2	215.6	7,160	4,961	17,697	527	206.1	44.3	22
5	8	Lower Brazos	Bosque	998.3	211.4	1,720	891	2,520	189	175	14.3	18
6	8	Lower Brazos	Brazoria	666.7	509.1	25,135	21,098	59,421	139	641	66.6	64
7	8	Lower Brazos	Brazos	587.9	82.2	8,124	7,407	21,566	302	128.4	1.8	12
8	8	Lower Brazos	Brown	19.2	20.5	9	6	5	1	1.9	5.1	0
9	8	Lower Brazos	Burleson	675.1	227.4	735	347	991	117	109.9	103.2	8
10	8	Lower Brazos	Burnet	482.4	72.6	696	462	917	104	54.4	2.9	0
11	8	Lower Brazos	Callahan	16.2	12.2	10	1	8	3	4	1.7	0
12	8	Lower Brazos	Comanche	919.1	242.4	1,279	703	1,568	204	209.9	64	5
13	8	Lower Brazos	Coryell	1052.2	254.8	2,796	2,176	10,583	246	194.3	38.6	18
14	8	Lower Brazos	Eastland	769.9	134.5	2,416	1,301	3,083	216	263.8	15.5	28
15	8	Lower Brazos	Erath	1083.1	122.9	2,031	1,237	2,862	318	182.5	13.7	6
16	8	Lower Brazos	Falls	770.5	195.9	344	96	960	239	113.4	96.3	0
17	8	Lower Brazos	Fayette	1	0	0	0	0	0	0	0	0
18	8	Lower Brazos	Fort Bend	608.7	269.9	53,538	48,405	138,587	268	674.8	72.4	110
19	8	Lower Brazos	Freestone	103.2	5.5	135	91	176	35	11.1	0.1	0
20	8	Lower Brazos	Grimes	455.1	183.5	1,184	732	3,202	94	51.5	15.5	10
21	8	Lower Brazos	Hamilton	832.7	179.8	620	228	948	188	125.1	19.5	6
22	8	Lower Brazos	Hill	661.4	76.3	904	473	1,311	340	107.9	16.8	10
23	8	Lower Brazos	Hood	436.1	116.7	4,485	3,916	8,478	158	66.1	4.3	8
24	8	Lower Brazos	Jack	260.1	13.1	39	7	19	42	16	0.4	0
25	8	Lower Brazos	Johnson	371.8	73.4	3,006	2,295	7,081	158	88.6	7.5	19
26	8	Lower Brazos	Lampasas	559.4	77.2	1,438	633	5,044	135	49.4	11.1	17
27	8	Lower Brazos	Lee	529.7	90.8	324	117	205	119	43.2	5.5	0
28	8	Lower Brazos	Leon	268.8	34	506	7	391	33	20.8	0.4	0
29	8	Lower Brazos	Limestone	833.3	159.1	1,719	1,149	1,397	180	86	9	1
30	8	Lower Brazos	Madison	69.5	8	40	29	26	13	6.3	0	0
31	8	Lower Brazos	McLennan	1056.4	249.2	10,804	7,343	51,580	815	473.6	66.6	78
32	8	Lower Brazos	Milam	1017.3	331.6	867	534	1,126	193	125.3	148.3	6
33	8	Lower Brazos	Mills	288.6	35.1	46	16	124	57	17.7	4.8	0
34	8	Lower Brazos	Palo Pinto	981.9	279.8	3,194	1,735	4,091	338	194.6	9.7	21
35	8	Lower Brazos	Parker	429.3	49.9	2,801	1,673	6,259	221	132.9	1.1	3
36	8	Lower Brazos	Robertson	861.7	130.9	1,647	1,044	2,694	153	132.3	3.3	6
37	8	Lower Brazos	Somervell	190.8	18.5	836	462	3,930	71	35.4	0.5	14
38	8	Lower Brazos	Stephens	357.1	140.6	247	1	96	50	44.1	6.3	0

## Appendix 2B.2: TWDB Table 5 - Future Condition Flood Risk Summary Table

39	8	Lower Brazos	Travis	1.9	20.3	1	1	0	0	0	8.8	0
40	8	Lower Brazos	Waller	322.7	134.4	3,197	1,711	2,893	119	135.7	26.6	1
41	8	Lower Brazos	Washington	617.7	143.7	744	341	1,858	241	98.3	17.6	4
42	8	Lower Brazos	Williamson	1128.5	265.4	19,116	17,485	51,473	849	348.1	74.6	20
43	8	Lower Brazos	Young	407.5	72.3	1,796	1,107	2,647	93	106	7.5	10
<b>Total</b>				<b>23,349</b>	<b>5,689</b>	<b>168,534</b>	<b>134,024</b>	<b>421,657</b>	<b>7,819</b>	<b>5,639</b>	<b>1,030</b>	<b>533</b>

General Information				Possible Flood Prone Areas									
	RFPG No.	RFPG Name	County	Area in Flood Planning Region	Area	Number of Structures in Flood Prone Area	Residential Structures in Flood Prone Area	Population	Roadway Crossings	Roadway Segments	Agricultural Areas	Critical Facilities	Average SVI of features in floodplain or flood prone area
				(sqmi)	(sqmi)	(#)	(#)	(#)	(#)	(miles)	(sqmi)	(#)	(#)
1	8	Lower Brazos	Archer	5.9	0	0	0	0	0	0	0	0	0.37
2	8	Lower Brazos	Austin	509.3	0	0	0	0	0	0	0	0	0.46
3	8	Lower Brazos	Bastrop	58.7	0	0	0	0	0	0	0	0	0.32
4	8	Lower Brazos	Bell	1082.2	2.1	2	0	0	0	0	0.1	0	0.43
5	8	Lower Brazos	Bosque	998.3	0	0	0	0	0	0	0	0	0.37
6	8	Lower Brazos	Brazoria	666.7	50.2	18,032	13,842	49,410	8	275	6.5	74	0.51
7	8	Lower Brazos	Brazos	587.9	0	0	0	0	0	0	0	0	0.34
8	8	Lower Brazos	Brown	19.2	0	0	0	0	0	0	0	0	0.24
9	8	Lower Brazos	Burleson	675.1	4.9	252	215	476	1	14	3.6	0	0.38
10	8	Lower Brazos	Burnet	482.4	0	0	0	0	0	0	0	0	0.35
11	8	Lower Brazos	Callahan	16.2	0	0	0	0	0	0	0	0	0.51
12	8	Lower Brazos	Comanche	919.1	2.1	40	16	19	0	9	0	0	0.44
13	8	Lower Brazos	Coryell	1052.2	0	0	0	0	0	0	0.4	0	0.35
14	8	Lower Brazos	Eastland	769.9	0	0	0	0	0	0	0	0	0.57
15	8	Lower Brazos	Erath	1083.1	0	0	0	0	0	0	0	0	0.38
16	8	Lower Brazos	Falls	770.5	0	0	0	0	0	0	0	0	0.64
17	8	Lower Brazos	Fayette	1	0	0	0	0	0	0	0	0	0.26
18	8	Lower Brazos	Fort Bend	608.7	46	65,891	64,176	196,588	94	547	1	106	0.24
19	8	Lower Brazos	Freestone	103.2	0	0	0	0	0	0	0	0	0.53
20	8	Lower Brazos	Grimes	455.1	0	0	0	0	0	0	0	0	0.39
21	8	Lower Brazos	Hamilton	832.7	0	0	0	0	0	0	0	0	0.38
22	8	Lower Brazos	Hill	661.4	0	0	0	0	0	0	0	0	0.5
23	8	Lower Brazos	Hood	436.1	0	0	0	0	0	0	0	0	0.27
24	8	Lower Brazos	Jack	260.1	0	0	0	0	0	0	0	0	0.34
25	8	Lower Brazos	Johnson	371.8	0	0	0	0	0	0	0	0	0.43
26	8	Lower Brazos	Lampasas	559.4	0	0	0	0	0	0	0	0	0.42
27	8	Lower Brazos	Lee	529.7	0	0	0	0	0	0	0	0	0.32
28	8	Lower Brazos	Leon	268.8	0	0	0	0	0	0	0	0	0.38
29	8	Lower Brazos	Limestone	833.3	0	0	0	0	0	0	0	0	0.56
30	8	Lower Brazos	Madison	69.5	0	0	0	0	0	0	0	0	0.32
31	8	Lower Brazos	McLennan	1056.4	0	0	0	0	0	0	0	0	0.41
32	8	Lower Brazos	Milam	1017.3	0	0	0	0	0	0	0	0	0.52
33	8	Lower Brazos	Mills	288.6	0	0	0	0	0	0	0	0	0.35
34	8	Lower Brazos	Palo Pinto	981.9	0	0	0	0	0	0	0	0	0.34
35	8	Lower Brazos	Parker	429.3	0	0	0	0	0	0	0	0	0.3

### Appendix 2B.2: TWDB Table 5 - Future Condition Flood Risk Summary Table

36	8	Lower Brazos	Robertson	861.7	0	0	0	0	0	0	0	0	0.58
37	8	Lower Brazos	Somervell	190.8	0	0	0	0	0	0	0	0	0.47
38	8	Lower Brazos	Stephens	357.1	0	0	0	0	0	0	0	0	0.46
39	8	Lower Brazos	Travis	1.9	0	0	0	0	0	0	0	0	0.38
40	8	Lower Brazos	Waller	322.7	0	0	0	0	0	0	0	0	0.71
41	8	Lower Brazos	Washington	617.7	0	0	0	0	0	0	0	0	0.4
42	8	Lower Brazos	Williamson	1128.5	0	0	0	0	0	0	0	0	0.31
43	8	Lower Brazos	Young	407.5	0	0	0	0	0	0	0	0	0.47
<b>Total</b>				<b>23,349</b>	<b>105</b>	<b>84,217</b>	<b>78,249</b>	<b>246,493</b>	<b>103</b>	<b>845</b>	<b>12</b>	<b>180</b>	



## Appendix 2B.3

**TO:** Mr. Jeff Walker, Executive Administrator  
**CC:** Mr. Ryke Moore, TWDB Regional Flood Planner  
**FROM:** Region 8 Technical Consultants Team  
**SUBJECT:** Task 2B – Future Conditions Flood Hazard Areas  
**DATE:** 1/25/2022

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## Introduction

The Lower Brazos Regional Flood Planning Group (RFPG) is tasked with identifying and compiling a comprehensive outlook of future condition flood hazards in the region. Future conditions must consider riverine flooding, urban flooding, coastal flooding, and other possible flood-prone areas and how the extent and nature of flooding differs from the existing flood hazard. Future conditions must determine the location for the 1% annual chance flood event (100-year) and 0.2% annual chance flood event (500-year) inundation boundaries. The proposed future condition flood hazards consider a “no-action” scenario for 30 years of continued trends, population growth, future rainfall patterns, and current regulations. This effort is not regulatory in nature, instead intended to gather a single, comprehensive set of best available information on future flood risk in the region.

Where available, future condition flood hazard data will be utilized. In areas where no future condition flood hazard study has been completed, the RFPG will follow the procedures provided by the Texas Water Development Board (TWDB) in “Exhibit C: Technical Guidelines for Regional Flood Planning”. TWDB provided four methods for performing the future conditions flood hazard analyses.

- Method 1: Increase water surface elevation based on projected percent population increase (as proxy for development of land areas)
- Method 2: Utilize the existing condition 0.2 percent annual chance floodplain as a proxy for the future 1 percent level
- Method 3: Combination of methods 1 and 2 or an RFPG-proposed method
- Method 4: Request TWDB for a Desktop Analysis

The methodology included in this document relies primarily on Method 2 and has been an ongoing point of discussion with the Lower Brazos RFPG and was agreed upon during the December 14, 2021, RFPG meeting.

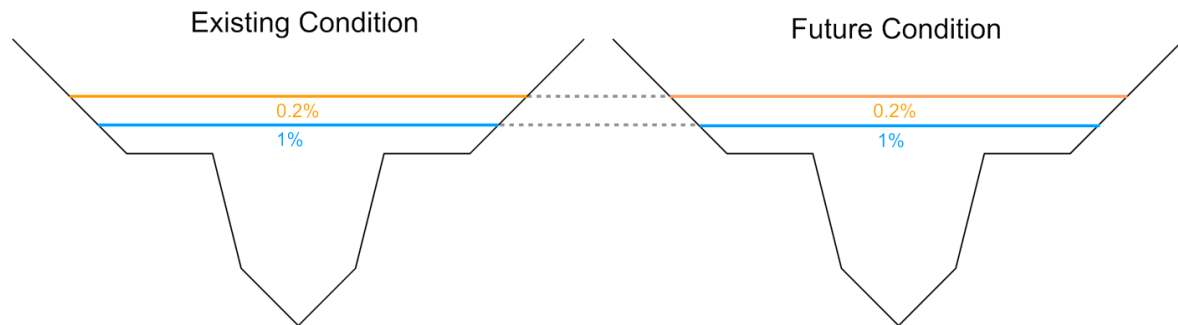
## Lower Brazos Region Future Conditions Flood Hazard Approach

### Large Rivers

Due to the large size of the watershed, the Brazos River would be less susceptible to localized increases in storms. In part this is due to reservoirs that regulate releases, such as flood control reservoirs or in some instances water supply reservoirs. Another factor is larger floodplains that result in greater attenuation of flood flows, when compared to the floodplains for smaller streams.

Frequency flows for large watersheds are defined based on flood frequency analyses at streamflow gages, which in the case of the Brazos River spans close to 100 years of records. Changes to the future rainfall patterns would have to be significant to result in a considerable increase during the period of record. However, the guidance provided by the State of Texas climatologist on future condition rainfall pattern (Nielsen-Gammon, 2020; Nielsen Gammon and Jorgensen, 2021) presents changes over Atlas 14 precipitation between a decrease of 5% and an increase of 10% for rivers, which may not be large enough to result in a noticeable increase in the future condition flood hazard.

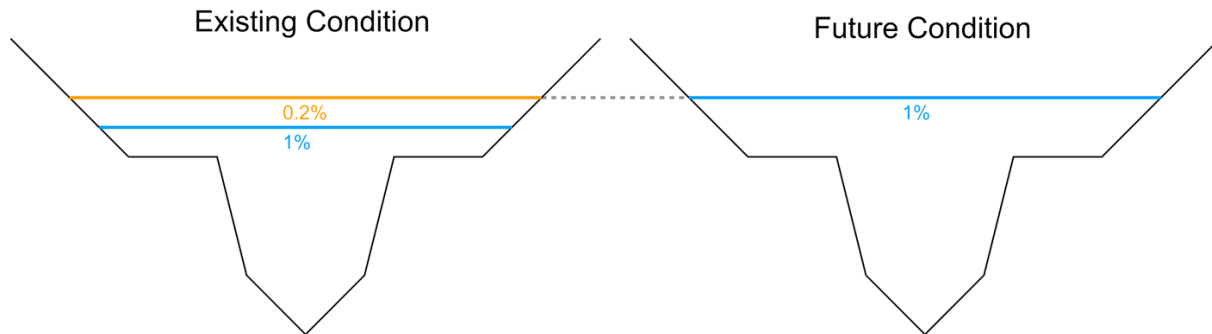
Recently completed studies along the Brazos River have taken into consideration the most up to date streamflow records. As a result, the consultant team is recommending that the existing condition flood hazard areas are maintained for the future condition for the Brazos River as represented in schematic form in **Figure 1**.



**Figure 1: Future Conditions Flood Hazard for the Brazos River**

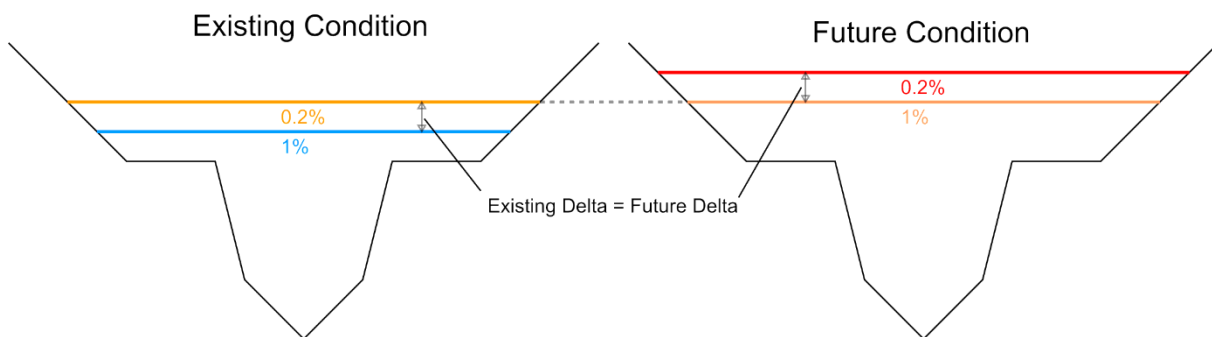
### Tributaries to Large Rivers

The development of the future conditions flood hazard area for tributaries will be based on TWDB's Method 2 and begin with the existing conditions flood hazard areas identified in Task 2A. The area delineated as the existing 500-year flood hazard area will be assumed to be the approximate future 100-year flood hazard area as represented in schematic form in **Figure 2: Future Conditions Flood Hazard 100-year (Method 2)**



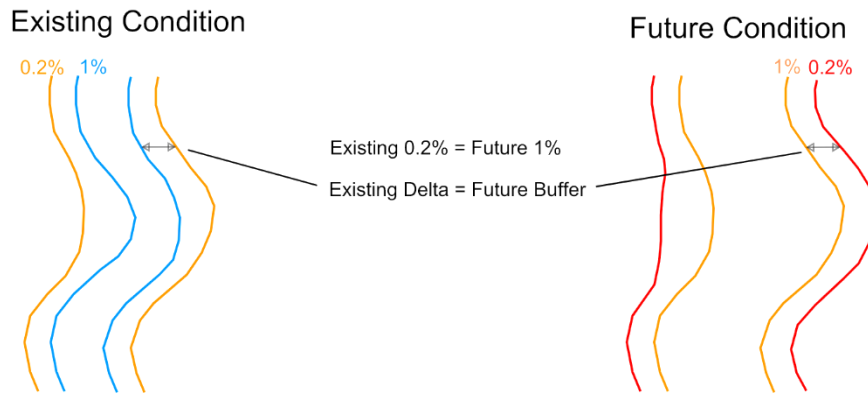
**Figure 2: Future Conditions Flood Hazard 100-year (Method 2)**

The future 500-year flood hazard area will be developed using the future 100-year flood hazard area boundary. In areas where Base Level Engineering (BLE) data is determined to be the best available, the relationship between the 100-year and 500-year flood events will be determined by comparing water surface elevation (WSEL). The elevation difference (delta) between the existing 100-year WSEL and 500-year WSEL will be maintained in future conditions as depicted in **Figure 3**. The future 500-year WSEL will be compared to the existing topography to determine the extents of the future 500-year flood hazard boundary.



**Figure 3: Future Conditions Flood Hazard 100-year and 500-year**

In areas where NFHL Effective data is considered best available, or BLE is not available, the future 500-year flood hazard areas boundary is represented as a horizontal buffer outward from the future 100-year flood hazard area boundary. The extents of the buffer will be determined based on the existing condition flood hazard layer. The future condition 500-year flood hazard area boundary is illustrated in schematic form in **Figure 4**.



**Figure 4: Future Condition Flood Hazard 100-year and 500-year**

The exposure and vulnerability assessment for future conditions will be completed using the future 100-year and 500-year flood hazard boundaries.

### **Approval Request**

On behalf of the Lower Brazos RFGP, the consultant team for Region 8 is requesting the TWDB evaluate for approval the methodology proposed in this document for determining the location of future conditions flood hazard areas.