

4.2 Hazard Analysis

The *Hazard Analysis* section provides information on the following identified hazards – location, extent, historical occurrences and likelihood of future events in the Houston-Galveston Area Council (H-GAC) region¹:

- Flood
- Hurricanes and Tropical Storms
- Severe Thunderstorms
- Tornadoes
- Wildfire
- Drought
- Expansive Soils
- Excessive Heat
- Winter Storms
- Hail
- Coastal Erosion
- Dam/Levee Failure

Hazard analyses were also conducted for the following two human-caused hazards:

- Toxic Release/Hazardous Materials
- Energy Pipeline Failures

Flood

Numerous rivers and streams wind through the counties and jurisdictions in the region. This, combined with flat topography and clayey soils, sets the stage for potential flooding during heavy rain events. Flash flooding often develops quickly in the region, endangering life and property and requiring rescue.

Notable flood events recorded by the National Climatic Data Center for the period of October 1994 through October 2011 are listed in **Table 4.2-1**. The table describes which jurisdictions experienced the flooding and the nature and magnitude of flooding. **Table 4.2-2** list the highest magnitude floods for the plan update planning area.



This photo of Buffalo Bayou, looking upstream from Main Street in the Houston area, illustrates the extent of flooding from Tropical Storm Allison on June 9, 2001.

Detailed flood mapping for each county has been included in Section 4.3. These maps show the location of the flood hazard within each county.

¹ Jurisdiction-specific hazard characteristics are noted in table format, wherever applicable.

**Table 4.2-1
 Recent Flood Events in the H-GAC Region (1994-2010)**

County	Date	Deaths	Property Damage	Details
Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, Wharton	10/16/1994-10/18/1994	17	\$900,000,000	Total rainfall generally ranged from 10 to 20 inches with Liberty recording 30.5 inches of rain during the storm. Over 13,000 people had to be evacuated during the floods and more than 22,000 homes were damaged.
Austin, Brazoria, Chambers, Colorado, Fort Bend, Harris, Liberty, Matagorda, Montgomery, Waller, Wharton	10/17/1998-10/18/1998	8	\$418,000	Many areas received in excess of 10 inches. Over 16 inches of rain fell along the Wharton/Colorado county line. Three hundred and fifty to 375 homes were impacted, four were destroyed, 143 sustained major damage, and 209 received minor damage. Hundreds of livestock were lost and 7,500 acres of crop land were damaged.
Austin, Brazoria, Colorado, Fort Bend, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, Wharton	11/12/1998-11/14/1998	0	\$239,000	Rainfall amounts across the area averaged 5 to 7 inches with large areas receiving 7 to 9 inches. Isolated locations received more than 10 inches of rain. Homes flooded in several communities, including Plum Grove, Patton Village, Magnolia Gardens, Banana Bend, Highland Shores and Friendswood.
Brazoria, Fort Bend, Galveston, Harris	08/28/2001-08/31/2001	0	\$1,463,000	Heavy rainfall caused street flooding and water in some homes. Some roads were closed.
Harris	09/18/1996	0	\$1,500,000	Widespread street flooding in downtown Houston and Pasadena. Homes and businesses in Pasadena were flooded.
Harris	05/24/1997	0	\$250,000	Severe flooding in Houston. 50-75 homes received flood damage.
Harris	03/19/1999	0	\$300,000	Widespread flooding in southwest Houston. Numerous streets in the Alief and Bellaire areas were flooded. Several on ramps to US 59, Loop 610, and US 90, as well as the intersection of I-10 and Beltway 8, were impassable due to high water.
Harris, Liberty	05/19/2000	0	\$10,400,000	Major flooding on Greens, Airtex, Rankin, and Aldine-Westfield Roads in Harris County. Four homes were damaged. At least 262 homes, 42 businesses, and several schools were damaged in Liberty County.
Brazoria, Galveston, Harris	09/13/2000	0	\$350,000	Brazoria--Several roads and a railroad underpass were impassable in Freeport and Clute. Galveston--Street flooding in Galveston, League City and Texas City.
Liberty	10/22/2000	0	\$500,000	Several homes flooded in the Rye and Moss Hill areas. Part of FM 787 was washed out in Romayor. SH 146 flooded north of Moss Hill.
Walker	11/3/2000	0	\$500,000	FM 2989 closed. Major street flooding in Huntsville. Subdivisions flooded in Riverside area.
Brazoria	09/2/2001	0	\$80,000	Homes flooded in Danbury. Numerous streets flooded, including Highway 6 between Manvel and Alvin and Highway 36 in Damon.
Galveston	05/17/2002	0	\$150,000	Streets flooded with 2-3 feet of water, 50 homes and businesses flooded.
Brazoria, Galveston, Harris	08/15/2002	0	\$325,000	Several Brazoria County homes and roads around Alvin received high water. In Galveston County, flood waters inundated cars and businesses. Several streets were closed. Numerous roads in Harris County were flooded.

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County	Date	Deaths	Property Damage	Details
Matagorda, Brazoria	09/06/2002-09/07/2002	0	\$920,000	Matagorda County--Homes in Sargent were flooded. Brazoria County--Waist deep water and flooding in Sweeny. Homes flooded in Wharton.
Brazoria, Galveston, Harris	10/24/2002	0	\$250,000	In Brazoria County, flooding occurred in and around Pearland. Roads near I-45 throughout northern Galveston County flooded. Flooding occurred on Almeda, El Dorado and Beamer Roads.
Fort Bend, Harris, Liberty	10/28/2002	0	\$775,000	Flooding at Highway 36 and Highway 90 in Fort Bend County. Widespread flooding across Harris County, resulting in many streets becoming impassable. Countywide flooding occurred in Liberty County.
Entire region	11/17/2003	0	Unknown	As much as 9 inches of rain fell in the area causing several spots of localized flooding. There were also thirteen tornadoes reported.
Fort Bend	4/25/2004	0	\$250,000	Flooding in the Pecan Hill subdivision. Two feet of water in the worst flooded homes.
Wharton	11/21/2004	0	\$2,100,000	Widespread major flooding with evacuations in Louise. Numerous roads and bridges were flooded and impassable. Countywide, 59 homes sustained major damage and 225 homes received minor damage.
Harris	7/14/2005	0	\$115,000	Flash flooding along I-10 East in the Uvalde and Cloverleaf areas, in and around Downtown Houston, and the University of Houston area. Some rainfall amounts/rates measured by Harris County rainfall gages included: 0.75" in 5 minutes, 1.81" in 15 minutes and 2.64" in 30 minutes.
Harris	6/19/2006	0	\$3,300,000	Approximately 3,370 homes were flooded and some water rescues were conducted in the I-45 and Beltway 610 vicinity. Sections of Sims, Halls, and Hunting Bayous with Vogel and White Oak Creeks experienced significant flooding. Homes along these bayous and creeks were flooded with water from 2 to 8 inches to as high as 18 to 20 inches.
Brazoria, Galveston, Harris, Waller	10/16/2006	4	\$1,608,000	Approximately 115 homes and various roads flooded in several locations around the county including Pearland due to the combination of very deep tropical moisture with a slow-moving warm front and the approach of a strong upper level trough resulted in excessive rainfall across Harris and various surrounding counties. There were four directly related drowning fatalities during this episode.
Harris	5/10/2007	0	\$650,000	Brickhouse Gully exceeded its banks and resulted in house flooding upstream of US 290 in the Langwood Subdivision. The area flooded in northern Houston accounted for damage to 70 to 90 homes. Flooding was caused by bands of thunderstorms moving in from the southwest.
Brazoria, Colorado	5/28/2007	0	\$180,000	A series of upper level disturbances affected eastern Texas over the last week of the month. Numerous thunderstorms and heavy showers continually passed over the region's western and southwestern counties causing extreme flooding problems throughout these communities. Over 50 flooded homes were reported.

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County	Date	Deaths	Property Damage	Details
Harris	8/16/2007	3	\$750,000	Damage was caused by Tropical Storm Erin. Numerous roads in Harris County flooded and were impassable across the eastern half of the county. Residential and commercial flooding also occurred in Pasadena and La Porte. At least a dozen schools, majority of these being in East Houston, received water damage. Heavy rainfall collapsed a warehouse roof in Houston on Harrisburg Boulevard. There were three fatalities. Two men died (one at the scene, the other several hours later in a hospital) when heavy rainfall collapsed the roof of a grocery store in Clear Lake. A third fatality occurred when an eighteen wheeler was accidentally driven into a 26 foot deep flooded retention pond in La Porte. The driver drowned.
Austin	11/17/2007 - 11/18/2007	0	\$60,000	Strong, slow moving thunderstorms caused flooding in and around the intersection of Rinn Road and FM 109. Vehicles were swept off roadways and occupants had to be rescued. One home in the area suffered water damage.
Galveston, Harris	4/18/2009	5	\$7,500,000	Heavy rainfall from thunderstorms moving across the county produced road closures and widespread flooding of homes, with high water rescues being required in Dickinson.
Harris, Chambers, Galveston	4/24/2009	0	\$1,006,000	A series of thunderstorms produced heavy rainfall and strong winds across portions of Harris, Galveston, and Chambers counties leaving motorists stranded along several flooded area highways and causing damage to residential and commercial structures. Forty to fifty homes received water damage from this event, although this is only an estimated count as all of the homes flooded on the 24th were also flooded during the earlier event on April 18th.
Harris, Montgomery	4/28/2009	1	\$15,750,000	A large, slow moving thunderstorm produced widespread heavy rainfall across western portions of Harris County during the early morning hours. Many roads were impassable for most of the morning rush hour, with numerous cars becoming stranded by high water. One fatality occurred when a vehicle was swept into the drainage system near I-10 W and Beltway 8. In addition to the major disruption to the morning commute, over 2,100 homes received some amount of water intrusion from this event. This ranks as the fourth largest number of homes flooded in a single event for Harris County.
Brazoria	7/1/2010	0	\$1,800,000	Widespread showers and thunderstorms across southeast Texas caused widespread damage due to flash flooding. 30 to 35 homes in the town of Sweeny were damaged.
Harris	7/2/2010	0	\$1,800,000	The passage of Hurricane Alex through the Gulf of Mexico caused a surge of tropical moisture. The resulting showers and thunderstorms led to flash flooding in the Houston area. Approximately 40 homes were damaged along Halls, Hunting, and Little White Oak bayous.

**Table 4.2-2
Highest Magnitude Floods for Planning Area (1994-2011)**

Year	Forecast Point	County	Flood Stage (ft)	Crest (ft)
1994	Brazos River near Hempstead	Waller/Washington	50	51.3
1994	Brazos River near Rosharon	Fort Bend/Brazoria	43	51.7
1994	Brazos River near West Columbia	Brazoria	30	32
1994	East Fork San Jacinto River near Cleveland	Liberty	19	24.5
1994	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	33
1994	Luce Bayou near Huffman	Liberty	22	35.1
1994	San Jacinto River near Conroe	Montgomery	20	32.8
1994	San Jacinto River near Humble	Harris/Montgomery	19	35.9
1994	Trinity River at Liberty	Liberty	24	30.8
1994	Trinity River near Moss Bluff	Liberty	13	17
1994	Trinity River near Romayor	Liberty	40	42.8
1995	Caney Creek near Splendora	Montgomery	13	21.2
1995	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	20.5
1995	Peach Creek near Splendora	Montgomery	13	14.1
1995	San Bernard River near Sweeny	Brazoria	14	20.1
1995	San Jacinto River near Conroe	Montgomery	20	21.4
1995	San Jacinto River near Humble	Harris/Montgomery	19	20.3
1995	Trinity River at Liberty	Liberty	24	27.1
1995	Trinity River near Moss Bluff	Liberty	13	13.4
1996	Luce Bayou near Huffman	Liberty	22	24.7
1997	San Bernard River near Sweeny	Brazoria	14	20.8
1997	Trinity River at Liberty	Liberty	24	27.7
1997	Trinity River near Moss Bluff	Liberty	12	13.6
1998	Bedias Creek near Madisonville	Madison/Walker	19	22.5
1998	Brazos River near Rosharon	Fort Bend/Brazoria	43	48.8
1998	Caney Creek near Splendora	Montgomery	18	20.7
1998	East Fork San Jacinto River near Cleveland	Liberty	19	20.2
1998	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	28.6
1998	Luce Bayou near Huffman	Liberty	22	31.4
1998	Menard Creek near Rye	Liberty	20	24.7
1998	San Bernard River near Sweeny	Brazoria	16	23.9
1998	San Jacinto River near Conroe	Montgomery	20	27.8
1998	San Jacinto River near Humble	Harris/Montgomery	19	29.6
1998	San Jacinto River near Porter	Montgomery	24	29
1998	Spring Creek near Spring	Harris/Montgomery	21	32.3
1998	Trinity River at Liberty	Liberty	24	29.3
1998	Trinity River near Moss Bluff	Liberty	12	14.4
1999	Bedias Creek near Madisonville	Madison/Walker	19	19.4
1999	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	20.4
1999	Menard Creek near Rye	Liberty	20	31.4
1999	Trinity River at Liberty	Liberty	26	27.8
1999	Trinity River near Moss Bluff	Liberty	12	13.7
2000	Bedias Creek near Madisonville	Madison/Walker	19	20.3
2000	Peach Creek near Splendora	Montgomery	13	13.5
2001	Bedias Creek near Madisonville	Madison/Walker	19	21.4
2001	Caney Creek near Splendora	Montgomery	18	26.6

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Year	Forecast Point	County	Flood Stage (ft)	Crest (ft)
2001	East Fork San Jacinto River near Cleveland	Liberty	19	19.8
2001	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	23.5
2001	Luce Bayou near Huffman	Liberty	22	23.3
2001	Menard Creek near Rye	Liberty	20	20.2
2001	Peach Creek near Splendora	Montgomery	13	18.1
2001	San Bernard River near Sweeny	Brazoria	16	23.5
2001	San Jacinto River near Conroe	Montgomery	20	23.3
2001	San Jacinto River near Humble	Harris/Montgomery	19	24.8
2001	San Jacinto River near Porter	Montgomery	24	32.2
2001	Spring Creek near Spring	Harris/Montgomery	21	29.6
2001	Trinity River at Liberty	Liberty	26	28.6
2001	Trinity River near Moss Bluff	Liberty	12	12.4
2002	Bedias Creek near Madisonville	Madison/Walker	19	25.7
2002	Brazos River near Rosharon	Fort Bend/Brazoria	43	47.3
2002	East Fork San Jacinto River near Cleveland	Liberty	19	19.6
2002	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	23.7
2002	Luce Bayou near Huffman	Liberty	22	28.9
2002	Menard Creek near Rye	Liberty	20	23.8
2002	Peach Creek near Splendora	Montgomery	13	17.6
2002	San Bernard River near Sweeny	Brazoria	16	21.6
2002	San Jacinto River near Conroe	Montgomery	20	25.1
2002	San Jacinto River near Humble	Harris/Montgomery	19	25.3
2002	San Jacinto River near Porter	Montgomery	24	35
2002	Spring Creek near Spring	Harris/Montgomery	21	25.4
2002	Trinity River at Liberty	Liberty	26	28.8
2002	Trinity River near Moss Bluff	Liberty	15	17.2
2003	Bedias Creek near Madisonville	Madison/Walker	19	23.1
2003	Luce Bayou near Huffman	Liberty	22	22.3
2003	Peach Creek near Splendora	Montgomery	13	18.3
2003	San Bernard River near Sweeny	Brazoria	16	19.7
2003	Trinity River at Liberty	Liberty	26	26.5
2003	Trinity River near Moss Bluff	Liberty	15	17.2
2004	Bedias Creek near Madisonville	Madison/Walker	19	20.1
2004	Brazos River near Rosharon	Fort Bend/Brazoria	43	48.8
2004	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	21.6
2004	Luce Bayou near Huffman	Liberty	22	23.9
2004	Menard Creek near Rye	Liberty	20	23.9
2004	Peach Creek near Splendora	Montgomery	13	17.4
2004	San Bernard River near Sweeny	Brazoria	16	22.4
2004	San Jacinto River near Conroe	Montgomery	20	20.4
2004	San Jacinto River near Humble	Harris/Montgomery	19	20.1
2004	San Jacinto River near Porter	Montgomery	24	28
2004	Trinity River at Liberty	Liberty	26	28.1
2004	Trinity River at Riverside	Walker/Trinity	134	135.7
2004	Trinity River near Moss Bluff	Liberty	15	17.6
2005	Bedias Creek near Madisonville	Madison/Walker	19	20
2005	Luce Bayou near Huffman	Liberty	22	22.5
2005	Peach Creek near Splendora	Montgomery	13	13.5
2005	Trinity River at Liberty	Liberty	26	27.1

Year	Forecast Point	County	Flood Stage (ft)	Crest (ft)
2005	Trinity River at Riverside	Walker/Trinity	134	135
2005	Trinity River near Moss Bluff	Liberty	15	16.8
2006	East Fork San Jacinto River near New Caney	Harris/Montgomery	19	21.4
2006	Luce Bayou near Huffman	Liberty	22	25.3
2006	Peach Creek near Splendora	Montgomery	13	17.8
2006	San Bernard River near Sweeny	Brazoria	16	20.5
2006	San Jacinto River near Humble	Harris/Montgomery	19	20.9
2006	San Jacinto River near Porter	Montgomery	24	27.3
2006	Trinity River near Moss Bluff	Liberty	15	15.3
2007	Bedias Creek near Madisonville	Madison/Walker	19	19.2
2007	Brazos River near Rosharon	Fort Bend/Brazoria	43	48.9
2007	San Bernard River near Sweeny	Brazoria	16	17.8
2007	San Jacinto River near Humble	Harris/Montgomery	19	19.6
2007	San Jacinto River near Porter	Montgomery	24	27.9
2007	Trinity River at Liberty	Liberty	26	28.8
2007	Trinity River at Riverside	Walker/Trinity	134	137.7
2007	Trinity River near Moss Bluff	Liberty	15	17.1
2008	Bedias Creek near Madisonville	Madison/Walker	19	19.3
2008	Luce Bayou near Huffman	Liberty	22	27.8
2008	Peach Creek near Splendora	Montgomery	13	18
2008	San Jacinto River near Humble	Harris/Montgomery	19	23.3
2008	San Jacinto River near Porter	Montgomery	24	29.9
2008	Spring Creek near Spring	Harris/Montgomery	21	25.6
2008	Trinity River at Riverside	Walker/Trinity	134	134.4
2008	Trinity River near Moss Bluff	Liberty	15	16
2009	Luce Bayou near Huffman	Liberty	22	23.4
2009	Menard Creek near Rye	Liberty	20	21.5
2009	Peach Creek near Splendora	Montgomery	13	15.5
2009	San Bernard River near Sweeny	Brazoria	16	16.8
2009	San Jacinto River near Humble	Harris/Montgomery	19	22.8
2009	San Jacinto River near Porter	Montgomery	24	27
2009	Spring Creek near Spring	Harris/Montgomery	21	22.6
2009	Trinity River at Liberty	Liberty	26	26.7
2009	Trinity River at Riverside	Walker/Trinity	134	135.1
2009	Trinity River near Moss Bluff	Liberty	15	17.4
2010	San Bernard River near Sweeny	Brazoria	16	23.4
2010	Trinity River at Liberty	Liberty	26	28.4
2010	Trinity River at Riverside	Walker/Trinity	134	135.5
2010	Trinity River near Moss Bluff	Liberty	15	17.2
2011	No events	N/A	N/A	N/A

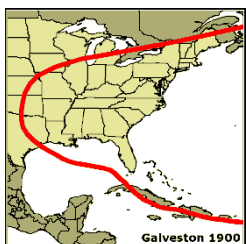
From 2000 to 2010, there were 26 flood events within the region, with an average of 2.36 flood events per year. The total amount of property damage from 2000 to 2010 was approximately \$53 million and the average was \$1.6 million. Thirteen deaths resulted from these 2000 to 2010 events. Given the past flooding history of the region, the presence of numerous rivers and stream, flat topography and clayey soils, the region has a 100 percent likelihood of flooding and could experience one or more flood events per year. The amount of property damages are expected to increase due to the anticipated population growth and increased impervious surfaces associated development. Impacts would include impassable roads and public and private property damage. Flooding amounts will vary across the region, as flooding involves several variables, such as intensity and duration of rainfall, soil types, and impervious surfaces,

and therefore it is difficult to regionally quantify the level of flooding based on rainfall amounts; however, based on the average feet above flood stage from 1994-2011 in Table 4.2-2, approximately 4 feet of flooding could be anticipated.

Hurricanes and Tropical Storms

Over the past 100 years, Southeast Texas has experienced numerous hurricane and tropical storm landfalls, and several have impacted the H-GAC region as described below.²

Galveston Hurricane 1900



This killer weather system was first detected over the tropical Atlantic on August 27, 1900. While the history of the track and intensity is not fully known, the system reached Cuba as a tropical storm on September 3 and

moved into the southeastern Gulf of Mexico on the 5th. A general west-northwestward motion occurred over the Gulf accompanied by rapid intensification. By the time the storm reached the Texas coast south of Galveston late on September 8, it was a Category 4 hurricane. After landfall, the cyclone turned northward through the Great Plains. The system became extratropical and turned east-northeastward on September 11, passing across the Great Lakes, New England, and southeastern Canada. It was last witnessed over the north Atlantic on September 15.

This hurricane was the deadliest weather disaster in United States history. Storm tides of eight to 15 feet inundated Galveston Island, as well as other portions of the nearby Texas coast. High tides were largely responsible for the 8,000 deaths (estimates range from 6,000 to 12,000) attributed to the storm. The damage to property was estimated at \$30 million.

Hurricane Carla 1961

Carla made landfall near Port Lavaca on September 14. Carla was among the largest hurricanes of historical record (number 2 behind the Great New England Hurricane of 1938). The storm produced numerous tornadoes, gusts reaching 175 MPH, torrential rains, and a 22 foot storm surge at Port O'Connor. Hurricane force wind gusts were seen along almost the entire Texas Coast. The path of devastation extended from Victoria to Dallas. A death toll of only 34 people in Texas can be attributed in part to what was the largest peace time evacuation of in U.S. history. A quarter million people fled the middle and upper Texas coasts, moving inland to safety.

Twenty-six tornadoes were spawned by Hurricane Carla, one of which damaged 120 buildings and killed six in Galveston. Structures located outside of the protective seawall were severely damaged by the storm surge.³ Texas City saw 90 percent of its homes flooded. Surfside, near Freeport, received extensive damage. The trail of destruction extended south to Point Isabel, where four to five foot storm surges were observed. Seventy-five percent of Port O'Connor was destroyed.

Hurricane Beulah 1967



The Galveston Hurricane caused extensive damage with its hurricane-force wind and storm surge, as illustrated in this photo of ruined homes. (NOAA Photo Library, NOAA Central Library; OAR/ERL/National Severe Storms Laboratory)

² Historic hurricane track graphics provided by the National Hurricane Center.

³ The Galveston Island seawall was constructed following the Galveston Hurricane of 1900.

At the time, Hurricane Beulah was the third largest hurricane on record, following Carla in 1961 and the Great New England Hurricane of 1938. Beulah, which struck the coast near Brownsville on September 20, 1967, turned to the southwest, paralleling the coastline.

Hurricane-force winds extended up the coast to Corpus Christi, which received gusts up to 86 MPH. Winds gusted to 110 MPH at the local Army Corp of Engineers office. The storm surge reached 20 feet along lower sections of Padre Island. Storm surge and wind-driven waves cut 31 new inlets through the island. Citrus fruit and tree damage totaled \$15 million in the Lower Rio Grande Valley.



Flooding along the Texas coast following the passage of Hurricane Beulah on September 20, 1967 caused significant damage to this business district. (NOAA Photo Library, NOAA Central Library; OAR/ERL/National Severe Storms Laboratory)

One hundred and fifteen tornadoes were spawned by the system, the most ever known to be generated by a tropical storm (five times the previous record set by Isabel in 1964). Most of the tornadoes were confined to the coast of Texas and were rather weak. One tornado touched down in Palacios on the morning of the 20th, killing four people and injuring six others. Fifteen people died in Texas during Beulah. Five were killed by a tornado and 10 died due to drowning. A total of 110 boats were damaged or destroyed by the storm. Damages were estimated conservatively at \$100 million.

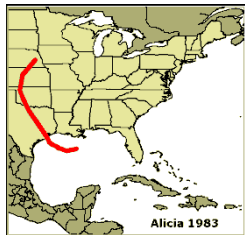
Hurricanes Fern and Edith 1971

Hurricane Fern paralleled the Texas coast and made landfall as a tropical storm on the 11th. Major flooding occurred along portions of the Frio, Lavaca, Nueces, San Antonio, Guadalupe, Mission, and Aransas Rivers. Wind gusts over 100 MPH blew away the anemometer at Port O'Connor on the 10th. Gusts exceeding 60 MPH were seen from Galveston down the coast south of Corpus Christi. Five tornadoes were generated by Fern. The highest recorded storm surge reached six feet at Freeport. Damages totaled \$30 million, \$5 million of which occurred in Sinton. Two people died during the storm.

Edith made landfall as a Category 2 hurricane on the 16th. A six foot storm surge overran Highway 87 between Sabine Pass and High Island. Galveston and Port Arthur reported wind gusts of 53 and 47 MPH respectively.

Tropical Storm Claudette 1979

Tropical Storm Claudette made landfall near Galveston and made a loop just after landfall, stalling over southeast Texas from July 24 to July 27. Winds gusted to 60 MPH. Tides in Chocolate Bayou reached five feet above normal. Rainfall amounts greater than 10 inches fell within 40 miles of the coast from Matagorda Bay to Sabine Pass. Twenty four hour rainfall totals reached 45 inches in Alvin, establishing a new U.S. rainfall record. This caused widespread and unprecedented flooding across the area. Most streams did not return to their banks until the 30th. Fifteen thousand homes and hundreds of businesses were flooded. The rice crop was beaten into the soil by the heavy rain. Six counties in southeast Texas were declared major disaster areas. In Austin, two inches of rain fell within an hour on the 27th and caused flash flooding. Claudette produced \$750 million in damages, putting it on the National Hurricane Center's list of history's most damaging tropical cyclones in the United States.



Hurricane Alicia 1983

Alicia formed over the north central Gulf of Mexico on August 15, 1983. It drifted slowly westward and northwestward while steadily strengthening on the 16th and 17th. This motion brought Alicia over the western end of Galveston Island as a Category 3 hurricane on August 18. Alicia moved northwestward into Oklahoma as a tropical depression on August 19, and then turned northward before dissipating over Nebraska on the 21st.

The Coast Guard cutter Buttonwood moored at Galveston reported sustained winds of 96 MPH with gusts reaching 125 MPH. Hobby Airport at Houston, Texas reported 94 MPH sustained winds with gusts to 107 MPH. Wind gusts of hurricane force in downtown Houston littered the streets with broken glass as windows broke in numerous high-rise buildings. Additionally, 23 tornadoes were reported from Alicia. Alicia was responsible for 21 deaths and \$2 billion in damages.

Tropical Storm Frances 1998

On September 10, 1998, Tropical Storm Frances formed in the western Gulf of Mexico approximately 250 miles south of Galveston. On September 12, Frances moved inland just southwest of Victoria and remained nearly stationary throughout the day, moving to the north northeast that evening. At 7 p.m. ET, Frances was downgraded to a Tropical Depression as it moved to the northeast of Victoria.

Most of the damage along the coast was attributed to the high tides that persisted for nearly two days. The high tides in Galveston Bay increased flooding problems experienced further inland by the heavy rains. Over four inches of rain fell over the Houston/ Galveston County Warning area. More than 10 inches of rain fell along the coastal counties of Matagorda, Brazoria, Galveston and Chambers. Inland counties, including Harris, Polk, San Jacinto and Washington received similar rainfall totals. With tides already running four to six feet above normal, rainfall runoff that normally drained into area bays, backed up, resulting in more widespread flooding of inland creeks and bayous. Galveston, Harris, Brazoria, and Matagorda Counties were declared disaster areas. Total damages exceeded \$286 million dollars. Most of this damage was along the coast and around Galveston Bay where high tides and winds destroyed dunes and personal property. Nearly 100 single family homes were destroyed along the upper Texas coast by the high tides and battering waves. Three deaths can be attributed to Tropical Storm Frances.

Tropical Storm Allison 2001



Tropical Storm Allison, which began as an area of disturbed weather over the northwestern Gulf of Mexico on June 5, 2001, rapidly developed into a tropical storm. The storm made landfall near Freeport, Texas later that day. Allison weakened to a depression on the 6th, while drifting northward. The storm then made a slow loop over southeastern Texas from the 7th to the 9th. The cyclone moved into the Gulf of Mexico on the 10th and acquired subtropical characteristics. It then moved east-northeastward over southeastern Louisiana on the 11th, where it re-intensified into a subtropical storm. Allison then weakened to a subtropical depression on the 12th while continuing east-northeastward. This track carried it to southeastern North Carolina by the 14th where it stalled. The cyclone then drifted northeastward on the 15th and 16th. This was followed by a faster northeastward motion on the 17th as the center emerged in the Atlantic. Allison regained subtropical storm strength later that day before becoming extratropical on the 18th southeast of Cape Cod. The system dissipated southeast of Nova Scotia the next day.

Allison brought tropical-storm-force winds and above normal tides to portions of the Texas and Louisiana coasts. However, the greatest damages sustained were due to the widespread heavy rains and resulting floods along the entire path of the cyclone. Houston, Texas, was the worst affected area, as the Port of Houston reported 37 inches of rain. Several other locations reported more than 30 inches. The storm also spawned 23 tornadoes. Allison was responsible for 41 deaths and at least \$5 billion in damage in the United States, making it the deadliest and costliest U.S. tropical storm of record.

Hurricane Rita 2005

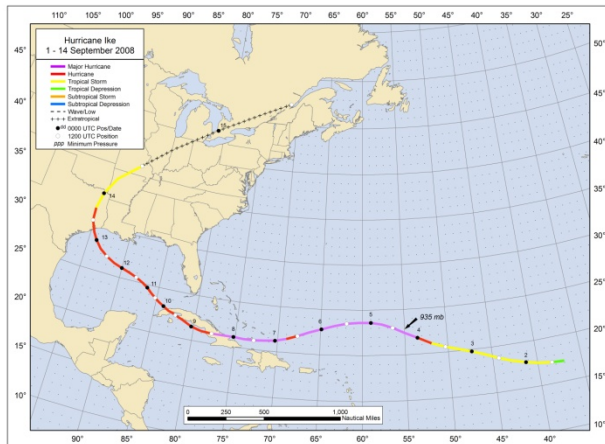


Hurricane Rita began as a tropical wave, combined with the remnants of an old front, on September 7, 2005. The system developed into a depression just east of the Turks and Caicos Islands late on the 17th. The following afternoon, it developed into a tropical storm. Maximum winds increased to 70 mph as Rita moved through the central Bahamas on the 19th. The storm went through rapid intensification on September 20 as it moved through the Straits of Florida and became a Category 2. The center of the storm passed about 50 miles south of Key West, Florida.

Upon entering the Gulf of Mexico, Rita intensified to a Category 5 within 24 hours. The maximum sustained winds reached 165 mph late on September 21, and the hurricane reached a peak intensity of 180 mph early on September 22. Weakening began later that day and continued until landfall the morning of the 24th just east of the Texas/Louisiana border between Sabine Pass and Johnson's Bayou. At that time, Rita was a Category 3 with maximum sustained winds of 115 mph. Weakening continued after landfall, but Rita remained a tropical storm until reaching northwestern Louisiana late on the 24th. The cyclone then turned northeastward and merged with a frontal system two days later. Rita brought hurricane conditions to southwestern Louisiana and southeastern Texas.

The hurricane caused storm-surge flooding of 10 to 15 feet above normal tide levels along the southwestern coast of Louisiana, Texas, and inundated portions of the New Orleans area previously flooded by Katrina. Rita was responsible for seven deaths, and it caused damage estimated at \$10 billion in the United States.

Hurricane Ike 2008



Ike originated from a tropical wave off the coast of Africa on August 28, 2008. Ike became a tropical depression on September 1 and turned into a tropical storm later that day. Ike became a hurricane on the 3rd, and reached an estimated peak intensity of 145 mph (Category 4) on September 4 when it was located 550 miles northeast of the Leeward Islands.

Ike moved across the Turks and Caicos Islands and the Great Inagua Island. The hurricane made landfall on the coast of Cuba on the 8th as a Category 4 storm. It moved into the Gulf of Mexico the next day.

Ike had a large wind field as it moved northwestward across the Gulf of Mexico for 3 days, with tropical-storm-force winds extending up to 275 miles from the center and hurricane-force winds extending up to 115 miles from the center. The hurricane gradually intensified as it moved across the Gulf toward the Texas coast. Ike made landfall over the north end of Galveston Island on the morning of September 13 as a Category 2 hurricane with maximum sustained winds of 110 mph. The hurricane weakened as it moved inland across eastern Texas and Arkansas and became extratropical over the middle Mississippi Valley on the 14th, and eventually moved into the Ohio valley and Canada.

Storm surges of 15 to 20 feet above normal tide levels occurred along the Bolivar Peninsula of Texas and in much of the Galveston Bay area, with surges of up to 10 feet above normal occurring as far east as south central Louisiana. Storm total rainfalls from Ike were as much as 19 inches in southeastern Texas and 14 inches in Cuba.



The surge before the storm swamps Galveston Island, Texas, and a fire destroys homes along the beach as Hurricane Ike approaches Friday, Sept. 12, 2008. (AP Photo/David J. Phillip)

In its path through the Gulf of Mexico, Ike caused extensive damage and took many lives across the Caribbean and along the coast of Louisiana and Texas. Estimates have that 74 people were killed due to flooding and mud slides in Haiti and two in the Dominican Republic. Seven deaths were reported in Cuba.

Ike's storm surge destroyed the Bolivar Peninsula of Texas. Storm surge, winds, and flooding from heavy rains caused widespread damage in other areas of southeastern Texas, western Louisiana, and Arkansas. Twenty people were killed in these areas, with many others still missing. Property damage from Ike as a hurricane is estimated at \$19.3 billion. Additionally, as an extratropical system over the Ohio valley, Ike was directly or indirectly responsible for 28 deaths and more than \$1 billion in property damage.

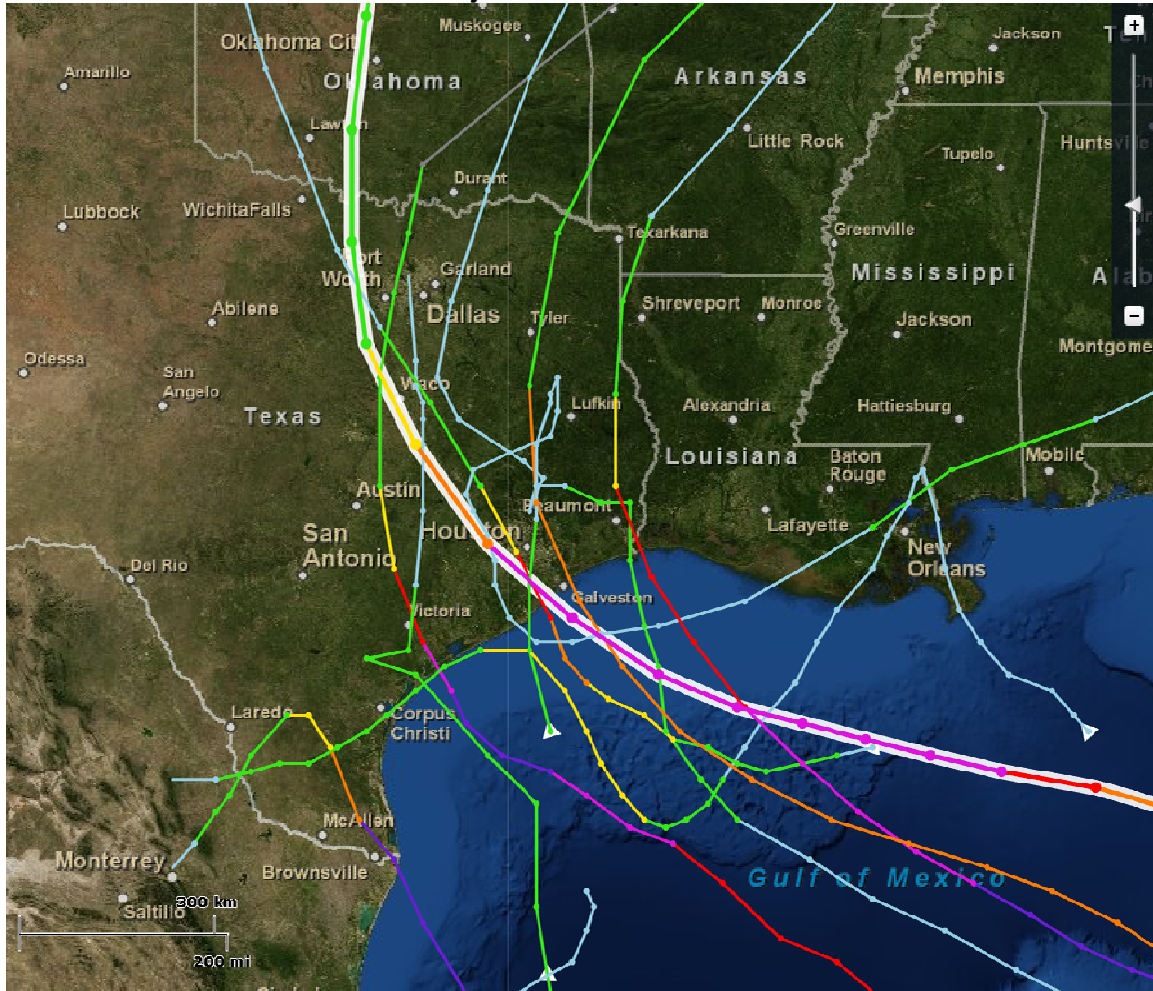
Table 4.2-3 summarizes hurricanes and tropical storms affecting the H-GAC region.

**Table 4.2-3
 Hurricanes and Tropical Storms Affecting the H-GAC Region**

Name	Year	Category
Galveston Hurricane	1900	4
Hurricane Carla	1961	4
Hurricane Beulah	1967	4
Hurricane Fern	1971	1
Hurricane Edith	1971	2
TS Claudette	1979	Tropical Storm
Hurricane Alicia	1983	3
TS Frances	1998	Tropical Storm
TS Allison	2001	Tropical Storm
Hurricane Rita	2005	3
Hurricane Ike	2008	2

Figure 4.2-1 shows the tracks of the major hurricanes, discussed above, that have impacted the region. While the coastal portions of the region are more at risk to the effects of hurricanes than the other parts of the region, the entire region is in a hurricane hazard area and can be expected to experience hurricanes in the future.

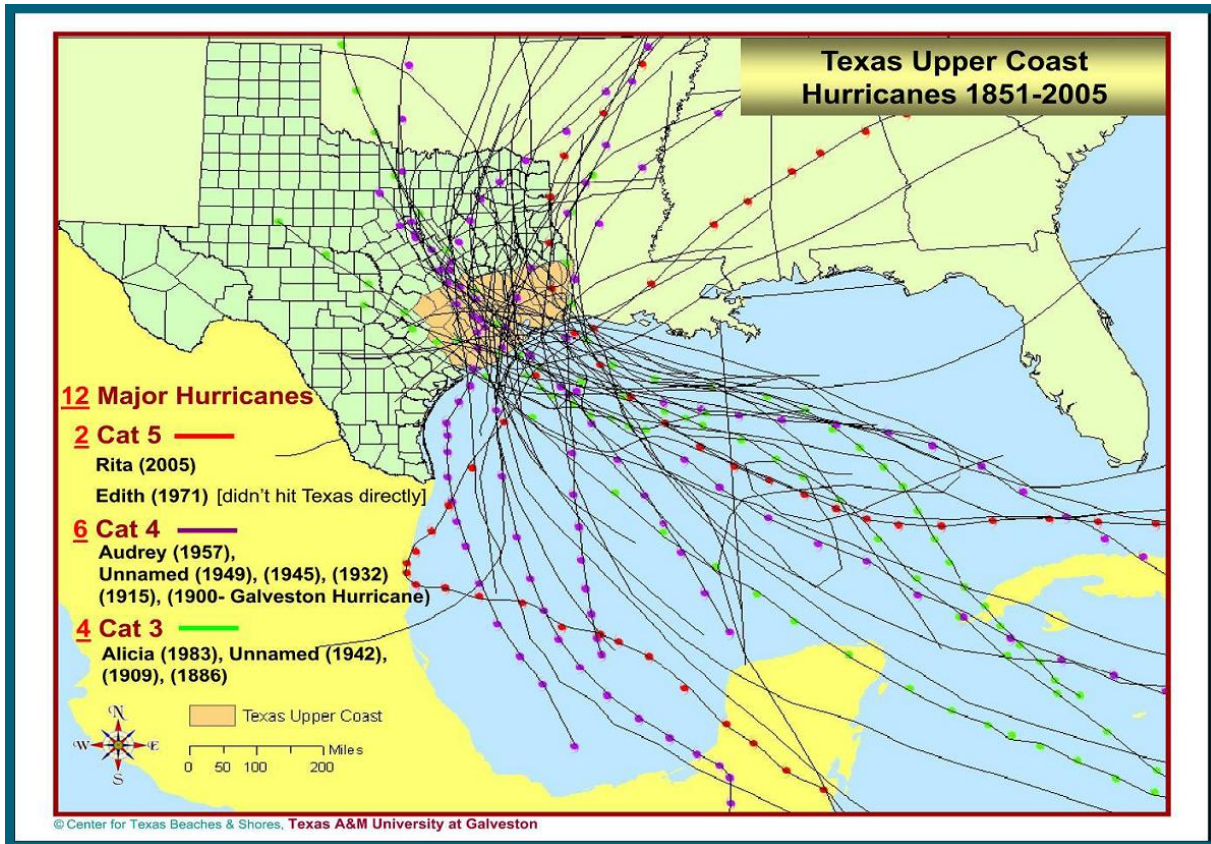
**Figure 4.2-1
Major Hurricane Tracks**



Source: National Hurricane Center

As shown in **Figure 4.2-2**, the possibility of a hurricane occurring along the upper coast of Texas is significant. Since the 16th century, 26 major storms have made landfall on the Southeast Texas coast. Damage totals for these 26 storms is estimated to be over \$80 billion in 2007 US dollars (Hurricane Ike Impact Report, December 2008).

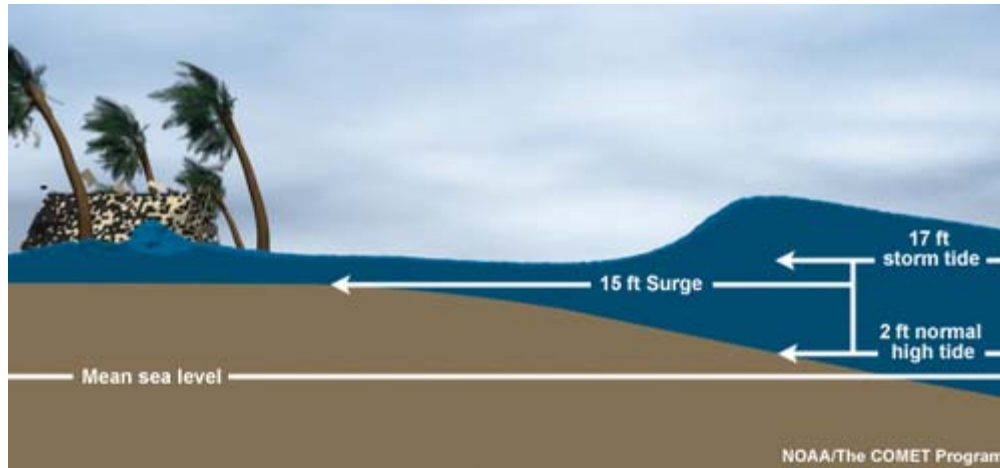
Figure 4.2-2
Texas Upper Coast Historic Hurricane Tracks



Storm Surge

Storm surge is typically caused by tropical systems although the resulting damage is from flooding. Storm surge is a significant rise of water caused by a storm that exceeds the normal tide fluctuations. Storm tide differs from storm surge because the storm tide defines the water level rise due to the combination of storm surge and astronomical tide. Storm surge can combine with the storm tide which can cause extreme inundation. **Figure 4.2-3** illustrates the difference between storm surge and storm tide.

Figure 4.2-3
Storm Surge vs. Storm Tide

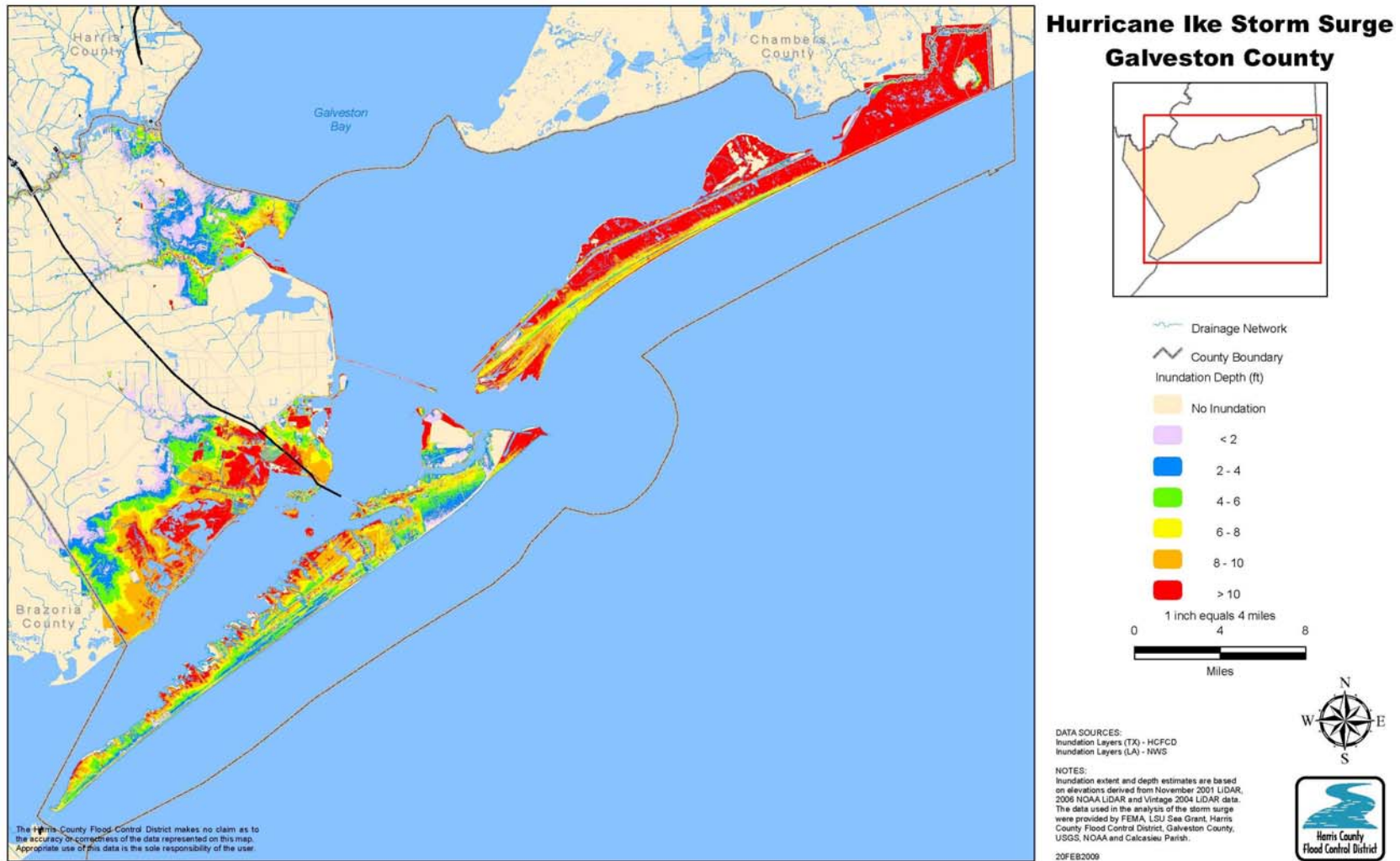


Source: <http://www.nhc.noaa.gov/ssurge/index.shtml>

Coastal areas have the highest *susceptibility* to storm surge and include the following counties in the H-GAC region: Matagorda, Brazoria, Galveston, Harris, and Chambers. In recent years, these counties suffered damage due to storm surge from Hurricane Katrina, Rita, Ike, Ida and Tropical Storm Edouard. Although some of these storms did not make landfall in the region, residual impacts were still made.

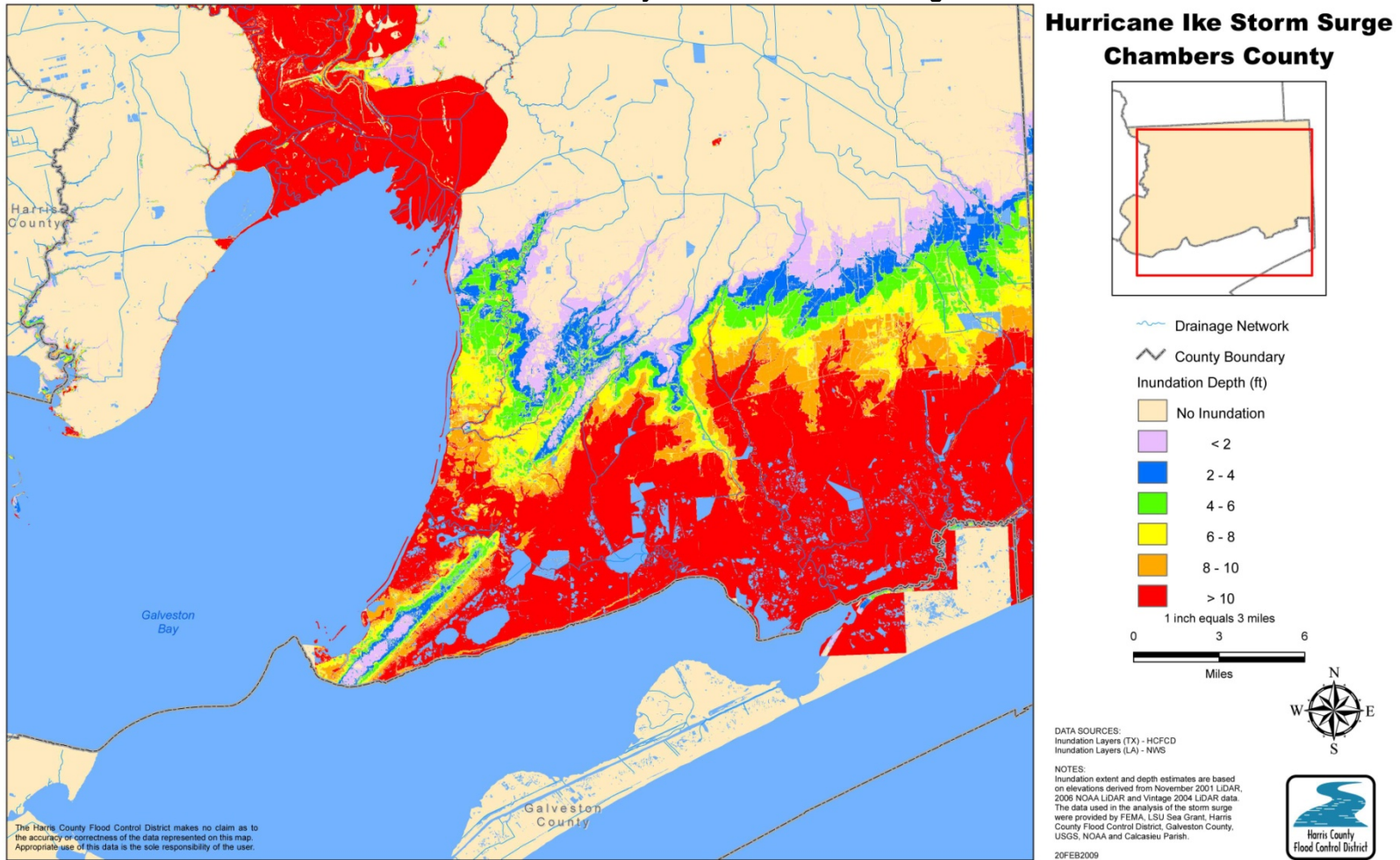
The amount of surge from storms is estimated using the NOAA's Sea, Lake and Overland Surges from Hurricanes (SLOSH) models. **Figure 4.2-4** illustrated the estimated storm surge predicted for Hurricane Ike. Some areas were predicted to receive over 20 feet of storm surge. **Figures 4.2-5, 4.2-6, 4.2-7 and 4.2-8** illustrate the actual storm surge for Galveston, Chambers, Harris, and Brazoria counties respectively.

**Figure 4.2-5
 Galveston County Hurricane Ike Storm Surge**



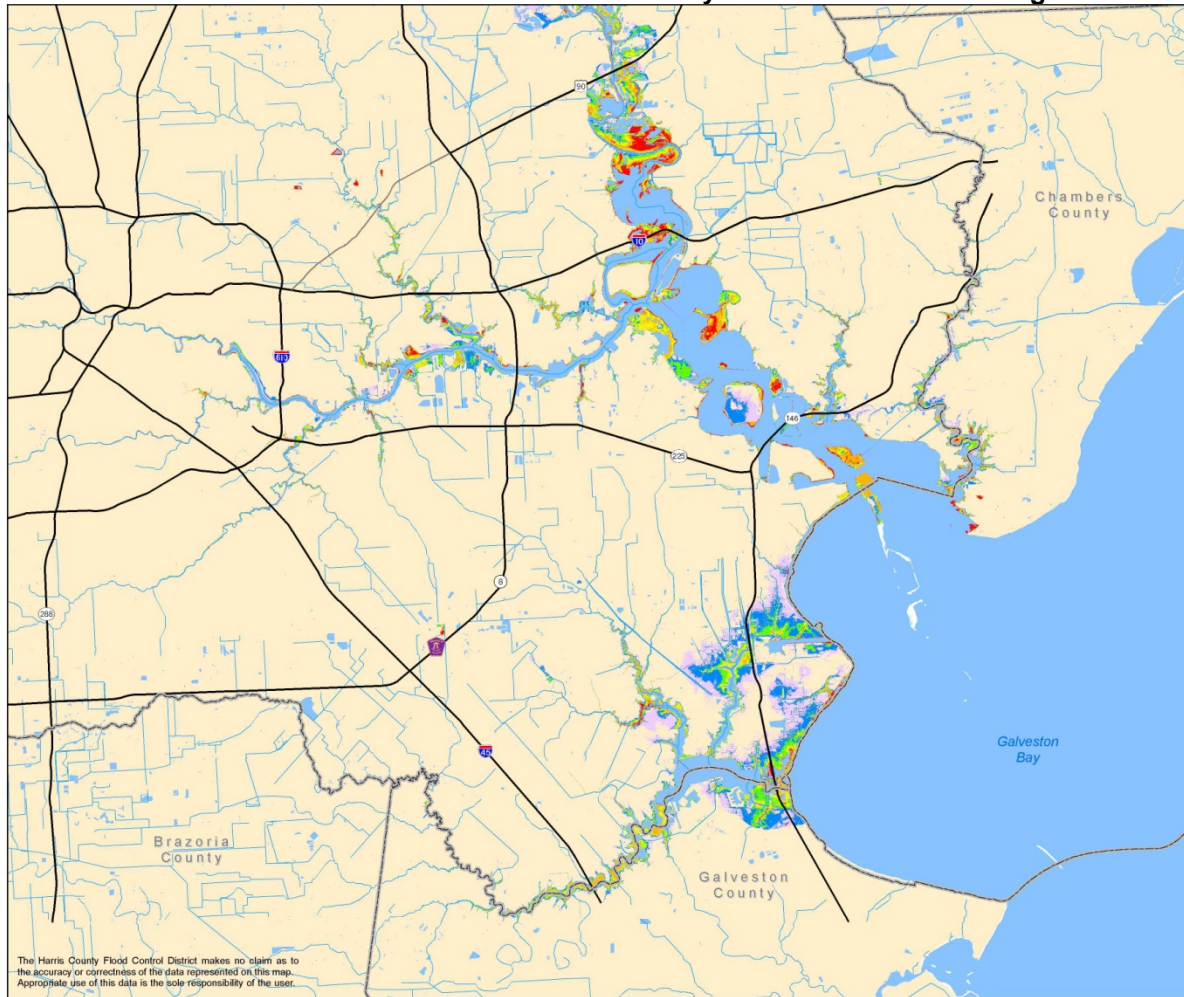
Maximum storm surge inundation levels (water depth) for Galveston County, Texas, including Galveston Island and the Bolivar Peninsula, during Hurricane Ike. Areas shaded in red indicate where the water depths exceeded 10 ft. Image courtesy of the Harris County Flood Control District. (NHC, 2009)

**Figure 4.2-6
 Chambers County Hurricane Ike Storm Surge**

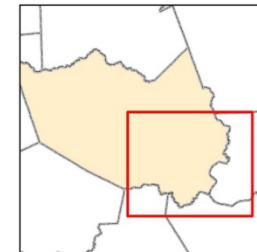


Maximum storm surge inundation levels (water depth) across Chambers County, Texas, during Hurricane Ike. Areas shaded in red indicate where the water depths exceeded 10 ft. Image courtesy of the Harris County Flood Control District. (NHC, 2009)

**Figure 4.2-7
 Harris County Hurricane Ike Storm Surge**



**Hurricane Ike Storm Surge
 Harris County**



Drainage Network
 County Boundary
 Inundation Depth (ft)
 No Inundation
 < 2
 2 - 4
 4 - 6
 6 - 8
 8 - 10
 > 10
 1 inch equals 3 miles



DATA SOURCES:
 Inundation Layers (TX) - HCFCD
 Inundation Layers (LA) - NWS

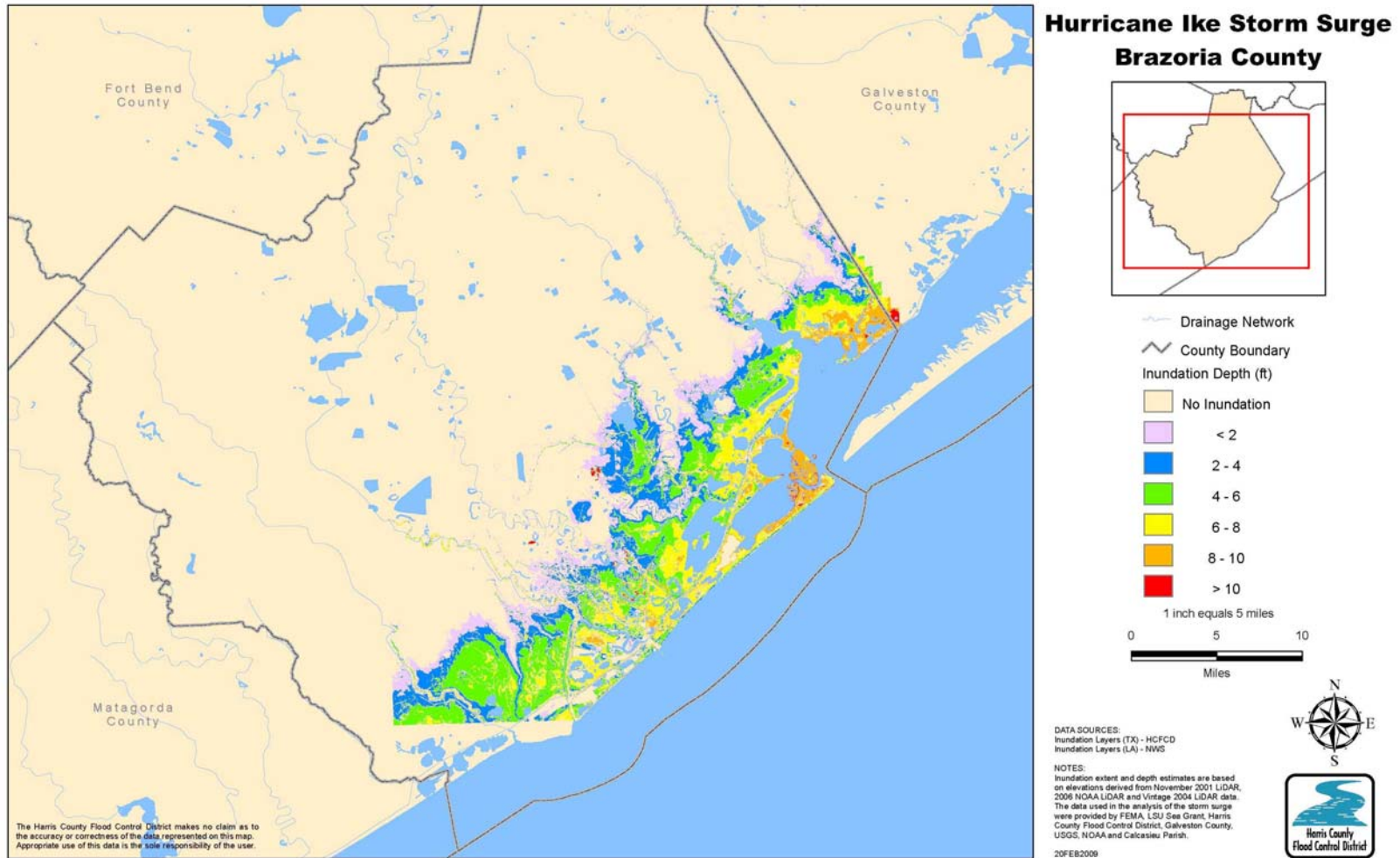
NOTES:
 Inundation extent and depth estimates are based on elevations derived from November 2001 LIDAR, 2006 NOAA LIDAR and Vintage 2004 LIDAR data. The data used in the analysis of the storm surge were provided by FEMA, LSU Sea Grant, Harris County Flood Control District, Galveston County, USGS, NOAA and Calcasieu Parish.

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Maximum storm surge inundation levels (water depth) across Harris County, Texas, during Hurricane Ike. Areas shaded in red indicate where the water depths exceeded 10 ft. Image courtesy of the Harris County Flood Control District. (NHC, 2009)

**Figure 4.2-8
 Brazoria County Hurricane Ike Storm Surge**



Maximum storm surge inundation levels (water depth) across Chambers County, Texas, during Hurricane Ike. Areas shaded in red indicate where the water depths exceeded 10 ft. Image courtesy of the Harris County Flood Control District. (NHC, 2009)

Based on historical information, the region should anticipate landfall of a category 4 hurricane every ten years or less. The region should anticipate at least one tropical storm every ten years or less. Storm surge associated with these hurricanes is difficult to estimate. For example, Hurricane Ike was a category 2 hurricane according to wind speed, but storm surge was similar to that of a category 4 hurricane. The coastal counties of Matagorda, Brazoria, Galveston, Chambers and Harris would experience effects from storm surge that the more inland counties would not. Given historical costs of past storms, property damages would likely exceed \$1 billion.

Severe Thunderstorms

According to the National Climatic Data Center, the H-GAC planning area experienced 1,557 thunderstorm wind events from 1950 through October of 2010 (see **Table 4.2-4**). These events caused six deaths, 59 injuries, over \$150 million in property damage, and more than \$2 million in crop damage (NCDC, 2010).

**Table 4.2-4
 Thunderstorm Wind Activity in the H-GAC Region (1950-2010)**

County	No. of Recorded Thunderstorms Wind Events 1950 – 10/31/2010	Total Property Damage Recorded	Total Crop Damage Recorded	Deaths	Injuries
Austin	60	\$1,102,000	\$250,000	0	0
Brazoria	122	\$3,134,000	\$5,000	0	5
Chambers	65	\$890,000	\$3,000	0	0
Colorado	56	\$114,000	\$0	0	4
Fort Bend	112	\$4,034,000	\$2,000,000	0	0
Galveston	173	\$53,004,000	\$0	0	7
Harris	472	\$86,030,000	\$100,000	3	25
Liberty	101	\$968,000	\$5,000	0	1
Matagorda	68	\$472,000	\$0	3	3
Montgomery	134	\$1,677,000	\$0	0	1
Walker	65	\$737,000	\$0	0	8
Waller	37	\$288,000	\$0	0	0
Wharton	92	\$1,638,000	\$20,000	0	5
TOTAL	1,557	\$154,088,000	\$2,383,000	6	59

Source: National Climatic Data Center

Figure 4.2-9
Historical Frequency of Thunderstorm Events by County

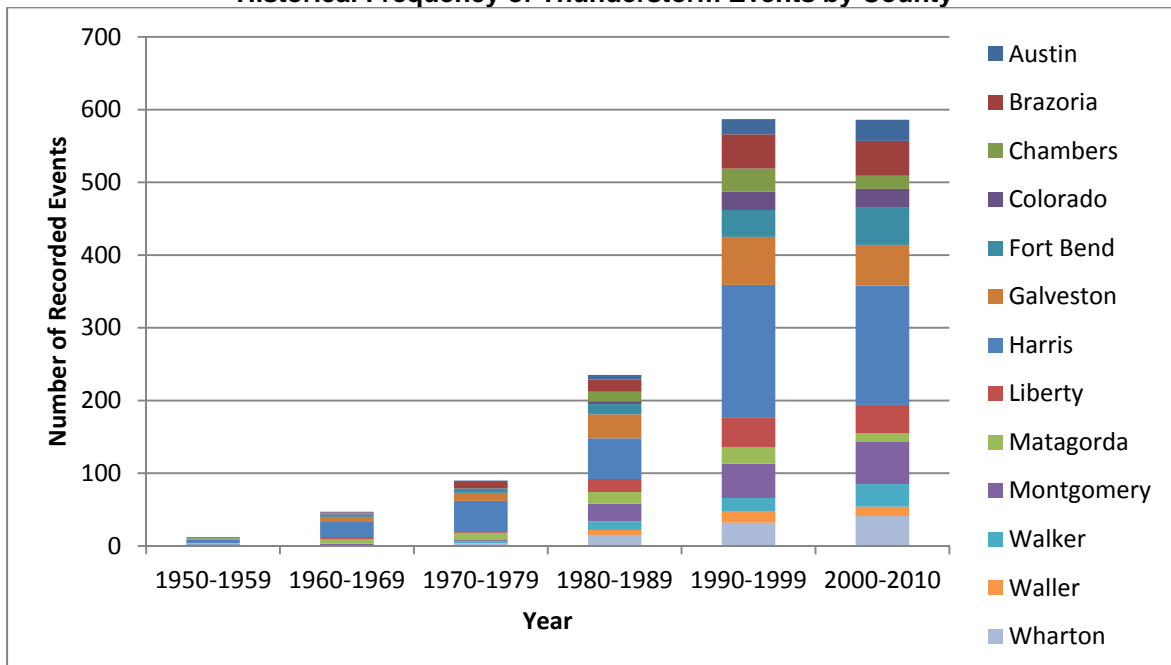
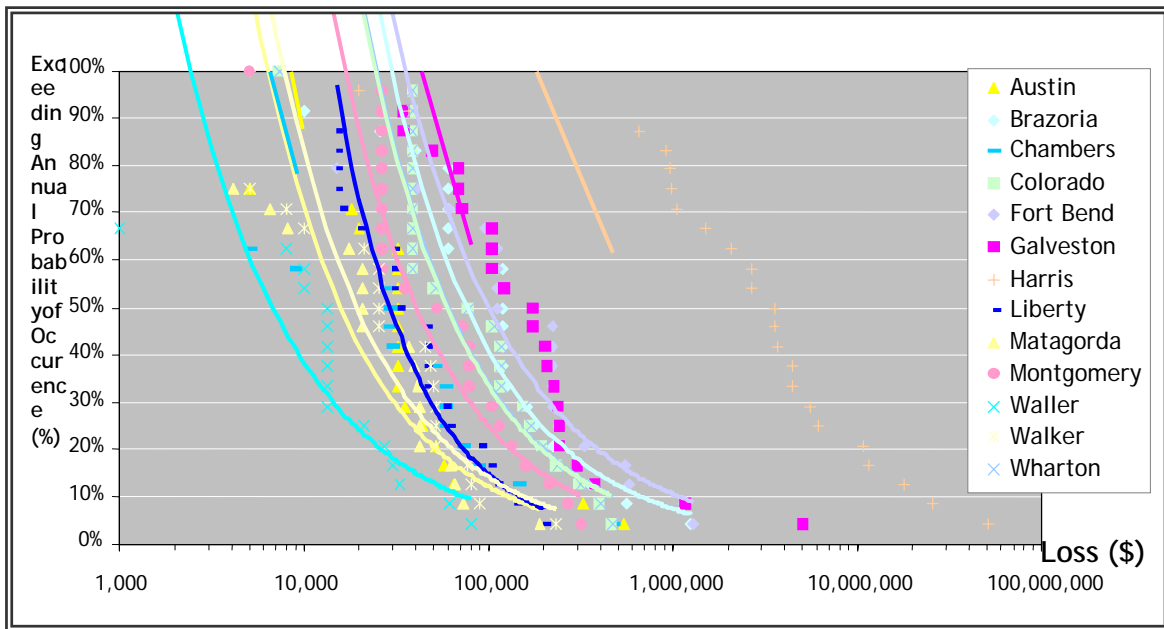


Figure 4.2-9 shows the historical frequency of events by county. No one portion of the region is more at risk to severe thunderstorms than any other part of the region; therefore the entire region is in a severe thunderstorm hazard area. Given the past frequency, and recent increased number of thunderstorms in the last two decades, it is likely that the region would continue to experience approximately 26 thunderstorms per year, with less than one per year severe enough to cause deaths and injuries.

Figure 4.2-10 shows the annual probability of thunderstorm wind occurrence and potential monetary damages for each county in the H-GAC planning area.

Figure 4.2-10
Probability of Thunderstorm Wind Occurrence and Potential Losses



Tornadoes

When compared with other states, Texas ranks number one in the number of tornado events; number one in tornado deaths; number one in tornado injuries; and number one in total damages. These rankings are based upon data collected for all states and territories for tornado events between 1950 and 1994 (SPC, 2003).

According to the National Climatic Data Center, the H-GAC region experienced 759 reported tornado events from 1950 through October of 2010 (See **Table 4.2-5**). These events caused 34 deaths, 822 injuries and approximately \$620 million in property damage (NCDC, 2010).



This Texas school was severely impacted by a tornado. (FEMA News Photo)

**Table 4.2-5
 Tornado Activity in the H-GAC Region (1950-2010)**

County	No. of Recorded Tornadoes 1950 – 10/31/2010	Total Property Damage Recorded	Deaths	Injuries
Austin	26	\$8,033,000	0	7
Brazoria	69	\$6,448,000	0	45
Chambers	28	\$1,505,000	4	8
Colorado	29	\$25,614,000	1	12
Fort Bend	47	\$9,399,000	1	73
Galveston	110	\$34,216,000	9	242
Harris	214	\$504,791,000	12	319
Liberty	56	\$10,862,000	0	38
Matagorda	44	\$4,561,000	4	25
Montgomery	46	\$8,233,000	0	10
Walker	14	\$1,553,000	1	18
Waller	13	\$725,000	1	6
Wharton	63	\$2,435,000	1	19
TOTAL	759	\$618,375,000	34	822

Source: National Climatic Data Center

Notable Tornadoes

09/12/1961 Galveston County

An F4 tornado caused eight deaths and 200 injuries.

09/20/1967 Wharton and Matagorda Counties

Three tornadoes in Matagorda County (F0, F1 and F3) caused a total of \$25,000 in damage. The F3 tornado caused four deaths and seven injuries. In Wharton County, a tornado of unknown intensity caused one death, one injury, and \$25,000 in property damage.

03/08/1976 Brazoria County

An F3 tornado injured 18 people and caused \$2.5 million in property damages.

01/31/1983 Austin and Montgomery Counties

Several tornadoes (F1 and F2) caused four injuries and \$5 million in property damage.

05/20-21/1983 Austin, Liberty and Harris Counties

Twenty tornadoes, ranging from F0, F1 and F3, caused a total of three deaths and 14 injuries. Austin County property damages were estimated at over \$2.7 million; Liberty County property damages approximated \$5 million; and Harris County property damages were estimated at over \$5 million.

11/16/1987 Galveston and Harris Counties

Two F1 tornadoes caused four injuries and approximately \$5 million in property damages.

01/14/1991 Colorado County

An F1 tornado caused one death, eleven injuries, and approximately \$25 million in damage.

01/21/1992 Liberty, Harris, and Fort Bend Counties

Several tornadoes, ranging from F1 to F4, caused a total of 34 injuries (32 in Harris County). Harris County property damages were estimated at \$350 million; Liberty County property damages were estimated at \$5 million; and Fort Bend County damages approximated \$2.5 million.

11/17/2003 Harris County and surrounding areas

Thirteen tornadoes were reported as a bizarre storm blew through the region, which also inundated the region with as much as nine inches of rain.

8/30/2009 Galveston County

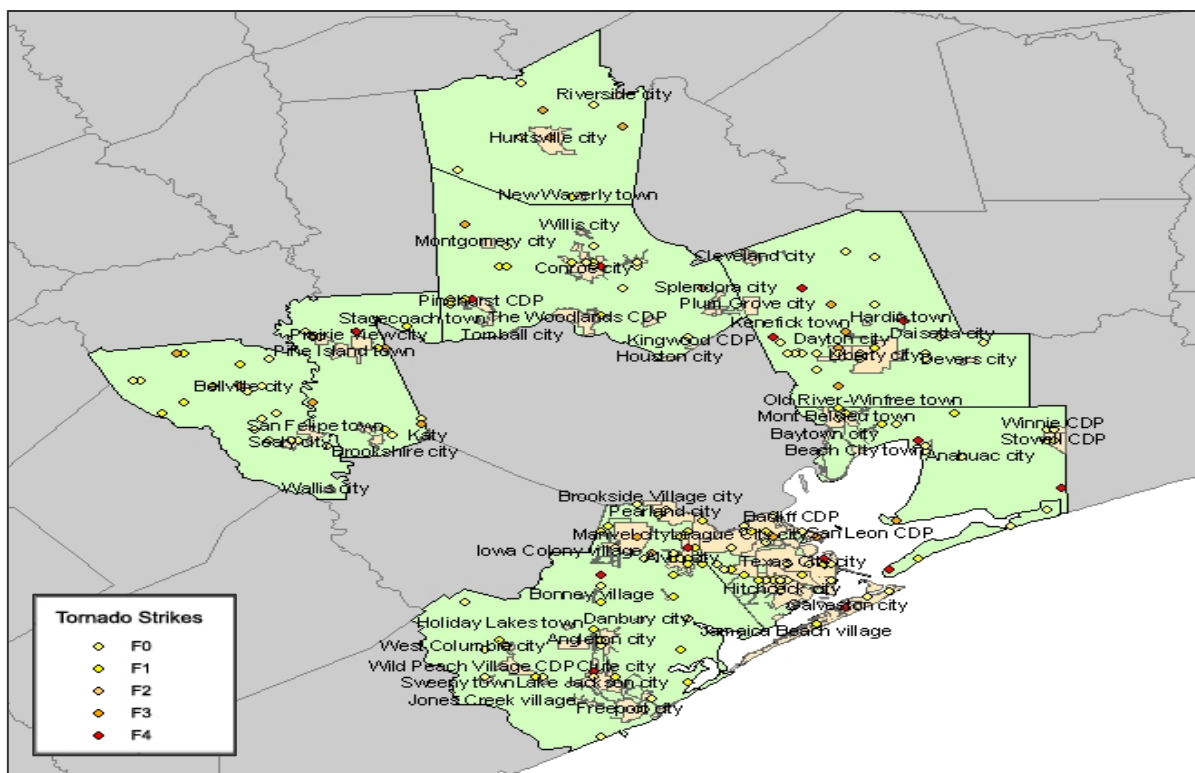
An EF1 tornado, which began as a waterspout, caused three injuries and \$0.5 million in property damage.

1/20/2010 Harris County

An EF3 tornado caused \$1.5 million in property damage.

Figure 4.2-11 and **Figure 4.2-12** show historical tornado occurrences and tornado frequency by county, with Harris County recording a high number relative to other counties in the last 60 years, followed by Galveston, Brazoria and Liberty counties.

**Figure 4.2-11
 Historical Tornado Occurrences**



Source: National Climatic Data Center

Figure 4.2-12
Frequency of Tornado Events

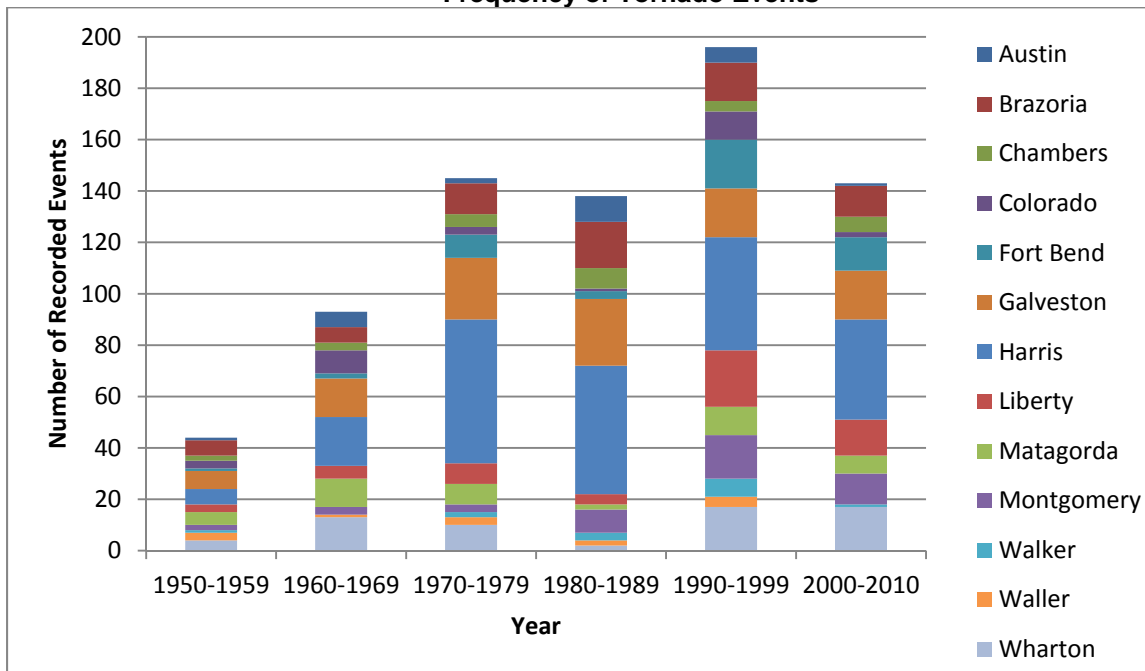
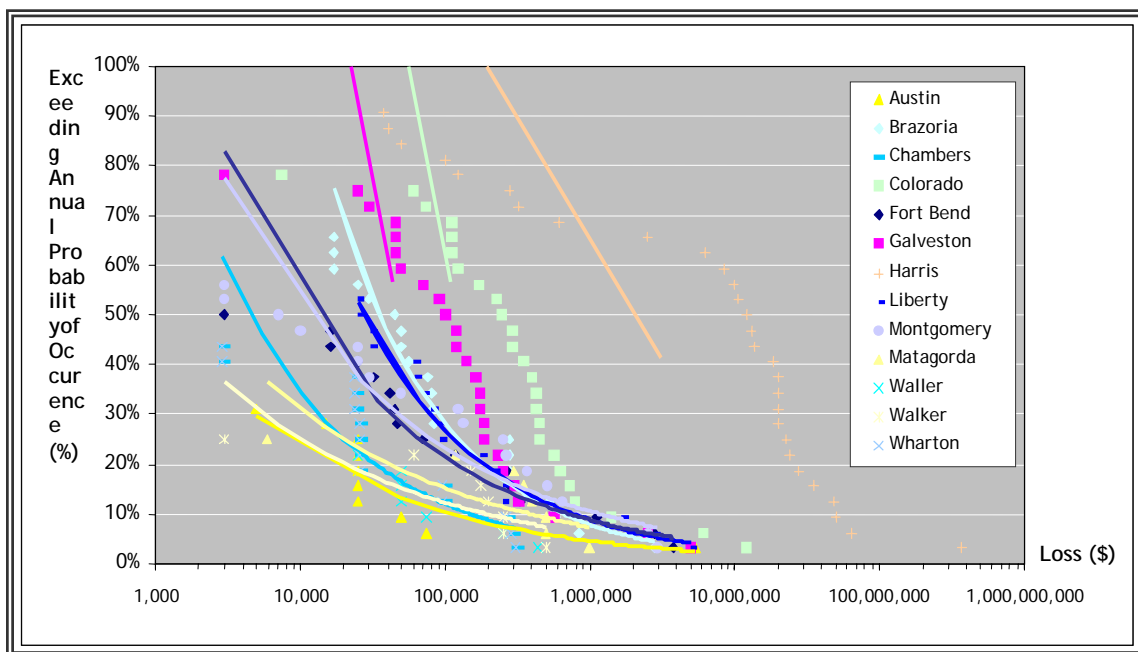


Figure 4.2-13 shows the probability of tornado occurrence and potential monetary damages for each county in the area.

Figure 4.2-13
Probability of Tornado Occurrence and Potential Monetary Damages*



Tornadoes can occur in any part of the region; therefore the entire region is in a tornado hazard area. Given the past frequency and range of tornadoes from EF1 to EF4, it is likely that the region would continue to experience approximately 13 tornadoes per year, ranging from EF1 to EF3, with roughly one

of them severe enough to cause death every other year. Because the Enhanced Fujita Scale is based largely on damage to structures, the number of recorded tornado events could increase due to the amount of population growth and associated development the region is anticipated to experience.

Wildfire

According to the Texas Forest Service, approximately 90 percent of all Texas wildfires are human-caused, due primarily to unchecked burning of debris. **Table 4.2-6** displays the number of wildfires suppressed by the Texas Forest Service and local fire departments, the causes and the acres burned.

**Table 4.2-6
 Number of Wildfires Suppressed by Texas Forest Service and/or Local Fire Departments**

Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2005	Montgomery	Grangerland VFD	2005-74357	1	Miscellaneous
2005	Montgomery	Grangerland VFD	05-75063	0.25	Miscellaneous
2005	Montgomery	Conroe	Conroe - 2	2	Debris burning
2005	Walker	Conroe	Conroe - 3	20	Debris burning
2005	Montgomery	Conroe	Conroe - 4	10	Debris burning
2005	Montgomery	Conroe	Conroe - 5	17	Incendiary
2005	Montgomery	Conroe	Conroe - 7	43	No data
2005	Liberty	Highway 321 VFD	Grass Fire	5	Miscellaneous
2005	Waller	Conroe	Conroe - 15	93	Debris burning
2005	Walker	Conroe	Conroe - 12	1	Debris burning
2005	Montgomery	Conroe	Conroe - 17	2	Debris burning
2005	Walker	Conroe	Conroe - 18	1	Miscellaneous
2005	Walker	Conroe	Conroe - 19	3	Debris burning
2005	Montgomery	Conroe	Conroe - 20	5	Debris burning
2005	Liberty	Conroe	Conroe - 21	4	Debris burning
2005	Montgomery	Conroe	Conroe - 23	1	Debris burning
2005	Walker	Conroe	Conroe - 24	5	Debris burning
2005	Montgomery	Conroe	Conroe - 26	4	Children
2005	Walker	Conroe	Conroe - 27	2	Miscellaneous
2005	Walker	Conroe	Conroe - 28	9	Debris burning
2005	Chambers	Winnie-Stowell VFD	5083	2	Smoking
2005	Liberty	Conroe	Conroe - 31	8	Debris burning
2005	Walker	Conroe	Conroe - 33	4	Debris burning
2005	Montgomery	Conroe	Conroe - 34	1	Debris burning
2005	Montgomery	Conroe	Conroe - 35	20	Incendiary
2005	Walker	Conroe	Conroe - 36	21	Debris burning
2005	Montgomery	Conroe	Conroe - 37	1	Debris burning
2005	Walker	Conroe	Conroe - 38	3	Debris burning
2005	Walker	Conroe	Conroe - 39	3	Debris burning
2005	Walker	Conroe	Conroe - 40	1	Equipment use
2005	Walker	Conroe	Conroe - 43	1	Lightning
2005	Montgomery	Conroe	Conroe - 44	1	Debris burning
2005	Montgomery	Conroe	Conroe - 46	2	Debris burning
2005	Montgomery	Conroe	Conroe - 51	4	Miscellaneous
2005	Montgomery	Conroe	Conroe - 50	4	Debris burning
2005	Walker	Conroe	Conroe - 52	118	Lightning
2005	Montgomery	Conroe	Conroe - 54	1	Debris burning
2005	Montgomery	Conroe	Conroe - 53	1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2005	Montgomery	Conroe	Conroe - 58	7	Debris burning
2005	Montgomery	Conroe	Conroe - 60	1	Debris burning
2005	Montgomery	Conroe	Conroe - 61	1	Miscellaneous
2005	Liberty	Conroe	Conroe - 62	1	Debris burning
2005	Montgomery	Conroe	Conroe - 65	5	Debris burning
2005	Montgomery	Conroe	Conroe - 63	1	Debris burning
2005	Montgomery	Conroe	Conroe - 67	1	Debris burning
2005	Walker	Conroe	Conroe - 68	5	Miscellaneous
2005	Montgomery	Richards VFD	WATSON LANE	4	Power Lines
2005	Montgomery	Conroe	Conroe - 70	30	Equipment use
2005	Montgomery	Conroe	Conroe - 69	1	Miscellaneous
2005	Montgomery	Conroe	Conroe - 71	10	Miscellaneous
2005	Walker	Conroe	Conroe - 75	116	Debris burning
2005	Walker	Conroe	Conroe - 78	10	Lightning
2005	Montgomery	Conroe	Conroe - 77	29	Equipment use
2005	Walker	Conroe	Conroe - 79	2	Debris burning
2005	Walker	Conroe	Conroe - 82	2	No data
2005	Montgomery	Conroe	Conroe - 81	4	Miscellaneous
2005	Montgomery	Richards VFD	WELCH RD.	1	Power Lines
2005	Montgomery	Conroe	Conroe - 88	4	Debris burning
2005	Montgomery	Conroe	Conroe - 89	1	Children
2005	Walker	Conroe	Conroe - 90	15	Debris burning
2005	Montgomery	Conroe	Conroe - 94	2	Debris burning
2005	Montgomery	Conroe	Conroe - 91	14	Debris burning
2005	Walker	Conroe	Conroe - 95	3	Debris burning
2005	Montgomery	Conroe	Conroe - 96	1	Debris burning
2005	Liberty	Kenefick VFD	Nancy Robinson	1	Debris burning
2005	Walker	Conroe	Conroe - 98	4	Children
2005	Montgomery	Conroe	Conroe - 101	2	Debris burning
2005	Montgomery	Conroe	Conroe - 100	5	Debris burning
2005	Montgomery	Conroe	Conroe - 102	15	Lightning
2005	Montgomery	Conroe	Conroe - 107	18	Debris burning
2005	Montgomery	Conroe	Conroe - 109	1	Debris burning
2005	Montgomery	Conroe	Conroe - 113	3	Debris burning
2005	Liberty	Kenefick VFD	Watson	1	Debris burning
2005	Walker	Conroe	Conroe - 121	5	Miscellaneous
2005	Liberty	Conroe	Conroe - 126	3	Incendiary
2005	Liberty	Conroe	Conroe - 123	7	Incendiary
2005	Liberty	Conroe	Conroe - 125	1	Incendiary
2005	Montgomery	Conroe	Conroe - 127	2	Smoking
2005	Montgomery	Conroe	Conroe - 128	3	Debris burning
2005	Montgomery	Conroe	Conroe - 129	250	Debris burning
2005	Montgomery	Conroe	Conroe - 131	1	Debris burning
2005	Liberty	Conroe	Conroe - 132	15	Debris burning
2005	Montgomery	Conroe	Conroe - 134	4	Incendiary
2005	Montgomery	Conroe	Conroe - 133	1	Debris burning
2005	Montgomery	Conroe	Conroe - 135	1	Debris burning
2005	Montgomery	Conroe	Conroe - 137	3	Smoking
2005	Montgomery	Conroe	Conroe - 136	1	Miscellaneous
2005	Montgomery	Conroe	Conroe - 138	3	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2005	Liberty	Highway 321 VFD	Brush Fire	15	Debris burning
2005	Walker	Conroe	Conroe - 140	7	Debris burning
2005	Walker	Conroe	Conroe - 147	3	Debris burning
2005	Liberty	Kenefick VFD	Day	1	Debris burning
2005	Liberty	Kenefick VFD	Hendrix	2	Debris burning
2005	Liberty	Conroe	Conroe - 148	71	Campfire
2005	Montgomery	Conroe	Conroe - 151	10	Debris burning
2005	Montgomery	Conroe	Conroe - 153	2	Incendiary
2005	Liberty	Conroe	Conroe - 156	2	Debris burning
2005	Liberty	Conroe	Conroe - 157	290	Debris burning
2005	Liberty	Conroe	Conroe - 158	9	Debris burning
2005	Liberty	Conroe	Conroe - 162	7	Debris burning
2005	Walker	Conroe	Conroe - 155	3	Debris burning
2005	Waller	Conroe	Conroe - 161	250	Campfire
2005	Montgomery	Conroe	Conroe - 165	1	Debris burning
2005	Montgomery	Conroe	Conroe - 166	1	Incendiary
2005	Walker	Conroe	Conroe - 163	2	Debris burning
2005	Walker	Conroe	Conroe - 164	65	Debris burning
2005	Montgomery	Conroe	Conroe - 167	3	Debris burning
2005	Liberty	Kenefick VFD	Cleveland PD	1	Debris burning
2005	Montgomery	Conroe	Conroe - 171	2	Debris burning
2005	Montgomery	Conroe	Conroe - 173	1	Debris burning
2005	Liberty	Conroe	Conroe - 177	5	Incendiary
2005	Montgomery	Conroe	Conroe - 178	1	Debris burning
2005	Walker	Conroe	Conroe - 181	5	Debris burning
2005	Montgomery	Conroe	Conroe - 183	4	Children
2005	Liberty	Kenefick VFD	Greenlee	1	Debris burning
2005	Walker	Conroe	Conroe - 185	15	No data
2005	Liberty	Kenefick VFD	Peterson	1	Debris burning
2005	Montgomery	Conroe	Conroe - 187	2	Lightning
2005	Liberty	Kenefick VFD	COX	0.2	Debris burning
2005	Montgomery	Conroe	Conroe - 189	1	Miscellaneous
2005	Liberty	Kenefick VFD	KENEFICK PD	0.1	Debris burning
2005	Liberty	Kenefick VFD	WILLIAMS	0.1	Debris burning
2005	Liberty	Kenefick VFD	BLACK	0.05	Debris burning
2005	Liberty	Kenefick VFD	PROVENZANO	0.05	Debris burning
2005	Liberty	Kenefick VFD	PROVENZANO	0.05	Debris burning
2005	Walker	Conroe	Conroe - 193	1	Debris burning
2005	Montgomery	Conroe	Conroe - 195	2	Incendiary
2005	Montgomery	Conroe	Conroe - 197	2	Incendiary
2005	Montgomery	Conroe	Conroe - 196	2	Incendiary
2005	Montgomery	Conroe	Conroe - 199	6	Miscellaneous
2005	Liberty	Conroe	Woodville - 414	70	Miscellaneous
2005	Montgomery	Conroe	Conroe - 202	1	Debris burning
2005	Walker	Huntsville Fire Dept.	11 th street	0.12	Miscellaneous
2005	Walker	Conroe	Conroe - 203	5	Debris burning
2005	Montgomery	Conroe	Conroe - 206	5	Miscellaneous
2005	Walker	Conroe	Conroe - 208	1	Miscellaneous
2005	Liberty	Kenefick VFD	JONES	1	Debris burning
2005	Montgomery	Conroe	Conroe - 209	3	Campfire

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2005	Liberty	Tarkington VFD	CR2213	0.25	Smoking
2005	Liberty	Tarkington VFD	CR2246	0.5	Debris burning
2005	Liberty	Tarkington VFD	CR2212	0.25	Smoking
2005	Liberty	Tarkington VFD	CR3017B	1.25	Debris burning
2005	Montgomery	Conroe	Conroe - 213	6	Debris burning
2005	Montgomery	Conroe	Conroe - 214	10	Campfire
2005	Liberty	Tarkington VFD	151 CR2295	2	Debris burning
2005	Liberty	Tarkington VFD	1670 FM2518	0.5	Debris burning
2005	Liberty	Conroe	Conroe - 215	8	Debris burning
2005	Liberty	Tarkington VFD	FM787	2	Debris burning
2005	Liberty	Tarkington VFD	CR3315	1.5	Debris burning
2005	Liberty	Kenefick VFD	MCWHORTER	0.1	Miscellaneous
2005	Liberty	Tarkington VFD	260 CR2283	0.25	Debris burning
2005	Liberty	Conroe	Conroe - 227	125	Incendiary
2005	Walker	Huntsville Fire Dept.	Robinson creek 1	2	Miscellaneous
2005	Montgomery	Conroe	Conroe - 229	7	Debris burning
2005	Montgomery	Conroe	Conroe - 230	6	Debris burning
2005	Walker	Huntsville Fire Dept.	Wire Rd	1	Miscellaneous
2005	Montgomery	Conroe	Conroe - 232	18	Debris burning
2005	Walker	Conroe	Conroe - 233	2	Miscellaneous
2005	Montgomery	North Montgomery County Volunteer Fire Department	05-0002063	1	Debris burning
2005	Walker	Bedias Volunteer Fire Dept.	Walker County	1	Debris burning
2005	Liberty	Tarkington VFD	SH321@CR303	0.1	Debris burning
2005	Walker	Conroe	Conroe - 234	5	Miscellaneous
2005	Walker	Huntsville Fire Dept.	Veterans Memorial	0.25	Miscellaneous
2005	Walker	Huntsville Fire Dept.	Robinson Creek	5	Miscellaneous
2005	Walker	Huntsville Fire Dept.	1791 @ bowden	7	Miscellaneous
2005	Walker	Huntsville Fire Dept.	Pine Hill	4	Miscellaneous
2005	Montgomery	Conroe	Conroe - 236	10	Debris burning
2005	Montgomery	Conroe	Conroe - 238	1	Miscellaneous
2005	Montgomery	Cut-N-Shoot VFD	05-0002294	0.25	Debris burning
2005	Liberty	Tarkington VFD	224 CR3141W	0.1	Debris burning
2006	Liberty	Conroe	Conroe - 1	5	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0002369	0.5	Debris burning
2006	Walker	Huntsville Fire Dept.	Collard	0.5	Miscellaneous
2006	Montgomery	Conroe	Conroe - 2	11	Equipment use
2006	Walker	Huntsville Fire Dept.	Bowden	0.25	Miscellaneous
2006	Walker	Riverside VFD	4509	1	Miscellaneous
2006	Walker	Riverside VFD	4511	0.05	Miscellaneous
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0002486	1	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0002469	1	Debris burning
2006	Liberty	Kenefick VFD	RUTLAND	1	Debris burning
2006	Liberty	Tarkington VFD	CR2219 Burn Ban	0.1	Debris burning
2006	Liberty	Tarkington VFD	CR2240	25	Debris burning
2006	Liberty	Tarkington VFD	SH321@CR306	0.1	Debris burning
2006	Chambers	Beach City VFD	Grass fire near Carlswood	3	Incendiary
2006	Montgomery	Conroe	Conroe - 6	35	Incendiary
2006	Liberty	Conroe	Conroe - 7	20	Equipment use

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2006	Walker	Conroe	Conroe - 8	7	Debris burning
2006	Liberty	Tarkington VFD	CR2243	3	Debris burning
2006	Liberty	Tarkington VFD	CR331A	2	Miscellaneous
2006	Liberty	Tarkington VFD	CR2255	0.1	Debris burning
2006	Liberty	Kenefick VFD	MORGAN	0.1	Debris burning
2006	Walker	Riverside VFD	4513	10	Miscellaneous
2006	Walker	Huntsville Fire Dept.	Haas Rd.	0.25	Miscellaneous
2006	Liberty	Conroe	Conroe - 9	1	Miscellaneous
2006	Walker	Huntsville Fire Dept.	Rosenwall	0.5	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0002733	1.25	Miscellaneous
2006	Montgomery	Conroe	Conroe - 11	1	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0002839	1	Miscellaneous
2006	Liberty	Tarkington VFD	CR3017	0.25	Debris burning
2006	Walker	Huntsville Fire Dept.	Lessa Ln.	1	Miscellaneous
2006	Walker	Huntsville Fire Dept.	FM 3478	1	Debris burning
2006	Walker	Huntsville Fire Dept.	Lessa LN	0.5	Miscellaneous
2006	Walker	Riverside VFD	4519	10	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0002798	0.25	Debris burning
2006	Montgomery	Conroe	Conroe - 14	10	Incendiary
2006	Montgomery	Conroe	Conroe - 13	4	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0002926	3	Miscellaneous
2006	Montgomery	Conroe	Conroe - 19	1	Debris burning
2006	Liberty	Conroe	Conroe - 15	90	Miscellaneous
2006	Liberty	Kenefick VFD	VOTAW	0.25	Debris burning
2006	Liberty	Tarkington VFD	CR3018	0.25	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0003070	0.25	Debris burning
2006	Walker	Huntsville Fire Dept.	Horseshoe Lake	0.5	Debris burning
2006	Austin	Salem Volunteer Fire Dept	Hwy 36 // Sempronius Rd	30	Smoking
2006	Montgomery	Conroe	Conroe - 21	1	Debris burning
2006	Austin	South Branch	West Zone South - 18	138	Campfire
2006	Walker	Riverside VFD	4529	1	Miscellaneous
2006	Walker	Dodge VFD	1767 U.S. 190	1	Debris burning
2006	Chambers	Beach City VFD	West of Carlswood	0.5	Children
2006	Montgomery	Conroe	Conroe - 23	7	Miscellaneous
2006	Walker	Conroe	Conroe - 24	270	Miscellaneous
2006	Liberty	Tarkington VFD	CR308	0.25	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0003279	5	Miscellaneous
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0003335	1	Miscellaneous
2006	Walker	Dodge VFD	#12 Brandon Rd.	1	Debris burning
2006	Walker	Huntsville Fire Dept.	Lawrence Ln.	0.25	Debris burning
2006	Walker	Conroe	Conroe - 27	10	Miscellaneous
2006	Montgomery	Conroe	Conroe - 26	12	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0003474	15	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0003555	1	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0003654	2	Debris burning
2006	Montgomery	Grangerland VFD	2006-03637	2	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0003751	1	Children
2006	Montgomery	Conroe	Conroe - 29	1	Incendiary
2006	Montgomery	Cut-N-Shoot VFD	06-0004090	0.25	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0004187	1	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0004806	1	Miscellaneous
2006	Walker	Conroe	Conroe - 35	6	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0005139	4	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0005139	4	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0005193	1	Debris burning
2006	Montgomery	Conroe	Conroe - 37	2	Debris burning
2006	Walker	Huntsville Fire Dept.	Roy Webb	0.1	Miscellaneous
2006	Liberty	Conroe	Conroe - 40	15	Debris burning
2006	Chambers	Beach City VFD	Eagle Dr grass fire	1	Miscellaneous
2006	Montgomery	Conroe	Conroe - 44	9	Miscellaneous
2006	Austin	South Branch	West Zone South - 58	10	Debris burning
2006	Liberty	Tarkington VFD	CR3017A	0.1	Debris burning
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0005730	0.5	Miscellaneous
2006	Liberty	Tarkington VFD	CR315	0.1	Miscellaneous
2006	Liberty	Tarkington VFD	CR2229	0.1	Debris burning
2006	Montgomery	Conroe	Conroe - 45	1	Debris burning
2006	Liberty	Tarkington VFD	CR316	0.1	Debris burning
2006	Liberty	Kenefick VFD	BROWN	0.5	Miscellaneous
2006	Liberty	Conroe	mud bath	7	Children
2006	Liberty	Tarkington VFD	CR2298	0.1	Debris burning
2006	Liberty	Tarkington VFD	CR2283	0.1	Debris burning
2006	Liberty	Tarkington VFD	CR2219	0.25	Power Lines
2006	Walker	Riverside VFD	4558	1.5	Debris burning
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0006231	1	Miscellaneous
2006	Chambers	Beach City VFD	FM2354 at FM 3180	4	Equipment use
2006	Walker	Conroe	Conroe - 53	3	Smoking
2006	Liberty	Kenefick VFD	COX	0.37	Debris burning
2006	Montgomery	Conroe	Conroe - 55	16	Debris burning
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0006653	0.5	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0007287	5	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0007287	7	Debris burning
2006	Liberty	Tarkington VFD	28 CR2217	0.5	Debris burning
2006	Montgomery	Conroe	Conroe - 61	22	Debris burning
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0007536	0.25	Miscellaneous
2006	Liberty	Tarkington VFD	SH105 @ SH146	20	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0007638	4	Miscellaneous
2006	Montgomery	Conroe	Conroe - 62	3	Debris burning
2006	Walker	Conroe	Conroe - 63	1	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0007735	2	Debris burning
2006	Liberty	Tarkington VFD	11177 FM787	0.1	Debris burning
2006	Liberty	Tarkington VFD	CR2284-1	1	Debris burning
2006	Montgomery	North Montgomery County Volunteer Fire Department	06-0007707	0.5	Debris burning
2006	Montgomery	Conroe	Conroe - 64	1	Debris burning
2006	Walker	Conroe	Conroe - 65	10	Debris burning
2006	Montgomery	Conroe	Conroe - 69	25	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2006	Montgomery	Conroe	Conroe - 70	10	Debris burning
2006	Montgomery	Conroe	Conroe - 71	4	Incendiary
2006	Montgomery	Grangerland VFD	2006-08023	1	Miscellaneous
2006	Montgomery	Cut-N-Shoot VFD	06-0008007	1	Miscellaneous
2006	Walker	Riverside VFD	4570	15	Debris burning
2006	Montgomery	Cut-N-Shoot VFD	06-0008057	3	Debris burning
2006	Liberty	Tarkington VFD	CR3141E	1	Debris burning
2006	Chambers	High Island VFD	Wildland fire	5	Incendiary
2006	Montgomery	Conroe	Conroe - 73	1	Debris burning
2006	Chambers	High Island VFD	Wildland fire	20	Incendiary
2006	Walker	Riverside VFD	4577	0.25	Debris burning
2006	Liberty	Tarkington VFD	CR3374	0.25	Miscellaneous
2006	Walker	Riverside VFD	4580	1	Debris burning
2006	Montgomery	Conroe	Conroe - 81	4	Debris burning
2006	Liberty	Tarkington VFD	CR312	0.25	Debris burning
2006	Liberty	Tarkington VFD	CR3141 #2	0.25	Debris burning
2006	Liberty	Tarkington VFD	FM1008	5	Equipment use
2006	Walker	Conroe	Conroe - 83	2	Debris burning
2006	Liberty	Conroe	Conroe - 87	2	Debris burning
2006	Montgomery	Conroe	Conroe - 85	1	Debris burning
2006	Liberty	Woodville	Woodville - 144	20	Debris burning
2006	Montgomery	Conroe	Conroe - 88	6	Miscellaneous
2006	Montgomery	Conroe	Conroe - 92	3	Miscellaneous
2006	Liberty	Tarkington VFD	25019 Hwy 321	0.25	Miscellaneous
2006	Montgomery	Conroe	Conroe - 93	1	Debris burning
2006	Chambers	Beach City VFD	14316 FM 2354	1	Debris burning
2006	Liberty	Tarkington VFD	CR2274	5	Debris burning
2006	Walker	Conroe	Conroe - 94	1	Debris burning
2006	Liberty	Tarkington VFD	CR301N 3/21	1	Miscellaneous
2006	Liberty	Tarkington VFD	Arnold's Mobile Home Park	1	Debris burning
2006	Montgomery	Conroe	Conroe - 95	10	Power Lines
2006	Liberty	Tarkington VFD	CR2313	1	Debris burning
2006	Montgomery	Conroe	Conroe - 96	2	Debris burning
2006	Montgomery	Conroe	Conroe - 97	4	Miscellaneous
2006	Walker	Conroe	Conroe - 099	4	Debris burning
2006	Montgomery	Conroe	Conroe - 101	2	Campfire
2006	Montgomery	Conroe	Conroe - 103	20	Equipment use
2006	Montgomery	Richards VFD	WATSON	0.5	Power Lines
2006	Montgomery	Conroe	Conroe - 105	2	Debris burning
2006	Walker	Riverside VFD	4596	5	Debris burning
2006	Walker	Riverside VFD	4598	0.5	Debris burning
2006	Montgomery	Conroe	Conroe - 108	5	Miscellaneous
2006	Montgomery	Conroe	Conroe - 110	4	Debris burning
2006	Montgomery	Conroe	Conroe - 109	6	Debris burning
2006	Walker	Riverside VFD	4600	1	Debris burning
2006	Montgomery	Conroe	Conroe - 111	2	Miscellaneous
2006	Montgomery	Conroe	Conroe - 112	3	Debris burning
2006	Walker	Conroe	Conroe - 113	20	Debris burning
2006	Montgomery	Conroe	Conroe - 114	7	Campfire
2006	Chambers	Woodville	Woodville - 219	30	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2006	Walker	Riverside VFD	4601	1	Debris burning
2006	Walker	Riverside VFD	4602	8	Debris burning
2006	Walker	Riverside VFD	4629	20	Debris burning
2006	Walker	Shiro Volunteer Fire Department	neason	10	Equipment use
2006	Walker	Conroe	Conroe - 122	15	Miscellaneous
2006	Walker	Conroe	Conroe - 123	1	Miscellaneous
2006	Montgomery	Conroe	Conroe - 124	1	Debris burning
2006	Walker	Riverside VFD	4632	4	Debris burning
2006	Walker	Riverside VFD	4633	0.5	Debris burning
2006	Brazoria	South Branch	Camp Mohawk	560	Equipment use
2006	Waller	Conroe	Conroe - 128	9	Debris burning
2006	Liberty	Conroe	Conroe - 132	4	Debris burning
2006	Walker	Pine Prairie VFD	INDIAN LAKE FIRE	0.5	Miscellaneous
2006	Walker	Bedias Volunteer Fire Dept.	Dickie Loop & CR 158	1	Miscellaneous
2006	Walker	Conroe	Conroe - 133	5	Incendiary
2006	Montgomery	Conroe	Conroe - 136	10	Debris burning
2006	Montgomery	Conroe	Conroe - 139	7	Debris burning
2006	Walker	Conroe	Conroe - 140	253	Incendiary
2006	Montgomery	Conroe	Conroe - 141	3	Incendiary
2006	Montgomery	Conroe	Conroe - 146	3	Debris burning
2006	Montgomery	Conroe	Conroe - 148	2	Miscellaneous
2006	Montgomery	Conroe	Conroe - 149	3	Lightning
2006	Montgomery	Conroe	Conroe - 150	2	Miscellaneous
2006	Montgomery	Conroe	Conroe - 153	14	Lightning
2006	Walker	Thomas Lake Rd. VFD	Woodland Hills	0.5	Debris burning
2006	Walker	Conroe	Conroe - 155	1	Equipment use
2006	Walker	Conroe	Conroe - 156	10	Debris burning
2006	Walker	Conroe	Conroe - 161	15	Lightning
2006	Walker	Conroe	Mann Rd. Fire - 163	3	Debris burning
2006	Walker	Riverside VFD	4685	0.25	Debris burning
2006	Walker	Riverside VFD	4687	1	Equipment use
2006	Walker	Conroe	Conroe - 166	5	Miscellaneous
2006	Walker	Conroe	Conroe - 167	7	Debris burning
2006	Walker	Riverside VFD	4696	1.5	Debris burning
2006	Walker	Conroe	Conroe - 168	5	Debris burning
2006	Walker	Riverside VFD	4697	1.5	Debris burning
2006	Montgomery	Conroe	Conroe - 171	1	Miscellaneous
2006	Walker	Conroe	Fish Fry Fire	206	Power Lines
2006	Montgomery	Conroe	Conroe - 175	2	Miscellaneous
2006	Waller	Conroe	Conroe - 177	3	Miscellaneous
2006	Walker	Conroe	Conroe - 178	10	Debris burning
2006	Walker	Conroe	Conroe - 181	5	Miscellaneous
2006	Walker	Conroe	Conroe - 182	2	Power Lines
2006	Walker	Conroe	Conroe - 184	2	Railroads
2006	Walker	Conroe	Conroe - 185	50	Miscellaneous
2006	Montgomery	Conroe	Conroe - 186	3	Debris burning
2006	Walker	Riverside VFD	4713	1	Miscellaneous
2006	Montgomery	Conroe	Conroe - 190	1	Miscellaneous
2006	Montgomery	Conroe	Conroe - 195	12	Debris burning
2006	Montgomery	Conroe	Conroe - 196	1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2006	Montgomery	Conroe	Conroe - 199	2	Debris burning
2006	Walker	Thomas Lake Rd. VFD	Rogers	0.25	Equipment use
2006	Chambers	Beach City VFD	5200 McKinney	3	Miscellaneous
2006	Montgomery	Conroe	Conroe - 201	2	Debris burning
2006	Chambers	Beach City VFD	FM 1941 @ S.H. 65	3	Miscellaneous
2006	Montgomery	Richards VFD	Bay Chapel Road Grassfire	1	Miscellaneous
2006	Montgomery	Conroe	Conroe - 202	1	Power Lines
2006	Walker	Conroe	Conroe - 203	15	Debris burning
2006	Walker	Conroe	Conroe - 204	3	Debris burning
2006	Walker	Riverside VFD	4741	0.5	Miscellaneous
2006	Walker	Riverside VFD	4742	0.5	Miscellaneous
2006	Walker	Thomas Lake Rd. VFD	Forest Creek	3	Campfire
2006	Chambers	Beach City VFD	IH-10 @ S.H. 146	2	Campfire
2006	Montgomery	Conroe	Conroe - 205	20	Debris burning
2006	Liberty	Woodville	Woodville - 332	1	Debris burning
2006	Walker	Riverside VFD	4748	0.05	Debris burning
2006	Walker	Conroe	Conroe - 210	7	Power Lines
2006	Chambers	High Island VFD	Wildland Fire	20	Incendiary
2006	Walker	Oakhurst Volunteer Fire Department	Brush fire 39	1	Campfire
2006	Walker	Riverside VFD	4775	0.5	Debris burning
2006	Walker	Riverside VFD	4776	0.5	Debris burning
2006	Walker	Riverside VFD	4785	0.5	Debris burning
2006	Chambers	Beach City VFD	McCollum Park S.H. 99 @ RR tracks 2007-13	0.01	Miscellaneous
2007	Chambers	Beach City VFD	2007-13	1	Railroads
2007	Walker	Conroe	Conroe - 4	25	Debris burning
2007	Liberty	Conroe	Conroe - 5	2	Debris burning
2007	Chambers	Beach City VFD	4000 Cedar Blvd. 2007-14	1	Railroads
2007	Liberty	Woodville	Woodville - 49	70	Debris burning
2007	Walker	Riverside VFD	4832	1	Debris burning
2007	Austin	South Branch	Mound Road South Branch - 11	30	Miscellaneous
2007	Montgomery	Conroe	Conroe - 10	3	Debris burning
2007	Montgomery	Conroe	Conroe - 11	25	Miscellaneous
2007	Walker	Riverside VFD	4919	1.5	Debris burning
2007	Liberty	Conroe	Conroe - 13	1	Debris burning
2007	Walker	Riverside VFD	4925	10	Debris burning
2007	Chambers	Beach City VFD	203 Carroll	1	Debris burning
2007	Walker	Conroe	Conroe - 15	1	Debris burning
2007	Montgomery	Conroe	Conroe - 16	16	Debris burning
2007	Chambers	Beach City VFD	329 Gouhole	0.5	Debris burning
2007	Chambers	Beach City VFD	5003 Katies Creek	2	Debris burning
2007	Montgomery	Conroe	Conroe - 17	2	Debris burning
2007	Walker	Conroe	Conroe - 19	7	Debris burning
2007	Brazoria	Surfside Beach VFD	Stalman Park/Bluewater Hwy.	3	Smoking
2007	Chambers	Beach City VFD	127 Blueberry	1	Debris burning
2007	Chambers	Beach City VFD	6111 FM 3180	5	Debris burning
2007	Chambers	Beach City VFD	10012 Walker Ln.	0.1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2007	Liberty	Conroe	Conroe - 22	5	Smoking
2007	Walker	Conroe	Spell Bottom - 23	50	Incendiary
2007	Liberty	Highway 321 VFD	Grass Fire	1	Miscellaneous
2007	Chambers	Beach City VFD	9600 Warren Rd.	1	Children
2007	Walker	Riverside VFD	4952	10	Debris burning
2007	Walker	Conroe	Conroe - 26	10	Debris burning
2007	Walker	Conroe	Conroe - 27	20	Debris burning
2007	Walker	Conroe	Conroe - 29	2	Debris burning
2007	Montgomery	Conroe	Conroe - 30	20	Campfire
2007	Walker	Bedias Volunteer Fire Dept.	8008 CR 233	2	Debris burning
2007	Montgomery	Conroe	Conroe - 31	10	Debris burning
2007	Montgomery	Conroe	Conroe - 33	17	Miscellaneous
2007	Brazoria	Surfside Beach VFD	Access 2/Bluewater Hwy.	1.5	Miscellaneous
2007	Brazoria	Pearland Fire Department	Riley Road	0.1	Miscellaneous
2007	Brazoria	Surfside Beach VFD	Access 3/ Bluewater Hwy.	1	Miscellaneous
2007	Montgomery	Conroe	Conroe - 37	45	Incendiary
2008	Brazoria	Pearland Fire Department	Hastings/Firendwood	0.5	Debris burning
2008	Brazoria	Wild Peach VFD	Wild Peach VFD	1	Miscellaneous
2008	Walker	Conroe	Conroe - 01	25	Debris burning
2008	Walker	Conroe	Conroe - 02	1	Debris burning
2008	Walker	Conroe	Conroe - 03	7	Debris burning
2008	Brazoria	Surfside Beach VFD	Key Largo/CR 257	0.5	Debris burning
2008	Brazoria	Rivers End Fire Dept.	2611	1	Miscellaneous
2008	Walker	Riverside VFD	4985	0.5	Debris burning
2008	Walker	Conroe	Conroe - 7	8	Equipment use
2008	Liberty	Conroe	Conroe - 9	2	Miscellaneous
2008	Walker	Conroe	Conroe - 10	7	Debris burning
2008	Brazoria	Liverpool VFD	FM2004 Fire	100	Debris burning
2008	Montgomery	Conroe	Conroe - 11	1	Debris burning
2008	Liberty	Conroe	Conroe - 12	10	Miscellaneous
2008	Montgomery	Conroe	Conroe - 13	5	Debris burning
2008	Brazoria	Clute VFD	288B Service	0.5	Debris burning
2008	Montgomery	Richards VFD	GILES	10	Debris burning
2008	Liberty	Shepherd V. F. D.	FM 223 @ County Line	10	Debris burning
2008	Brazoria	Rivers End Fire Dept.	335	1	Debris burning
2008	Austin	Bellville Fire Dept.	Bellville/ stokes Rd	1	Debris burning
2008	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire:Grass	1	Miscellaneous
2008	Walker	Riverside VFD	RVFD	7	Miscellaneous
2008	Montgomery	Conroe	Conroe - 16	7	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	5	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	4	Debris burning
2008	Walker	Conroe	Conroe - 21	375	Incendiary
2008	Walker	Riverside VFD	5006	0.25	Debris burning
2008	Montgomery	Conroe	Conroe - 22	20	Debris burning
2008	Liberty	Conroe	Conroe - 24	30	Incendiary
2008	Walker	Conroe	Conroe - 27	2	Power Lines
2008	Brazoria	Surfside Beach VFD	Incendiary	1	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
			stand/Bluewater Hwy.		
2008	Walker	Riverside VFD	5022	4	Miscellaneous
2008	Walker	Conroe	Conroe - 29	3	Debris burning
2008	Liberty	Conroe	Conroe - 38	6	Debris burning
2008	Walker	Conroe	Conroe - 33	10	Debris burning
2008	Walker	Conroe	Conroe - 35	1	Debris burning
2008	Waller	Conroe	Conroe - 37	1	Campfire
2008	Montgomery	Conroe	Conroe - 39	5	Miscellaneous
2008	Liberty	Woodville	Woodville - 73	40	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	China Grove	1	Debris burning
2008	Montgomery	Conroe	Conroe - 41	35	Debris burning
2008	Montgomery	Conroe	Conroe - 42	15	Miscellaneous
2008	Montgomery	Conroe	Conroe - Oak Ridge Road	1	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Chambers	Woodville	Big Tire Fire	1	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Montgomery	Conroe	Conroe - 53	30	Debris burning
2008	Walker	Bedias Volunteer Fire Dept.	Scales Ranch Rd	1.5	Miscellaneous
2008	Walker	Conroe	Conroe - 56	50	Power Lines
2008	Walker	Conroe	Conroe - 55	2	Power Lines
2008	Austin	South Branch	Hillboldt - 145	20	Campfire
2008	Liberty	Woodville	Woodville - 110	5	Debris burning
2008	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire:Grass	25	Smoking
2008	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire:Grass	1	Debris burning
2008	Montgomery	Conroe	Conroe - 59	80	Miscellaneous
2008	Montgomery	Conroe	Conroe - 62	5	Lightning
2008	Walker	Conroe	Conroe - 65	15	Debris burning
2008	Liberty	Conroe	Conroe - 66	1	Debris burning
2008	Montgomery	Conroe	Conroe - 67	12	Debris burning
2008	Chambers	Hamshire Vol Fire Dept.	Main Street Fire	2.5	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	2	Incendiary
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Equipment use
2008	Montgomery	Conroe	Conroe - 68	5	Miscellaneous
2008	Montgomery	Conroe	Conroe - 69	40	Incendiary
2008	Brazoria	Manvel VFD	GRASS FIRE	10	Debris burning
2008	Walker	Bedias Volunteer Fire Dept.	Wier RD	15	Debris burning
2008	Walker	Conroe	Conroe - 72	415	Lightning
2008	Montgomery	Conroe	Conroe - 76	15	Lightning
2008	Montgomery	Conroe	Conroe - 77	10	Miscellaneous
2008	Brazoria	Manvel VFD	GRASS FIRE	2	Equipment use
2008	Liberty	Conroe	Conroe - 78	20	Incendiary
2008	Liberty	Conroe	Conroe - 81	5	Incendiary
2008	Liberty	Conroe	Conroe - 82	3	Incendiary
2008	Liberty	Conroe	Conroe - 79	10	Incendiary
2008	Montgomery	Conroe	Conroe - 86	6	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2008	Liberty	Woodville	Woodville - 157	1	Lightning
2008	Montgomery	Conroe	Conroe - 90	4	Lightning
2008	Walker	Conroe	Conroe - 96	10	Miscellaneous
2008	Montgomery	Conroe	Conroe - 91	3	Debris burning
2008	Montgomery	Conroe	Conroe - 93	1	Debris burning
2008	Liberty	Woodville	Woodville - 168	20	Debris burning
2008	Montgomery	Conroe	Conroe - 97	60	Miscellaneous
2008	Walker	Conroe	Conroe - 98	1	Incendiary
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Walker	Conroe	Conroe - 103	300	Children
2008	Liberty	Woodville	Woodville - 177	6	Debris burning
2008	Montgomery	Conroe	Conroe - 104	5	Debris burning
2008	Montgomery	Conroe	Conroe - 105	3	Debris burning
2008	Walker	Conroe	Conroe - 106	117	Incendiary
2008	Walker	Riverside VFD	5141	0.25	Lightning
2008	Liberty	Conroe	Conroe - 109	9	Debris burning
2008	Liberty	Conroe	Conroe - 110	8	Debris burning
2008	Montgomery	Conroe	Conroe - 111	4	Debris burning
2008	Walker	Crabbs Prairie Fire Department	132 mm Interstate 45	1	Equipment use
2008	Montgomery	Conroe	Conroe - 116	8	Debris burning
2008	Walker	Conroe	Conroe - 118	20	Lightning
2008	Brazoria	Rosharon Volunteer Fire Dept.	CR 42 & FM 521	1	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Equipment use
2008	Walker	Riverside VFD	5160	1	Miscellaneous
2008	Walker	Conroe	Conroe - 124	2	Debris burning
2008	Montgomery	Conroe	Conroe - 125	20	Debris burning
2008	Walker	Riverside VFD	5164	3	Miscellaneous
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Miscellaneous
2008	Montgomery	Conroe	Conroe - 126	1	Debris burning
2008	Walker	Conroe	Conroe - 127	30	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	914 Airline Place	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	Pecan Grove	1	Power Lines
2008	Brazoria	Manvel VFD	GRAS FIRE	1	Debris burning
2008	Walker	Riverside VFD	5178	0.5	Power Lines
2008	Montgomery	Conroe	Conroe - 130	3	Debris burning
2008	Liberty	Woodville	Woodville - 220	7	Power Lines
2008	Brazoria	MANVEL VFD	grassfire	2	Debris burning
2008	Brazoria	MANVEL VFD	grass fire	1	Power Lines
2008	Liberty	Woodville	Woodville - 227	20	Incendiary
2008	Chambers	Conroe	Woodville - 229	30	Incendiary
2008	Chambers	South Branch	Woodville - 230	5	Miscellaneous
2008	Chambers	Woodville	Woodville - 231	20	Incendiary
2008	Brazoria	MANVEL VFD	grass fire	2	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	16430 CR 897	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	Ramsey I	1	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2008	Walker	Crabbs Prairie Fire Department	462 FM 1696 W	2	Debris burning
2008	Chambers	South Branch	Woodville - 245	5	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	FM 1462 & CR 528A	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	7107 Ross Road	1	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	2	Debris burning
2008	Walker	Crabbs Prairie Fire Department	123 mm Interstate 45	1	Equipment use
2008	Chambers	South Branch	Woodville - 248	90	Debris burning
2008	Chambers	Woodville	Woodville - 249	7	Miscellaneous
2008	Chambers	Woodville	Woodville - 250	175	Incendiary
2008	Chambers	Woodville	Woodville - 251	45	Incendiary
2008	Walker	Crabbs Prairie Fire Department	130 mm Interstate 45	1	Equipment use
2008	Montgomery	Conroe	Conroe - 143	4	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	16507 Sandy Meadow Drive	1	Debris burning
2008	Chambers	Woodville	Woodville - 266	80	Debris burning
2008	Chambers	Woodville	Woodville - 267	25	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	CR 51 East	1	Debris burning
2008	Walker	Riverside VFD	5192	0.25	Debris burning
2008	Montgomery	Conroe	Conroe - 151	1	Debris burning
2008	Walker	Conroe	Conroe - 155	4	Debris burning
2008	Montgomery	Conroe	Conroe - 154	2	Debris burning
2008	Chambers	Woodville	Woodville - 271	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	FM 1462 & CR 39	1	Debris burning
2008	Walker	Riverside VFD	5203	0.15	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	Fm 1462 West 2206	1	Debris burning
2008	Liberty	South Branch	Woodville - 238	25	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	Wing Tip Drive	1	Debris burning
2008	Brazoria	Wild Peach VFD	CR 347	2	Debris burning
2008	Brazoria	Wild Peach VFD	FM522	2	Debris burning
2008	Walker	Conroe	Conroe - 163	80	Equipment use
2008	Montgomery	Conroe	Conroe - 164	5	Debris burning
2008	Brazoria	Wild Peach VFD	CR 344	2	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	2	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	Hwy 288 & CR 61	1	Miscellaneous
2008	Walker	Conroe	Conroe - 165	20	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Brazoria	Wild Peach VFD	3343 CR 344	2	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Smoking
2008	Walker	Conroe	Conroe - 166	7	Debris burning
2008	Brazoria	Wild Peach VFD	CR 347	2	Debris burning
2008	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2008	Brazoria	Rosharon Volunteer Fire Dept.	16518 Mill Drive	1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Brazoria	Angleton Fire Dept	Grass Fire	2	Railroads
2009	Brazoria	Manvel VFD	GRASS FIRE	2	Debris burning
2009	Brazoria	County Road 143 VFD	Cr 927	1	Debris burning
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Debris burning
2009	Austin	Sealy VFD	09-0000008	1	Equipment use
2009	Brazoria	Angleton Fire Dept	Grass Fire	2	Debris burning
2009	Austin	Sealy VFD	09-0000011	2	Miscellaneous
2009	Austin	Bellville Fire Dept.	BellvilleVFD	1	Debris burning
2009	Brazoria	County Road 143 VFD	Cr 98 & Cr 399	150	Miscellaneous
2009	Montgomery	Livingston	Livingston - 7	4	Power Lines
2009	Montgomery	Livingston	Livingston - 9	20	Debris burning
2009	Brazoria	County Road 143 VFD	Cr 98 & Cr 393	1	Miscellaneous
2009	Brazoria	Angleton Fire Dept	Trash Fire	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville / Liza Mae	10	Debris burning
2009	Brazoria	Wild Peach VFD	CR 244	2	Debris burning
2009	Brazoria	Wild Peach VFD	CR 348	2	Debris burning
2009	Brazoria	Surfside Beach VFD	1st rd./Quintana bridge	10	Lightning
2009	Brazoria	Surfside Beach VFD	Bryan Beach	3	Lightning
2009	Brazoria	Surfside Beach VFD	Bryan beach	5	Lightning
2009	Chambers	Woodville	Woodville - 15	500	Incendiary
2009	Montgomery	Livingston	Livingston - 16	10	Power Lines
2009	Chambers	Woodville	Woodville - 19	25	Incendiary
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 121 & CR 60	40	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 38 & CR 184	30	Miscellaneous
2009	Austin	Sealy VFD	09-0000018	1	Miscellaneous
2009	Brazoria	Angleton Fire Dept	Grass Fire	60	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	60	Debris burning
2009	Brazoria	Manvel VFD	GRSS FIRE	60	Debris burning
2009	Brazoria	Manvel VFD	GRASS	60	Miscellaneous
2009	Montgomery	Livingston	Livingston - 19	5	Debris burning
2009	Montgomery	Livingston	Livingston - 20	2	Debris burning
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Miscellaneous
2009	Austin	Sealy VFD	09-0000020	1	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	21838 CR 36	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	15423 FM 521	1	Debris burning
2009	Brazoria	Wild Peach VFD	CR 244	2	Debris burning
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Debris burning
2009	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Trash Fire	0.25	Debris burning
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Debris burning
2009	Brazoria	Wild Peach VFD	CR 244	2	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	1710 CR 62	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	630 CR 52	1	Debris burning
2009	Montgomery	Livingston	Livingston - 28	2	Debris burning
2009	Brazoria	Rosharon Volunteer Fire	18110 Cedar	1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
		Dept.			
2009	Brazoria	Angleton Fire Dept	Trash Fire	1	Debris burning
2009	Brazoria	County Road 143 VFD	Amoco	2	Debris burning
2009	Austin	Bellville Fire Dept.	BellvilleVFD/159 East	30	Debris burning
2009	Austin	Sealy VFD	09-0000025	1	Power Lines
2009	Brazoria	Rosharon Volunteer Fire Dept.	FM 521	5	Miscellaneous
2009	Brazoria	Angleton Fire Dept	Grass Fire	6	Incendiary
2009	Brazoria	Angleton Fire Dept	Grass Fire	2	Miscellaneous
2009	Brazoria	County Road 143 VFD	Cr 128	1	Miscellaneous
2009	Brazoria	County Road 143 VFD	Cr 128	1	Miscellaneous
2009	Montgomery	Livingston	Livingston - 31	4	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	1462 @ Brazos River Bridge	1	Miscellaneous
2009	Walker	Livingston	Livingston - 32	3	Incendiary
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Equipment use
2009	Brazoria	Manvel VFD	GRASS FIRE	2	Debris burning
2009	Brazoria	Clute VFD	Mockingbird	1	Children
2009	Austin	Bellville Fire Dept.	Bellville VFD/ Loop Rd.	1	Smoking
2009	Montgomery	Livingston	Livingston - 33	51	Miscellaneous
2009	Chambers	Woodville	Woodville - 33	80	Debris burning
2009	Brazoria	Damon Fire Dept	2/1/2009	2	Debris burning
2009	Brazoria	Angleton Fire Dept	Grass Fire	2	Equipment use
2009	Montgomery	Livingston	Livingston - 37	8	Miscellaneous
2009	Brazoria	County Road 143 VFD	Veterans & Trent Cove	25	Miscellaneous
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	60	Debris burning
2009	Montgomery	Livingston	Livingston - 38	9	Miscellaneous
2009	Montgomery	Livingston	Livingston - 39	6	Miscellaneous
2009	Walker	Livingston	Livingston - 40	2	Debris burning
2009	Austin	Sealy VFD	09-0000035	1	Miscellaneous
2009	Brazoria	Angleton Fire Dept	Brush Fire	1	Debris burning
2009	Brazoria	Wild Peach VFD	Steven F Austin	100	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	FM 521 17000	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	6042 CR 42	10	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	919 Paloma Drive	5	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	12601 Wanda Way	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	12713 Wanda Way	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 48 North of CR 60	1	Debris burning
2009	Brazoria	County Road 143 VFD	Mclean	1	Miscellaneous
2009	Montgomery	Livingston	Livingston - 43	3	Miscellaneous
2009	Austin	Bellville Fire Dept.	Bellville/ Leschper	0.5	Debris burning
2009	Montgomery	Livingston	Livingston - 44	2	Campfire
2009	Brazoria	Rosharon Volunteer Fire Dept.	FM 1462 @ CR 528	1	Debris burning
2009	Brazoria	Wild Peach VFD	CR 347	2	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Brazoria	Angleton Fire Dept	Brush Fire	2	Debris burning
2009	Brazoria	Angleton Fire Dept	Trash Fire	1	Debris burning
2009	Brazoria	Sweeny Fire and Rescue	2611 Wildland Fire	175	Miscellaneous
2009	Brazoria	South Branch	FM2611	175	Miscellaneous
2009	Brazoria	Wild Peach VFD	CR347	2	Debris burning
2009	Walker	Livingston	Livingston - 50	40	Campfire
2009	Brazoria	Manvel VFD	GRASS FIRE	2	Debris burning
2009	Walker	Riverside VFD	45	0.01	Miscellaneous
2009	Walker	Thomas Lake Rd. VFD	Water Tower Rd.	0.25	Miscellaneous
2009	Chambers	Hamshire Vol Fire Dept.	Hwy 65 grass fire	30	Debris burning
2009	Austin	Sealy VFD	09-0000041	75	Equipment use
2009	Brazoria	Angleton Fire Dept	Brush Fire	2	Debris burning
2009	Brazoria	Surfside Beach VFD	Ave.G/Levee rd.	7	Smoking
2009	Brazoria	Angleton Fire Dept	Brush Fire	1	Debris burning
2009	Brazoria	Wild Peach VFD	FM 522	2	Debris burning
2009	Liberty	Woodville	Woodville - 43	100	Miscellaneous
2009	Austin	South Branch	Orange Hill	30	Miscellaneous
2009	Walker	Livingston	Livingston - 56	3	Debris burning
2009	Brazoria	Angleton Fire Dept	Brush Fire	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	914 Airline Place	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	FM1462 East of 288	1	Debris burning
2009	Brazoria	Surfside Beach VFD	Tarpon Ln.	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	12925 FM 521	1	Debris burning
2009	Walker	Riverside VFD	63	2.5	Debris burning
2009	Walker	Thomas Lake Rd. VFD	Newport Village #1	0.15	Miscellaneous
2009	Brazoria	Wild Peach VFD	CR 204	2	Campfire
2009	Walker	Livingston	Livingston - 63	10	Miscellaneous
2009	Brazoria	Angleton Fire Dept	Bursh Fire	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ FM 1371	2	Power Lines
2009	Montgomery	Livingston	Livingston - 66	185	Debris burning
2009	Walker	Livingston	Livingston - 67	2	Miscellaneous
2009	Montgomery	Livingston	Livingston - 68	3	Incendiary
2009	Montgomery	Livingston	Livingston - 69	8	Incendiary
2009	Montgomery	Livingston	Livingston - 71	2	Incendiary
2009	Montgomery	Livingston	Livingston - 73	2	Power Lines
2009	Austin	Sealy VFD	09-0000050	1	Power Lines
2009	Brazoria	Clute VFD	Mammoth Lake	1	Campfire
2009	Walker	Livingston	Livingston - 74	5	Miscellaneous
2009	Montgomery	Livingston	Livingston - 75	15	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	1010 Airline North	1	Debris burning
2009	Chambers	Woodville	Woodville - 61	20	Miscellaneous
2009	Chambers	Woodville	Woodville - 64	60	Incendiary
2009	Chambers	Woodville	Woodville - 65	65	Incendiary
2009	Chambers	Woodville	Woodville - 66	4	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Smoking
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Miscellaneous
2009	Brazoria	Wild Peach VFD	CR 344	2	Incendiary

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Chambers	Woodville	Woodville - 67	2	Debris burning
2009	Liberty	Woodville	Woodville - 69	26	Incendiary
2009	Brazoria	Angleton Fire Dept	Brush Fire	2	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	Maple @ CR 39	1	Debris burning
2009	Chambers	High Island VFD	Wildland fire	5	Debris burning
2009	Brazoria	Angleton Fire Dept	Brush and Grass Fire	2	Debris burning
2009	Chambers	Woodville	Woodville - 77	100	Incendiary
2009	Walker	Thomas Lake Rd. VFD	Newport Village	0.15	Incendiary
2009	Walker	Thomas Lake Rd. VFD	TLR & BF Marina	0.15	Incendiary
2009	Walker	Livingston	Livingston - 78	4	Debris burning
2009	Montgomery	Livingston	Livingston - 79	9	Equipment use
2009	Montgomery	Livingston	Livingston - 81	4	Children
2009	Brazoria	Angleton Fire Dept	Grass Fire	1	Miscellaneous
2009	Montgomery	Livingston	Livingston - 84	3	Incendiary
2009	Brazoria	Wild Peach VFD	CR 517	3	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Smoking
2009	Montgomery	Livingston	Livingston - 85	175	Incendiary
2009	Montgomery	Livingston	Livingston - 86	14	Incendiary
2009	Brazoria	Surfside Beach VFD	690 Turtle Cove	2	Smoking
2009	Chambers	Woodville	Woodville - 90	17	Debris burning
2009	Chambers	Woodville	Woodville - 91	60	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	16235 CR 269 1 Street	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ Centerhill	2	Debris burning
2009	Brazoria	Wild Peach VFD	Hwy 36	4	Debris burning
2009	Brazoria	Wild Peach VFD	CR 353	2	Miscellaneous
2009	Austin	Bellville Fire Dept.	Bellville/ OLD 36	30	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	619 Wingtip Court	1	Equipment use
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 171	30	Debris burning
2009	Walker	Livingston	Livingston - 89	12	Miscellaneous
2009	Montgomery	Livingston	Livingston - 90	3	Miscellaneous
2009	Walker	Livingston	Livingston - 92	4	Debris burning
2009	Brazoria	Wild Peach VFD	CR 244A	2	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	19301 Murrey Road	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ Langberg	20	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	17126 CR 39	3	Debris burning
2009	Walker	Livingston	Livingston - 94	50	Miscellaneous
2009	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	1.5	Incendiary
2009	Chambers	Woodville	Woodville - 110	6	Incendiary
2009	Walker	Livingston	Livingston - 95	1	Debris burning
2009	Walker	Livingston	Livingston - 96	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	16902 Hamil Drive	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	17449 FM 521	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	16510 CR 48	5	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Walker	Riverside VFD	98	1	Debris burning
2009	Brazoria	County Road 143 VFD	9028	1	Debris burning
2009	Brazoria	Wild Peach VFD	CR 342	2	Debris burning
2009	Walker	Thomas Lake Rd. VFD	Bullard St.	2	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	0.5	Miscellaneous
2009	Walker	Livingston	Livingston - 99	2	Debris burning
2009	Brazoria	County Road 143 VFD	9044	4	Debris burning
2009	Brazoria	Wild Peach VFD	CR 347	2	Debris burning
2009	Brazoria	County Road 143 VFD	9035	1	Debris burning
2009	Brazoria	County Road 143 VFD	9034	1	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	1511 CR 382	1	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	0.5	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	0.1	Miscellaneous
2009	Brazoria	Manvel VFD	GRASS FIRE	0.1	Miscellaneous
2009	Brazoria	Manvel VFD	GRASS FIRE	0.8	Miscellaneous
2009	Brazoria	Rosharon Volunteer Fire Dept.	18510 Pecan Bayou	2	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville / Kenny Hall	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	7015 CR 865	3	Debris burning
2009	Brazoria	Holiday Lakes	wildland/grass	1	Debris burning
2009	Brazoria	Wild Peach VFD	CR 345	2	Debris burning
2009	Brazoria	Holiday Lakes	wildland/grass	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	1103 CR 713b Airline	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	6302 FM 1462	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville / Leschper	2	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville / Rocky	0.5	Debris burning
2009	Walker	Thomas Lake Rd. VFD	Werner	0.1	Debris burning
2009	Walker	Livingston	Livingston - 109	2	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ Kenny hall	2	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	Hwy 288 & CR 523	1	Debris burning
2009	Liberty	Livingston	Livingston - 110	3	Equipment use
2009	Austin	Bellville Fire Dept.	Bellville/ Bravenec	10	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ Mimosa	10	Equipment use
2009	Walker	Thomas Lake Rd. VFD	Smith	0.5	Debris burning
2009	Montgomery	Livingston	Livingston - 112	8	Miscellaneous
2009	Walker	Livingston	Livingston - 115	10	Incendiary
2009	Montgomery	Livingston	Livingston - 117	102	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	16400 Block CR 569	1	Debris burning
2009	Montgomery	Livingston	Livingston - 120	4	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	Camp Mohawk Hwy 35 & CR 191	1	Miscellaneous
2009	Brazoria	County Road 143 VFD	9041	5	Miscellaneous
2009	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	FIRE-GRASS	5	Debris burning
2009	Liberty	Livingston	Livingston - 122	1	Debris burning
2009	Brazoria	County Road 143 VFD	9042	20	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Walker	Livingston	Livingston - 125	2	Power Lines
2009	Walker	Livingston	Goose Paddle Fire	381	Incendiary
2009	Montgomery	Livingston	Livingston - 127	20	Debris burning
2009	Brazoria	County Road 143 VFD	9046	2	Debris burning
2009	Brazoria	Manvel VFD	GRASS FIRE	0.5	Children
2009	Brazoria	Wild Peach VFD	CR 586	2	Debris burning
2009	Montgomery	Livingston	Livingston - 133	2	Miscellaneous
2009	Walker	Livingston	Livingston - 134	1	Equipment use
2009	Montgomery	Livingston	Livingston - 135	15	Debris burning
2009	Montgomery	Livingston	Livingston - 138	3	Miscellaneous
2009	Montgomery	Livingston	Livingston - 140	5	Miscellaneous
2009	Montgomery	Livingston	Livingston - 143	5	Miscellaneous
2009	Walker	Thomas Lake Rd. VFD	Steamboat Rd.	0.25	Miscellaneous
2009	Walker	Livingston	Livingston - 144	1	Smoking
2009	Montgomery	Livingston	Livingston - 146	12	Debris burning
2009	Brazoria	County Road 143 VFD	9050	1	Lightning
2009	Brazoria	County Road 143 VFD	9051	1	Debris burning
2009	Liberty	Livingston	Livingston - 155	21	Lightning
2009	Brazoria	County Road 143 VFD	9054	20	Miscellaneous
2009	Brazoria	Wild Peach VFD	CR 310	2	Debris burning
2009	Montgomery	Livingston	Livingston - 160	41	Equipment use
2009	Montgomery	Livingston	Livingston - 161	3	Children
2009	Montgomery	Livingston	Livingston - 164	4	Incendiary
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Power Lines
2009	Brazoria	Surfside Beach VFD	Intercoastal waterway	1	Miscellaneous
2009	Montgomery	Livingston	Livingston - 166	1	Incendiary
2009	Walker	Livingston	Livingston - 167	1	Miscellaneous
2009	Walker	Livingston	Livingston - 159	5	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ School Rd	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville	10	Equipment use
2009	Brazoria	Rosharon Volunteer Fire Dept.	1700 Block Brazos Ave.	1	Miscellaneous
2009	Austin	Bellville Fire Dept.	Bellville/ FM 529	2	Debris burning
2009	Walker	Livingston	Livingston - 169	1	Smoking
2009	Brazoria	Wild Peach VFD	CR 244F	2	Debris burning
2009	Walker	Livingston	Livingston - 171	1	Power Lines
2009	Walker	Livingston	ALAMO	102	Incendiary
2009	Chambers	Woodville	Woodville - 169	200	Equipment use
2009	Austin	Bellville Fire Dept.	Bellville/ Clens	3	Incendiary
2009	Brazoria	County Road 143 VFD	9059	1	Miscellaneous
2009	Waller	Chappell Hill Fire Department	Illegal Burning	0.5	Debris burning
2009	Montgomery	Livingston	Livingston - 179	5	Power Lines
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 42 305	1	Debris burning
2009	Brazoria	Rosharon Volunteer Fire Dept.	CR 48 22400	1	Debris burning
2009	Waller	Chappell Hill Fire Department	Grass Fire	0.5	Debris burning
2009	Walker	Livingston	Livingston - 181	2	Debris burning
2009	Walker	Livingston	Livingston - 182	2	Incendiary
2009	Brazoria	County Road 143 VFD	9062	30	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2009	Montgomery	Livingston	Livingston - 185	1	Power Lines
2009	Brazoria	Wild Peach VFD	Pan America	2	Debris burning
2009	Liberty	Woodville	Woodville - 180	10	Lightning
2009	Liberty	Highway 321 VFD	Brush Fire	2	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ HWY 36 south	5	Equipment use
2009	Walker	Livingston	Livingston - 203	8	Debris burning
2009	Walker	Livingston	Livingston - 204	18	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ North HWY 36	1	Smoking
2009	Brazoria	Wild Peach VFD	CR 244	2	Debris burning
2009	Montgomery	Livingston	Livingston - 206	1	Debris burning
2009	Brazoria	Holiday Lakes	GRASS	1	Debris burning
2009	Liberty	Highway 321 VFD	Grass Fire	1	Railroads
2009	Liberty	Highway 321 VFD	Grass Fire	5	Debris burning
2009	Walker	Livingston	Davidson Fire	52	Incendiary
2009	Montgomery	Livingston	Livingston - 209	1	Debris burning
2009	Walker	Livingston	Livingston - 211	1	Debris burning
2009	Walker	Livingston	Livingston - 213	19	Incendiary
2009	Walker	Livingston	Livingston - 214	1	Incendiary
2009	Liberty	Highway 321 VFD	Brush Fire	10	Debris burning
2009	Liberty	Highway 321 VFD	Brush Fire	10	Debris burning
2009	Waller	Livingston	Livingston - 216	12	Equipment use
2009	Brazoria	Surfside Beach VFD	332/690	0.5	Smoking
2009	Walker	Livingston	Livingston - 223	3	Incendiary
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Miscellaneous
2009	Brazoria	Manvel VFD	GRASS FIRE	1	Miscellaneous
2009	Walker	Livingston	Livingston - 224	5	Lightning
2009	Montgomery	Livingston	Livingston - 225	2	Debris burning
2009	Walker	Livingston	Livingston - 226	1	Power Lines
2009	Brazoria	Wild Peach VFD	CR 496	5	Debris burning
2009	Walker	Livingston	Livingston - 231	4	Incendiary
2009	Austin	Bellville Fire Dept.	Bellville/ KIDD	2	Equipment use
2009	Walker	Riverside VFD	221	10	Miscellaneous
2009	Walker	Livingston	Livingston - 237	4	Lightning
2009	Brazoria	Wild Peach VFD	CR 244	5	Debris burning
2009	Montgomery	Livingston	Livingston - 238	3	Debris burning
2009	Walker	Livingston	Livingston - 239	47	Incendiary
2009	Chambers	Woodville	Woodville - 219	52	Debris burning
2009	Brazoria	Wild Peach VFD	GSt. Paul	2	Debris burning
2009	Walker	Livingston	Livingston - 243	29	Equipment use
2009	Brazoria	Wild Peach VFD	CR 347	2	Debris burning
2009	Walker	Livingston	Livingston - 244	2	Incendiary
2009	Brazoria	Wild Peach VFD	GSt. Paul	2	Debris burning
2009	Brazoria	Wild Peach VFD	FM 522	2	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ Burleson	1	Debris burning
2009	Austin	Bellville Fire Dept.	Bellville/ FM 949	1	Debris burning
2009	Austin	New Ulm VFD	Grass Fire	0.5	Debris burning
2009	Brazoria	Wild Peach VFD	East Washington Brazoria	2	Debris burning
2009	Austin	Bellville Fire Dept.	F Jasek	3	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2010	Walker	Livingston	Livingston - 001	5	Debris burning
2010	Brazoria	Manvel VFD	grass fire	1	Debris burning
2010	Brazoria	County Road 143 VFD	Grass fire	6	Debris burning
2010	Liberty	Highway 321 VFD	Brush Fire	5	Debris burning
2010	Liberty	Highway 321 VFD	Brush fire	2	Debris burning
2010	Liberty	Highway 321 VFD	Brush Fire	3	Debris burning
2010	Walker	Livingston	Livingston - 6	5	Children
2010	Walker	Livingston	Livingston - 7	57	Debris burning
2010	Montgomery	Livingston	Livingston - 08	10	Debris burning
2010	Montgomery	Livingston	Livingston - 16	12	Campfire
2010	Liberty	Highway 321 VFD	Brush Fire	2	Debris burning
2010	Walker	Livingston	Livingston - 043	5	Debris burning
2010	Montgomery	Livingston	Livingston - 49	6	Miscellaneous
2010	Brazoria	Manvel VFD	grass fire	10	Miscellaneous
2010	Liberty	Livingston	Livingston - 52	13	Debris burning
2010	Liberty	Livingston	Livingston - 53	4	Debris burning
2010	Brazoria	Surfside Beach VFD	Swordfish	0.5	Debris burning
2010	Brazoria	Manvel VFD	grass fire	1	Debris burning
2010	Austin	Bellville Fire Dept.	Bellville/ Shell	0.5	Power Lines
2010	Brazoria	Surfside Beach VFD	Freeport	1	Power Lines
2010	Walker	Thomas Lake Rd. VFD	TLR/FM980	1	Miscellaneous
2010	Walker	Livingston	Livingston - 82	1	Debris burning
2010	Montgomery	Livingston	Livingston - 92	14	Equipment use
2010	Brazoria	Manvel VFD	grass fire	1	Equipment use
2010	Liberty	Livingston	Livingston - 128	80	Incendiary
2010	Liberty	Livingston	Livingston - 127	6	Debris burning
2010	Walker	Livingston	Livingston - 151	3	Debris burning
2010	Liberty	Livingston	Livingston - 154	20	Incendiary
2010	Montgomery	Livingston	Livingston - 156	5	Debris burning
2010	Liberty	Livingston	Livingston - 160	8	Incendiary
2010	Montgomery	Livingston	Livingston - 170	3	Debris burning
2010	Montgomery	Livingston	Livingston - 172	3	Incendiary
2010	Liberty	Livingston	Livingston - 178	1	Power Lines
2010	Brazoria	Manvel VFD	grass fire	1	Debris burning
2010	Austin	Bellville Fire Dept.	South Holland	2	Equipment use
2010	Montgomery	Livingston	Livingston - 200	4	Equipment use
2010	Montgomery	Livingston	Livingston - 204	3	Debris burning
2010	Walker	Livingston	Livingston - 205	1	Debris burning
2010	Walker	Livingston	Livingston - 221	2	Debris burning
2010	Brazoria	County Road 143 VFD	Grass fire	1	Debris burning
2010	Chambers	Livingston	Livingston - 226	190	Debris burning
2010	Chambers	Livingston	Livingston - 229	25	Equipment use
2010	Walker	Livingston	Livingston - 250	5	Debris burning
2010	Montgomery	Livingston	Livingston - 253	5	Children
2010	Walker	Richards VFD	MILLS	0.12	Equipment use
2010	Brazoria	Manvel VFD	grass fire	4	Debris burning
2010	Austin	Bellville Fire Dept.	Bellville/ Ignoskie	2	Incendiary
2010	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	0.5	Debris burning
2010	Walker	Livingston	Livingston - 270	8	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2010	Montgomery	Livingston	Livingston - 279	2	Debris burning
2010	Walker	Livingston	Livingston - 291	2.1	Debris burning
2010	Austin	Bellville Fire Dept.	Bellville/ School Rd.	2	Debris burning
2010	Walker	Livingston	Livingston - 293	1	Debris burning
2010	Montgomery	Livingston	Livingston - 294	5	Equipment use
2010	Montgomery	Livingston	Livingston - 297	2	Debris burning
2010	Walker	Livingston	Livingston - 296	2	Debris burning
2010	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	1	Debris burning
2010	Montgomery	Livingston	Livingston - 306	4	Debris burning
2010	Walker	Livingston	Livingston - 307	1	Power Lines
2010	Walker	Livingston	Livingston - 309	101	Lightning
2010	Austin	Bellville Fire Dept.	Bellville/ Fisher Rd	1	Debris burning
2010	Montgomery	Richards VFD	Keisler 6796	2	Debris burning
2010	Walker	Livingston	Livingston - 315	1	Debris burning
2010	Walker	Riverside VFD	173	0.5	Debris burning
2010	Montgomery	Livingston	Livingston - 338	10	Debris burning
2010	Walker	Livingston	Livingston - 344	2	Debris burning
2010	Liberty	Livingston	Livingston - 345	7	Debris burning
2010	Walker	Livingston	Livingston - 346	1	Debris burning
2010	Liberty	Livingston	Livingston - 348	21	Incendiary
2010	Austin	Bellville Fire Dept.	N. Holland	1	Debris burning
2010	Montgomery	Livingston	Livingston - 355	15	Debris burning
2010	Montgomery	Livingston	Livingston - 356	5	Debris burning
2010	Montgomery	Livingston	Livingston - 364	2	Miscellaneous
2010	Walker	Livingston	Livingston - 385	1	Debris burning
2010	Montgomery	Livingston	Livingston - 387	3	Incendiary
2010	Walker	Livingston	Livingston - 389	8	Lightning
2010	Walker	Livingston	Livingston - 393	1	Debris burning
2010	Montgomery	Livingston	Livingston - 395	2	Debris burning
2010	Montgomery	Livingston	Livingston - 396	5.25	Power Lines
2010	Montgomery	Livingston	Livingston - 401	1	Debris burning
2010	Walker	Livingston	Livingston - 405	10.1	Debris burning
2010	Montgomery	Livingston	Livingston - 407	19	Debris burning
2010	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	0.5	Debris burning
2010	Montgomery	Livingston	Livingston - 413	6	Debris burning
2010	Montgomery	Livingston	Livingston - 424	20	Debris burning
2010	Montgomery	Livingston	Livingston - 425	20	Miscellaneous
2010	Austin	Bellville Fire Dept.	Old Nelsonville	0.5	Incendiary
2010	Brazoria	Manvel VFD	grass fire	1	Debris burning
2010	Montgomery	Livingston	Livingston - 427	1	Debris burning
2010	Montgomery	Livingston	Livingston - 428	3	Miscellaneous
2010	Montgomery	Livingston	Livingston - 431	2	Children
2010	Montgomery	Livingston	Livingston - 433	7	Debris burning
2010	Montgomery	Livingston	Livingston - 443	1	Debris burning
2010	Montgomery	Livingston	Livingston - 444	1	Campfire
2010	Liberty	Livingston	Livingston - 445	1	Incendiary
2010	Montgomery	Livingston	Livingston - 449	5	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2010	Montgomery	Livingston	Livingston - 451	2	Miscellaneous
2010	Walker	Livingston	Livingston - 458	1	Miscellaneous
2010	Montgomery	Livingston	Livingston - 461	4	Debris burning
2010	Montgomery	Livingston	Livingston - 462	2	Debris burning
2010	Austin	Bellville Fire Dept.	Plum	1	Power Lines
2010	Austin	Bellville Fire Dept.	Old Nelsonville	2	Power Lines
2010	Montgomery	Livingston	Livingston - 463	2	Debris burning
2010	Montgomery	Richards VFD	Ketkoski	6	Power Lines
2010	Liberty	Livingston	Livingston - 466	1	Lightning
2010	Liberty	Livingston	Livingston - 471	1	Debris burning
2010	Montgomery	Livingston	Livingston - 473	2	Debris burning
2010	Liberty	Livingston	Livingston - 474	10	Incendiary
2010	Walker	Livingston	Livingston - 476	1	Debris burning
2010	Montgomery	Livingston	Livingston - 478	1	Incendiary
2010	Austin	New Ulm VFD	Mutual Aid	0.5	Equipment use
2010	Austin	New Ulm VFD	Mutual Aid	2	Equipment use
2010	Brazoria	South Central Branch	Hide-A-way on the Gulf	150	Miscellaneous
2010	Austin	Bellville Fire Dept.	Bellville/ School Rd.	15	Power Lines
2010	Austin	Bellville Fire Dept.	Bellville/ Lynn Road	35	Debris burning
2010	Austin	Bellville Fire Dept.	Cat Spring/ Frontz	10	Debris burning
2010	Brazoria	Manvel VFD	grass fire	2	Debris burning
2010	Brazoria	Manvel VFD	grass fire	-1	Equipment use
2010	Walker	Livingston	Livingston - 494	2	Debris burning
2010	Liberty	Livingston	Livingston - 495	8	Incendiary
2010	Liberty	Livingston	Livingston - 500	26	Incendiary
2010	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	0.5	Equipment use
2010	Montgomery	Livingston	Livingston - 510	3	Railroads
2010	Liberty	Livingston	Livingston - 512	30	Incendiary
2010	Walker	Riverside VFD	238	2	Debris burning
2010	Walker	Riverside VFD	240	0.5	Miscellaneous
2010	Montgomery	Livingston	Livingston - 524	1	Campfire
2010	Montgomery	Livingston	Livingston - 526	3	Children
2010	Walker	Thomas Lake Rd. VFD	Newport Village	1	Miscellaneous
2010	Brazoria	Freeport Fire Dept.	Texas Barge	0.25	Incendiary
2010	Brazoria	Damon Fire Dept	highway 36 12/27	100	Miscellaneous
2010	Walker	Riverside VFD	256	0.75	Miscellaneous
2011	Walker	Riverside VFD	1	0.5	Campfire
2011	Montgomery	Magnolia VFD	Hall Drive North	1	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ FM 2754	5	Miscellaneous
2011	Austin	New Ulm VFD	Grass fire	0.05	Miscellaneous
2011	Walker	Dodge VFD	Tony Dowdy	1	Miscellaneous
2011	Walker	Livingston	Livingston - 2	2	Debris burning
2011	Walker	Livingston	Livingston - 1	3	Debris burning
2011	Montgomery	Livingston	Livingston - 3	25	Campfire
2011	Montgomery	Livingston	Livingston - 6	6	Equipment use
2011	Montgomery	Livingston	Livingston - 8	2	Debris burning
2011	Liberty	Hwy 321 VFD	Trash Fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Trash Fire	1	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Montgomery	Livingston	Livingston - 9	1	Miscellaneous
2011	Chambers	Hamshire Vol Fire Dept.	Broussard Rd Grass Fire	10	Debris burning
2011	Austin	New Ulm VFD	Grass Fire	25	Debris burning
2011	Austin	Cat Spring VFD	New Bremen	20	Miscellaneous
2011	Walker	Riverside VFD	11	0.5	Miscellaneous
2011	Montgomery	Magnolia VFD	Red Bird	1	Debris burning
2011	Walker	Livingston	Livingston - 16	1	Debris burning
2011	Brazoria	Rosharon Volunteer Fire Dept.	FM 521 N of Mammoet	1.5	Miscellaneous
2011	Austin	Cat Spring VFD	Schaffner	1	Debris burning
2011	Austin	Cat Spring VFD	Lakefield	3	Debris burning
2011	Austin	New Ulm VFD	Grass Fire (Mutual Aid)	20	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ FM 2754	12	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Travis	5	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/Tesch	2	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Kenney Hall	2	Debris burning
2011	Walker	Livingston	Livingston - 17	35	Debris burning
2011	Walker	Thomas Lake Rd. VFD	2422 FM 980	0.5	Debris burning
2011	Liberty	Livingston	Livingston - 22	3	Debris burning
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	0.25	Debris burning
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Pasture-Grass Fire	15	Miscellaneous
2011	Austin	Cat Spring VFD	Terrazas	3	Debris burning
2011	Brazoria	Rosharon Volunteer Fire Dept.	Hwy 288 1/4 S of CR 51	1	Miscellaneous
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire	0.5	Debris burning
2011	Brazoria	County Road 143 VFD	Grass fire	0.5	Debris burning
2011	Walker	Livingston	Livingston - 27	8	Debris burning
2011	Brazoria	Manvel VFD	grass fire	0.5	Debris burning
2011	Liberty	Hwy 321 VFD	Woods and Brush Fire	20	Miscellaneous
2011	Liberty	Hwy 321 VFD	Wood Brush fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Wood and Brush fire	20	Debris burning
2011	Brazoria	Manvel VFD	grass fire	5	Children
2011	Austin	Bellville Fire Dept.	Bellville/ Arning	2	Debris burning
2011	Brazoria	Damon Fire Dept	hiway 36 grass fire	30	Debris burning
2011	Brazoria	Damon Fire Dept	County Road 4	20	Debris burning
2011	Brazoria	Manvel VFD	grass fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Liberty	Plum Grove VFD	Grass and Woods	0.5	Debris burning
2011	Walker	Thomas Lake Rd. VFD	W. Thomas Rd.	0.25	Debris burning
2011	Liberty	Livingston	Livingston - 43	30	Railroads
2011	Montgomery	Richards VFD	Dean Kiesler	15	Incendiary
2011	Brazoria	Rosharon Volunteer Fire Dept.	7077 CR 42	2	Debris burning
2011	Walker	Livingston	Livingston - 47	10	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Walker	Livingston	Livingston - 49	3	Debris burning
2011	Montgomery	Livingston	Livingston - 54	43	Debris burning
2011	Walker	Livingston	Livingston - 55	3	Power Lines
2011	Liberty	Livingston	Livingston - 60	50	Debris burning
2011	Brazoria	Rosharon Volunteer Fire Dept.	2720 CR 49	10	Debris burning
2011	Walker	Huntsville Fire Dept.	Walker Loop	5	Debris burning
2011	Walker	Dodge VFD	Dodge Oakhurst/FM 405	20	Debris burning
2011	Walker	Livingston	Livingston - 69	2	Power Lines
2011	Brazoria	Manvel VFD	grass fire	3	Equipment use
2011	Brazoria	County Road 143 VFD	mutual aid grass fire	1	Equipment use
2011	Montgomery	Livingston	Livingston - 70	1	Debris burning
2011	Liberty	Livingston	Livingston - 76	3	Miscellaneous
2011	Montgomery	Livingston	Livingston - 105	3	Campfire
2011	Brazoria	Manvel VFD	grass fire	10	Debris burning
2011	Montgomery	Livingston	Livingston - 110	90	Debris burning
2011	Walker	Riverside VFD	45	40	Debris burning
2011	Montgomery	Livingston	Livingston - 116	25	Debris burning
2011	Montgomery	River Plantation FD	14833 Creighton RD	0.25	Miscellaneous
2011	Walker	Livingston	Livingston - 119	18	Debris burning
2011	Montgomery	Livingston	Livingston - 121	8	Debris burning
2011	Montgomery	Livingston	Livingston - 123	3	Miscellaneous
2011	Liberty	Hwy 321 VFD	Grass Fire	1	Debris burning
2011	Montgomery	Livingston	Livingston - 125	2	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Oil Field	2	Equipment use
2011	Walker	Dodge VFD	Bob Williams	14	Debris burning
2011	Walker	Livingston	Livingston - 131	14	Incendiary
2011	Brazoria	County Road 143 VFD	mutual aid grass fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Brush Fire	3	Debris burning
2011	Walker	Dodge VFD	20 Harold Circle	1	Debris burning
2011	Austin	Cat Spring VFD	Jasek	18	Debris burning
2011	Liberty	Hwy 321 VFD	Woods Fire	3	Power Lines
2011	Walker	Livingston	Livingston - 170	9	Debris burning
2011	Montgomery	Livingston	Livingston - 172	1	Equipment use
2011	Brazoria	Freeport Fire Dept.	Levee Road	0.5	Smoking
2011	Montgomery	Livingston	Livingston - 175	9	Debris burning
2011	Walker	Livingston	Livingston - 177	7	Debris burning
2011	Montgomery	Livingston	Livingston - 180	1	Debris burning
2011	Liberty	Hwy 321 VFD	Woods fire	3	Debris burning
2011	Montgomery	NeedHam FD	woodhollow	1	Miscellaneous
2011	Montgomery	Livingston	Livingston - 201	2	Miscellaneous
2011	Walker	Livingston	Livingston - 208	1	Power Lines
2011	Walker	Livingston	Livingston - 209	85	Lightning
2011	Liberty	Livingston	Livingston - 211	8	Debris burning
2011	Montgomery	Livingston	Livingston - 212	2	Children
2011	Montgomery	Livingston	Livingston - 216	2	Children
2011	Chambers	Livingston	Livingston - 217	10	Debris burning
2011	Montgomery	Splendora VFD	2011-73069	0.25	Debris burning
2011	Montgomery	NeedHam FD	brookhollow	0.5	Debris burning
2011	Montgomery	NeedHam FD	silver crescent	10	Lightning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Walker	Livingston	Livingston - 223	4.2	Power Lines
2011	Walker	Livingston	Livingston - 222	1	Power Lines
2011	Brazoria	Manvel VFD	grass fire	1	Equipment use
2011	Austin	Cat Spring VFD	Burger	2	Smoking
2011	Walker	Livingston	Livingston - 255	3	Miscellaneous
2011	Liberty	Livingston	Livingston - 266	30	Incendiary
2011	Montgomery	Livingston	Livingston - 265	3	Debris burning
2011	Liberty	Livingston	Livingston - 262	5	Miscellaneous
2011	Austin	Cat Spring VFD	Hwy 36	10	Equipment use
2011	Liberty	Shepherd V. F. D.	county rd 2183	5	Miscellaneous
2011	Montgomery	Livingston	Livingston - 273	3	Incendiary
2011	Walker	Livingston	Livingston - 280	1	Debris burning
2011	Walker	Livingston	Livingston - 281	79	Lightning
2011	Montgomery	Livingston	Livingston - 282	4	Children
2011	Austin	Bellville Fire Dept.	Bellville/ stokes rd.	3	Power Lines
2011	Montgomery	Livingston	Livingston - 287	4	Miscellaneous
2011	Montgomery	Livingston	Livingston - 291	30	Railroads
2011	Montgomery	Livingston	Livingston - 292	18	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Loop 497	10	Railroads
2011	Austin	Bellville Fire Dept.	Bellville/ Loop 497	12	Railroads
2011	Brazoria	Rosharon Volunteer Fire Dept.	FM 1462 1/4 E of FM 521	0.25	Miscellaneous
2011	Walker	Livingston	Livingston - 303	1	Equipment use
2011	Montgomery	NeedHam FD	white oak	0.5	Debris burning
2011	Montgomery	Livingston	Livingston - 317	17	Miscellaneous
2011	Liberty	Hwy 321 VFD	Brush Fire	5	Debris burning
2011	Austin	Cat Spring VFD	949	1	Smoking
2011	Montgomery	Livingston	Livingston - 326	6	Smoking
2011	Montgomery	NeedHam FD	sandy oak	0.1	Debris burning
2011	Montgomery	Livingston	Livingston - 337	6	Railroads
2011	Walker	Weldon VFD	Gibbs	10	Lightning
2011	Walker	Madisonville VFD	walker co	15	Miscellaneous
2011	Brazoria	Columbia Lakes VFD	Manor Lake	15	Miscellaneous
2011	Walker	Livingston	Livingston - 338	205	Lightning
2011	Montgomery	Livingston	Livingston - 339	8	Power Lines
2011	Montgomery	Livingston	Livingston - 342	8	Debris burning
2011	Chambers	Livingston	Livingston - 345	10	Power Lines
2011	Walker	Livingston	Livingston - 353	1	Power Lines
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Power Lines
2011	Brazoria	County Road 143 VFD	Grass fire	1	Incendiary
2011	Montgomery	Livingston	Livingston - 358	3	Children
2011	Montgomery	NeedHam FD	SANDY OAKS	0.3	Debris burning
2011	Chambers	Livingston	Livingston - 360	63	Debris burning
2011	Brazoria	Manvel VFD	grass fire	1	Power Lines
2011	Montgomery	NeedHam FD	Fallen Timbers	1.5	Debris burning
2011	Walker	Livingston	Livingston - 361	10.2	Miscellaneous
2011	Liberty	Livingston	Livingston - 362	13	Equipment use
2011	Liberty	Livingston	Livingston - 364	10	Equipment use
2011	Brazoria	Manvel VFD	grass fire	1	Smoking
2011	Montgomery	Livingston	Livingston - 365	1	Equipment use
2011	Walker	Livingston	Livingston - 368	1	Power Lines

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Austin	Cat Spring VFD	Kveton	15	Equipment use
2011	Montgomery	NeedHam FD	Poeples Rd	1	Power Lines
2011	Montgomery	NeedHam FD	sleepy Hollow Rd	0.5	Debris burning
2011	Montgomery	NeedHam FD	Winchester	1.5	Debris burning
2011	Montgomery	River Plantation FD	12665 FM1314	1	Debris burning
2011	Montgomery	Livingston	Livingston - 385	8	Miscellaneous
2011	Chambers	Livingston	Livingston - 388	1	Equipment use
2011	Brazoria	County Road 143 VFD	Grass fire	1.5	Miscellaneous
2011	Montgomery	River Plantation FD	607 sycamore	0.25	Debris burning
2011	Austin	Cat Spring VFD	Zubicek	1	Debris burning
2011	Walker	Livingston	Scales Ranch Rd Fire	321	Lightning
2011	Montgomery	NeedHam FD	Big Oaks	1.5	Debris burning
2011	Montgomery	NeedHam FD	Lexington	1	Miscellaneous
2011	Brazoria	Rosharon Volunteer Fire Dept.	FM1462 @ CR 39	2	Miscellaneous
2011	Montgomery	Livingston	Duck Creek Rd Fire	183	Miscellaneous
2011	Brazoria	Rosharon Volunteer Fire Dept.	6430 CR 42	2	Debris burning
2011	Brazoria	Manvel VFD	grass fire	30	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ 1456	1	Debris burning
2011	Liberty	Hwy 321 VFD	Woods fire	30	Debris burning
2011	Montgomery	NeedHam FD	Delores	1	Debris burning
2011	Montgomery	Livingston	Livingston - 428	1	Power Lines
2011	Liberty	Hwy 321 VFD	Woods Fire	50	Debris burning
2011	Montgomery	Livingston	Livingston - 437	10	Equipment use
2011	Brazoria	Freeport Fire Dept.	Dow	5	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Newsome	1	Debris burning
2011	Waller	Livingston	Bradbury Rd Fire	1	Debris burning
2011	Walker	Livingston	Livingston - 446	2	Miscellaneous
2011	Waller	Livingston	Forest Hills Fire	1	Debris burning
2011	Walker	Livingston	Livingston - 455	1	Lightning
2011	Austin	Cat Spring VFD	Streider	22	Power Lines
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Brush Fire	0.5	Debris burning
2011	Liberty	Livingston	RYE Fire	612	Lightning
2011	Montgomery	Livingston	Livingston - 462	1	Lightning
2011	Montgomery	NeedHam FD	45 freeway	2	Debris burning
2011	Liberty	Livingston	Livingston - 478	80	Lightning
2011	Walker	Livingston	Koonce Fire	151	Lightning
2011	Liberty	Hwy 321 VFD	GGrass Fire	10	Debris burning
2011	Walker	Livingston	Livingston - 483	30	Lightning
2011	Waller	Livingston	Livingston - 484	1	Miscellaneous
2011	Montgomery	Livingston	Livingston - 486	10	Lightning
2011	Liberty	Woodville	Livingston - 491	72	Incendiary
2011	Liberty	Livingston	Livingston - 490	10	Lightning
2011	Liberty	Livingston	Livingston - 495	78	Lightning
2011	Montgomery	Livingston	Livingston - 501	1	Miscellaneous
2011	Montgomery	NeedHam FD	Tamina	1	Debris burning
2011	Montgomery	Livingston	Two County Fire	171	Incendiary
2011	Montgomery	NeedHam FD	Glen eagles	5	Debris burning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Montgomery	Livingston	Livingston - 516	2	Children
2011	Liberty	Hwy 321 VFD	Brush Fire	2	Debris burning
2011	Austin	Cat Spring VFD	Kulow	18	Smoking
2011	Montgomery	Livingston	Livingston - 524	3	Children
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Walker	Livingston	Livingston - 531	5	Miscellaneous
2011	Walker	Livingston	Livingston - 539	15	Power Lines
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Montgomery	Livingston	Livingston - 549	1	Smoking
2011	Liberty	Livingston	Livingston - 552	1	Lightning
2011	Liberty	Hwy 321 VFD	Brush Fire	5	Debris burning
2011	Walker	Livingston	Livingston - 559	2	Miscellaneous
2011	Walker	Livingston	Midway / Cowboy Church Fire	2047	Miscellaneous
2011	Brazoria	Rosharon Volunteer Fire Dept.	CR 61 @ Hwy 288	5	Miscellaneous
2011	Liberty	Hwy 321 VFD	Brush Fire	5	Debris burning
2011	Liberty	Livingston	Livingston - 580	2	Power Lines
2011	Montgomery	Livingston	Livingston - 584	1	Miscellaneous
2011	Walker	Livingston	Livingston - 586	6	Power Lines
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Brazoria	Rosharon Volunteer Fire Dept.	431 Sunset Colony	20	Miscellaneous
2011	Brazoria	Rosharon Volunteer Fire Dept.	CR 48 1 mile N of CR 51	5	Debris burning
2011	Brazoria	County Road 143 VFD	mutual aid grass fire	3	Debris burning
2011	Walker	Livingston	Livingston - 592	3	Miscellaneous
2011	Austin	Bellville Fire Dept.	Bellville/ Oilfield	1	Equipment use
2011	Liberty	Livingston	Livingston - 595	27	Lightning
2011	Austin	Cat Spring VFD	Carols	0.5	Debris burning
2011	Austin	Cat Spring VFD	Roy Lane	1	Equipment use
2011	Liberty	Livingston	Livingston - 604	8	Lightning
2011	Chambers	Livingston	Livingston - 600	10	Equipment use
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Montgomery	River Plantation FD	FM 1314	0.5	Lightning
2011	Montgomery	Livingston	Livingston - 615	47	Lightning
2011	Liberty	Livingston	Livingston - 620	25	Lightning
2011	Montgomery	River Plantation FD	Bending oaks	1	Miscellaneous
2011	Montgomery	Montgomery County ESD # 6 (Porter Fire)	Needham Road	3	Incendiary
2011	Liberty	Hwy 321 VFD	Woods Fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Trash Dump Fire	5	Debris burning
2011	Brazoria	Freeport Fire Dept.	Shintech	20	Railroads
2011	Montgomery	Livingston	Livingston - 632	1	Debris burning
2011	Liberty	Livingston	Livingston - 636	14	Equipment use
2011	Liberty	Livingston	Livingston - 638	96	Lightning
2011	Liberty	Hwy 321 VFD	Trash Fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Trash Fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	TRee Fire	1	Debris burning
2011	Walker	Livingston	Livingston - 645	2	Power Lines
2011	Chambers	Livingston	Livingston - 650	2	Debris burning
2011	Brazoria	Freeport Fire Dept.	Bryan Beach	1	Smoking

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Liberty	Hwy 321 VFD	Woods Fire	1	Debris burning
2011	Liberty	Hwy 321 VFD	Brush Fire	1	Debris burning
2011	Montgomery	Livingston	Livingston - 661	14	Lightning
2011	Montgomery	Livingston	Livingston - 662	1	Lightning
2011	Liberty	Livingston	Livingston - 663	5	Lightning
2011	Brazoria	Manvel VFD	grass fire	1	Power Lines
2011	Walker	Dodge VFD	110 Hilltop Lane	1	Debris burning
2011	Walker	Dodge VFD	Gordon Jerry Wilson	3	Debris burning
2011	Walker	Riverside VFD	1152054	0.25	Debris burning
2011	Liberty	Woodville	Livingston - 669	35	Debris burning
2011	Walker	Livingston	Livingston - 671	1	Power Lines
2011	Walker	Riverside VFD	128	20	Debris burning
2011	Walker	Livingston	Robinson Creek Fire	130	Smoking
2011	Austin	Cat Spring VFD	Jeffrey	1	Equipment use
2011	Montgomery	Lake Conroe Fire Dept.	Grand Lake Estates	3	Miscellaneous
2011	Montgomery	Livingston	Livingston - 699	5	Debris burning
2011	Austin	Bellville Fire Dept.	Bellville/ Glazear	5	Lightning
2011	Montgomery	Livingston	Livingston - 704	7	Debris burning
2011	Brazoria	Rosharon Volunteer Fire Dept.	FM1462 & CR 606	1	Miscellaneous
2011	Montgomery	Livingston	Livingston - 732	34	Children
2011	Montgomery	Livingston	Livingston - 736	6	Incendiary
2011	Brazoria	Rosharon Volunteer Fire Dept.	17102 FM 521	5	Smoking
2011	Montgomery	River Plantation FD	FM 3083	5	Miscellaneous
2011	Montgomery	Livingston	Livingston - 754	2	Lightning
2011	Montgomery	River Plantation FD	Old Humble Pipeline	2	Miscellaneous
2011	Walker	Dodge VFD	43A Gerome Drive	1	Debris burning
2011	Walker	Livingston	Livingston - 767	1	Lightning
2011	Montgomery	Livingston	Livingston - 771	7	Power Lines
2011	Liberty	Livingston	Livingston - 773	11	Lightning
2011	Walker	Livingston	Livingston - 778	1	Lightning
2011	Montgomery	Livingston	Livingston - 786	1	Power Lines
2011	Walker	Livingston	Livingston - 788	2	Lightning
2011	Austin	New Ulm VFD	Cat Spring VFD Mutual Aid	1	Equipment use
2011	Austin	Cat Spring VFD	Dahl	4	Equipment use
2011	Austin	Bellville Fire Dept.	Bellville/ neumann	1	Power Lines
2011	Brazoria	Rosharon Volunteer Fire Dept.	10507 CR 48	1	Miscellaneous
2011	Montgomery	Livingston	Livingston - 803	1	Incendiary
2011	Montgomery	Livingston	Livingston - 804	10	Miscellaneous
2011	Montgomery	Livingston	Livingston - 810	1	Incendiary
2011	Walker	Livingston	Livingston - 813	85	Miscellaneous
2011	Montgomery	Livingston	Livingston - 815	2	Children
2011	Walker	Livingston	Crabbs Prairie Fire	1008	Equipment use
2011	Montgomery	Livingston	Livingston - 818	1	Children
2011	Liberty	Woodville	Livingston - 819	57	Equipment use
2011	Montgomery	Livingston	Livingston - 820	11	Incendiary
2011	Brazoria	Manvel VFD	grass fire	1	Miscellaneous
2011	Walker	Riverside VFD	11520065	0.25	Power Lines
2011	Liberty	Livingston	Livingston - 826	4	Miscellaneous

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Austin	Bellville Fire Dept.	Bellville/ sealy	2	Power Lines
2011	Austin	Bellville Fire Dept.	cat Spring/ Pless	2	Power Lines
2011	Austin	Cat Spring VFD	Columbus Road	10	Debris burning
2011	Walker	Livingston	Livingston - 832	1	Power Lines
2011	Walker	Riverside VFD	1152066	2	Power Lines
2011	Walker	Livingston	Livingston - 838	1	Power Lines
2011	Walker	Livingston	Livingston - 844	5	Incendiary
2011	Walker	Livingston	Livingston - 846	4	Power Lines
2011	Walker	Livingston	Pinedale Fire	183	Equipment use
2011	Brazoria	Manvel VFD	grass fire	10	Equipment use
2011	Montgomery	Lake Conroe Fire Dept.	Woodforest Parkway North	2	Miscellaneous
2011	Montgomery	Livingston	Livingston - 845	3	Incendiary
2011	Montgomery	Livingston	Livingston - 849	9	Miscellaneous
2011	Montgomery	Livingston	Tamina Fire	77	Miscellaneous
2011	Montgomery	Livingston	Riley Road Fire	19960	Lightning
2011	Walker	Livingston	Hopewell Fire	1035	Miscellaneous
2011	Montgomery	Livingston	Livingston - 852	25	Equipment use
2011	Brazoria	Rosharon Volunteer Fire Dept.	CR 528 @ Old Coffee Lake Drive	5	Miscellaneous
2011	Waller	Navasota FD	Ceader Creek	10	Miscellaneous
2011	Montgomery	Livingston	Livingston - 855	5	Miscellaneous
2011	Austin	New Ulm VFD	Mutual Aid Given	2	Power Lines
2011	Austin	Bellville Fire Dept.	Bellville/ Oil Field	10	Power Lines
2011	Brazoria	Rosharon Volunteer Fire Dept.	2827 Pearce Lane	1.25	Miscellaneous
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Brush Fire	2	Debris burning
2011	Montgomery	Livingston	Livingston - 872	4	Incendiary
2011	Brazoria	Manvel VFD	grass fire	0.5	Equipment use
2011	Brazoria	Manvel VFD	grass fire	0.75	Equipment use
2011	Austin	Bellville Fire Dept.	Bellville/ Reincke	10	Equipment use
2011	Montgomery	Livingston	Livingston - 882	1	Incendiary
2011	Montgomery	Livingston	Livingston - 891	1	Incendiary
2011	Brazoria	Freeport Fire Dept.	Port Freeport	0.25	Smoking
2011	Brazoria	Rosharon Volunteer Fire Dept.	Hwy 35 S @ CR 881	300	Miscellaneous
2011	Brazoria	Manvel VFD	grass fire	0.5	Miscellaneous
2011	Walker	Livingston	Third Fire	466	Lightning
2011	Montgomery	Livingston	Livingston - 901	5	Miscellaneous
2011	Brazoria	County Road 143 VFD	mutual aid grass fire	1	Power Lines
2011	Montgomery	River Plantation FD	Tower Glen	1	Miscellaneous
2011	Austin	Bellville Fire Dept.	Bellville/ Jasek	20	Equipment use
2011	Liberty	Livingston	Livingston - 903	3	Miscellaneous
2011	Montgomery	Livingston	Livingston - 915	1	Debris burning
2011	Walker	Livingston	Livingston - 916	1	Lightning
2011	Walker	Livingston	Livingston - 920	1	Lightning
2011	Walker	Livingston	Livingston - 921	1	Lightning
2011	Walker	Livingston	Livingston - 923	57	Lightning
2011	Montgomery	Livingston	Livingston - 922	2	Lightning
2011	Montgomery	Livingston	Livingston - 925	1	Lightning

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Year	County	Dispatch or VFD Name	Fire Name	Acres	Cause
2011	Montgomery	Livingston	Livingston - 929	1	Miscellaneous
2011	Walker	Livingston	Livingston - 932	1	Incendiary
2011	Walker	Livingston	Livingston - 940	1	Miscellaneous
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire - Grass	1	Smoking
2011	Waller	Mt. Zion Community Volunteer Fire Fighting Assoc.	Fire-Grass	0.5	Lightning
2011	Walker	Livingston	Livingston - 947	20	Power Lines
2011	Montgomery	Livingston	Livingston - 950	1	Lightning
2011	Walker	Livingston	Livingston - 954	7	Lightning
2011	Liberty	Livingston	Livingston - 962	65	Lightning
2011	Walker	Livingston	Livingston - 961	13	Lightning
2011	Liberty	Livingston	Livingston - 964	1	Lightning
2011	Walker	Thomas Lake Rd. VFD	FM 980 @	0.1	Smoking
2011	Walker	Livingston	Livingston - 965	2	Miscellaneous
2011	Liberty	Woodville	Livingston - 967	1	Equipment use
2011	Walker	Dodge VFD	John Webb	2	Debris burning
2011	Walker	Livingston	Livingston - 999	2	Power Lines
2011	Walker	Dodge VFD	415 Paul Dixon	1	Debris burning
2011	Walker	Livingston	Livingston - 1010	5	Equipment use
2011	Walker	Livingston	Livingston - 1011	1	Lightning
2011	Montgomery	Livingston	Livingston - 1014	4	Miscellaneous
2011	Walker	Dodge VFD	45 Hickory Lane	1	Debris burning
2011	Austin	New Ulm VFD	Grass Fire (Industry VFD)	2	Debris burning
2011	Walker	Dodge VFD	Rafael Sagastizado	1	Debris burning
2011	Montgomery	Livingston	Livingston - 1023	1	Debris burning
2011	Walker	Dodge VFD	1931 US Hwy 190	1	Debris burning
2011	Montgomery	Livingston	Livingston - 1029	3	Debris burning
2011	Walker	Dodge VFD	Charles Wheeler	1	Debris burning
2011	Walker	Livingston	Livingston - 1030	1	Debris burning
2011	Brazoria	Angleton Fire Dept	2011-000488	0.5	Debris burning
2011	Walker	Bedias Volunteer Fire Dept.	Eubanks DR	1	Equipment use

Source: Texas Forest Service, August 2012

Table 4.2-7 through 4.2-9 summarize the wildfire data from Table 4.2-6 for each of the participating seven counties.

Table 4.2-7 Number of Wildfires by County from 2005-2011

County	2005	2006	2007	2008	2009	2010	2011	Total
Austin	0	3	1	2	35	14	43	98
Brazoria	0	1	4	51	149	16	47	268
Chambers	1	13	9	13	16	2	7	61
Liberty	44	45	5	20	11	20	62	207
Montgomery	80	92	8	33	45	44	109	411
Walker	43	78	12	41	53	32	92	351
Waller	2	2	0	4	6	4	11	29
Total	170	234	39	164	315	132	371	1425

Source: Texas Forest Service, August 2012

Table 4.2-8 Causes of Wildfires by County from 2005-2011

County	Camp-fire	Children	Debris burning	Equip-ment use	Incendiary	Light-ning	Misc	Power Lines	Rail-roads	Smokin-g	Total
Austin	2	0	41	19	3	1	10	14	2	6	98
Brazoria	2	3	157	15	5	4	61	7	2	12	268
Chambers	1	2	28	5	14	0	7	1	2	1	61
Liberty	1	1	124	8	23	17	22	6	2	3	207
Montgomery	11	18	190	14	38	19	97	17	3	4	411
Walker	4	3	163	18	23	30	75	29	1	5	351
Waller	2	0	16	2	1	1	5	0	0	2	29
Total	23	27	719	81	107	72	277	74	12	33	1,425

Source: Texas Forest Service, August 2012

Table 4.2-9 Acres Burned by County from 2005-2011

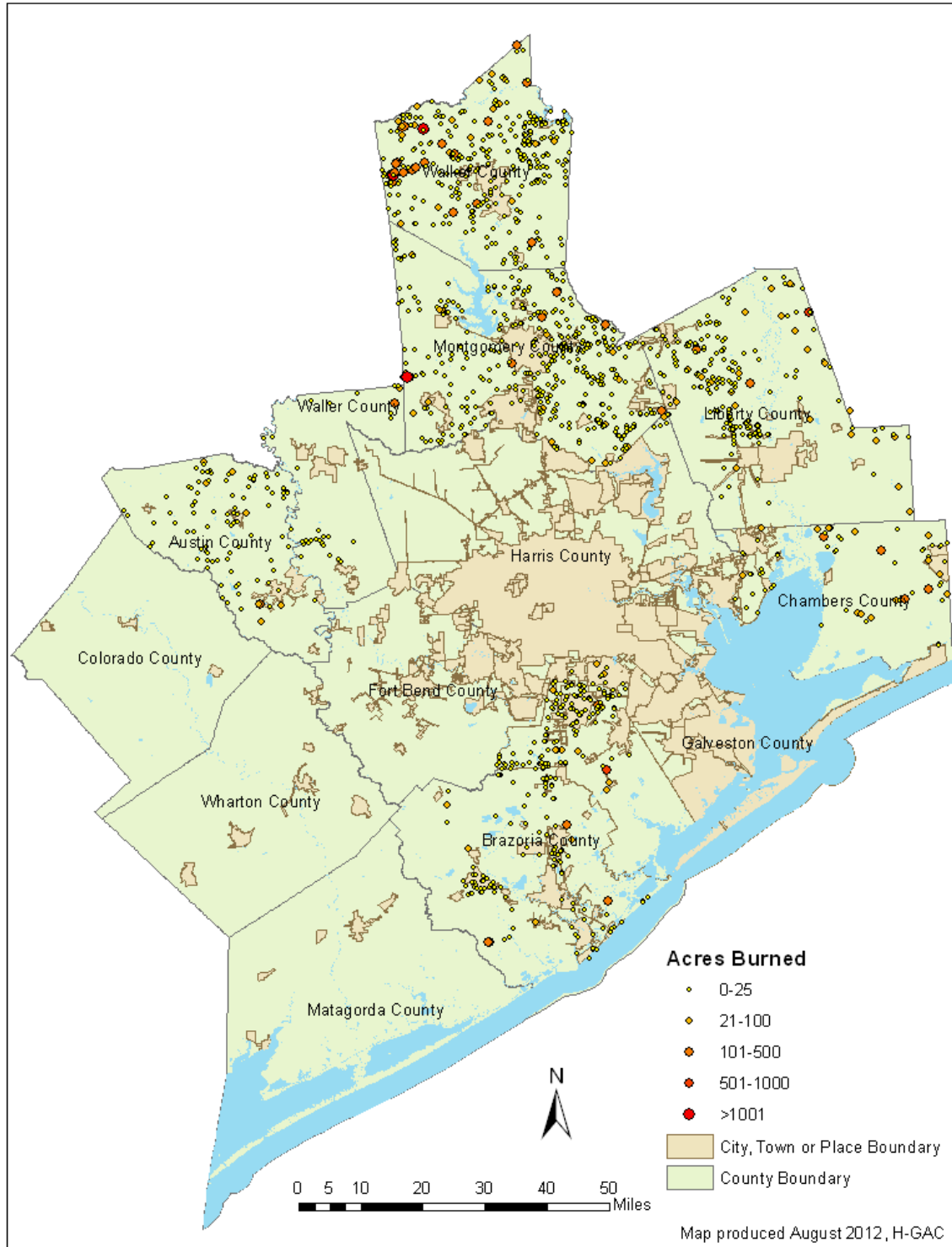
County	2005	2006	2007	2008	2009	2010	2011	Total
Austin	0	178	30	21	264.50	74.50	288.55	856.55
Brazoria	0	560	5.60	175.50	1,335	278.75	529.50	2,884.35
Chambers	2	92.51	12.60	486.50	1,226	215	106	2,140.61
Liberty	664.35	235.72	79	238	189	249	1,542.50	3,197.57
Montgomery	658.5	422.8	138	426	787	234.3	21,048.7	23,715.15
Walker	488.37	1,064.70	139.50	1,550.40	861.06	233.07	6,271.75	10,608.85
Waller	343	12	0	28	19.75	2.50	32.75	438
Total	4,161.22	4,571.68	2,411.70	4,933.40	6,691.31	3,297.07	31,830.70	43,841.08

Source: Texas Forest Service, August 2012

The wildfires in Austin County from 2005-2011 occurred predominantly in forested and cultivated areas. In Brazoria County, wildfires during this period occurred in a mix of grasslands, woody wetlands, herbaceous wetlands, cultivated areas, and developed areas. The wildfires in Chambers County during this period occurred in predominantly cultivated and grassland areas. In Liberty County, wildfires occurred predominantly in forested and woody wetland areas. The wildfires in Montgomery County occurred predominantly in forested areas. In Walker County, wildfires occurred predominantly in forested areas and some cultivated lands and grasslands. The wildfires occurred in Waller County in a mix of forested and cultivated lands.

Figure 4.2-14 depicts the wildfires reported to and suppressed by the Texas Forest Service and local fire departments.

Figure 4.2-14
2005 – 2011 Wildfire Locations Map

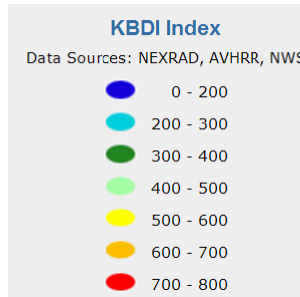


Source: Texas Forest Service

According to the previous occurrences data, Montgomery County has the highest occurrences of wildfires, relative to other counties, followed by Walker, Brazoria and Liberty counties.

Keetch-Byram Drought Index (KBDI) is an index used to determine forest fire potential. The drought index is based on a daily water balance, where a drought factor is balanced with precipitation and soil moisture (assumed to have a maximum storage capacity of 8 inches) and is expressed in hundredths of an inch of soil moisture depletion. **Figure 4.2-15** displays the KBDI legend. Each color on the map represents the drought index at that location. The drought index ranges from 0 to 800, where a drought index of 0 represents no moisture depletion, and an index of 800 represents absolutely dry conditions.

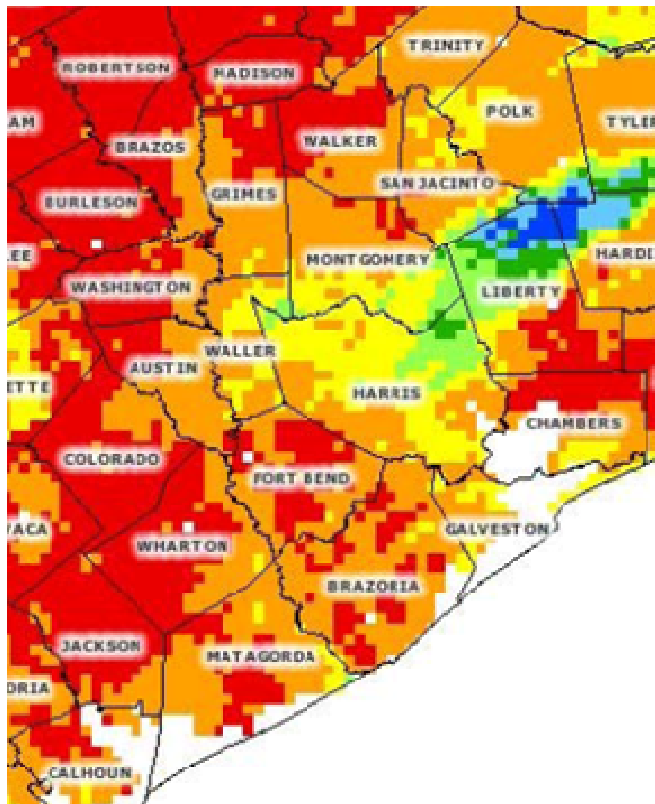
Figure 4.2-15
Keetch-Byram Drought Index (KBDI) Values



Source: Texas Weather Connection, Texas A&M University

The map in **Figure 4.2-16** represents the KBDI values for the region on November 15, 2011.

Figure 4.2-16
Keetch-Byram Drought Index (KBDI) Results for H-GAC Region, November 15, 2011



Source: Texas Weather Connection, Texas A&M University, November 15, 2011. <http://twc.tamu.edu/maps/kbdi>

Table 4.2-10 represents the KBDI values obtained for the region on November 15, 2011.

**Table 4.2-10
 Keetch-Byram Drought Index (KBDI) Values for H-GAC Region, November 15, 2011**

County	KBDI Mean	KBDI Maximum	KBDI Minimum
Austin	671.7789	742	588
Brazoria	673.823	740	542
Chambers	677.2621	754	525
Liberty	526.6616	773	84
Montgomery	597.1648	714	380
Walker	695.4048	752	598
Waller	602.908	672	418

Source: Texas Weather Connection, Texas A&M University, November 15, 2011. <http://twc.tamu.edu/maps/kbdi>

Although local weather, vegetative cover and topographic conditions determine the incidence of wildfire, given the conditions in a historical drought year such as 2011, it is likely that the region’s participating jurisdictions would continue to experience approximately 520 wildfires per year under similar drought and soil moisture conditions. The potential for wildfire occurrence is also increased by wind. In a year with typical rainfall amounts, the average number of fires to take place in the region’s participating jurisdictions is estimated to be approximately 175, with an average of approximately 30 acres burned per wildfire. While the number of historical wildfire occurrences may be low for some areas, the threat is continuous.

Other types of data that can contribute to a fuller understanding of historical extent of wildfires include intensity of flames and type of wildfire (grassland, canopy). At the time of this plan update, these data were not available; however, obtaining more complete wildfire data has been added as one of H-GAC’s specific mitigation actions.

The preliminary wildfire risk assessment conducted using the Southern Fire Risk Assessment System for the seven H-GAC counties covered under this plan are described in detail in Section 4.3.

Drought

Recent drought events which have affected the H-GAC region include:

Summer 1996

From April through June 1996, rainfall totals in the Houston area ran more than 10 inches below normal. Other areas to the west and north reported rainfall totals 75 percent below the normal for the first six months of the year. Damage from the extended drought began to reach record proportions as many crops were lost and livestock were sold due to the lack of available fodder. Property damages and agricultural losses reached \$10 million and \$100 million in southeast Texas respectively.

May – August 1998

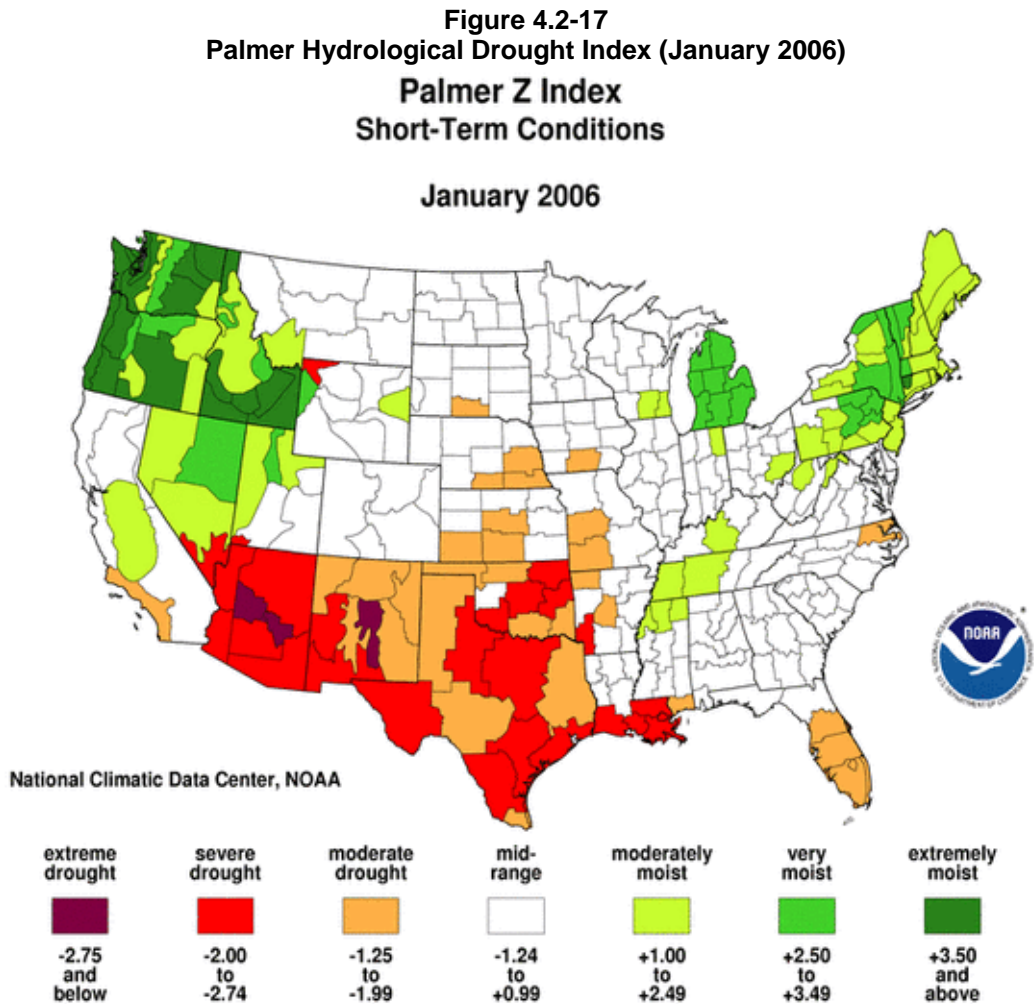
Over 20 people across the region lost their lives due to the extreme heat, and property and crop damage averaged \$8.3 million per county.

Summer 2000

The combination of excessive heat and dryness resulted in several wildfires during the first week of the month, including a 4,500 acre fire in Liberty County.⁴ By the end of September, damage estimates to cotton, wheat, and forage crops reached \$102.3 million in southeast Texas.

January - August 2006

Severe drought conditions gripped much of Oklahoma and Texas in September 2005 through mid-2006. The counties in the H-GAC region lie in the Texas Climate Divisions 4 (East Texas) and 8 (Upper Coast). The average monthly Palmer Hydrological Drought Index (PHDI) for Texas Divisions 4, 7, and 8 fell below -2 and -2.75 respectively, which according to the PHDI scale is a "moderate to severe drought". **Figure 4.2-17** depicts the moderate to severe drought conditions in Texas in January 2006.

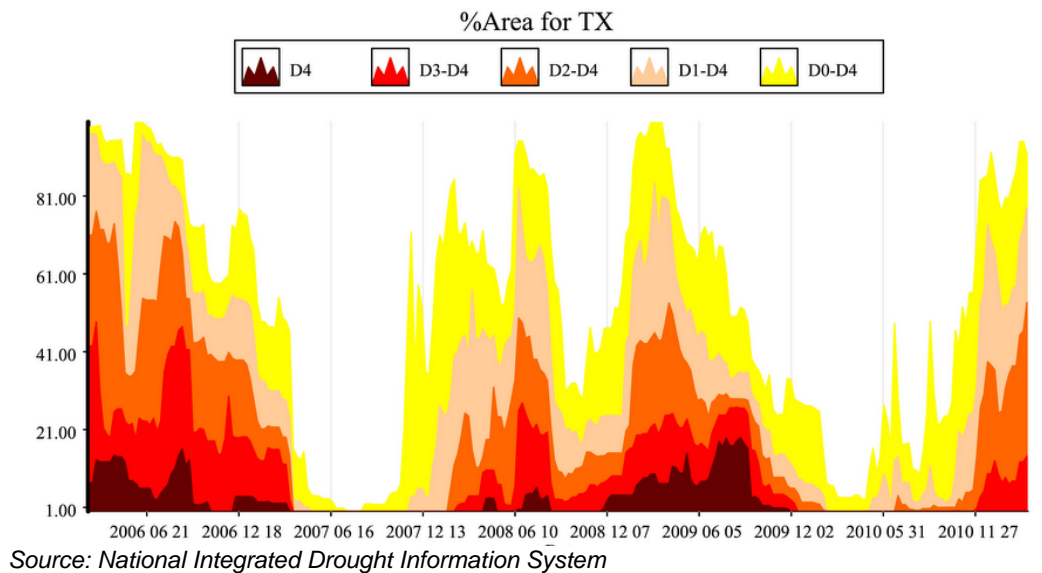


Source: <https://wf.ncdc.noaa.gov/sotc/drought/2006/1>

Figure 4.2-18 provides the drought indices (by percent area) for the state of Texas between 2006 and 2010.

⁴ These events were not reported to the National Climatic Data Center, and are therefore not referenced under the Wildfire heading in this section.

Figure 4.2-18
2006 – 2010 Drought Index (Percent Area) for Texas

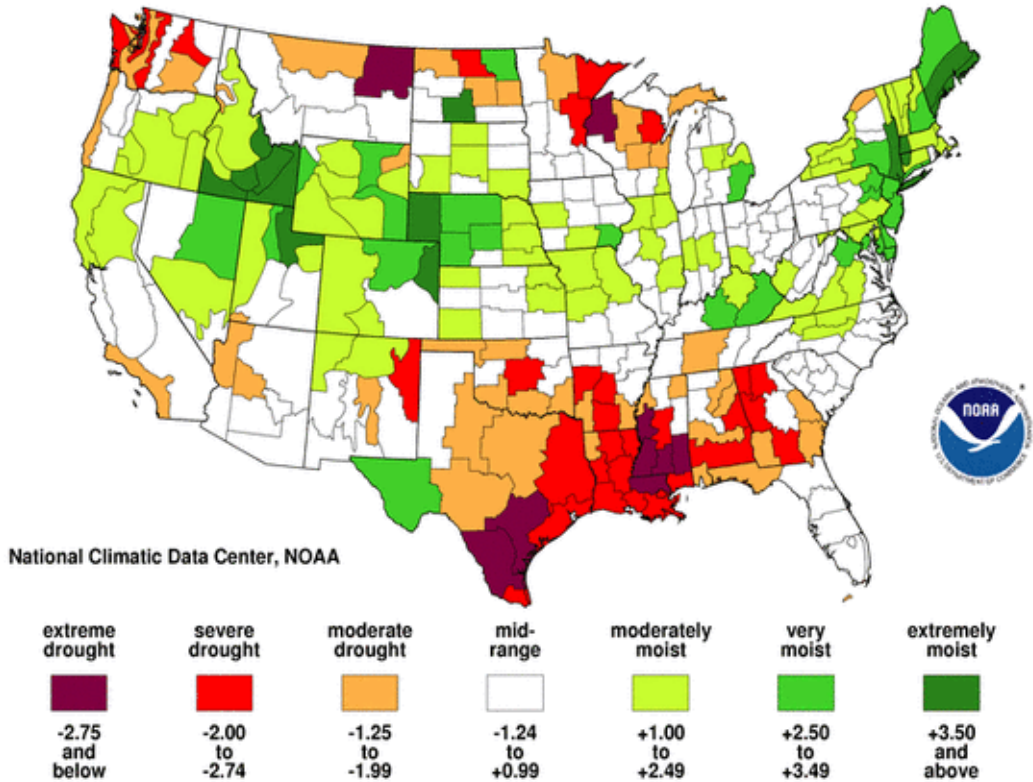


Summer 2009 - 2011

A combination of record-high heat and record-low rainfall pushed south and central Texas into the region's deepest drought in a half century, with \$3.6 billion of crop and livestock losses in 2009. The heat wave drastically reduced reservoirs and forced about 230 public water systems to declare mandatory water restrictions. Low water levels in lakes and rivers impact tourism as well, by making summer boating, swimming and fishing activities impossible in some places. High salinity levels and red tides due to the reduction in freshwater inflows in Galveston Bay and the Gulf of Mexico threatened oyster and other shellfish production **Figures 4.2-19** and **4.2-20** depict the severe to extreme drought conditions in the H-GAC region in the summer of 2009 and 2011. The drought of 2009 continued into 2010 and 2011. Note that 100% all 13 of the H-GAC region's counties are in D4 Exceptional drought conditions in Figure 4.2-20.

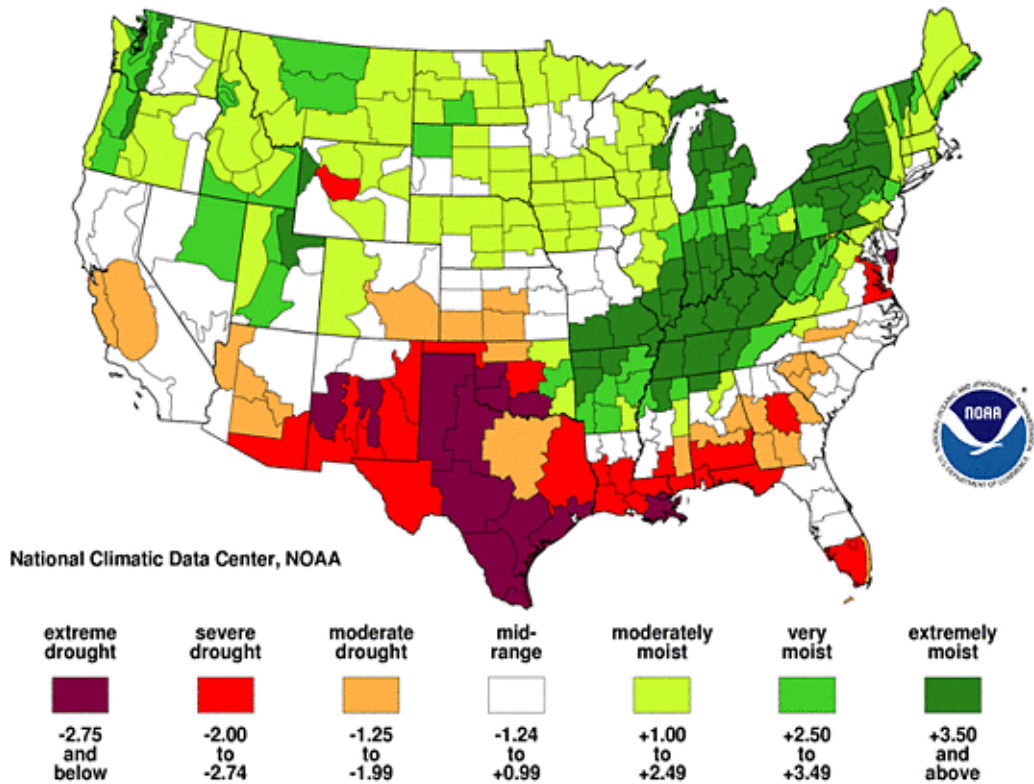
Figure 4.2-19
Palmer Hydrological Drought Index (June 2009)
Palmer Z Index
Short-Term Conditions

June 2009



Source: <https://wf.ncdc.noaa.gov/sotc/drought/2009/6>

Figure 4.2-20
Palmer Hydrological Drought Index (April 2011)
Palmer Z Index
Short-Term Conditions
April 2011



Source: <https://wf.ncdc.noaa.gov/sotc/drought/2011/4>

Figures 4.2-21 and 4.2-22 depict the moderate to extreme drought conditions in the H-GAC region in the July 2009 and October 2011, respectively.

**Figure 4.2-21
 U.S Drought Monitor (July 2009)**

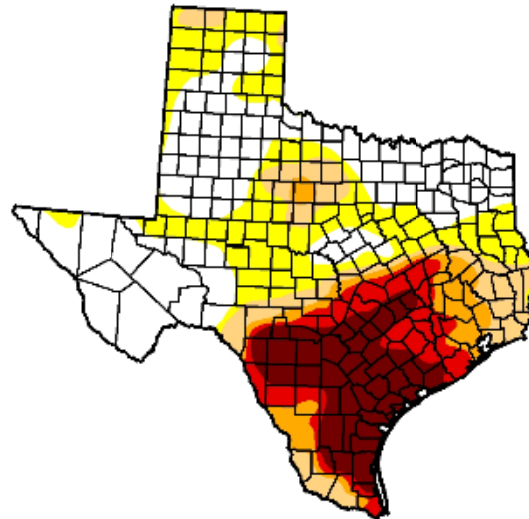
U.S. Drought Monitor

Texas

July 7, 2009
 Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	37.7	62.3	39.4	28.8	22.4	14.1
Last Week (06/30/2009 map)	28.2	71.8	38.4	27.9	20.0	11.1
3 Months Ago (04/14/2009 map)	14.9	85.1	68.2	50.6	25.1	11.5
Start of Calendar Year (01/06/2009 map)	41.7	58.3	24.5	15.0	9.1	4.2
Start of Water Year (10/07/2008 map)	67.2	32.8	20.5	11.0	3.6	0.0
One Year Ago (07/08/2008 map)	12.4	87.6	64.0	44.9	22.6	4.6



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



Released Thursday, July 9, 2009
 Author: R. Tinker, CPC/NOAA

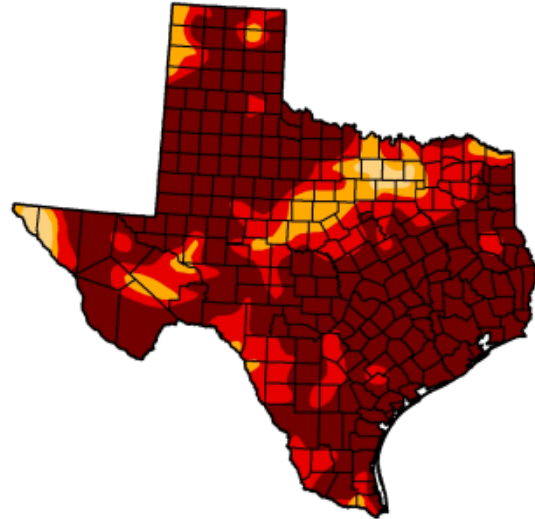
Figure 4.2-22
U.S Drought Monitor (October 2011)

U.S. Drought Monitor

Texas

October 25, 2011
 Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	98.34	90.87	69.61
Last Week (10/18/2011 map)	0.00	100.00	100.00	98.60	91.87	72.61
3 Months Ago (07/26/2011 map)	0.00	100.00	99.85	96.88	91.65	75.23
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/27/2011 map)	0.00	100.00	100.00	99.16	96.65	85.75
One Year Ago (10/19/2010 map)	53.55	46.45	9.48	0.96	0.08	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

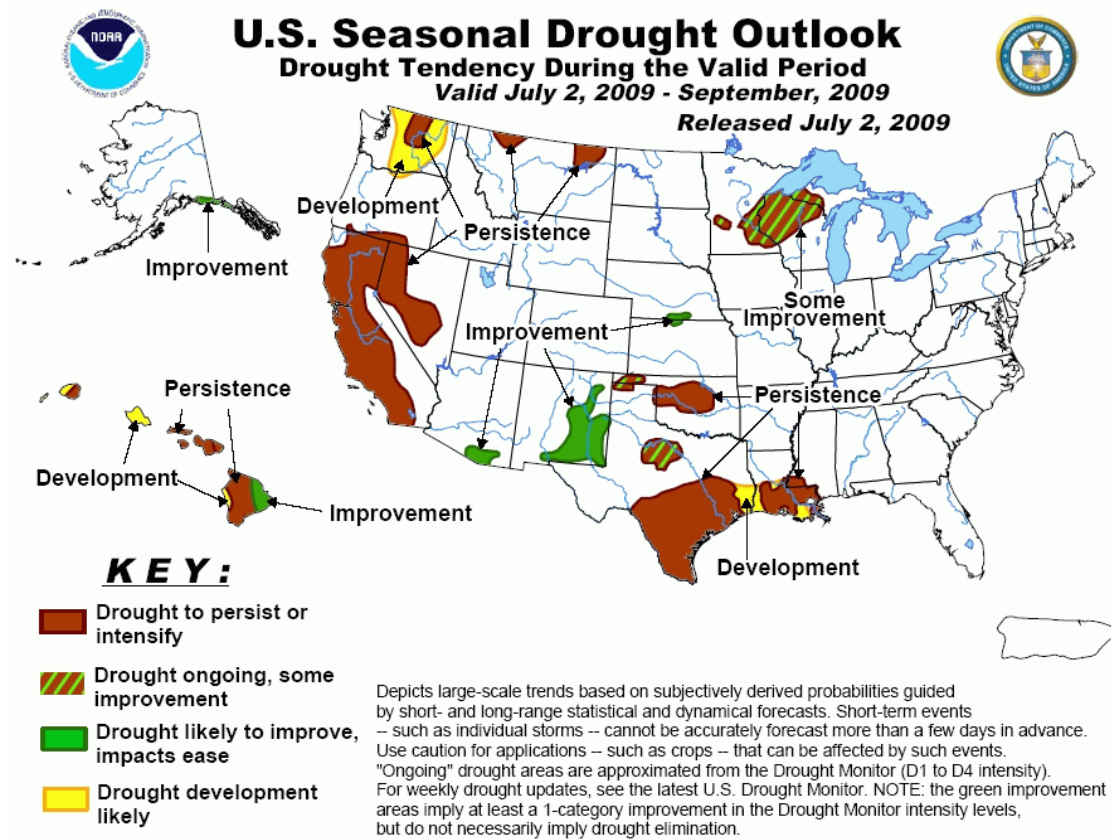
<http://droughtmonitor.unl.edu>



Released Thursday, October 27, 2011
 David Miskus, NOAA/NWS/NCEP/CPC

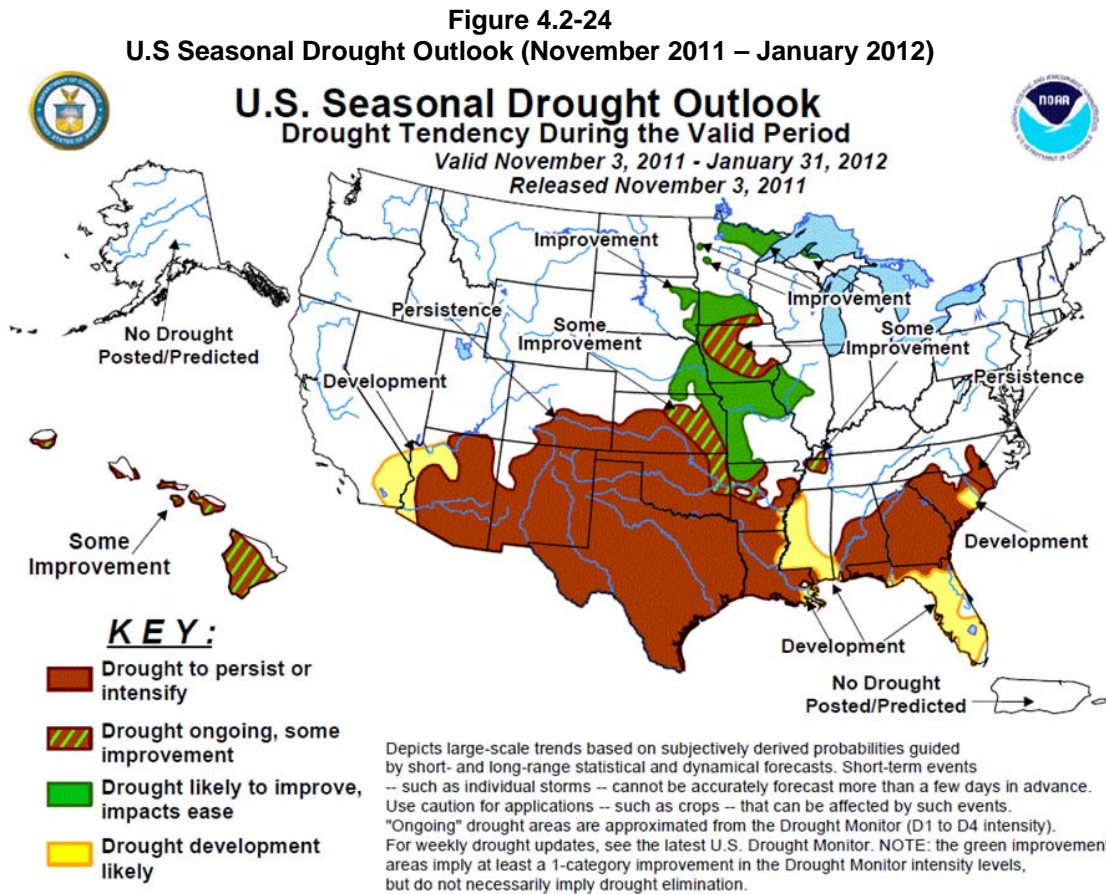
Figure 4.2-23 depicts the seasonal drought outlook from July through September 2009. The majority of the region's drought was forecast to persist or intensify.

Figure 4.2-23
U.S. Seasonal Drought Outlook (July - September 2009)



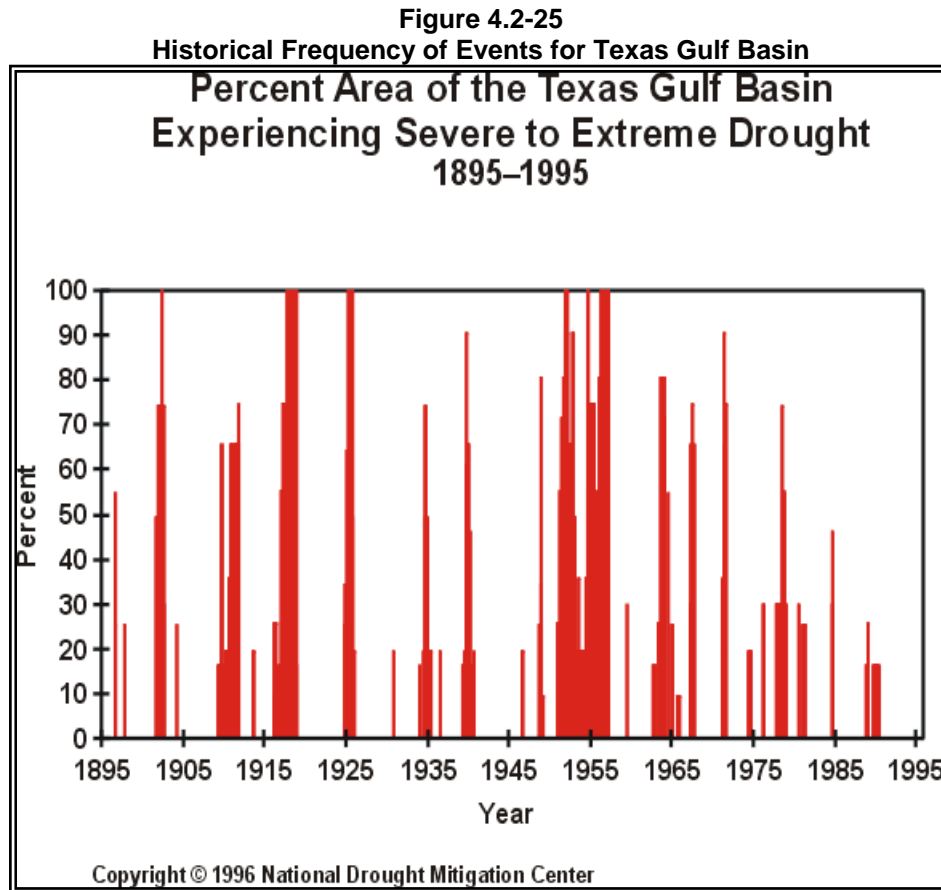
Source: NOAA

Figure 4.2-24 depicts the seasonal drought outlook from November 2011 through January 2012. The drought tendency for the region during that period is for the drought to persist or intensify.



Source: NOAA

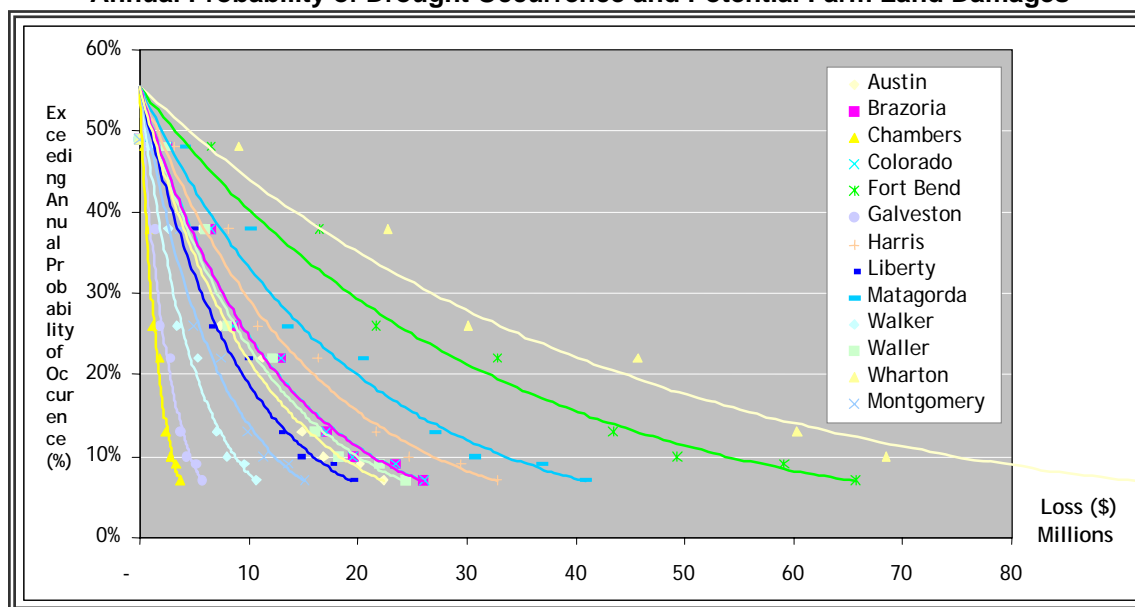
Figure 4.2-25 shows the historical frequency of drought events in the Texas Gulf Basin from 1895 to 1995.



The drought hazard is difficult to map because drought affects large areas, most times uniformly. The Texas Water Development Board maintains a webpage that provides monthly drought presentations, drought indices, and links to the National Drought Monitor website. The National Weather Service provides maps predicting drought in their Climate Prediction Center web page.

Figure 4.2-26 shows the annual probability of drought occurrence and potential farmland damages for each county in the H-GAC planning area. In any given year, most of the H-GAC counties have over a 50 percent chance of experiencing a drought.

**Figure 4.2-26
 Annual Probability of Drought Occurrence and Potential Farm Land Damages**



According to an article published September 29, 2011 by the Texas State Climatologist, the Texas drought could last through 2016 or even until 2020. According to the Texas State Climatologist, the possible cause of the multi-year drought is the likely establishment of a new La Niña in the central Pacific Ocean. A La Niña is formed when colder than usual ocean temperatures form in the central Pacific, and these tend to create wetter than normal conditions in the Pacific Northwest but also drier than normal conditions in the Southwest. No one portion of the region is more at risk to drought than any other part of the region, therefore the entire region is in a drought hazard area and can be expected to experience between two and seven droughts every ten years. The region can expect an “extreme drought” as defined by the Palmer Z index.

Expansive Soils

As mentioned in section 4.1, expansive soils can be problematic during drought. It is differential expansion that causes damage. If the entire area under a foundation or road maintained the same moisture content, the entire structure would rise uniformly, and there would be no damage. Residential construction generally has more problems than commercial, but both experience significant losses. The foundation type most prevalent in Texas, slab on grade, is also the most susceptible to damage from expansive clays.

Commercial construction has mitigation measures applied more commonly than residential construction, and is commonly completely surrounded by waterproof paving, which acts to maintain the soil moisture at a constant level without additional irrigation. Residential losses account for the bulk of damages.

The great increase in damages in Texas caused by problems with expansive soils can be traced to the rise in residential slab-on-grade construction which began to accelerate in the 1960s. Prior to that time, most residential construction in Texas was pier and beam, with wood siding or other non-masonry covering. This construction style was still susceptible to differential soil expansion, but re-leveling was simply and inexpensively accomplished by shimming the existing piers. The non-masonry siding would warp back to its original alignment without damage. Manufactured homes in Texas also experience these advantages.

Soils expansion extent is measured by the rate of expansion, called linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a

moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. **Table 4.2-11** shows the percent of the planning area with linear extensibility. Very high linear extensibility rates are 9-30, high are 6-9, moderate are 3-6 and low are 0-3 (Natural Resource Conservation Service). The planning area expects a range of 9%-56% in linear extensibility.

**Table 4.2-11
 Percent of County with Linear Extensibility**

County	Very High	High	Moderate	Low
Austin & Waller*	20%	0%	8%	71%
Brazoria	35%	30%	21%	14%
Chambers	44%	17%	0%	38%
Liberty	21%	18%	9%	52%
Montgomery	8%	0%	2%	90%
Walker	11%	3%	3%	83%
Region	23%	12%	9%	56%

* Austin and Waller counties are included in the same soil survey.

Figures 4.2-27 through 4.2-34 depict the soil swelling potential for the region. Developed areas, which are vulnerable to this hazard, are indicated in the figures. Approximately 29% of soils in the region have very high swelling potential, 20% have moderate to high swelling potential and 51% have low swelling potential. Very high swelling potential soils are defined by having 35% or more of vertisols, a type of soil with a high content of expansive clay. Moderate to high swelling potential soils consist of 20 to 34% vertisols. Low swelling potential soils contain less than 20% vertisols.

Figure 4.2-27 Soil Swelling Potential for the H-GAC Region

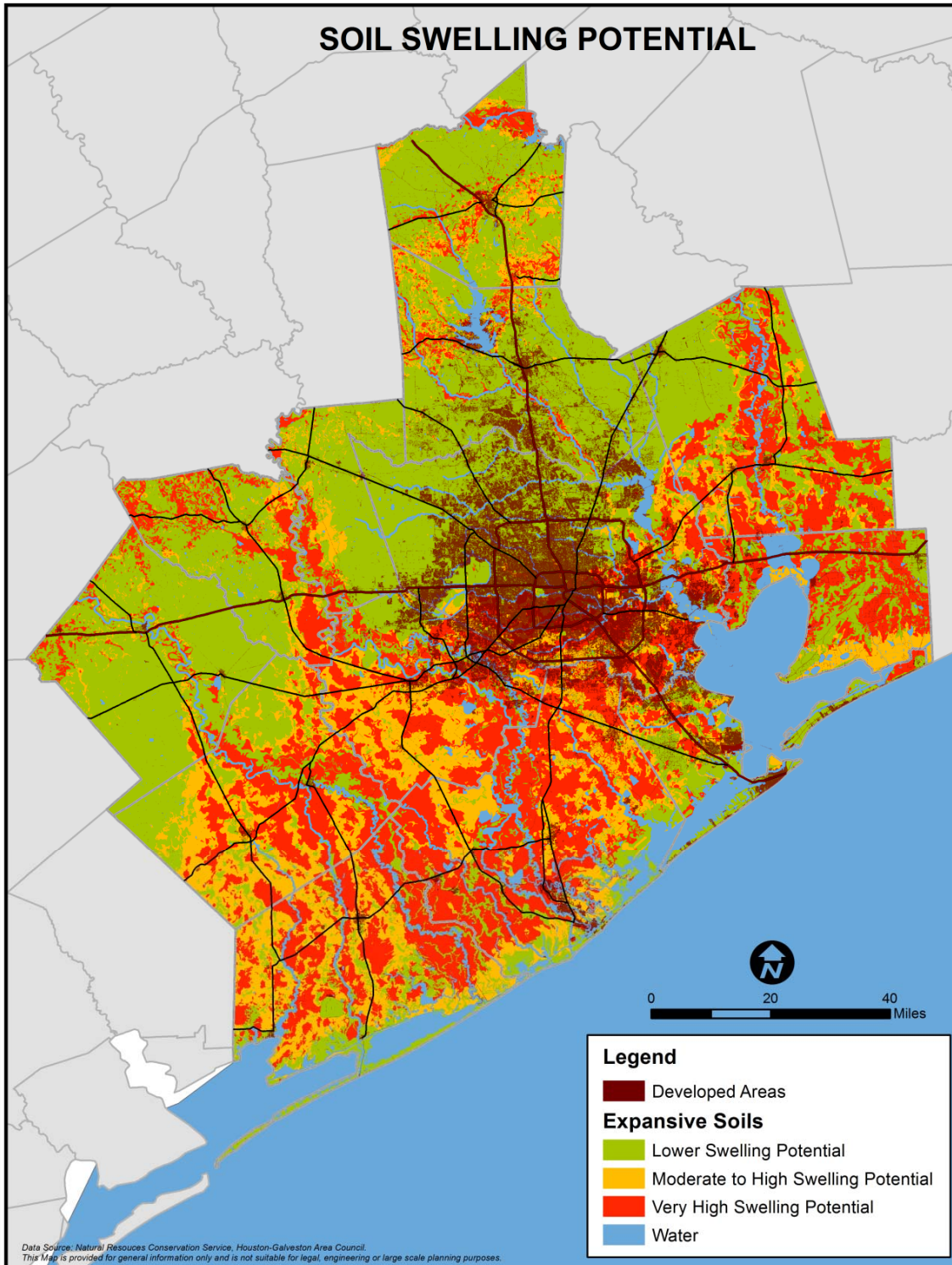


Figure 4.2-28 Soil Swelling Potential for Austin County

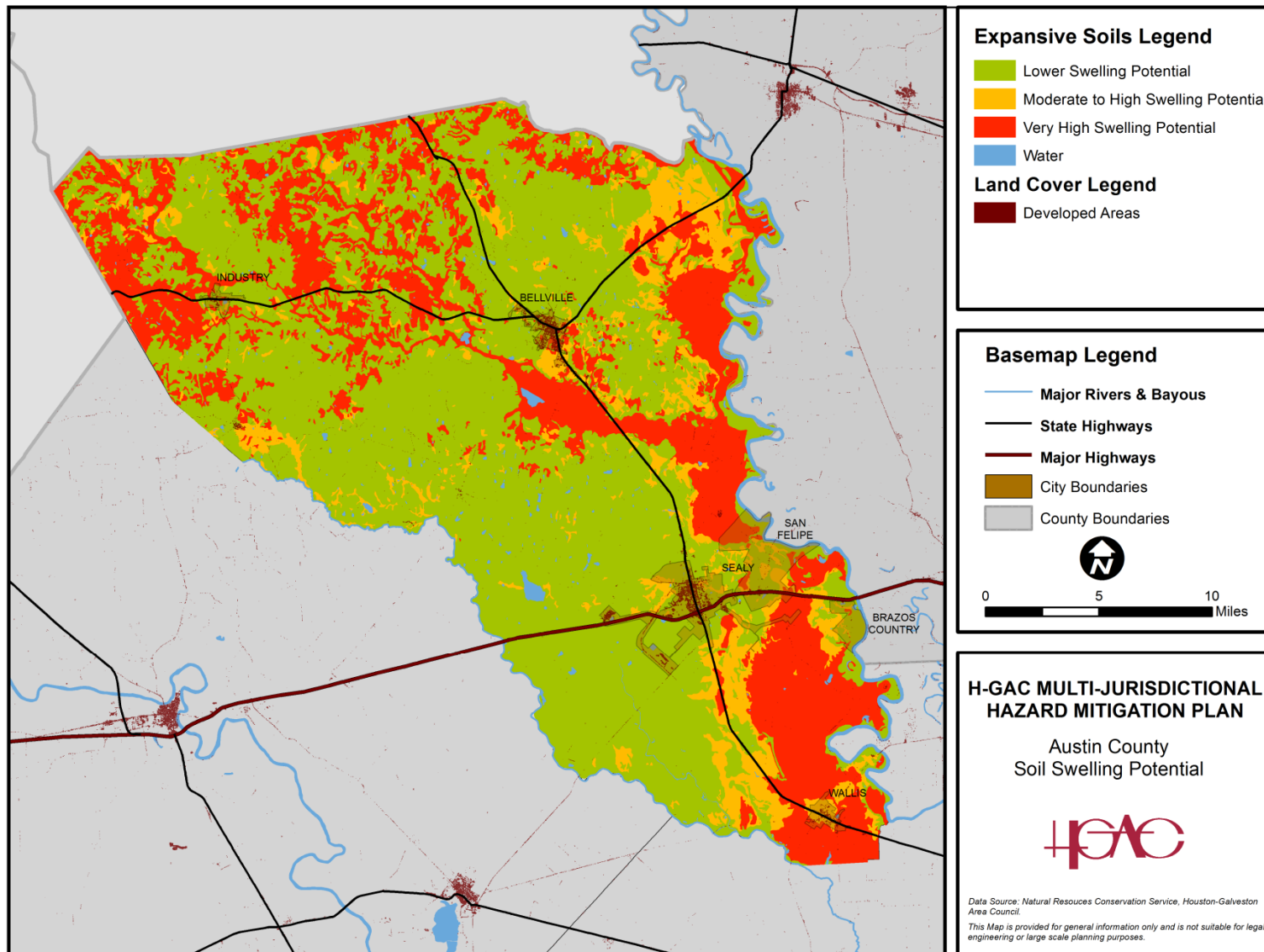


Figure 4.2-29 Soil Swelling Potential for Brazoria County

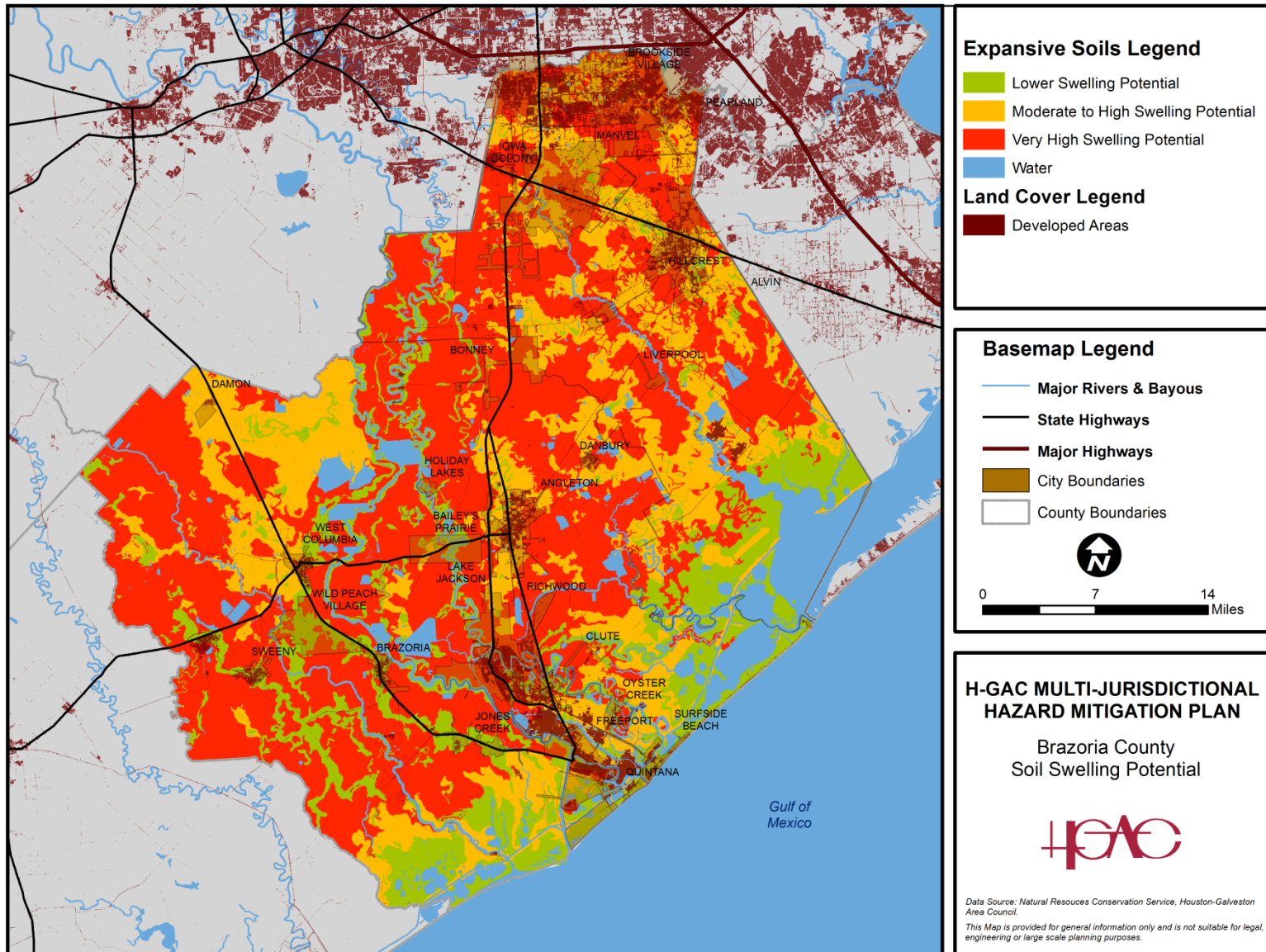


Figure 4.2-30 Soil Swelling Potential for Chambers County

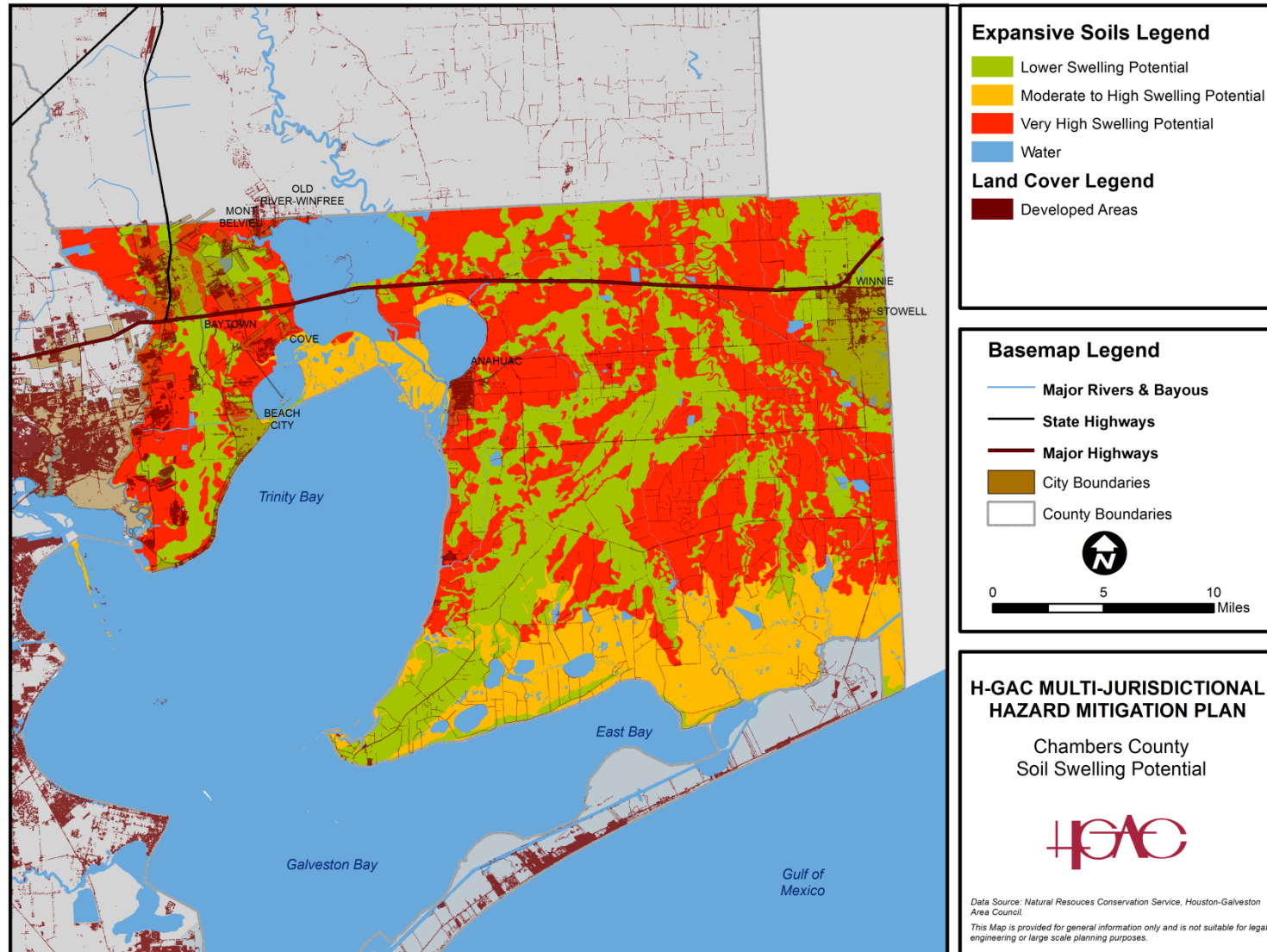


Figure 4.2-31 Soil Swelling Potential for Liberty County

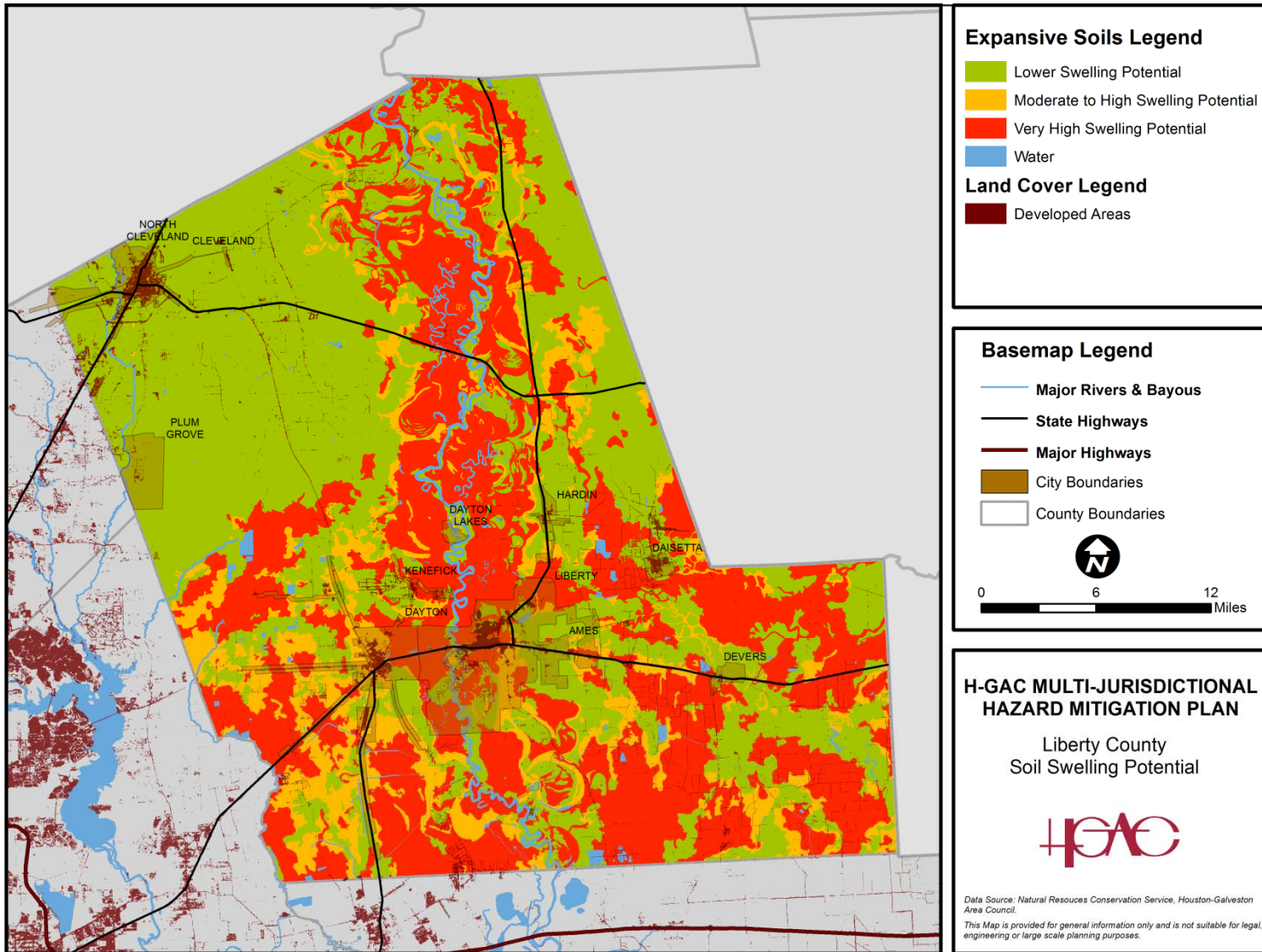


Figure 4.2-32 Soil Swelling Potential for Montgomery County

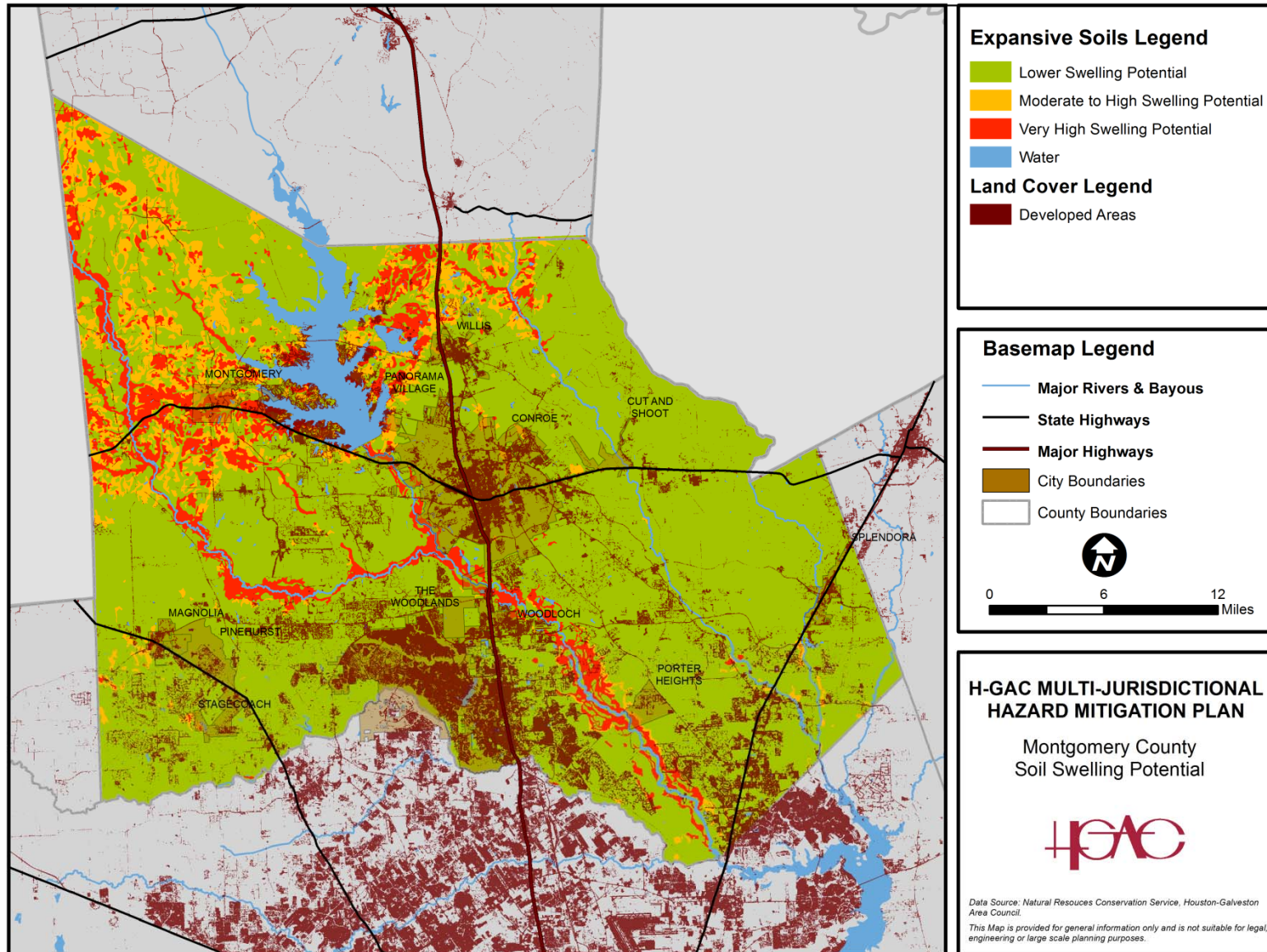


Figure 4.2-33 Soil Swelling Potential for Walker County

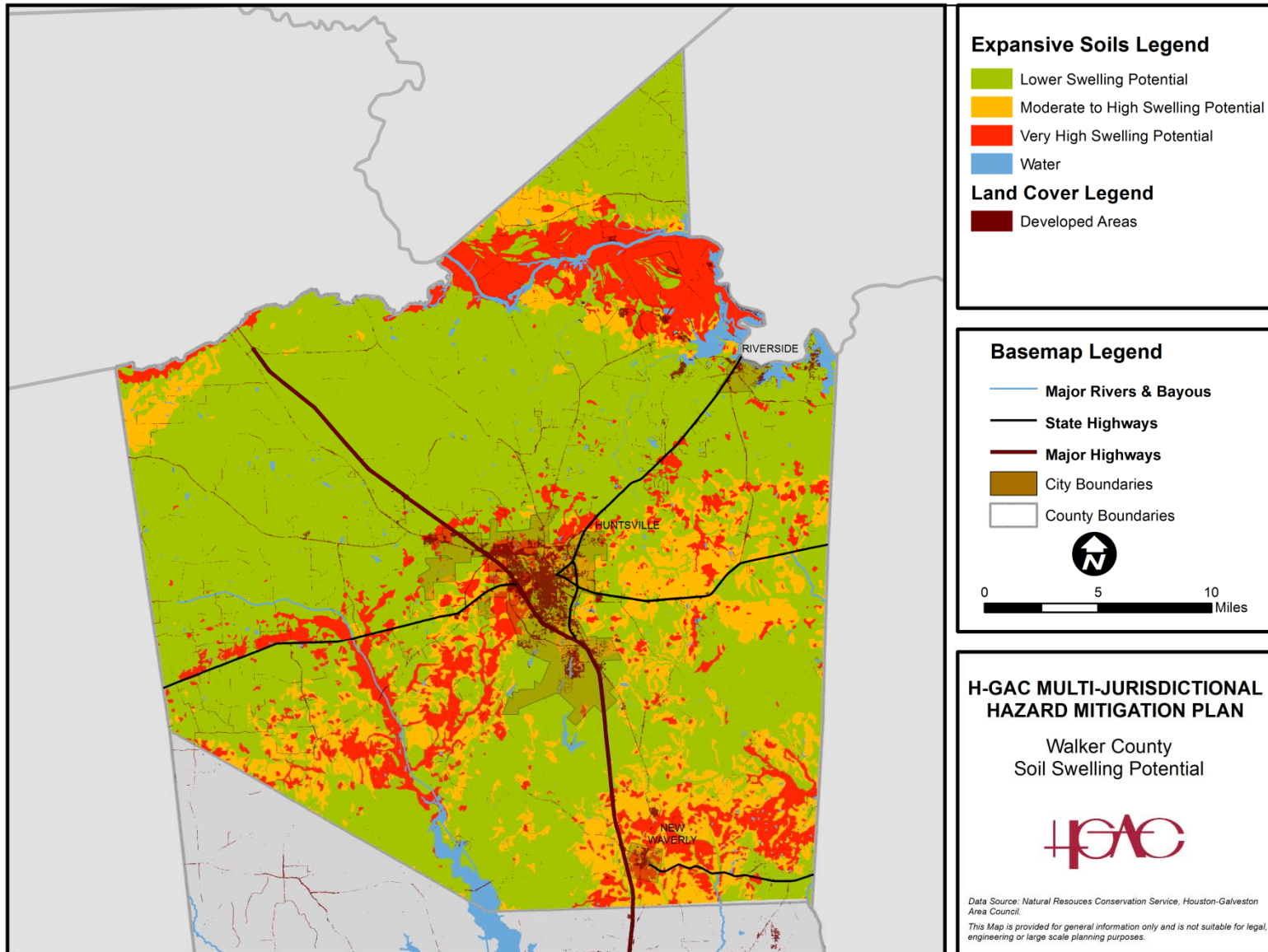


Figure 4.2-34 Soil Swelling Potential for Waller County

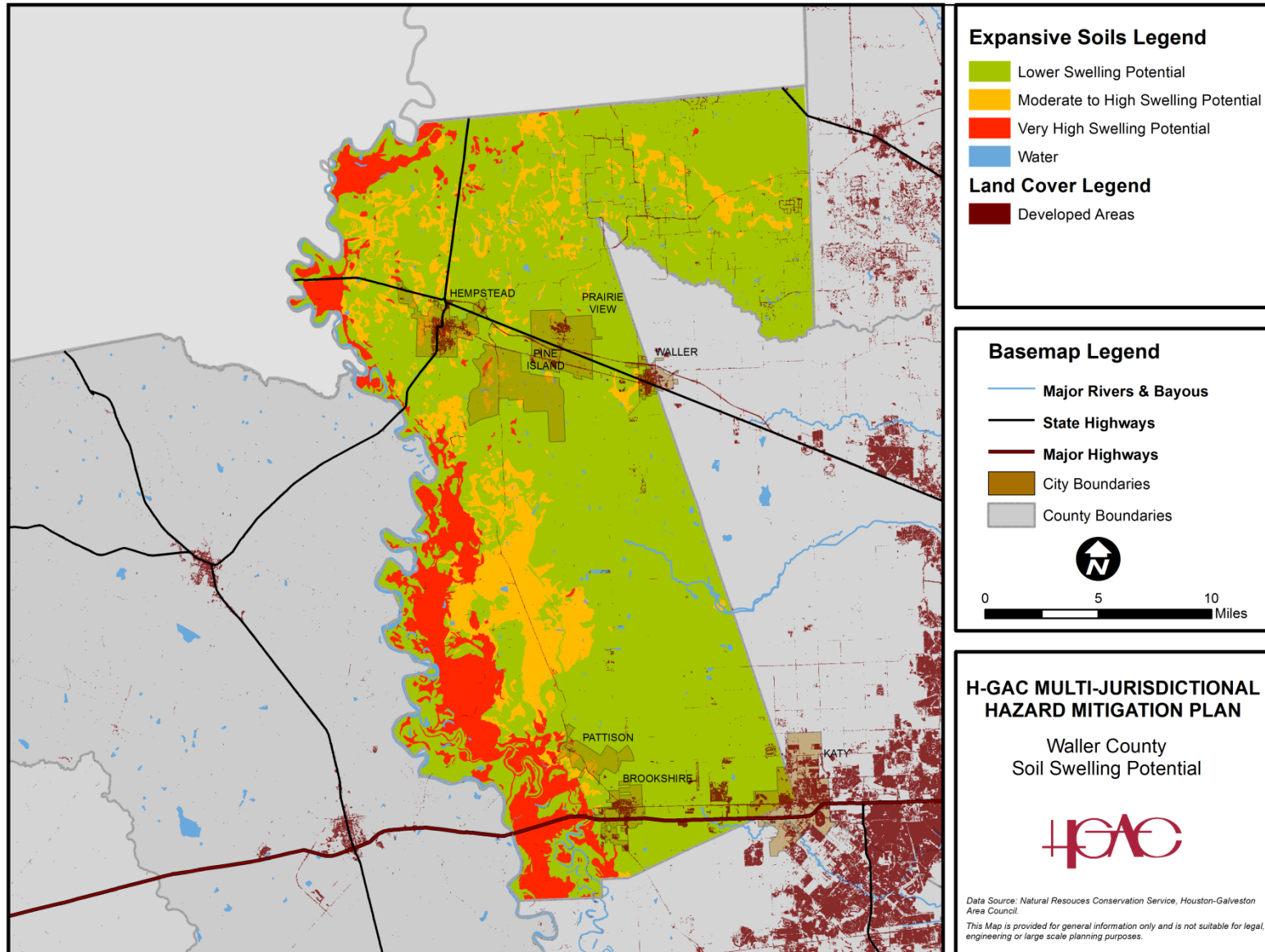


Table 4.2-12 demonstrates the swelling potential of soils for each of the participating counties on a square mile and percent basis.

Table 4.2-12: Swelling Potential for Soils in Participating Counties

County Name	Lower Swelling Potential	% of the County that is Lower Swelling Potential	Moderate to High Swelling Potential	% of the County that is Moderate to High Swelling Potential	Very High Swelling Potential	% of the County that is Very High Swelling Potential
Austin County	8.48	1.29%	1.95	0.30%	1.55	0.24%
Brazoria County	15.53	0.97%	52.83	3.31%	62.79	3.93%
Chambers County	16.34	1.87%	1.99	0.23%	21.35	2.45%
Liberty County	22.78	1.94%	7.41	0.63%	8.89	0.76%
Montgomery County	153.67	14.27%	7.77	0.72%	6.93	0.64%
Walker County	16.54	2.06%	6.04	0.75%	4.86	0.61%
Waller County	15.05	2.91%	1.37	0.26%	0.64	0.12%

Austin County

In general, the majority of soils in Austin County have lower swelling potential. Exceptions include the areas in the northern portion, north of State Highway 159. Soils with very high swelling potential are also located along the Brazos River, the eastern border of the county. Very little development occurs outside the city limit boundaries; classifications for Austin County’s cities are available in Table 4.2-13.

Brazoria County

The majority of soils in Brazoria County have moderate to high and very high swelling potential. Expansive soils are pervasive throughout the county, especially near Brazos River, Oyster Creek, and Chocolate Bayou. Exceptions include areas along the coastline and away from the Brazos River and Oyster Creek. Classifications for Brazoria County’s cities are available in Table 4.2-13.

Chambers County

Very high swelling potential soils are unequally distributed among lower swelling potential soils throughout Chambers County. Exceptions include the coastal areas to the south and the mouth of the Trinity River, which are underlain by moderate to high swelling potential soils. Classifications for Chambers County’s cities are available in Table 4.2-13. Development occurs outside of incorporated areas. The unincorporated area of Winnie-Stowell at the northeastern corner of the county is underlain with lower swelling potential soils, as is the westernmost portion of the county near Cedar Bayou.

Liberty County

Very high swelling potential soils in Liberty County exist in the general vicinity of the floodplain associated with the Trinity River. Areas underlain by lower swelling potential soils are located in the northwestern corner and eastern boundary of the county. Development outside of incorporated areas does exist, but in general, is not concentrated in one particular area. These unincorporated areas with development occur in lower, moderate to high and very high swelling potential soils. Classifications for Liberty County’s cities are available in Table 4.2-13.

Montgomery County

The majority of soils in Montgomery County have low swelling potential; however, very high and moderate to high swelling potential soils underlay the northwestern and northern portion of Montgomery County, near Lake Conroe. Very high and moderate to high swelling potential soils are also present along Lake Creek and the San Jacinto River. The majority of development in the unincorporated areas occurs in lower swelling potential soils; however, in the vicinity of Lake Conroe, larger concentrations of development existing in areas underlain by very high and moderate to high swelling potential soils. Classifications for Montgomery County’s cities are available in Table 4.2-13.

Walker County

The majority of soils in Walker County have low swelling potential; however, very high and moderate to high swelling potential soils underlie the southeastern portion of Walker County as well as areas near the San Jacinto and Trinity rivers. Development in unincorporated areas is general dispersed among lower swelling potential soils. Classifications for Walker County’s cities are available in Table 4.2-13.

Waller County

Waller County is dominated by soils with lower swelling potential. Very high swelling potential soils are present on the western border of the county, along the Brazos River floodplain. Moderate to high swelling potential soils are present in the center of the county and are also sporadically distributed along the northern portion of the county. Unincorporated areas with development exist predominately in lower swelling potential soils. Classifications for Waller County’s cities are available in Table 4.2-13.

Table 4.2-13 characterizes the three classifications for each of the participating cities in the Plan Update.

Table 4.2-13: Soil Swelling Potential Classification for Cities in Plan Update

County	City	Soil Swelling Potential Classification
Austin	Bellville	Lower
	Brazos Country	Lower
	Industry	Lower
	San Felipe	Lower
	Sealy	Lower
	Wallis	Moderate to High
Brazoria	Alvin	Very High
	Angleton	Moderate to High
	Bailey's Prairie	Moderate to High
	Bonney	Very High
	Brazoria	Lower
	Brookside Village	Very High
	Clute	Lower
	Danbury	Moderate to High
	Freeport	Moderate to High
	Hillcrest Village	Moderate to High
	Holiday Lakes	Lower
	Iowa Colony	Very High
	Jones Creek	Lower
	Lake Jackson	Very High
	Liverpool	Very High
	Manvel	Very High
	Oyster Creek	Lower
	Quintana	Lower
	Richwood	Very High
	Surfside Beach	Lower
Sweeny	Lower	

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County	City	Soil Swelling Potential Classification
Chambers	Anahuac	Very High
	Beach City	Lower
	Cove	Very High
	Mont Belvieu	Lower
	Old River-Winfree	Very High
Liberty	Ames	Lower
	Cleveland	Lower
	Daisetta	Lower
	Dayton	Moderate to High
	Dayton Lakes	Lower
	Devers	Lower
	Hardin	Lower
	Kenefick	Very High
	Liberty	Very High
	North Cleveland	Lower
	Plum Grove	Lower
	Montgomery	Conroe
Cut and Shoot		Lower
Magnolia		Lower
Montgomery		Very High
Oak Ridge North		Lower
Panorama Village		Lower
Patton Village		Lower
Roman Forest		Lower
Shenandoah		Lower
Splendor		Lower
Stagecoach		Lower
Willis		Lower
Woodbranch Village		Lower
The Woodlands Township		Lower
Woodloch		Lower
Walker	Huntsville	Lower
	New Waverly	Very High
	Riverside	Lower
Waller	Brookshire	Lower
	Hempstead	Lower
	Pattison	Lower
	Pine Island	Lower
	Prairie View	Lower
	Waller	Lower

Because damage associated with expansive soils is associated with droughts, previous occurrences for expansive soils are correlated with previous occurrences for drought. This same correlation between expansive soils and drought applies to the likelihood of expansive soils causing damage. The previous section on drought states the region can be expected to experience between two and seven droughts every ten years. Damage associated with expansive soils could also be expected to occur between two and seven times every ten years.

Excessive Heat

The H-GAC region has an extensive history of excessive heat dating to the 1950s. **Table 4.2-14** shows the number of days in each decade each county experienced temperatures reaching 100 degrees or more.

Table 4.2-14
Days of 100 Degrees or More

County	Decade						Total 1950 - 2010	Years of available data	Average number of days of excessive heat per year
	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2010			
Austin	260	145	53	77	97	36	668	51	13.1
Brazoria	5	2	0	11	11	9	38	54	0.7
Chambers	1	3	2	30	5	12	53	54	1.0
Colorado	No data	66	100	203	312	264	945	48	19.7
Fort Bend	41	27	3	33	28	15	147	51	2.9
Galveston	0	0	0	0	2	5	7	52	0.1
Harris	16	18	0	11	20	27	92	60	1.5
Liberty	102	21	2	14	21	23	183	58	3.2
Matagorda	5	1	0	0	0	7	13	60	0.2
Montgomery	95	64	20	64	81	59	383	60	6.4
Walker	107	113	67	69	46	81	483	60	8.1
Waller	No data	47	39	No data	No data	No data	86	15	5.7
Wharton	175	105	9	No data	No data	112	401	35	11.5

Source: NOAA Regional Climate Centers

The data in **Table 4.2-14** are based on weather station data from one location within each of the counties. Weather stations were selected based on the amount of historical data from 1950 to 2010. Based on historical information, the coastal counties of Brazoria, Chambers, Galveston, Harris and Matagorda counties experienced fewer days reaching 100 degrees or more than the inland counties of the region. These coastal counties can expect to experience approximately one day of temperatures reaching 100 degrees or greater per year. The inland counties of may experience a higher number of days of temperatures reaching 100 degrees or greater per year relative to the coastal counties of the region. Based on historical data, the counties experiencing an average number of days meeting or exceeding 100 degrees or more in ranked order are Colorado, Austin, Wharton, Walker, Montgomery, Waller, Liberty, and Fort Bend counties. Similar occurrences such as those expressed as the averages of the days of excessive heat would be expected to occur in the future.

Heat-related illnesses are associated with occurrences of excessive heat. Elderly persons, young children, persons with respiratory difficulties, and those who are sick or overweight are more likely to become victims of excessive heat. Although no repositories of data were available at the time of this Plan update, instances of roads buckling due to expansion of pavement has the potential to occur. In these situations, closure of the lanes affected and repair would be necessary.

Winter Storms

Winter storm risk maps are not readily available for this region of Texas. The below freezing data in **Table 4.2-15** are based on weather station data from one location within each of the counties. Weather stations were selected based on the amount of historical data from 1950 to 2009. Based on averaged historical information, Galveston County experienced the fewest number of instances where temperatures were 32 degrees or below. The westernmost county in the region, Colorado County, had the highest number of instances of temperatures 32 degrees or lower. There is a trend of more days at or below freezing the further a county is from the coast. The average number of days of freezing temperatures per year is given in **Table 4.2-15** below. Similar occurrences such as those expressed as the averages of the days of freezing temperatures could be expected to occur in the future. The region as a whole could experience approximately 16 days of freezing temperatures a year.

Table 4.2-15
Days at or below Freezing

County	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	Total 1950 - 2009	Years of available data	Average number of days of freezing temps per year
Austin	127	194	93	146	97	47	704	49	14.4
Brazoria	124	177	202	162	59	50	774	60	12.9
Chambers	130	77	184	129	86	104	710	54	13.1
Colorado	No data	174	388	314	348	313	1537	49	31.4
Fort Bend	No data	No data	No data	No data	No data	No data	No data	No data	No data
Galveston	19	41	45	46	21	11	183	55	3.3
Harris	78	124	269	167	118	92	848	60	14.1
Liberty	206	247	283	189	116	118	1159	60	19.3
Matagorda	109	149	152	93	58	46	607	59	10.3
Montgomery	208	326	279	254	164	153	1384	60	23.1
Walker	197	304	290	213	156	164	1324	60	22.1
Waller	No data	No data	No data	No data	No data	No data	No data	No data	No data
Wharton	No data	No data	No data	No data	No data	No data	No data	No data	No data

Source: NOAA Regional Climate Centers Applied Climate Information System

Snowfall in the region is very uncommon. The region averaged less than one day and one inch of snow per year from 1950-2009. **Table 4.2-16** shows the number of days and inches of snow per decade from 1950-2009. Snowfall data are available on a monthly basis. Based on historical snowfall information, the

range of snowfall data on a monthly basis is 0.1 to 8.2 inches. Coastal counties would be on the lower end of the snowfall range, while more inland counties would be on the higher end of the snowfall range.

**Table 4.2-16
 Days and Inches of Snow**

County	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	Total 1950 - 2009	Years of available data	Average per year
Austin - days	0	0	0	1	0	0	1	60	0.0
Austin - inches	0	0	0	1.5	0	0	1.5	60	0.0
Brazoria - days	0	0	2	0	1	0	3	52	0.1
Brazoria - inches	0	0	4.5	0	0.1	0	4.6	52	0.1
Chambers - days	3	1	0	1	0	0	5	59	0.1
Chambers - inches	3.8	0.2	0	0.5	0	0	4.5	59	0.1
Colorado - days	1	2	0	0	0	0	3	60	0.1
Colorado - inches	1	8	0	0	0	0	9	60	0.2
Fort Bend - days	2	1	3	1	0	0	7	60	0.1
Fort Bend - inches	1.3	4	6.3	1	0	0	12.6	60	0.2
Galveston - days	1	2	2	1	0	0	6	55	0.1
Galveston - inches	0.1	2.2	4.1	1	0	0	7.4	55	0.1
Harris - days	1	2	2	5	1	2	13	60	0.2
Harris - inches	1.7	5.4	5.2	4.8	0.1	2.4	19.6	60	0.3
Liberty - days	0	3	1	1	0	1	6	60	0.1
Liberty - inches	0	10.6	3	2	0	3.9	19.5	60	0.3
Matagorda - days	1	0	0	0	0	0	1	59	0.0
Matagorda - inches	3.8	0	0	0	0	0	3.8	59	0.1
Montgomery - days	0	3	3	1	0	0	7	60	0.1
Montgomery - inches	0	6.2	3.8	0.1	0	0	10.1	60	0.2
Walker - days	3	5	3	0	0	1	12	60	0.2
Walker - inches	2.5	16.2	5.5	0	0	0.5	24.7	60	0.4
Waller - days	0	1	0	0	0	No data	1	50	0.0
Waller - inches	0	8.2	0	0	0	No data	8.2	50	0.2
Wharton - days	1	1	1	0	0	0	3	57	0.1
Wharton - inches	2	7	1	0	0	0	10	57	0.2

Source: NOAA Regional Climate Centers Applied Climate Information System

No one portion of the region is more at risk to winter storms than any other part of the region, therefore the entire region is in a winter storm hazard area and can be expected to experience winter storms approximately one every two years, with an event average of approximately \$50,000 worth of property damage. The winter storm may include freezing temperatures, sleet, freezing rain and/or one to four inches of snow.

Hail

According to the National Climatic Data Center, the H-GAC region experienced 1,222 hail events from 1950 through October 2010 (see **Table 4.2-17**), with some hail stones reaching three inches in diameter. These events caused over \$47 million in property damage (NCDC, 2010).

Table 4.2-17
Hail Activity in the H-GAC Region (1950-2010)

County	No. of Recorded Hail Events 1950 – 10/31/2010	Total Property Damage Recorded	Total Crop Damage Recorded	Largest Recorded Diameter (Inches)
Austin	51	\$924,000	\$100,000	2
Brazoria	90	\$691,000	\$0	2.5
Chambers	50	\$244,000	\$0	1.75
Colorado	64	\$787,000	\$0	2.75
Fort Bend	85	\$2,893,000	\$0	2.75
Galveston	94	\$1,120,000	\$0	3
Harris	416	\$23,200,000	\$0	3
Liberty	66	\$331,000	\$0	2.75
Matagorda	29	\$169,000	\$0	2
Montgomery	125	\$11,143,000	\$0	2.75
Walker	46	\$273,000	\$5,000	2.25
Waller	40	\$357,000	\$0	3
Wharton	66	\$5,230,000	\$5,000,000	2
TOTAL	1,222	\$47,362,000	\$5,105,000	-

Source: National Climatic Data Center

Figure 4.2-35 shows the location of past hail events and **Figure 4.2-36** shows the historical frequency of events by county.

Figure 4.2-35
Locations of Past Hail Events

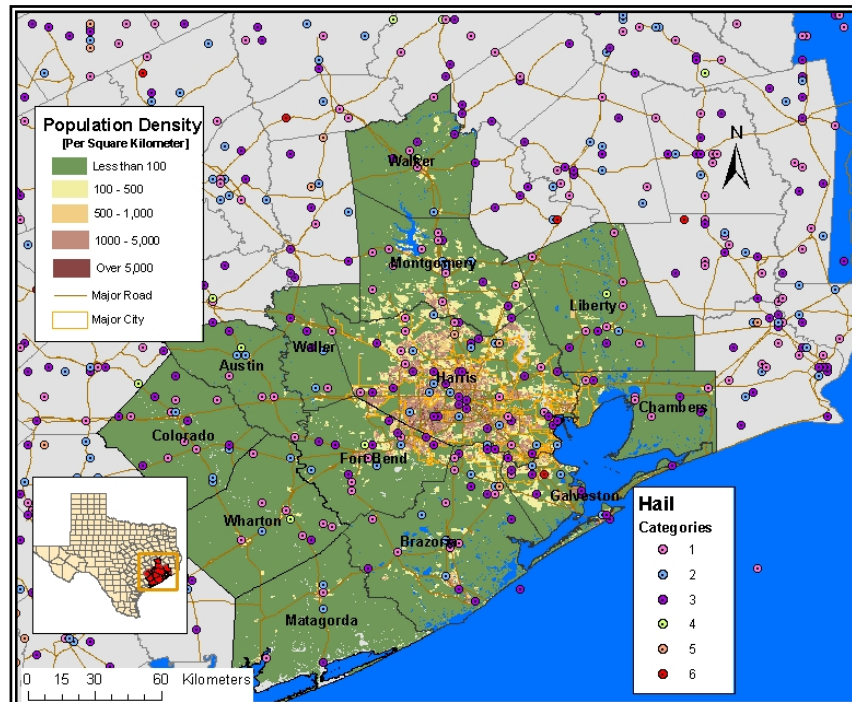


Figure 4.2-36
Historical Frequency of Hail Events by County

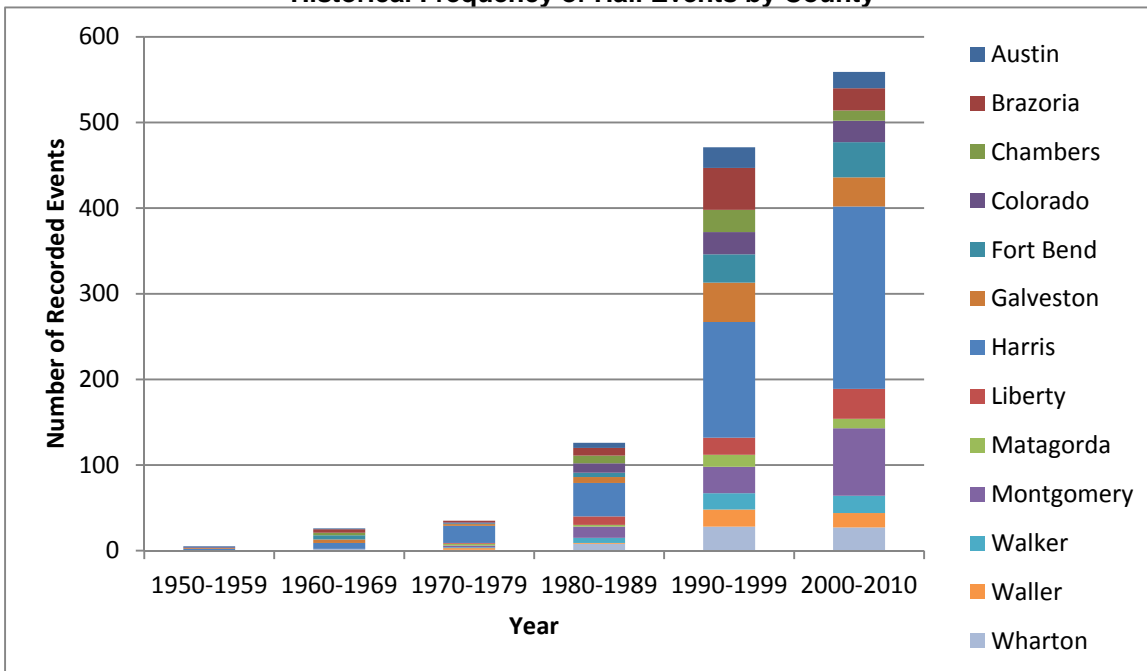
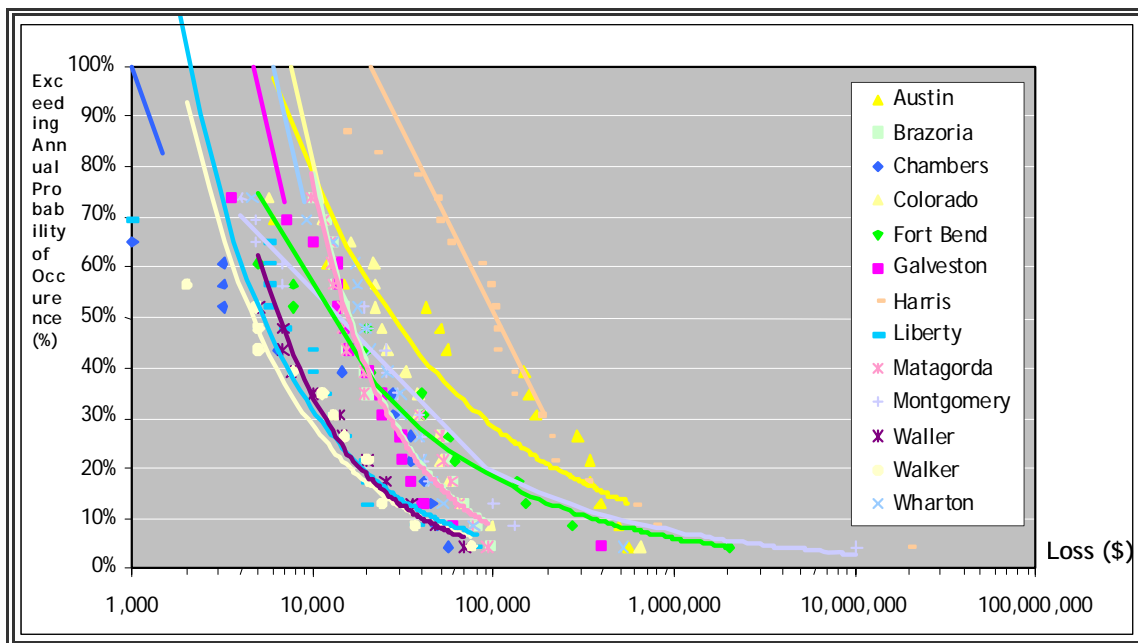


Figure 4.2-37 shows the annual probability of hail occurrence and potential monetary damages for each county in the area.

Figure 4.2-37
Annual Probability of Hail Occurrence and Potential Monetary Damages



No one portion of the region is more at risk to hail than any other part of the region, therefore the entire region is in a hail hazard area and can be expected to experience approximately 20 hail events per year, with an event average of approximately \$39,000 worth of property damage and hailstones of 2.5 inches in diameter.

Coastal Erosion

According to the Texas General Land Office (GLO), Texas has one of the highest erosion rates in the country and estimates that over 27,000 acres of Gulf shoreline were lost to erosion from the mid-1800s through 1982. Long-term shoreline erosion of the upper Texas coast is occurring at an average rate of 1.6 meters (5.2 feet) per year (The University of Texas at Austin, Bureau of Economic Geology (BEG), 2011). Erosion rates along the Texas coastline average 1.24 meters (4.07 feet) per year.

Figures 4.2-38 and 4.2-39 show the coastal erosion rates from the BEG for the coastal counties in the Houston-Galveston region.

Figure 4.2-38
Coastal Erosion Map for Chambers and Galveston Counties

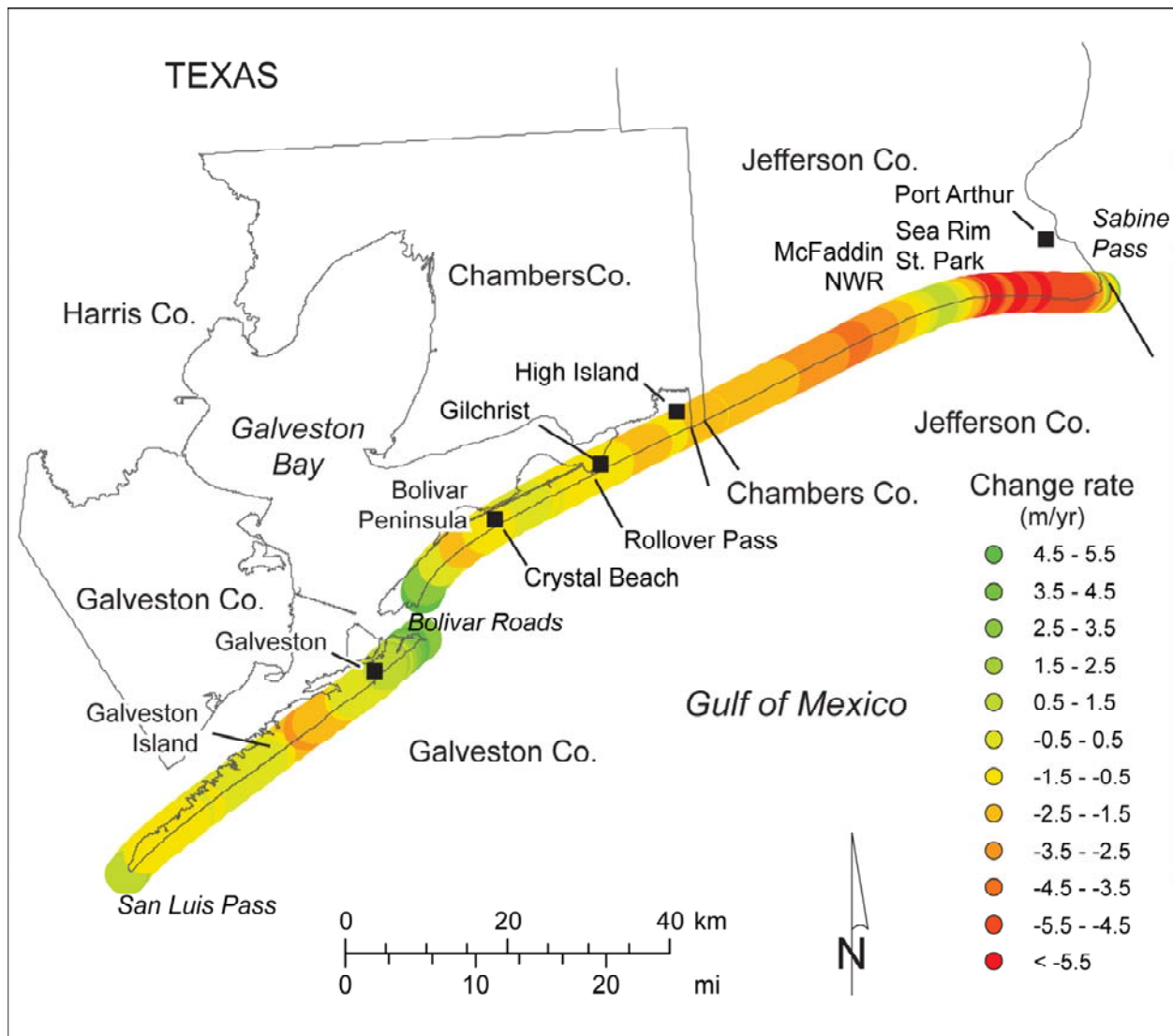
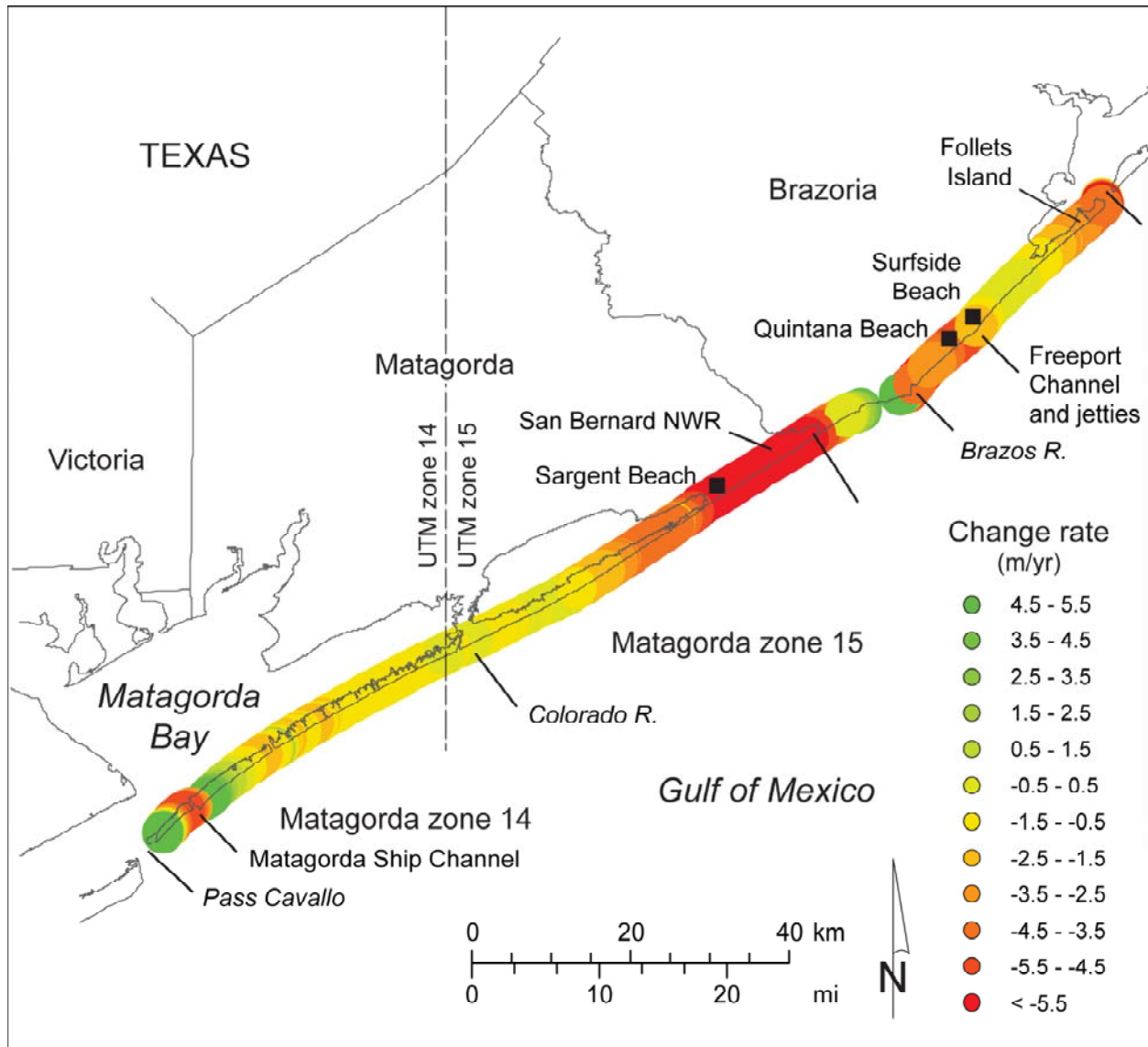


Figure 4.2-39
Coastal Erosion Map for Brazoria and Matagorda Counties



Source: Bureau of Economic Geology

Table 4.2-18 shows the number of miles of critically eroding shoreline on the Texas coast determined from average shoreline erosion rates measure over the past 70 years (Bureau of Economic Geology).

Table 4.2-18
Miles of Critically Eroding Shoreline

Region	Total Coastline Miles	Critically Eroding Miles	Percent Eroding Miles
1-Sabine Pass to Bolivar Roads (Galveston County)	59.0	47.0	80%
2-Bolivar Roads to San Luis Pass (Galveston and Brazoria Counties)	29.0	27.0	93%
3-San Luis Pass to Old Colorado River (Matagorda County)	63.1	63.1	100%
4-Old Colorado River to Aransas Pass (Outside of H-GAC Region)	83.7	38.5	46%
5-Aransas Pass to Padre Island National Seashore (Outside of H-GAC Region)	27.3	15.3	56%
6-Padre Island National Seashore to Mansfield Cut (Outside of H-GAC Region)	64.1	1.0	2%
7-Mansfield Cut to Rio Grande River/U.S. Border (Outside of H-GAC Region)	40.8	37.5	92%

Based on the annual erosion rates, the Coastal Studies Group of the Bureau of Economic Geology estimated future shorelines for the Texas coast. **Figure 4.2-40** presents the 1956 shoreline in relation to the projected 2056 shoreline at Pirates Beach on Galveston Island.

Figure 4.2-40
Projected Shoreline – Galveston Island



Source: *The Texas Shoreline Change Project: Combining LIDAR, Historical Photography, and Ground Surveys to Measure Shoreline Change Rates Along Bay and Gulf*, Bureau of Economic Geology, 2004.

The coastal counties Matagorda, Brazoria, Galveston, and Chambers counties can expect to continue experiencing 1.6 meters of shoreline erosion per year. In Galveston Bay, the GLO estimates that 0.6 meters (2.2 feet) of shoreline is lost each year due to erosion. This amount will be greater if hurricanes or tropical storms make contact with the shoreline.

Dam/Levee Failure

According to the U.S. Army Corps of Engineers' (USACE) National Inventory of Dams (NID), there are 273 dams classified as high hazard, significant hazard or low downstream hazard potential in the seven counties participating in the Plan Update. (see **Table 4.2-19**). Approximately 34 percent of dams in the area are classified as facing a high or significant downstream hazard potential; however, there is no record of dam failure in the H-GAC planning area. The NID consists of dams meeting at least one of the following criteria:

- 1) High hazard classification - loss of human life is likely if the dam fails,
- 2) Significant hazard classification - possible loss of human life and likely significant property or environmental destruction,
- 3) Equal or exceed 25 feet in height and exceed 15 acre-feet in storage,
- 4) Equal or exceed 50 acre-feet storage and exceed 6 feet in height.

**Table 4.2-19
 Dam Downstream Hazard Potential**

County	High	Significant	Low	Total Dams
Austin	0	2	17	19
Brazoria	6	14	36	56
Chambers	0	0	14	14
Liberty	1	7	22	30
Montgomery	27	20	39	86
Walker	7	6	40	53
Waller	1	1	7	9
TOTAL	42	50	179	273

Source: USACE NID, 2011

Figure 4.2-41 depicts the low, significant and high downstream potential dams according to NID.

Figure 4.2-41
Low, Significant and High Downstream Potential Dams in H-GAC Region

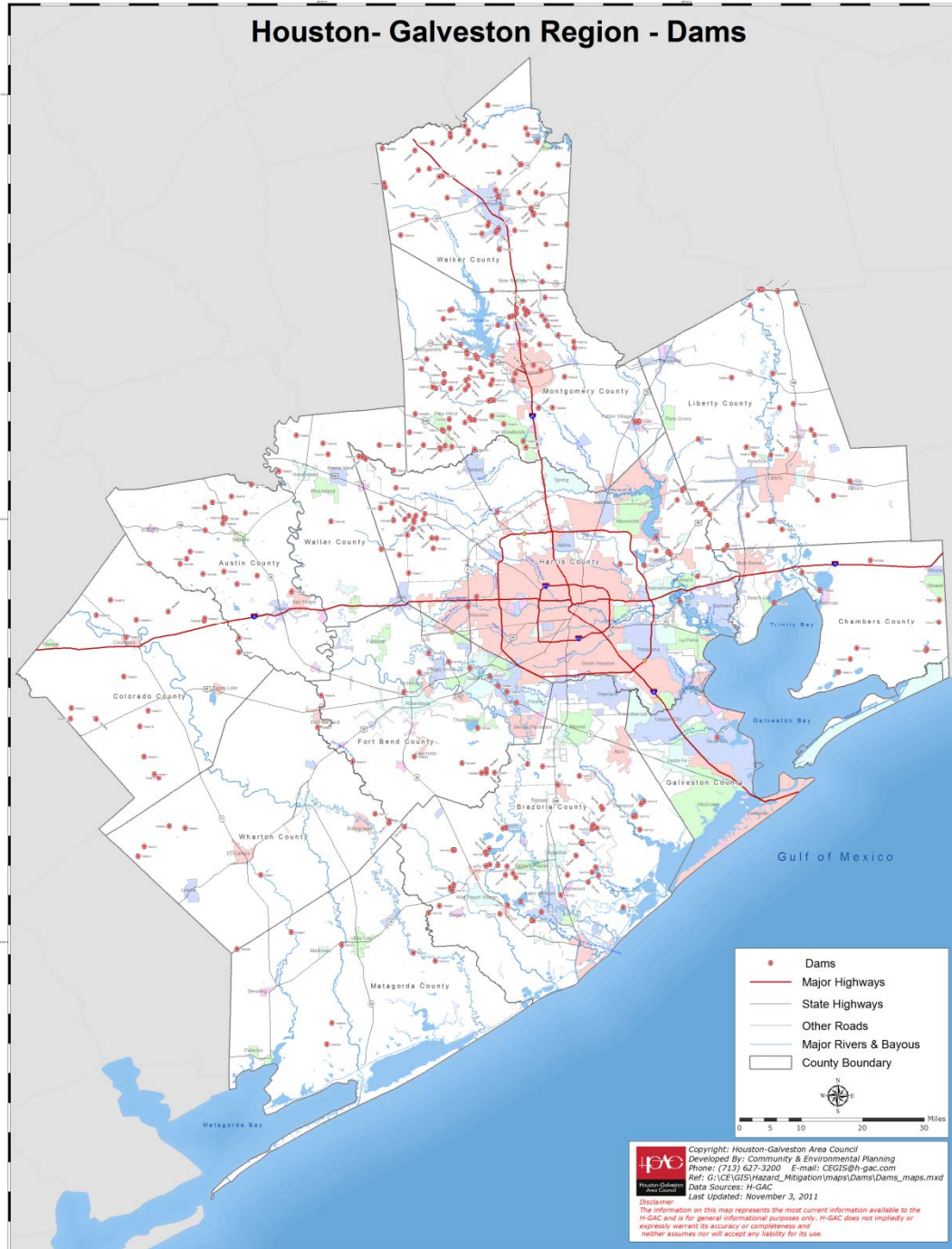


Table 4.2-20 presents location, high and significant downstream hazard potential, height, and storage for dams and levees in the NID for each participating county. For hazard potential, “S” stands for significant and “H” stands for high. Dams with low hazard potential were excluded from the table because of their low risk.

The general methodology for determining risk to buildings and people is as follows:

Low risk: 0-10 buildings downstream from the dam or levee, no structures immediately downstream.

Medium risk: 11 – 25 (sometimes more, in some cases the size and capacity of the lake or reservoir was taken into consideration) structures downstream, no structures immediately downstream from the dam.

High risk: 25+ structures within a mile downstream of the dam or levee, or a high number of structures such as a neighborhood or commercial area immediately downstream of the dam.

**Table 4.2-20
 Dam Location, Downstream Hazard Potential, Height and Storage**

County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
AUSTIN	Rural reservoir. Located on the south end of Butler Lake is of earthen construction. Directly south of the dam is a private road. Within a one mile radius of the dam are a few residential homes, structures that appear to be commercial grade chicken farms, agricultural fields, and range lands for cattle grazing. Although currently the area surrounding Butler Lake is sparsely populated, the available land around the lake is in consideration to be developed into a residential community.	TX01396	25	600	S	Immediately downstream, undeveloped land/agricultural fields. Further downstream, within 1-mile radius, a few structures, agricultural.	Low	Low
AUSTIN	Rural reservoir known locally for fishing and recreational boating. Approximately 1.9 miles away from the community of Peters. Peters Lake Dam is located on the south side of lake. Around the northern edge of the lake are about a dozen residential homes. Residential homes are also located directly south of Peters Lake Dam off of Gosler Rd; however, homes below the dam are few (less than 10).	TX01398	14	84	S	Immediately downstream, undeveloped forest land. Further downstream within a 1-mile radius, rural residential development (<10 structures).	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
BRAZORIA	Dacus Lake is located southeast of the Carlton Reservoir and is northeast of the City of Brazoria. It is a small lake, which appears to interlock with the Carlton Reservoir. However, Dacus Lake is within 500 feet of a residential neighborhood. If the dam were to fail, many residential homes within Brazoria would be affected.	TX01724	9	439	H	Immediately downstream, moderate to high residential development. Residential development, undeveloped land within 1-mile radius of dam.	High	High
BRAZORIA	Located off the channel of Austin Bayou. Connected to McCullough Lake as well as a series of smaller reservoirs. To the northeast of the Lazy CZ No 1 Reservoir is a sparse residential development. The City of Danbury is located southwest of the levee; however, it is greater than one mile away.	TX01732	8	872	H	Immediately Downstream, McCullough Lake. Further downstream, within 1-mile radius, sparse residential development.	Low to Medium	Low to Medium
BRAZORIA	Part of a reservoir system that includes San Bernard Reservoirs 1 and 3. No 2 Reservoir is located on southwestern portion of system. Reservoir is in close proximity to a sparsely populated residential area as well as to agricultural buildings.	TX01747	12	3343	H	Immediately downstream, undeveloped forest land. Within 1-mile radius of dam, very sparse residential development (<10).	Low	Low
BRAZORIA	Located in a very developed area. To the north is the Columbia Lakes community and to the south west is the City of West Columbia. South of the levee is the City of East Columbia. East Columbia is within a one mile radius of the dam, downstream from the dam.	TX01751	10	2810	H	Immediately downstream, undeveloped forest land. Within 1-mile radius of levee, City of East Columbia, moderate residential and commercial development.	High	High
BRAZORIA	Located off the San Bernard River channel. Dam separates the San Bernard from the Barker Reservoir. There are a few residential or agricultural structures within one mile of the Twin Lakes Dam. The surrounding area is mostly comprised of agricultural or range land fields.	TX01761	8	960	H	Immediately downstream of dam, sparse residential development, further downstream within a 1-mile radius of dam, agricultural fields.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
BRAZORIA	Part of a series of agricultural reservoirs, which includes Lazy CZ No 1. The lake is located on the southeastern portion of this system. The levee is in close proximity to the south of a sparsely populated residential community, which is located off of County Rd 210.	TX04732	9	928	H	Immediately downstream, undeveloped forest land, within 1-mile radius of dam sparse rural residential development along Austin Bayou.	Low to Medium	Low to Medium
BRAZORIA	Earthen levee that forms an agricultural reservoir. Reservoir is created from inflows from Bastrop Bayou. To the north of Evans Lake on the banks of Bastrop Bayou are about a dozen residential homes. Southwest of the reservoir is the Waste Connections Inc. Seabreeze Environmental Landfill. East of the reservoir, off Fairway Rd, are a few residential homes and trailers. The area surrounding the immediate vicinity of the reservoir appears to be agricultural fields. It also appears that systems of agricultural canals are connected to the reservoir.	TX01723	10	704	S	Immediately downstream of levee, agricultural fields. Sparse residential development on north side of levee, between lake and Bastrop Bayou.	Low	Low
BRAZORIA	Located north of Jones Creek and West of Lake Jackson. Reservoir, as well as the neighboring Clemens Reservoir #2, is a small agricultural reservoir. There are no structures or dwellings within a one mile radius of the Clemens Reservoir #1 levee.	TX01725	11	1210	S	Immediately downstream, undeveloped forest land/agricultural fields. Within 1-mile buffer undeveloped land.	Low	Low
BRAZORIA	Located directly west of Clemens Reservoir #1. It is also a small agricultural reservoir. There are no structures or dwellings within a one mile radius of Clemens Reservoir #2.	TX01726	7	482	S	Immediately downstream, undeveloped forest land/agricultural fields. Within 1-mile buffer undeveloped land.	Low	Low
BRAZORIA	First in a series of numbered agricultural reservoirs. Although it appears residential buildings and other structures are not within a mile of this particular levee, one could assume that a failure of this levee could set up a chain reaction that could affect the other reservoirs (given that this particular reservoir is connected to the Austin Bayou channel). To	TX01736	7	1874	S	Immediately downstream, McCormack Reservoir, within 1-mile radius McCormack Reservoir No 4.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
	the south there is a residential community on the eastern bank of Bastrop Bayou.							
BRAZORIA	Located on the western edge of Brazoria. To the east of the levee is moderate to high residential and commercial development.	TX01745	7	1225	S	Immediately downstream, between reservoir and San Bernard River is undeveloped, forest land.	High	High
BRAZORIA	Located a few miles west of Wild Peach Village. Part of agricultural reservoir system including San Bernard Reservoirs 2 and 3. Dam is connected to San Bernard River channel via small channel or tributary. Area surrounding the reservoirs is sparsely populated with few residential or agricultural structures.	TX01746	27	3375	S	Immediately downstream, undeveloped forest land. Within 1-mile radius of dam, very sparse residential development (<10).	Low	Low
BRAZORIA	Latitude and Longitude coordinates do not seem to match up precisely to the levee. The area is mainly agricultural with a few residential or agricultural structures.	TX01748	9	459	S	Immediately downstream (Mound Creek), agricultural fields, further downstream within 1-mile of dam, very sparse (<10) residential development.	Low	Low
BRAZORIA	Latitude and Longitude coordinates do not seem to match up precisely to levee. Lake could be extremely low due to drought conditions. The area is mainly agricultural with a few residential or agricultural buildings.	TX01749	7	280	S	Immediately downstream (Mound Creek), agricultural fields, further downstream within 1-mile of dam, very sparse (<10) residential development.	Low	Low
BRAZORIA	Located on the eastern bank of Tenneco Lake #2 and the western bank of the Brazos River. Within the one mile radius is Tenneco Lake #1 and a few residential structures to the south, east, and north. It is in close proximity to the Columbia Lakes Neighborhood and also a sparsely populated neighborhood community to the west of Bailey's Prairie. However, these communities are just outside of a one-mile radius.	TX01752	10	2150	S	Immediately downstream, undeveloped land followed by a few residential structures (<15). Within 1-mile radius is undeveloped land.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
BRAZORIA	Small reservoir that is west of the much larger Mann Lake. Appears that this reservoir is influenced by a tributary of the Brazos River system. Directly south of Beal Reservoir are less than ten structures, which appear to be residential homes, trailers, and agricultural buildings. The Beal Reservoir Levee separates the Beal Reservoir from Mann Lake. If the levee should fail, an overflow from Mann Lake could cause the Beal Reservoir Levee to breach, which would certainly affect the structures to the south.	TX01755	9	927	S	Immediately downstream, residential structures (<10). Within 1-mile radius undeveloped land/agricultural fields.	Low	Low
BRAZORIA	Surrounds both Mallard Lake and neighboring Mann Lake. Many residential homes are located in western and northern portions of Mallard Lake. To the south of Mallard lake, within a one-mile radius of the levee, is the Columbia Lakes Neighborhood (High Res Density). Within the one-mile radius is also the Columbia Lakes Heliport and the Columbia Lakes Resort and Conference Center.	TX01756	8	8408	S	Immediately downstream, undeveloped land/forest land. Within 1-mile radius, northern portion of Columbia Lakes Neighborhood, moderate to high residential development.	High	High
BRAZORIA	Very narrow and long reservoir that runs along the eastern edge of the Columbia Lakes Community. Reservoir was constructed by the damming of Varner Creek. Because of its close proximity to the Columbia Lakes Community, which includes a high residential development, conference center, and heliport, it can be assumed that there is a high risk associated with proximity to people and structures.	TX04353	6	148	S	Immediately downstream, undeveloped forest land. Within 1-mile radius of dam, city of East Columbia, moderate residential and commercial development.	High	High
BRAZORIA	Part of a reservoir system that includes San Bernard Reservoirs 1 and 2. Reservoir is located on the northwestern portion of the system. Reservoir is in close proximity to a sparsely populated residential area as well as to agricultural buildings.	TX04683	15	3900	S	Immediately downstream, undeveloped forest land. Within 1-mile radius of dam, very sparse residential development (<10)	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
BRAZORIA	Located in the northwest corner of Mallard/Man lake reservoir system. It is in close proximity to around 30 homes along the northern and western borders of Mallard Lake.	TX05887	7	1462	S	Immediately Downstream, Mann Lake. Within 1-mile radius of levee sparse residential development.	Low to Medium	Low to Medium
LIBERTY	Located in unincorporated northeastern Liberty County. Damming of a tributary that drains into Mill Creek creates the Bearfoot Lake. Reservoir is surrounded by a rural residential "ranchette" style neighborhood.	TX03916	27	3207	H	Immediately downstream, undeveloped land, further downstream very sparse rural residential development.	Medium	Medium
LIBERTY	Located close to the headwaters of Luce Bayou in unincorporated northwest Liberty County. Luce Bayou drains into Lake Houston. The area surrounding the levee is mainly agricultural fields. A structure or dwelling does not appear within a one-mile radius of the levee.	TX03909	12	5000	S	Immediately downstream, undeveloped land/agricultural fields. Within 1-mile radius of levee, undeveloped land/agricultural fields.	Low	Low
LIBERTY	Located northwest of Devers. Dam is located off the channel of Whites Bayou, which is part of the Lower Trinity River Basin and drains into Trinity Bay. Most of the western portion of the city of Devers is within a one mile radius of the dam. The area within the one mile radius contains residential homes, businesses, and a post office.	TX03911	10	440	S	Immediately downstream, undeveloped land/very sparse residential structures. Within 1-mile of dam downstream, City of Devers, moderate to high residential/commercial development.	High	High
LIBERTY	Located in south Liberty County on a small tributary of the Trinity River. The lake is to the west of the much larger Timber Lake. Surrounding the lake is an unincorporated residential neighborhood that includes homes and trailers.	TX03919	18	156	S	Immediately downstream, sparse residential development between Talley and Timber Lake. Further downstream, within 1-mile of dam downstream Timber Lake.	High	High
LIBERTY	Located to the west of the community of Fitzgerald (146 & CR 2097). The reservoir was created by damming Knight Bayou, which is a tributary of the Trinity River. Knight Bayou is part of the Lower Trinity River Basin and drains into Trinity Bay.	TX04420	11	62	S	Immediately downstream, undeveloped land. Within 1-mile of dam downstream, moderate residential and commercial development off of CR 2097.	High	High

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
LIBERTY	Located off a tributary of the Trinity River. The lake is to the east of the smaller Talley Lake. Surrounding the lake is an unincorporated residential neighborhood that includes homes and trailers.	TX04816	12	204	S	Immediately downstream, sparse residential development between Timber Lake and Trinity River. Further downstream within 1-mile of dam, sparse residential development along Trinity River Channel.	High	High
LIBERTY	Small residential lake/amenity pond. Surrounding the lake is a residential "ranchette" style neighborhood. Although the lake is surrounded by homes, due to its size, it would probably not pose much of a flooding threat to the greater neighborhood.	TX04873	26	201	S	Immediately downstream, undeveloped forest land. Within 1-mile of dam, sparse residential development.	Low to Medium	Low to Medium
LIBERTY	Located on a small tributary of the Trinity River within the town of Kenefick. Dam creates a small reservoir. Area surrounding the dam is a developed rural/suburban "ranchettes" style neighborhood. Numerous residential structures are within a one-mile radius zone of the dam.	TX09018	18	29	S	Immediately downstream, sparse to moderate residential development, within 1-mile of dam, sparse to moderate residential and commercial development	High	High
MONTGOMERY	Located within Stagecoach, east of Patton Village. Patton Lake is relatively small in terms of size and water capacity.	TX00082	6	86	H	Immediately downstream is forest, Lakeland Lake.	Low	Low
MONTGOMERY	Located in Patton Village. Peach Creek Lake is west of the smaller Patton and Lakeland Lakes. The area around the Peach Creek Dam is mostly moderate residential development. To the south of the dam there is undeveloped forest land.	TX00083	10	408	H	Immediately downstream is residential development (<20) homes, further downstream is undeveloped forest land to Peach Creek.	Medium	Medium
MONTGOMERY	Located in Stagecoach, northwest of the Stagecoach Farms subdivision. Surrounding the lake is moderate residential develop, which is characterized by large residential homes and lots.	TX00086	19	273	H	Immediately downstream, undeveloped forest land. Further downstream within 1-mile radius of dam, sparse residential development.	Medium	Medium

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Located east of the much smaller Lake Hazy in Pinehurst. Surrounding the lake and dam is sparse to moderate residential development.	TX00087	19	130	H	Immediately downstream, sparse residential development. Within one mile of dam, further downstream is sparse to moderate residential development.	High	High
MONTGOMERY	Located southwest of Magnolia. Downstream of the dam are a few residential structures. Further downstream is undeveloped forest land. The lake is surrounded by sparse residential development.	TX00091	80	63	H	A few lake front residential structures/undeveloped forest land.	Low	Low to Medium
MONTGOMERY	Located southwest of Lake Conroe. The lake itself is relatively small. To the west of Hickory Lake is the larger Rushing Springs Lake. Hickory Lake is surrounded by moderate to high residential development.	TX00094	19	59	H	Immediately downstream moderate to high residential development. Within one mile of the dam downstream moderate to high residential development.	High	High
MONTGOMERY	Located off of the lower western arm of Lake Conroe, north of the City of Conroe. Immediately north of the dam is a buffer zone; however, going further north is high residential development.	TX00095	31	168	H	Immediately downstream is undeveloped land, further downstream, within one mile of the dam is moderate urban development which continues along Lake Conroe.	High	High
MONTGOMERY	Located off of the southwestern arm of Lake Conroe. Surrounding the lake is high residential and business development.	TX00096	22	192	H	Immediately downstream, commercial development. Within one mile downstream high commercial and residential development.	High	High
MONTGOMERY	Located on the southern end of Lake Conroe. Downstream of the dam are businesses as well as medium residential development. High residential development is located on the western and eastern shores of Lake Conroe.	TX00097	82	706970	H	Immediately downstream, commercial, governmental (SJRA) buildings, undeveloped land. Further downstream within one mile of dam, high commercial developed	High	High

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
						along Hwy 105, undeveloped land.		
MONTGOMERY	Located south of Lake Conroe, west of the City of Conroe. Moderate residential development is located around the lake. To the north, east, and west, there appears to be medium to high residential development. South of the lake is undeveloped forest land.	TX00101	29	925	H	Immediately downstream of dam, undeveloped forest land/sparse residential development. Further downstream, within one mile of dam campground and high commercial development along SH 105.	High	High
MONTGOMERY	Tri-Lake No 1 and the Tri-Lake Estates Dam are located southeast of Montgomery. The lake is surrounded by residential development. The lake is relatively small in size and capacity.	TX00113	21	55	H	Immediately downstream is sparse residential development. Further downstream, between the dam and Lake Creek is undeveloped land.	Low to Medium	Low to Medium
MONTGOMERY	Hidden Forest Lake and Hidden Forest Lake Dam are located west of northwestern arm of Lake Conroe. To the east is Lake Mount Pleasant. Surrounding Lake Forest Dam is a sparse residential development. Outside of the neighborhood, especially to the south, is undeveloped forest land.	TX00117	20	242	H	Immediately downstream is Lake Mount Pleasant. Further downstream within one mile of dam, sparse to moderate residential development along Lake Mount Pleasant shoreline.	Medium to High	Medium to High
MONTGOMERY	Lewis Creek Reservoir and Lewis Creek Dam are located west of Willis and east of Lake Conroe. Immediately surrounding the reservoir and dam is mostly undeveloped land intermixed with sparse residential development. There is one significant high residential subdivision located to the southwest of the reservoir along the shoreline of Lake Conroe that is within a one mile radius of the dam.	TX00119	62	23200	H	Immediately downstream is undeveloped land. Further downstream within one mile of the dam is moderate residential and commercial development between the reservoir and Lake Conroe.	High	High
MONTGOMERY	County Club Lake and County Club Lake Dam are located in the City of Conroe. Surrounding the lake and dam are businesses, such as Builders Electrical Supply, a Lutheran Church, and medium residential development.	TX00122	13	264	H	Immediately downstream, undeveloped land, within 1-mile radius, sparse to moderate commercial development, after FM 2854 undeveloped forest land.	High	High

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Royal Forest Lake and Royal Forest Lake Dam are located east of Willis. The lake is relatively large in size and capacity.	TX00125	38	690	H	Immediately downstream is residential development, further downstream is undeveloped land.	Medium	Medium
MONTGOMERY	Shadow Lake and the Shadow Lake Dam GSC are located north of Conroe, east of Panorama Village. Mostly undeveloped forest land surrounds the lake and dam.	TX00131	27	383	H	Immediately downstream is undeveloped forest. Further downstream, within a mile of the dam is undeveloped forest.	Low	Low
MONTGOMERY	McRae Lake and the McRae Lake Dam are located north of Cut and Shoot. Northwest West and south of the lake is mostly undeveloped forest land (Lake seems to be situated on the western edge of the Sam Houston National Forest).	TX00135	21	305	H	Immediately downstream of the dam is undeveloped forest. Further downstream, within one mile of the dam is undeveloped land, a few residential structures.	Low	Low
MONTGOMERY	Lakeland Lake and the Lakeland Lake Dam are located in Patton Village. To the east is the smaller Patton Lake and to the west is the larger Peach Creek Lake. The lake's capacity is relatively small.	TX04778	9	192	H	Immediately downstream is undeveloped forest land. Further downstream, within a mile of the dam is undeveloped forest land to Peach Creek.	Low	Low
MONTGOMERY	Lake Harrison and the Lake Harrison Dam are located within the Woodlands Resort and Conference Center. Surrounding the lake are conference center buildings and a golf course.	TX04855	13	196	H	Immediately downstream, golf course and undeveloped forest. Further downstream within one mile of dam, waste water treatment facility, school, and residential development.	High	High
MONTGOMERY	Lake Dodge and the Lake Dodge Dam are located north of Willis. Area surrounding the lake is sparse to moderate residential development. The lake itself is relatively small. To the west of Lake Dodge is Frontier Lake, and to the north is Frontier Lake No 2.	TX05265	24	55	H	Immediately downstream, undeveloped forest. To east, downstream sparse residential development. Further downstream, within a mile of dam, sparse residential development.	Medium	Medium
MONTGOMERY	Bear Branch Lake and Dam is located in The Woodlands Township. The lake itself is relatively small and is buffered by green space. The lake is surrounded by high residential development and two strip mall centers.	TX05878	27	5700	H	Immediately downstream, high residential development to east and west, undeveloped green space directly south. Within one mile of dam, high residential	High	High

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
						development.		
MONTGOMERY	Lake Woodlands and the Lake Woodlands Dam are located within the heart of The Woodlands Township. The lake is very large with a high capacity for water.	TX06032	20	2376	H	Immediately downstream is undeveloped land; further downstream within a mile of the dam is high residential development.	High	High
MONTGOMERY	Indigo Lake and Indigo Lake Dam are located west of Stagecoach off of Nicholls Sawmill/Magnolia-Waller Rd.	TX06916	38	4668	H	Immediately downstream undeveloped forest land. Further downstream, within one mile of dam, other side of Nicholls Sawmill Road, very rural residential development, undeveloped forest land.	Low	Low
MONTGOMERY	Upper Serenity Lake Dam is located west of The Woodlands Township.	TX07098	10	121	H	Immediately downstream is Lower Serenity Lake. Further downstream, within a mile of the dam is sparse residential development.	High	High
MONTGOMERY	Majestic Lake and Majestic Lake Dam are located southwest of Conroe in an unincorporated residential community. Lake appears to be neighborhood detention or amenity pond. Surrounding lake is moderate residential development characterized by large home on very large lots. North and west of dam (downstream) appears to be undeveloped forest land.	TX07151	31.1	514	H	Immediately downstream is undeveloped land. Further downstream, within a mile of the dam mostly undeveloped land with a few residential structures.	Low	Low
MONTGOMERY	Lake Hazy and Lake Hazy Dam are located in Pinehurst, south of Magnolia. To the east are larger Lake Hollow and Lake Hollow Dam. Lake Hazy is small amenity pond.	TX09132	15	9	H	Immediately downstream, undeveloped land. Further downstream is Lake Hollow.	Low	Low
MONTGOMERY	HEB Detention Pond and Detention Pond Dam are located within City of Conroe. Detention pond is relatively small. It is a small wet bottom detention pond. Further south, downstream of the dam is more moderate residential development and an elementary school.	TX09272	11	14	H	Immediately downstream, undeveloped forest land. Downstream to south, within one mile of dam, moderate to high residential development along Decker and Gilmore streets.	Low to Medium	Low to Medium

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Shadow Lake and the Shadow Lake Dam are located northeast of Woodloch. The lake itself is relatively small in terms of size and capacity. South and southeast of the dam appears to be undeveloped forest.	TX00085	10	175	S	Immediately downstream of the dam is undeveloped forest. Continuing downstream is undeveloped forest.	Low	Low
MONTGOMERY	Lake Forest Dam is located southwest of Conroe off of FM 2854. Area surrounding dam is characterized by sparse to moderate residential and commercial development. Area south of dam is mostly agricultural fields.	TX00098	15	381	S	Immediately downstream, undeveloped land. Further downstream within a mile from the dam, sparse residential development, agricultural fields.	Medium	Medium
MONTGOMERY	Near Kim Lake and the Near Kim Lake Dam are located off of Jackson Road, north of Pinehurst. Lake is adjacent to Kim Lake. Area surrounded by the Kim Lake dam is mostly undeveloped forest land with some very sparse residential or commercial development.	TX00103	19.3	142	S	Immediately downstream is undeveloped forest. Further downstream is undeveloped land with a few residential structures along Jackson Road.	Low	Low
MONTGOMERY	Old Lake 177 and the Old Lake 177 Dam are located south of Montgomery, east of FM 149. Lake is to the west of Lake Seventy Seven. Old Lake 177 is relatively small in size and capacity.	TX00106	15	75	S	Immediately downstream is undeveloped land, further downstream within a mile to the dam is undeveloped land.	Low	Low
MONTGOMERY	Pine Lake is located off of the western middle arm of Lake Conroe. It is a modestly sized lake, south of Lake Lorraine.	TX00110	19	152	S	Immediately downstream is Lake Lorraine. Further downstream, moderate residential development along Lake Lorraine shoreline.	Medium to High	Medium to High
MONTGOMERY	Stewart Lake and Stewart Lake Dam are located in south Montgomery. Downstream of the dam is mostly undeveloped; however, there appears to be some development along SH 105, which is within one mile of the dam.	TX00111	29	518	S	Immediately downstream is undeveloped forest. Further downstream is some commercial development along SH 105/undeveloped land.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Spring Lake and Spring Lake Dam are located northeast of Conroe. Lake is in a rural area on edge of Sam Houston National Forest and is relatively small in terms of size and capacity. South of the dam is undeveloped forest land.	TX00124	23	255	S	Immediately downstream is undeveloped forest. Further downstream, within a mile of the dam is undeveloped forest.	Low	Low
MONTGOMERY	Dunwoody Lake and Dunwoody Lake Dam are located north of Willis, Texas. Surrounding lake is mostly woodlands and agricultural fields. Very sparse residential development is located to east off of Old Willis New Waverly Road.	TX00133	34	1000	S	Immediately downstream, undeveloped forest land. Within one mile of dam, very sparse rural development/possibly agricultural buildings	Low	Low
MONTGOMERY	Hillside Lake and Hillside Lake Dam are located southeast of Conroe, off of County Line Road. Area surrounding Hillside Lake is mostly rural and undeveloped. To the north is what appears to be a gravel quarry/operation.	TX05266	18	70	S	Immediately downstream, undeveloped forest land. Within one mile downstream of dam undeveloped forest land.	Low	Low
MONTGOMERY	Panorama Lake and Panorama Lake Dam are located north of Conroe in Panorama Village, which is off of I-45. The lake itself is relatively small in terms of size and water capacity.	TX05267	12	224	S	Immediately downstream is I-45. Further downstream within one mile of the dam is sparse residential development off of N Frazier, undeveloped land, and Shadow Lake.	Low to Medium	Low to Medium
MONTGOMERY	Lake Hardin and Lake Hardin Dam are located in Stagecoach, within Stagecoach Farms subdivision. The lake is relatively small as compared to the larger Apache Lake to the north. The area surrounding the lake and dam is moderate to sparse residential development. The area is characterized by large homes on very large lots.	TX05829	19	60	S	Immediately downstream, undeveloped forest. Further downstream within one mile of dam, undeveloped forest with some residential development.	Low to Medium	Low to Medium
MONTGOMERY	Rannefeld Dam is located in south Pinehurst. The associated lake is relatively small, more like an amenity pond. Surrounding the lake shore is a buffer zone of forest land.	TX06922	16	115	S	Immediately downstream is undeveloped forest. Further downstream, within a mile of the dam is sparse residential development.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Windcrest Lake Dam is located east of Pinehurst. To the west are the Upper and Lower Serenity Lakes. Directly downstream of the dam is undeveloped forest land. However, further downstream within a one-mile radius of the dam is sparse residential development. The Windcrest Lake is also surrounded by sparse to moderate residential development.	TX07031	20	943	S	Green space/forest undeveloped land. Within 1-mile radius sparse residential development.	Medium	Medium
MONTGOMERY	Lake Azure and the Lake Azure Dam are located west of The Woodlands Township. To the east is the Lake Windcrest Golf Course.	TX07092	18	424	S	Immediately downstream, undeveloped forest land. Further downstream within a mile of dam, sparse residential development.	Medium to High	Medium to High
MONTGOMERY	Fish Creek Dam No 1 and Fish Creek Lake are located to the southwest of Conroe. Surrounding the dam is medium residential development. This area (Honea Egypt) is mostly characterized by large homes with very large wooded lots.	TX07093	16	200	S	Immediately downstream, moderate residential development. Within a mile radius, undeveloped forest land, sparse to moderate residential development	Medium to High	Medium to High
MONTGOMERY	Lower Serenity Lake and Lower Serenity Lake Dam are located west of The Woodlands Township. Above this lake is the Upper Serenity Lake and dam.	TX07099	9	117.8	S	Immediately downstream is undeveloped forest. Further downstream is sparse residential development.	High	High
MONTGOMERY	Ridge Lake and Ridge Lake Dam are located west of the City of Conroe. To the east of the dam appears to be undeveloped forest land. Around the western and northern lake shore is sparse residential development. There is residential development to the north, west, and south of the lake that is located within a mile radius of the dam.	TX07114	21	840	S	Immediately downstream is undeveloped forest. Further downstream, within a mile of the dam is sparse residential development off of Overland Terrace.	Medium	Medium
MONTGOMERY	Downstream of Trophy Dam is sparse residential development, characterized by large homes on large lots. Between the residential development and the dam is undeveloped land.	TX07115	26	542	S	Immediately downstream, undeveloped land. Further downstream is sparse residential development.	Medium	Medium

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
MONTGOMERY	Grand Lake Dam and Grand Lake are located southwest of Conroe. Downstream of the lake is undeveloped land; however, new construction seems to be taking place. In future more residential development could be in the area.	TX07262	21	201	S	Immediately downstream of dam is an amenity pond. Further south is undeveloped land, within one mile of dam downstream to the west and east is moderate residential development. Mostly undeveloped land.	Low	Low
MONTGOMERY	Wal-Mart Store No 400 Expansion Pond Dam is located in the heart of Conroe, off of I-45. The pond is small and is located on the southwestern portion of the Wal-Mart complex. Surrounding the pond, downstream of the dam, is green space to the south, and the Wal-Mart store to the north and west. East of the pond is I-45. Although the pond is located in a high density commercial area of Conroe, it would appear that due to the size of the pond, it would not pose a significant threat.	TX09343	14.5	10	S	Green Space, Apartment Complex to the west, within 1-mile radius of dam.	Low	Medium
WALKER	Tillie Lake Lower Dam is located to the east of Huntsville. Surrounding the lake is sparse residential development. Downstream of the dam is sparse residential development and undeveloped land. There is rural residential development within a one mile radius of the dam.	TX02949	18	117	H	Immediately downstream, sparse residential development. Further downstream undeveloped land, in between sparse rural residential development.	High	High
WALKER	Muecke Lake Dam is located to west of Huntsville. Downstream of dam is undeveloped forest land. The lake is surrounded by undeveloped land.	TX02954	19	357	H	Immediately Downstream, undeveloped forest land. Within 1-mile radius, undeveloped forest land/agricultural fields.	Low	Low
WALKER	Elkins Lake Dam is located in Huntsville. Immediately downstream of the dam is Lake Azalea and a neighborhood community. Surrounding Lake Elkins is moderate to high residential development.	TX02956	31	1766	H	Immediately Downstream, Lake Azalea to the West, Moderate Residential Development to south and east. Within 1-mile radius, moderate to high residential development.	High	High

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
WALKER	Spring Lake Dam is located in Huntsville. Downstream of the dam is Club Lake. Further downstream, within a one-mile radius of the dam is undeveloped forest land. To the north of Spring Lake is moderate residential development.	TX02958	24	575	H	Undeveloped forest land/Club Lake	Low	Low
WALKER	Horseshoe Lake No 1 dam is located northeast of Huntsville. Immediately downstream of the dam is forest undeveloped land. To the southwest, within a one-mile radius of the dam is rural/sparse residential development off of E Walnut Lake Drive.	TX02981	17	150	H	Immediately downstream undeveloped forest land. Rural residential development to the southwest within 1 mile radius of the dam.	Low	Low
WALKER	Horseshoe Lake No 2 dam is located northeast of Huntsville, east of Horseshoe Lake No 1 dam. Downstream of the dam is sparse to moderate residential development. Further downstream, on the other side of Hwy 19 is undeveloped land.	TX04398	32	554	H	Sparse to moderate residential development, further downstream is undeveloped land.	Medium	Medium
WALKER	Located east of Huntsville. Surrounding the lake is sparse residential development. Downstream of the dam is sparse residential development, and further downstream is undeveloped land. There is rural residential development within a one mile radius of the dam.	TX06351	17	151	H	Immediately downstream, sparse residential development. Further downstream undeveloped land, in between sparse rural residential development.	High	High
WALKER	Located south of Lake Raven, south of Huntsville. Downstream of the dam is parkland, surrounding the lake is forest park land.	TX02952	35	6508	S	Forest land/Huntsville State Park.	Low	Low
WALKER	Located southwest of Huntsville. Immediately downstream of the dam is undeveloped land. Further downstream is a cemetery. A few structures are located off of Cotton Creek Cemetery Road.	TX02955	25	960	S	Undeveloped land/forest land immediately downstream. Cemetery, a few residential/commercial structures within a 1-mile radius.	Low	Low

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County	Characterization of Area	NID ID	Height	Storage	Hazard Potential	Downstream Description	People Risk	Building Risk
WALKER	Located southwest of Huntsville. Immediately downstream of the dam is national forest or undeveloped forest land. Surrounding the lake is also undeveloped forest land. Within a one-mile radius of the dam is undeveloped forest land.	TX02957	21	400	S	Undeveloped forest land/National Forest.	Low	Low
WALKER	Dawson Lake Dam is located within the Sam Houston National Forest, north of Lake Conroe. Downstream of the dam is forest, surrounding the lake is forest.	TX07086	28	102	S	National Forest.	Low	Low
WALKER	Located north of Huntsville. Immediately downstream of the dam is undeveloped forest land. Further downstream, within a one mile radius of the dam is very sparse/rural residential development.	TX07087	20	55	S	Undeveloped forest land/A few (<10) residential buildings	Low	Low
WALKER	Located west of New Waverly. East of the dam is the Sam Houston National Forest. The dam is located above a few residential structures that are off Hwy 150/Faulk Road. The development is very sparse and rural.	TX07194	14.4	81	S	Hwy 150, undeveloped land. Further downstream some rural residential development off of Faulk Rd, within 1-mile radius of dam.	Low	Low
WALLER	Located northeast of Hempstead. Immediately downstream of the dam is sparse to moderate residential development. Further downstream, within a one mile radius of the dam is agricultural land with a few agricultural structures.	TX04190	15	240	H	Immediately downstream, residential development. Further downstream undeveloped agricultural land/fields.	High	High
WALLER	Located northeast of Fairview in un-incorporated Waller County. Downstream of the dam is mainly agricultural fields and a few agricultural structures.	TX05263	15	52	S	Immediately downstream, agricultural fields. Further downstream are agricultural fields and a few structures.	Low	Low

Source: USACE NID

Despite the fact that there is no record of dam failure in the region, approximately 34 percent of dams in the area are classified as facing a high or significant downstream hazard potential. If these dams were to fail there would be immediate danger to human life, property and the environment and the loss of human life and significant property or environmental destruction is likely. All participating counties in the Plan Update have at least one dam that is classified as high or significant downstream potential.

Following acquisition of the NID from the Corps of Engineers, H-GAC staff observed when using GIS software that at least one dam was located outside the region. This led H-GAC staff to believe that accuracy of the dams is questionable in some cases. H-GAC proposes to conduct a review of the dams' and levees' locations to confirm accuracy as a mitigation action described in Appendix A.

The probability of dam and levee failure is difficult to ascertain. Currently, there is not an available inventory of dam and levee failure upon which to base a probability of future events. Factors that contribute to dam failure include rainfall, flooding, and maintenance and operations of dams, all which can vary widely throughout the region.

Toxic Release/Hazardous Materials

Toxic releases can have a substantial impact on health and safety of the public and first responders. Such events can cause multiple deaths, shut down facilities or operations, and cause major damages to nearby properties. In a hazardous materials incident, solid, liquid and/or gaseous contaminants may be released from fixed or mobile containers.

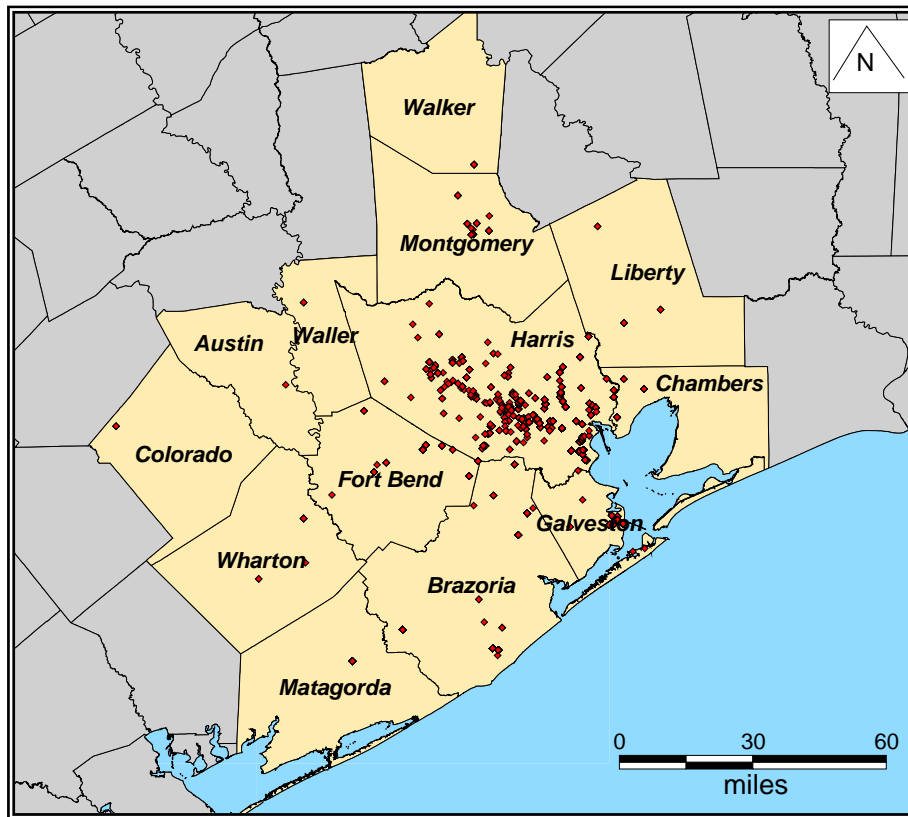
The H-GAC region is home to a multitude of industrial facilities that present the risk for a hazardous materials (HAZMAT) incident. For instance, Harris County houses one of the largest petrochemical complexes in the nation.

The Toxics Release Inventory (TRI) is a database that is publicly available from the federal Environmental Protection Agency (EPA) that contains information on toxic chemical releases and other waste management activities reported annually by certain industry groups and federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

Figure 4.2-42 shows the locations of toxic sites in the H-GAC planning area. There are 2,970 toxic chemicals identified in the TRI that are stored at 400 facilities or sites across the region.⁵ The majority of these sites are located in Harris County.

⁵ Several chemicals are often stored at the same location, which explains why the number of storage facilities is less than the number of chemicals inventoried. This data presented was collected and evaluated for the 2006 HMP.

**Figure 4.2-42
 Locations of Toxic Sites (from Toxic Release Inventory)***



Note: * Results are from the 2006 Regional Hazard Mitigation Plan

Based on the TRI data, the areas within a close proximity to a TRI facility would be at a higher risk of impact than those further away. Due to the large number of chemicals associated with these facilities it is not feasible to conduct an analysis based on each chemical and its potential effects. However, it is important to note that the chemical involved in a release is another factor in measuring the impact effects.

Table 4.2-21 presents the number of chemical disposal or release incidents for 2009 for jurisdictions included in this HMP Update. Of the incidents, Brazoria County has had the highest number of on-site disposals or releases and Chambers County has had the highest number of off-site disposals or releases.

**Table 4.2-21
 2009 TRI On-site and Off-site Reported Disposed or Released for all Industries and Chemicals**

County	Total On-site Disposal or Other Releases	Total Off-site Disposal or Other Releases	Total On- and Off-site Disposal or Other Releases
Austin	1,097	7,655	8,752
Brazoria	24,830,463	507,433	25,337,895
Chambers	1,326,522	878,856	2,205,378
Liberty	47,967	2,731	50,698
Montgomery	421,632	466,883	888,514
Walker	5,950	1,220	7,170

County	Total On-site Disposal or Other Releases	Total Off-site Disposal or Other Releases	Total On- and Off-site Disposal or Other Releases
Waller	4,439	457	4,896
Total	31,622,205	1,976,017	33,598,221

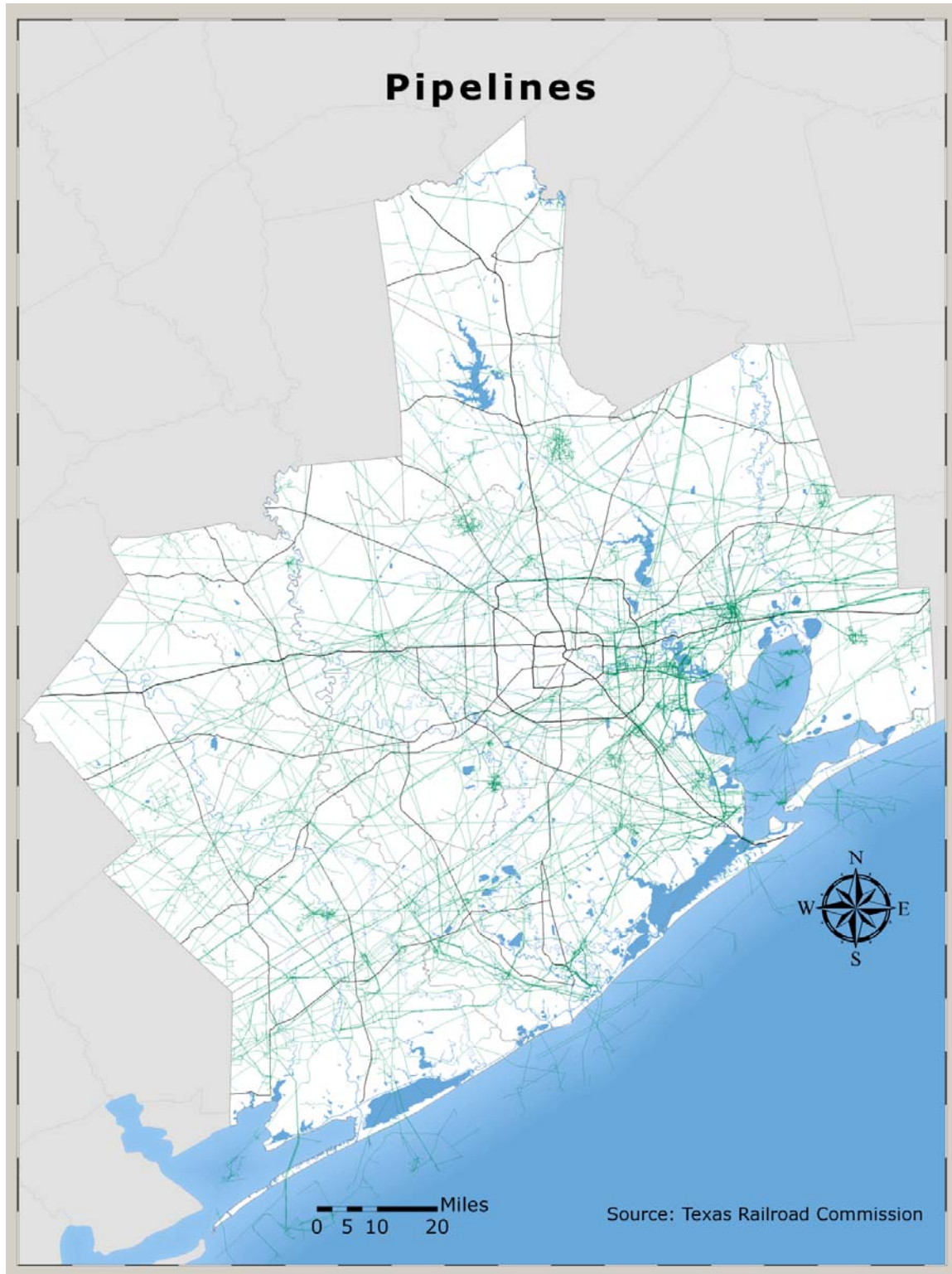
Source: Toxic Release Inventory, Environmental Protection Agency

Given the vast amount of industry throughout the region, the likelihood of a release or improper disposal is low; however, if these hazardous materials are improperly handled, an event could imminently endanger lives and cause damage to property in the immediate area. While the actual release may be isolated, the risk area may be large. All counties in the H-GAC region are susceptible to this hazard.

Energy Pipeline Failure

Energy pipelines are prevalent in the H-GAC region. Energy pipeline crossings in Texas include large diameter pipes that carry energy products to population centers along with small diameter pipes that bring products such as natural gas to homes and businesses. **Figure 4.2-43** illustrates the energy pipeline network in the H-GAC region. Please note that pipelines are present throughout all counties in the region. While the likelihood of failure is low, if any of these energy pipelines were to be damaged or rupture, such an event could imminently endanger lives and cause damage to property in the immediate area (within less than a half-mile radius). Incidents involving pipeline failures are typically isolated although the risk area may appear large. All counties in the H-GAC region are susceptible to this hazard.

Figure 4.2-43
H-GAC Energy Pipeline Network



Between 2002 and 2010, the region experienced 85 pipeline incidents. The accidents are depicted in **Figure 4.2-44**. Note that all of the counties in the region have at least one pipeline accident. According to

available information from the US Department of Transportation Pipeline and Hazardous Materials Safety Administration (USDOT PHMSA), the 13-county region experienced 7% of the nation's onshore pipeline accidents. Given that the region has the largest petrochemical complex in the country and that pipelines are ubiquitous throughout the region, if pipeline failure were to occur, it could have a significant impact on human life and property.

Figure 4.2-44
H-GAC Pipeline Accidents

