FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 3 OF 5



HAYS COUNTY, TEXAS AND INCORPORATED AREAS

| COMMUNITY NAME | NUMBER |
|--------------------------------------|--------|
| AUSTIN, CITY OF | 480624 |
| BEAR CREEK, VILLAGE OF | 481679 |
| BUDA, CITY OF | 481640 |
| CREEDMOOR, CITY OF | 481697 |
| DRIPPING SPRINGS, CITY OF | 481667 |
| HAYS COUNTY, UNINCORPORATED AREAS | 480321 |
| HAYS, CITY OF | 481669 |
| KYLE, CITY OF | 481108 |
| MOUNTAIN CITY, CITY OF | 481671 |
| NIEDERWALD, CITY OF | 481670 |
| SAN MARCOS, CITY OF | 485505 |
| UHLAND, CITY OF | 481668 |
| WIMBERLEY, CITY OF | 481694 |
| WOODCREEK, CITY OF | 481641 |

REVISED PRELIMINARY 12/14/2022

REVISED: TBD

FLOOD INSURANCE STUDY NUMBER 48209CV003B

Version Number 2.3.3.3



TABLE OF CONTENTS

Volume 1

| | | Page |
|-------|---|------|
| SEC | TION 1.0 – INTRODUCTION | 1 |
| 1.1 | The National Flood Insurance Program | 1 |
| 1.2 | Purpose of this Flood Insurance Study Report | 2 |
| 1.3 | Jurisdictions Included in the Flood Insurance Study Project | 2 |
| 1.4 | Considerations for using this Flood Insurance Study Report | 6 |
| SEC | TION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS | 17 |
| 2.1 | Floodplain Boundaries | 17 |
| 2.2 | Floodways | 42 |
| 2.3 | Base Flood Elevations | 43 |
| 2.4 | Non-Encroachment Zones | 44 |
| 2.5 | Coastal Flood Hazard Areas | 44 |
| | 2.5.1 Water Elevations and the Effects of Waves | 44 |
| | 2.5.2 Floodplain Boundaries and BFEs for Coastal Areas | 44 |
| | 2.5.3 Coastal High Hazard Areas | 44 |
| | 2.5.4 Limit of Moderate Wave Action | 44 |
| SEC | TION 3.0 – INSURANCE APPLICATIONS | 44 |
| 3.1 | National Flood Insurance Program Insurance Zones | 44 |
| SEC | ΓΙΟΝ 4.0 – AREA STUDIED | 45 |
| 4.1 | Basin Description | 45 |
| 4.2 | Principal Flood Problems | 46 |
| 4.3 | Non-Levee Flood Protection Measures | 50 |
| 4.4 | Levees | 52 |
| SEC | FION 5.0 – ENGINEERING METHODS | 53 |
| 5.1 | Hydrologic Analyses | 53 |
| | Figures | |
| | | Page |
| Figur | e 1: FIRM Index | 8 |
| Figur | e 2: FIKWI NOTES TO USERS | 10 |
| Figur | e 3: Map Legend for FIRM | 13 |
| Figur | e 4. Floouway Schemalic | 43 |
| FIGUL | E D. WAVE RUHUP HANSELL JUNEMALL | 44 |

Figure 5: Wave Runup Transect Schematic Figure 6: Coastal Transect Schematic

44

Volume 1, Continued

<u>Tables</u>

| Table 1: Listing of NFIP Jurisdictions | 2 |
|---|----|
| Table 2: Flooding Sources Included in this FIS Report | 18 |
| Table 3: Flood Zone Designations by Community | 45 |
| Table 4: Basin Characteristics | 46 |
| Table 5: Principal Flood Problems | 46 |
| Table 6: Historic Flooding Elevations | 47 |
| Table 7: Non-Levee Flood Protection Measures | 50 |
| Table 8: Levees | 52 |
| Table 9: Summary of Discharges | 56 |

Volume 2

Page **SECTION 5.0 – ENGINEERING METHODS, CONTINUED** Hydraulic Analyses 5.2 100 5.3 Coastal Analyses 141 5.3.1 Total Stillwater Elevations 141 5.3.2 Waves 141 5.3.3 Coastal Erosion 141 5.3.4 Wave Hazard Analyses 141 5.4 Alluvial Fan Analyses 141 **SECTION 6.0 – MAPPING METHODS** 143 6.1 Vertical and Horizontal Control 143 6.2 Base Map 144 Floodplain and Floodway Delineation 145 6.3 Figures, Continued <u>Page</u>

| Figure 7: Frequency Discharge-Drainage Area Curves | 93 |
|--|-----|
| Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas | 141 |
| Figure 9: Transect Location Map | 141 |

Tables, Continued

<u>Page</u>

| Table 10: Summary of Non-Coastal Stillwater Elevations | 98 |
|--|-----|
| Table 11: Stream Gage Information used to Determine Discharges | 99 |
| Table 12: Summary of Hydrologic and Hydraulic Analyses | 101 |
| Table 13: Roughness Coefficients | 135 |
| Table 14: Summary of Coastal Analyses | 141 |
| Table 15: Tide Gage Analysis Specifics | 141 |

Volume 2, Continued

Tables, Continued

| Table 16: Coastal Transect Parameters | 141 |
|---|-----|
| Table 17: Summary of Alluvial Fan Analyses | 142 |
| Table 18: Results of Alluvial Fan Analyses | 142 |
| Table 19: Countywide Vertical Datum Conversion | 143 |
| Table 20: Stream-Based Vertical Datum Conversion | 144 |
| Table 21: Base Map Sources | 144 |
| Table 22: Summary of Topographic Elevation Data used in Mapping | 145 |
| Table 23: Floodway Data | 148 |
| | |

Volume 3

<u>Page</u>

253

| SEC | FION 6.0 |) – MAPPING METHODS, CONTINUED | |
|-------|------------|--|-------------|
| 6.4 | Coast | al Flood Hazard Mapping | 225 |
| 6.5 | FIRM | Revisions | 225 |
| | 6.5.1 | Letters of Map Amendment | 225 |
| | 6.5.2 | Letters of Map Revision Based on Fill | 225 |
| | 6.5.3 | Letters of Map Revision | 226 |
| | 6.5.4 | Physical Map Revisions | 228 |
| | 6.5.5 | Contracted Restudies | 228 |
| | 6.5.6 | Community Map History | 228 |
| SEC | ΓΙΟN 7.0 | - CONTRACTED STUDIES AND COMMUNITY COORDINATION | 231 |
| 7.1 | Contra | acted Studies | 231 |
| 7.2 | Comm | nunity Meetings | 247 |
| SEC | FION 8.0 | - ADDITIONAL INFORMATION | 250 |
| SEC | FION 9.0 | - BIBLIOGRAPHY AND REFERENCES | 252 |
| | | Tables, Continued | |
| | | | <u>Page</u> |
| Table | e 23: Flo | odway Data, Continued | 186 |
| Table | e 24: Flo | od Hazard and Non-Encroachment Data for Selected Streams | 225 |
| Table | e 25: Sur | nmary of Coastal Transect Mapping Considerations | 225 |
| Table | e 26: Inco | prporated Letters of Map Change | 227 |
| Table | e 27: Cor | mmunity Map History | 230 |
| Table | e 28: Sur | nmary of Contracted Studies Included in this FIS Report | 232 |
| Table | e 29: Cor | nmunity Meetings | 248 |
| Table | e 30: Ma | p Repositories | 250 |
| Table | e 31: Add | ditional Information | 251 |

Table 31: Additional InformationTable 32: Bibliography and References

Volume 3, Continued

<u>Exhibits</u>

| Flood Profiles | <u>Panel</u> |
|----------------------------|--------------|
| Barton Creek | 01-05 P |
| Barton Creek Tributary 1 | 06-07 P |
| Barton Creek Tributary 2 | 08-11 P |
| Barton Creek Tributary 2-1 | 12-13 P |
| Barton Creek Tributary 3 | 14-17 P |

Volume 4

Exhibits, Continued

| Flood Profiles | Panel |
|---|-----------|
| Bear Creek | 18-23 P |
| Bear Creek Tributary 1A | 24-26 P |
| Blanco River | 27-37 P |
| Blanco River Overflow Upstream of I-35 | 38-39 P |
| Brushy Creek | 40-44 P |
| Bunton Branch | 45 P |
| Bypass Creek | 46-51 P |
| Cambrian Branch | 52-54 P |
| Cambrian Branch Tributary 1 | 55 P |
| Cottonwood Branch (Tributary to Roy Branch) | 56-57 P |
| Cottonwood Creek | 58-60 P |
| Cypress Creek | 61-68 P |
| Dripping Springs | 69-70 P |
| Dripping Springs Tributary | 71 P |
| Garlic Creek | 72-74 P |
| Garlic Creek Tributary | 75 P |
| Hamilton Creek Tributary 1 | 76 P |
| Hog Creek | 77-79 P |
| Little Barton Creek | 80-83 P |
| Little Bear Creek | 84-87 P |
| Loneman Creek | 88-91 P |
| Long Branch | 92-93 P |
| Onion Creek | 94-101 P |
| Plum Creek | 102-108 P |
| Plum Creek Tributary 1 | 109 P |
| Plum Creek Tributary 2 | 110 P |
| Pope Creek | 111 P |

Volume 5

Exhibits, Continued

| Flood Profiles | <u>Panel</u> |
|-----------------------------------|--------------|
| Purgatory Creek | 110-120 P |
| Purgatory Creek Diversion 1 | 121 P |
| Richmond Branch | 122 P |
| Roy Branch | 123-125 P |
| San Marcos River | 126-129 P |
| Sink Creek | 130-139 P |
| Smith Creek | 140-142 P |
| Spring Branch | 143-144 P |
| Stream Bear-1 | 145-146 P |
| Stream Bear-2 | 147-148 P |
| Stream BPC-1 | 149 P |
| Stream BPC-2 | 150 P |
| Stream Brushy-1 | 151-153 P |
| Stream Brushy-1A | 154 P |
| Stream CC-1 | 155-156 P |
| Stream CC-1 South Tributary | 157 P |
| Stream CC-2 | 158-160 P |
| Stream CC-2D | 161 P |
| Stream CC-IH35 | 162-163 P |
| Stream Cypress-1 | 164-165 P |
| Stream LB-1 | 166-167 P |
| Stream PC-1 | 168-170 P |
| Stream Plum-1 | 171-174 P |
| Stream WSC-1 | 175-176 P |
| Stream WSC-RR | 177 P |
| Unnamed Tributary to Blanco River | 178 P |
| Unnamed Tributary to Plum Creek | 179 P |
| Walnut Spring | 180 P |
| Willow Springs Creek | 181-185 P |
| Wilson Creek | 186-189 P |

Published Separately

Flood Insurance Rate Map (FIRM)

| LOCA | TION | | FLOODWAY | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|---|---------------------|------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| Δ | 147 981 | 430 | 8 711 | 9.2 | 648.9 | 648.9 | 649 3 | 0.4 |
| B | 149 297 | 484 | 10,507 | 7.6 | 652.1 | 652 1 | 653.0 | 0.4 |
| Č | 151,403 | 285 | 6,659 | 12.1 | 654.3 | 654.3 | 654.9 | 0.6 |
| D | 153.880 | 305 | 7.319 | 11.0 | 660.6 | 660.6 | 661.2 | 0.6 |
| Е | 155,567 | 340 | 7,491 | 10.7 | 664.9 | 664.9 | 665.5 | 0.5 |
| F | 157,942 | 510 | 10,622 | 7.6 | 670.9 | 670.9 | 671.3 | 0.4 |
| G | 160,720 | 394 | 8,484 | 9.4 | 677.0 | 677.0 | 677.2 | 0.7 |
| Н | 162,747 | 850 | 12,949 | 6.2 | 682.5 | 682.5 | 682.9 | 0.3 |
| I | 165,038 | 865 | 14,728 | 5.4 | 686.8 | 686.8 | 687.3 | 0.5 |
| J | 166,981 | 918 | 13,139 | 6.1 | 691.5 | 691.5 | 692.2 | 0.7 |
| K | 168,897 | 560 | 12,292 | 6.5 | 695.5 | 695.5 | 696.4 | 0.9 |
| L | 172,718 | 572 | 11,204 | 7.1 | 702.8 | 702.8 | 703.6 | 0.8 |
| Μ | 174,662 | 750 | 13,169 | 6.1 | 708.0 | 708.0 | 708.9 | 0.9 |
| N | 176,264 | 895 | 12,138 | 6.6 | 710.8 | 710.8 | 711.7 | 0.9 |
| 0 | 178,266 | 298 | 7,216 | 10.9 | 716.1 | 716.1 | 716.8 | 0.7 |
| Р | 179,399 | 450 | 10,454 | 7.5 | 720.8 | 720.8 | 721.1 | 0.3 |
| Q | 181,769 | 354 | 4,307 | 18.2 | 729.2 | 729.2 | 729.5 | 0.3 |
| K | 183,740 | 435 | 8,450 | 9.3 | /51.8 | /51.8 | /51.8 | 0.0 |
| reet above con | | | | | | | | |
| FEDERAL E | MERGENCY MA | NAGEMENT | AGENCY | | FL | .OODWAY I | DATA | |
| HA | | Y, TEXAS | 5 | | FLOODING | G SOURCE: O | | |

| LOCA | TION | FLOODWAY | | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | |
|-------------------------------------|-------------------|-----------------|-------------------------------|--------------------------------|---|---------------------|------------------|----------|
| CROSS SECTION | DISTANCE1 | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S | 194 101 | 510 | 10.420 | 7.5 | 752 4 | 752 4 | 752 5 | 0.1 |
| З Т | 186 005 | 455 | 0.429 | 7.5 | 753.4 | 753.4 | 753.5 | 0.1 |
| 1 | 188 131 | 455 | 9,405 | 0.3 | 766.0 | 766.0 | 703.4 | 0.0 |
| V | 190,750 | 430 | 8 242 | 9.5 | 700.9 | 700.9 | 707.5 | 0.4 |
| Ŵ | 191 798 | 527 | 8 778 | 8.9 | 778.8 | 778.8 | 778.9 | 0.2 |
| X | 194 096 | 513 | 10 625 | 7.3 | 790.1 | 790.1 | 790.8 | 0.7 |
| Ŷ | 196,202 | 489 | 11,285 | 6.9 | 795.4 | 795.4 | 796.1 | 0.7 |
| Ž | 196,977 | 527 | 11.326 | 6.8 | 796.9 | 796.9 | 797.5 | 0.6 |
| AA | 197,489 | 400 | 8,514 | 9.1 | 797.5 | 797.5 | 798.1 | 0.6 |
| AB | 199,159 | 358 | 8,317 | 9.3 | 801.3 | 801.3 | 802.2 | 0.9 |
| AC | 200,660 | 327 | 8,216 | 9.4 | 804.4 | 804.4 | 805.1 | 0.7 |
| AD | 202,604 | 305 | 7,491 | 10.3 | 808.9 | 808.9 | 809.7 | 0.8 |
| AE | 204,944 | 313 | 8,073 | 9.6 | 815.9 | 815.9 | 816.8 | 0.9 |
| AF | 207,305 | 306 | 8,359 | 9.3 | 822.3 | 822.3 | 823.0 | 0.7 |
| AG | 209,536 | 297 | 7,183 | 10.8 | 827.6 | 827.6 | 828.2 | 0.6 |
| AH | 211,236 | 295 | 6,899 | 11.2 | 831.1 | 831.1 | 831.8 | 0.7 |
| AI | 213,618 | 290 | 7,781 | 9.9 | 837.9 | 837.9 | 838.8 | 0.9 |
| AJ | 216,117 | 255 | 6,907 | 11.2 | 843.7 | 843.7 | 844.6 | 0.9 |
| Feet above conf | luence with Color | rado River | | | | | | |
| FEDERAL EMERGENCY MANAGEMENT AGENCY | | | | FLOODWAY DATA | | | | |
| | | | | | FLOODING SOURCE: ONION CREEK | | | |

| LOCA | | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| Δκ | 218 887 | 240 | 7 208 | 10.7 | 851 7 | 851 7 | 852 5 | 0.8 |
| | 221 107 | 675 | 15 106 | 5 1 | 856.4 | 856.4 | 857.3 | 0.0 |
| AM | 222 683 | 300 | 6 383 | 11 9 | 858.2 | 858.2 | 859.1 | 0.9 |
| AN | 223 161 | 342 | 7 518 | 10.1 | 861.3 | 861.3 | 861.8 | 0.5 |
| AO | 226.295 | 450 | 11.435 | 6.6 | 868.4 | 868.4 | 869.3 | 0.9 |
| AP | 228,983 | 444 | 10.768 | 7.0 | 871.6 | 871.6 | 872.6 | 1.0 |
| AQ | 230,311 | 482 | 10,219 | 7.4 | 873.6 | 873.6 | 874.6 | 1.0 |
| AR | 236,076 | 405 | 9,373 | 8.1 | 883.4 | 883.4 | 884.3 | 0.9 |
| AS | 236,718 | 410 | 9,268 | 8.2 | 884.7 | 884.7 | 885.6 | 0.9 |
| AT | 237,184 | 433 | 7,941 | 9.5 | 886.0 | 886.0 | 886.9 | 0.9 |
| AU | 240,325 | 530 | 8,459 | 8.9 | 893.7 | 893.7 | 894.5 | 0.8 |
| AV | 242,675 | 547 | 10,500 | 7.2 | 899.2 | 899.2 | 900.0 | 0.8 |
| AW | 244,386 | 465 | 10,456 | 7.2 | 901.7 | 901.7 | 902.7 | 1.0 |
| AX | 247,837 | 337 | 8,238 | 9.2 | 906.0 | 906.0 | 906.8 | 0.8 |
| AY | 249,329 | 627 | 12,415 | 6.1 | 908.8 | 908.8 | 909.6 | 0.8 |
| AZ | 250,734 | 630 | 10,483 | 7.2 | 910.6 | 910.6 | 911.6 | 1.0 |
| BA | 252,019 | 625 | 11,286 | 6.7 | 913.8 | 913.8 | 914.6 | 0.8 |
| BB | 254,711 | 551 | 11,578 | 6.4 | 919.7 | 919.7 | 920.6 | 0.9 |
| Feet above con | fluence with Color | ado River | | | | | | |
| FEDERAL E | | | | | FL | OODWAY [| DATA | |
| | | | | FLOODING SOURCE: ONION CREEK | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | |
|------------------|-------------------|-----------------|-------------------------------|--------------------------------|------------|--------------------------------|-----------------------------|----------|--|
| CROSS SECTION | DISTANCE1 | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| PC | 255 201 | 460 | 10 571 | 7 1 | 020.8 | 020.8 | 021 7 | 0.0 | |
| BD | 258,361 | 382 | 8 862 | 8.4 | 920.0 | 920.0 | 921.7 | 0.9 | |
| BE | 250,501 | 446 | 10.071 | 7 / | 920.0 | 920.0 | 927.5 | 0.7 | |
| BE | 260,040 | 427 | 9 711 | 7.4 | 932.6 | 932.6 | 933.3 | 0.7 | |
| BG | 262,243 | 374 | 9,199 | 8.0 | 935.3 | 935.3 | 936.0 | 0.7 | |
| BH | 263 885 | 411 | 10 227 | 7.2 | 938.1 | 938.1 | 938.9 | 0.8 | |
| BI | 265,421 | 448 | 9,992 | 7.4 | 940.9 | 940.9 | 941.8 | 0.9 | |
| BJ | 267.934 | 458 | 9,704 | 7.5 | 946.1 | 946.1 | 947.0 | 0.9 | |
| BK | 270.259 | 657 | 10.316 | 7.1 | 952.0 | 952.0 | 952.5 | 0.5 | |
| BL | 271,675 | 474 | 8,934 | 8.1 | 955.2 | 955.2 | 955.4 | 0.2 | |
| BM | 273,676 | 921 | 13,695 | 5.3 | 960.1 | 960.1 | 960.8 | 0.7 | |
| BN | 275,728 | 723 | 12,104 | 6.0 | 964.3 | 964.3 | 965.0 | 0.7 | |
| BO | 277,750 | 470 | 9,571 | 7.6 | 968.6 | 968.6 | 969.5 | 0.9 | |
| BP | 280,190 | 645 | 11,945 | 6.1 | 973.8 | 973.8 | 974.7 | 0.9 | |
| BQ | 282,621 | 585 | 10,444 | 7.0 | 978.3 | 978.3 | 979.0 | 0.7 | |
| BR | 284,020 | 950 | 17,758 | 4.0 | 980.9 | 980.9 | 981.4 | 0.5 | |
| BS | 287,905 | 900 | 19,152 | 3.7 | 988.2 | 988.2 | 989.1 | 0.9 | |
| BT | 291,118 | 656 | 11,849 | 6.0 | 992.7 | 992.7 | 993.2 | 0.5 | |
| Feet above conf | luence with Color | ado River | | | | | | | |
| FEDERAL E | MERGENCY MA | NAGEMENT | AGENCY | | FI | | ΔΤΔ | | |
| НΔ | YS COUNT | | | | | | | | |
| 11/- | | | | | | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|---------------|--------------------------------|-----------------------------|----------|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| B H | 204 670 | 1 156 | 10 760 | 3.6 | 007.0 | 007.0 | 007.0 | 0.0 | |
| BV | 294,079 | 709 | 11 1/0 | 5.0 | 1 000 9 | 1 000 9 | 1 001 3 | 0.9 | |
| BW/ | 290,334 | 568 | 10/13 | 6.7 | 1,000.9 | 1,000.9 | 1,001.3 | 0.4 | |
| BX | 301 438 | 930 | 14 698 | 47 | 1,000.4 | 1,000.4 | 1,007.0 | 0.0 | |
| BY | 302 515 | 1 038 | 14 238 | 4.1 | 1,011.0 | 1,011.0 | 1,012.0 | 0.0 | |
| BZ | 305,830 | 665 | 10.071 | 5.7 | 1.017.2 | 1.017.2 | 1.018.1 | 0.9 | |
| CA | 308.054 | 733 | 9.053 | 6.3 | 1.021.5 | 1.021.5 | 1.022.5 | 1.0 | |
| CB | 312.143 | 534 | 9,968 | 5.8 | 1.030.8 | 1.030.8 | 1.031.5 | 0.7 | |
| CC | 315,267 | 575 | 6,774 | 5.6 | 1.035.4 | 1.035.4 | 1.036.2 | 0.8 | |
| CD | 316,952 | 563 | 5,562 | 6.8 | 1,039.0 | 1,039.0 | 1,040.0 | 1.0 | |
| CE | 319,357 | 649 | 7,866 | 4.8 | 1,047.2 | 1,047.2 | 1,048.2 | 1.0 | |
| CF | 322,373 | 429 | 5,472 | 6.9 | 1,054.1 | 1,054.1 | 1,055.0 | 0.9 | |
| CG | 323,947 | 513 | 6,211 | 6.0 | 1,057.8 | 1,057.8 | 1,058.6 | 0.8 | |
| СН | 326,910 | 585 | 5,595 | 6.5 | 1,064.0 | 1,064.0 | 1,064.8 | 0.8 | |
| CI | 327,834 | 590 | 6,165 | 5.9 | 1,066.7 | 1,066.7 | 1,067.7 | 1.0 | |
| CJ | 329,717 | 700 | 6,896 | 5.3 | 1,070.6 | 1,070.6 | 1,071.5 | 0.9 | |
| CK | 330,450 | 325 | 4,091 | 8.9 | 1,071.9 | 1,071.9 | 1,072.6 | 0.7 | |
| CL | 332,774 | 229 | 3,957 | 9.2 | 1,080.7 | 1,080.7 | 1,081.4 | 0.7 | |
| Feet above cont | luence with Color | rado River | | | | | | | |
| | | | | | | | | | |
| FEDERAL E | | | | | FLOODWAY DATA | | | | |
| H <i>P</i> | HATS COUNTY, TEXAS | | | FLOODING SOURCE: ONION CREEK | | | | | |

| LOCA | | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|--|---|---|---|--|---|---|---|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| CM CN CO CP CQ CR CS CT CU CV CW | 334,604 336,033 338,449 340,093 341,260 343,289 346,036 347,934 350,599 352,479 353,899 | 249 287 253 209 257 251 190 287 170 164 305 | 4,046 5,156 4,041 4,055 4,479 4,300 3,527 4,888 3,454 3,144 4,337 | 8.9 7.0 8.7 8.6 7.6 7.9 9.7 7.0 9.5 10.5 7.6 | 1,086.7 1,090.3 1,097.1 1,103.5 1,106.8 1,111.9 1,119.2 1,124.9 1,133.7 1,141.2 1,145.0 | 1,086.7 1,090.3 1,097.1 1,103.5 1,106.8 1,111.9 1,119.2 1,124.9 1,133.7 1,141.2 1,145.0 | 1,087.4 1,091.2 1,098.0 1,103.8 1,107.6 1,112.7 1,120.0 1,125.4 1,134.1 1,141.9 1,145.7 | 0.7 0.9 0.3 0.8 0.8 0.8 0.5 0.4 0.7 0.7 |
| FEDERAL E | | | | | FL | OODWAY I | DATA | |
| | ND INCORPORA | Y, IEXAS | • • | FLOODING SOURCE: ONION CREEK | | | | |

| LOCA | ΓΙΟΝ | | FLOODWAY | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | | |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|---|---------------------|------------------|----------|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| Δ | 30 560 | 634 | 5.037 | 2.8 | 545 7 | 545 7 | 546.2 | 0.5 | |
| B | 32 260 | 1 048 | 8 182 | 17 | 546.5 | 546.5 | 547.2 | 0.0 | |
| Č | 34,380 | 589 | 3.649 | 3.9 | 548.0 | 548.0 | 548.8 | 0.8 | |
| D | 35,740 | 498 | 4.054 | 3.3 | 550.1 | 550.1 | 551.0 | 0.9 | |
| Е | 37,360 | 1,009 | 4,615 | 2.9 | 552.4 | 552.4 | 553.1 | 0.7 | |
| F | 39,310 | 526 | 2,370 | 4.0 | 556.6 | 556.6 | 557.4 | 0.8 | |
| G | 41,600 | 511 | 2,256 | 4.3 | 564.5 | 564.5 | 565.0 | 0.5 | |
| Н | 43,130 | 682 | 3,771 | 2.4 | 568.5 | 568.5 | 569.3 | 0.8 | |
| I | 44,380 | 332 | 1,516 | 6.0 | 570.9 | 570.9 | 571.8 | 0.9 | |
| J | 45,170 | 369 | 2,514 | 3.6 | 574.3 | 574.3 | 575.2 | 0.9 | |
| K | 46,730 | 395 | 2,350 | 3.7 | 578.6 | 578.6 | 579.3 | 0.7 | |
| L | 48,030 | 339 | 2,216 | 3.9 | 581.0 | 581.0 | 581.9 | 0.9 | |
| Μ | 49,420 | 273 | 1,885 | 4.6 | 584.6 | 584.6 | 585.5 | 0.9 | |
| Ν | 50,850 | 327 | 2,005 | 4.2 | 588.3 | 588.3 | 589.2 | 0.9 | |
| 0 | 52,250 | 324 | 2,179 | 3.9 | 591.1 | 591.1 | 591.9 | 0.8 | |
| Р | 53,880 | 274 | 1,626 | 4.4 | 594.0 | 594.0 | 594.6 | 0.6 | |
| Q | 55,470 | 283 | 2,037 | 3.5 | 598.0 | 598.0 | 598.8 | 0.8 | |
| R | 56,650 | 272 | 1,277 | 5.6 | 600.3 | 600.3 | 601.3 | 1.0 | |
| Feet above conf | uence with Brush | ny Creek | | | | | | | |
| FEDERAL E | MERGENCY MA | NAGEMENT | AGENCY | | FI | | | | |
| | | | | I LOODWAT DATA | | | | | |
| | HATS COUNTT, TEXAS | | | | | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| c | 59 290 | 241 | 2 126 | 2.2 | 605 1 | 605 1 | 605 8 | 0.7 |
| - 5 Т | 60 130 | 1/10 | 2,120 | 2.5 | 607.5 | 607.5 | 608.3 | 0.7 |
| , U | 61 100 | 300 | 2,023 | 2.0 | 608.3 | 608.3 | 609.1 | 0.0 |
| V | 62 130 | 326 | 2,104 | 2.9 | 609.8 | 609.8 | 610.7 | 0.0 |
| Ŵ | 63 170 | 173 | 1 112 | 57 | 612.6 | 612.6 | 613.1 | 0.5 |
| X | 64,270 | 178 | 1.278 | 4.9 | 616.9 | 616.9 | 617.5 | 0.6 |
| Ŷ | 65,850 | 205 | 1,197 | 5.3 | 620.9 | 620.9 | 621.9 | 1.0 |
| Ž | 66,930 | 170 | 1.220 | 5.2 | 626.1 | 626.1 | 626.9 | 0.8 |
| ĀĀ | 68.030 | 180 | 1.240 | 4.4 | 630.3 | 630.3 | 631.1 | 0.8 |
| AB | 69,080 | 197 | 1,265 | 3.5 | 632.4 | 632.4 | 633.3 | 0.9 |
| AC | 69,870 | 133 | 835 | 5.3 | 634.5 | 634.5 | 635.2 | 0.7 |
| AD | 70,840 | 89 | 576 | 6.9 | 637.9 | 637.9 | 638.8 | 0.9 |
| AE | 72,330 | 137 | 791 | 5.0 | 643.0 | 643.0 | 644.0 | 1.0 |
| AF | 73,440 | 83 | 624 | 6.4 | 649.8 | 649.8 | 650.6 | 0.8 |
| AG | 74,500 | 159 | 624 | 6.4 | 654.5 | 654.5 | 655.2 | 0.7 |
| AH | 74,850 | 252 | 1,370 | 2.9 | 656.8 | 656.8 | 657.8 | 1.0 |
| AI | 76,100 | 253 | 1,142 | 3.5 | 660.1 | 660.1 | 660.7 | 0.8 |
| AJ | 77,420 | 237 | 992 | 4.0 | 665.2 | 665.2 | 666.2 | 1.0 |
| Feet above conf | luence with Brusl | hy Creek | | | | | | |
| FEDERAL E | | | | | FL | OODWAY [| ΟΑΤΑ | |
| | | | FLOODING SOURCE: PLUM CREEK | | | | | |

| L | OCATION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|--|--|--|--|---|---|---|---|---|
| CROSS SECTIO | S DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| AK AL AM AN AO AP AQ AR AS AT AU | 78,972 79,600 80,440 80,950 82,620 83,870 84,660 85,670 87,210 88,620 90,080 | 210 151 105 150 206 189 89 197 146 77 49 | 1,060 782 575 602 1,741 474 300 672 250 129 76 | 3.8 4.5 6.2 5.9 0.9 3.2 4.0 1.8 2.7 3.5 3.2 | 673.9 676.3 679.7 685.0 694.8 699.0 702.6 709.2 714.1 723.3 732.5 | 673.9 676.7 679.7 685.0 694.8 699.0 702.6 709.2 714.1 723.3 732.5 | 674.8 676.9 680.4 685.8 695.8 700.0 703.6 709.2 715.0 723.8 732.9 | 0.9 0.2 0.7 0.8 1.0 1.0 1.0 0.0 0.9 0.5 0.4 |
| FEDER | | | AGENCY | | FL | .OODWAY I | DATA | |
| | HAYS COUNTY, TEXAS | | | FLOODING SOURCE: PLUM CREEK | | | | |

| | LOCAT | ION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|------|--------------------------------|-------------------------|-----------------|-------------------------------|--------------------------------|-------------------------|--------------------------------|-----------------------------|-------------------|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C | 1,630 2,871 3,454 | 52 154 64 | 168 228 256 | 9.5 7.0 0.5 | 667.9 674.2 676.6 | 667.9 674.2 676.6 | 668.1 674.2 676.7 | 0.2 0.0 0.1 |
| | ¹ Feet above conflu | ence with Sink | Creek | | | | | | |
| | | | | | | | | | |
| TABL | | | NAGEMENT | AGENCY | | FL | OODWAY I | | |
| E 23 | | | TED AREAS | , | | FLOODIN | G SOURCE: F | POPE CREEK | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|-------------------------------------|-----------------------|-----------------|-------------------------------|----------------------------------|------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| ٨ | 2 107 | 810 | 3 047 | 25 | 576 5 | 576 5 | 576 5 | 0.0 |
| R | 2,137 | 778 | 1 839 | 4.2 | 577.4 | 577.4 | 577 4 | 0.0 |
| C | 2,943 4 424 | 566 | 2,606 | 2 9 | 581 3 | 581 3 | 581 3 | 0.0 |
| D | 6 130 | 1 478 | 3,000 | 2.5 | 582.2 | 582.2 | 582.2 | 0.0 |
| F | 7 120 | 1 149 | 3 015 | 2.5 | 584.3 | 584.3 | 584.3 | 0.0 |
| F | 8,925 | 527 | 1,306 | 3.5 | 588.8 | 588.8 | 588.8 | 0.0 |
| G | 11.270 | 445 | 919 | 3.7 | 598.8 | 598.8 | 598.8 | 0.0 |
| Ĥ | 14.041 | 330 | 2.159 | 0.4 | 607.0 | 607.0 | 607.0 | 0.0 |
| I | 24,200 | 345 | 2,442 | 6.6 | 667.0 | 667.0 | 667.0 | 0.0 |
| J | 26,830 | 329 | 2,445 | 6.5 | 684.2 | 684.2 | 684.2 | 0.0 |
| К | 29,158 | 325 | 2,280 | 6.0 | 697.3 | 697.3 | 697.3 | 0.0 |
| L | 30,953 | 290 | 2,101 | 6.5 | 709.0 | 709.0 | 709.1 | 0.1 |
| Μ | 33,329 | 211 | 1,805 | 7.5 | 721.4 | 721.4 | 721.5 | 0.1 |
| Ν | 35,456 | 193 | 1,306 | 9.2 | 733.4 | 733.4 | 733.9 | 0.5 |
| 0 | 37,192 | 105 | 1,175 | 9.6 | 745.8 | 745.8 | 746.5 | 0.7 |
| Р | 39,549 | 143 | 1,507 | 6.3 | 764.2 | 764.2 | 764.4 | 0.2 |
| Q | 41,210 | 104 | 1,256 | 7.6 | 771.2 | 771.2 | 772.2 | 1.0 |
| R | 43,528 | 92 | 1,122 | 8.5 | 787.5 | 787.5 | 788.5 | 1.0 |
| Feet above conf | luence with San I | Marcos River | | | | | | |
| | | | | | | | | |
| FEDERAL EMERGENCY MANAGEMENT AGENCY | | | | FLOODWAY DATA | | | | |
| | | | | FLOODING SOURCE: PURGATORY CREEK | | | | |

| | LOCAT | TION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | | | |
|------|---------------------------------|--|---|--|---|--|--|---|---|--|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | | | |
| | S T U W X Y Z | 45,020 59,535 61,140 62,143 63,223 63,775 64,872 65,410 | 161 182 155 267 281 222 171 | 1,594 3,045 2,861 2,999 3,579 3,319 2,614 2,183 | 0.3 10.0 10.6 10.1 5.9 6.4 8.1 9.7 | 801.2 889.1 895.0 899.8 904.1 905.5 909.6 911.8 | 801.2 889.1 895.0 899.8 904.1 905.5 909.6 911.8 | 802.0 890.0 900.8 905.1 906.4 910.2 912.3 | 0.8 0.9 1.0 1.0 0.9 0.6 0.5 | | | |
| TABL | FEDERAL EN | | | AGENCY | | FL | OODWAY [| DATA | | | | |
| Е 23 | | D INCORPORA | T, TEAAS | | | FLOODING S | OURCE: PUR | FLOODING SOURCE: PURGATORY CREEK | | | | |

| | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|------|------------------|----------------------------------|---|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C D | 1,115 2,787 3,421 5,209 | 671 513 1,270 213 atory Creek | 1,738 1,422 3,429 934 | 3.1 4.9 1.6 5.5 | 588.1 593.6 596.1 602.0 | 588.1 593.6 596.1 602.0 | 588.1 593.6 596.1 602.0 | 0.0 0.0 0.0 0.0 |
| | | | | | | | | | |
| TABL | | | | AGENCY | | FL | OODWAY [| ΟΑΤΑ | |
| E 23 | ANI | | TED AREAS | , | FLOO | DING SOURCE | E: PURGATOR | | ERSION 1 |

| LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|-------------------------------------|--------------------------------------|-----------------------------|-------------------------------|--------------------------------|------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| А | 1,191 | 105 | 789 | 9.5 | 961.2 | 960.9 ² | 961.1 | 0.2 |
| В | 1,699 | 120 | 1,082 | 6.9 | 964.1 | 964.1 | 964.8 | 0.7 |
| С | 2,140 | 167 | 1,592 | 4.4 | 973.0 | 973.0 | 973.7 | 0.7 |
| D | 2,706 | 119 | 788 | 8.9 | 974.3 | 974.3 | 974.8 | 0.5 |
| E | 3,918 | 140 | 1,052 | 6.7 | 985.7 | 985.7 | 985.8 | 0.1 |
| F | 4,578 | 86 | 847 | 8.3 | 989.1 | 989.1 | 989.3 | 0.2 |
| G | 5,436 | 91 | 476 | 7.6 | 995.8 | 995.8 | 996.5 | 0.7 |
| Н | 6,472 | 63 | 337 | 10.8 | 1,009.3 | 1,009.3 | 1,009.4 | 0.1 |
| I | 7,842 | 124 | 473 | 7.7 | 1,027.4 | 1,027.4 | 1,027.8 | 0.4 |
| J | 8,664 | 58 | 336 | 10.8 | 1,035.7 | 1,035.7 | 1,035.8 | 0.1 |
| K | 9,761 | 113 | 333 | 7.7 | 1,048.5 | 1,048.5 | 1,048.5 | 0.0 |
| L | 10,137 | 53 | 282 | 9.1 | 1,053.3 | 1,053.3 | 1,053.9 | 0.6 |
| Μ | 11,781 | 54 | 588 | 4.3 | 1,071.9 | 1,071.9 | 1,072.5 | 0.6 |
| N | 12,574 | 96 | 508 | 5.0 | 1,081.2 | 1,081.2 | 1,081.6 | 0.4 |
| 0 | 13,750 | 45 | 272 | 9.4 | 1,097.4 | 1,097.4 | 1,097.8 | 0.4 |
| Р | 14,249 | 55 | 306 | 8.3 | 1,104.6 | 1,104.6 | 1,104.8 | 0.2 |
| Feet above confl Elevation compu | uence with Bartc ted without cons | on Creek ideration of ba | ackwater effects | from Barton Cre | eek | | | |
| FEDERAL EN | MERGENCY MA | NAGEMENT | AGENCY | | FI | | | |
| НА | HAYS COUNTY, TEXAS | | | | | | | |

| LOCA | ATION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|--|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| BA BB BC BD BE BF BG BH BI BJ BK BL BM | 392,770 400,002 408,950 415,155 420,327 421,347 427,343 428,378 429,056 430,262 430,999 433,513 436,674 | 3,302/2,956 ² 2,157/500 ² 855 1,353 2,136 2,481 1,961 1,584 320 543 891 998 970 | 25,012 22,880 17,278 10,619 16,789 16,971 7,128 4,943 4,597 4,207 3,746 4,391 4,387 | 6.1 6.7 2.3 3.2 1.5 0.5 2.1 2.9 3.7 2.8 3.4 3.3 2.6 | 552.0 563.8 572.0 572.5 573.6 573.7 574.3 574.9 575.6 576.1 579.4 581.1 585.8 | 552.0 563.8 572.0 572.5 573.6 573.7 574.3 574.9 575.6 576.1 579.4 581.1 585.8 | 552.3 564.3 572.5 573.0 574.0 574.1 574.7 575.2 575.8 576.2 579.4 581.1 586.5 | $\begin{array}{c} 0.3\\ 0.5\\ 0.5\\ 0.4\\ 0.4\\ 0.4\\ 0.3\\ 0.2\\ 0.1\\ 0.0\\ 0.0\\ 0.7\end{array}$ |
| FEDERAL | | | | FLOODWAY DATA | | | | |
| H A | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING S | OURCE: SAN | | /ER |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|-----------------------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| Δ | 1 151 | 464 | 2 618 | 4.2 | 591 3 | 591 3 | 592.2 | 0.9 |
| B | 2 282 | 799 | 3 871 | 2.8 | 595.1 | 595.1 | 595.5 | 0.0 |
| Č | 4,253 | 527 | 2,649 | 4.1 | 599.1 | 599.1 | 599.1 | 0.0 |
| D | 16.189 | 135 | 1.905 | 6.1 | 641.4 | 641.4 | 641.9 | 0.5 |
| Ē | 17.712 | 342 | 2,592 | 4.4 | 654.6 | 654.6 | 655.2 | 0.6 |
| F | 19,097 | 279 | 2,418 | 4.7 | 659.3 | 659.3 | 659.7 | 0.4 |
| G | 21,035 | 153 | 1,982 | 5.4 | 666.5 | 666.5 | 667.5 | 1.0 |
| Н | 22,854 | 276 | 2,383 | 4.5 | 675.6 | 675.6 | 676.2 | 0.6 |
| I | 37,869 | 251 | 3,054 | 10.5 | 756.1 | 756.1 | 756.2 | 0.1 |
| J | 39,246 | 191 | 3,394 | 9.4 | 763.3 | 763.3 | 764.2 | 0.9 |
| K | 41,006 | 173 | 2,750 | 11.6 | 773.2 | 773.2 | 773.7 | 0.5 |
| L | 42,361 | 212 | 3,534 | 9.0 | 780.8 | 780.8 | 781.3 | 0.5 |
| Μ | 44,038 | 314 | 4,448 | 7.2 | 787.8 | 787.8 | 788.6 | 0.8 |
| Ν | 45,440 | 181 | 2,419 | 9.8 | 791.7 | 791.7 | 792.7 | 1.0 |
| 0 | 47,021 | 328 | 3,652 | 6.5 | 799.2 | 799.2 | 800.0 | 0.8 |
| Р | 49,075 | 323 | 2,875 | 7.7 | 807.6 | 807.6 | 808.1 | 0.5 |
| Q | 50,855 | 214 | 2,723 | 8.1 | 813.6 | 813.6 | 814.3 | 0.7 |
| R | 52,714 | 156 | 2,377 | 9.3 | 819.8 | 819.8 | 820.6 | 0.8 |
| Feet above conf | luence with the S | an Marcos Ri | ver | | | | | |
| FEDERAL E | | | AGENCY | | FL | OODWAY I | DATA | |
| | | | | | FLOODING SOURCE: SINK CREEK | | | |

| LOCAT | ION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | |
|-----------------------|--|---------------------------------|---|---------------------------------|---|---|---|---------------------------------|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| S T U W W | 54,413 55,851 57,477 59,432 60,913 | 198 196 183 520 206 | 2,429 2,094 1,900 2,956 1,728 | 9.1 7.7 8.5 5.2 7.6 | 828.9 834.9 841.8 851.0 860.6 | 828.9 834.9 841.8 851.0 860.6 | 829.7 835.8 842.5 851.8 861.3 | 0.8 0.9 0.7 0.8 0.7 | |
| FEDERAL EN | IERGENCY MA | NAGEMENT | AGENCY | ΕΙ ΟΟ ΓΙΑΤΑ | | | | | |
| | YS COUNT | Y, TEXAS | ; - | FLOODING SOURCE: SINK CREEK | | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|---|--|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A B C D E F G H I J K L M | 965 1,950 3,590 4,420 5,000 5,380 6,410 7,140 7,750 9,310 10,780 11,760 12,360 | 82 96 76 95 84 99 110 70 52 144 87 102 85 | 714 766 400 932 381 1,273 568 615 463 1,488 336 433 300 | 7.2 5.2 10.0 4.3 10.5 3.1 5.6 5.1 6.8 1.7 7.6 4.9 7.1 | 884.8 895.8 903.4 914.9 918.2 925.1 934.7 937.7 946.8 970.1 972.3 981.2 988.5 | 884.8 895.8 903.4 914.9 918.2 925.1 934.7 937.7 946.8 970.1 972.3 981.2 988.5 | 885.6 896.7 904.1 915.8 918.7 926.1 935.1 938.3 947.6 971.0 972.9 981.6 988.8 | 0.8 0.9 0.7 0.9 0.5 1.0 0.4 0.6 0.8 0.9 0.6 0.4 0.3 |
| N O | 13,070 13,825 | 71 158 | 313 2,627 | 6.8 0.8 | 995.9 1015.4 | 995.9 1015.4 | 996.7 1016.4 | 0.8 1.0 |
| Feet above conf | luence with Lone | man Creek | | | | | | |
| | | | | | FL | OODWAY [| DATA | |
| HA AI | | T, IEXAS | • | FLOODING SOURCE: SMITH CREEK | | | | |

| | LOCAT | ION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU ET NAVD88) | RFACE | |
|-------|--------------------------------|-----------------------|-----------------------|-------------------------------|--------------------------------|----------------|--------------------------------|----------------------------|------------|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B | 2,175 3,825 | 460 120 | 1,278 305 | 1.8 6.4 | 705.6 717.6 | 705.6 717.6 | 705.6 717.6 | 0.0 0.0 | |
| | ¹ Feet above conflu | ence with Plum | Creek | | | | | | | |
| TAB | FEDERAL EN | | NAGEMENT | AGENCY | | FL | OODWAY [| ΟΑΤΑ | | |
| LE 23 | | YS COUNT | Y, TEXAS ted areas | , - | FLOODING SOURCE: SPRING BRANCH | | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|------------------|-----------------------|-----------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------------|----------|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| ٨ | 400 | 160 | 1 207 | 7 1 | 940.6 | 940.6 | 940 7 | 0.1 | |
| R | 400 | 102 | 1,307 | 7.1 | 049.0 851.2 | 049.0 851.2 | 049.7 851 3 | 0.1 | |
| D C | 1 280 | 126 | 1,144 | 6.0 | 853.5 | 853.5 | 854.5 | 1.0 | |
| | 1,200 | 120 | 1,104 | 0.3 7 4 | 855.0 | 855.0 | 855.8 | 0.8 | |
| F | 2 150 | 124 | 845 | 9.5 | 857.5 | 857.5 | 858.3 | 0.0 | |
| F | 2,850 | 131 | 908 | 74 | 864.9 | 864.9 | 865.8 | 0.0 | |
| Ġ | 3,290 | 111 | 650 | 10.4 | 867.9 | 867.9 | 868.2 | 0.3 | |
| Ĥ | 3.840 | 119 | 695 | 9.7 | 874.0 | 874.0 | 874.9 | 0.9 | |
| I I | 4.280 | 140 | 1.077 | 6.3 | 879.4 | 879.4 | 880.2 | 0.8 | |
| J | 4,840 | 111 | 726 | 9.3 | 883.3 | 883.3 | 884.1 | 0.8 | |
| К | 5,220 | 126 | 613 | 11.0 | 885.7 | 885.7 | 886.5 | 0.8 | |
| L | 5,700 | 84 | 796 | 8.5 | 891.5 | 891.5 | 891.9 | 0.4 | |
| Μ | 6,160 | 77 | 611 | 11.1 | 893.7 | 893.7 | 894.3 | 0.6 | |
| Ν | 6,680 | 64 | 521 | 12.9 | 901.1 | 901.1 | 901.2 | 0.1 | |
| 0 | 7,190 | 95 | 686 | 9.8 | 906.5 | 906.5 | 907.5 | 1.0 | |
| Р | 7,450 | 82 | 523 | 12.9 | 908.1 | 908.1 | 908.8 | 0.7 | |
| Q | 7,960 | 141 | 603 | 11.2 | 914.0 | 914.0 | 914.1 | 0.1 | |
| R | 8,590 | 200 | 991 | 6.8 | 920.1 | 920.1 | 921.1 | 1.0 | |
| Feet above conf | luence with Bear | Creek | | | | | | | |
| | | | | | | | | | |
| | | | | FLOODWAY DATA | | | | | |
| 117- | | | | | FLOODING SOURCE: STREAM BEAR-1 | | | | |

| LOCAT | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | |
|--|---|--|--|---|--|---|---|--|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| A B C D E F G H ¹ Feet above confl ² Elevation comput | 760 1,120 1,750 2,350 2,970 3,530 3,910 4,650 uence with Bear ted without cons | 76 36 48 76 78 72 73 23 23 Creek ideration of ba | 507 137 179 219 184 315 164 200 | 2.9 10.8 8.3 6.8 8.1 4.7 9.1 7.4 from Bear Cree | 851.3 854.0 866.9 879.5 890.4 900.9 906.2 921.2 | 850.1 ² 854.0 866.9 879.5 890.4 900.9 906.2 921.2 | 850.7 854.3 867.5 879.5 901.8 906.2 922.2 | 0.6 0.3 0.6 0.0 0.1 0.9 0.0 1.0 | |
| FEDERAL EN | MERGENCY MA | NAGEMENT | AGENCY | FLOODWAY DATA | | | | | |
| | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM BEAR-2 | | | | |

| | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | |
|------------|---|------------------------------------|------------------------------|-------------------------------|--------------------------------|----------------|--------------------------------|-----------------------------|------------|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B | 825 2,066 | 196 230 | 2,306 187 | 0.3 4.8 | 579.5 580.2 | 579.4 ² 580.2 | 579.5 580.2 | 0.1 0.0 | |
| TA | ¹ Feet above conflu ² Elevation comput | uence with Bypa ed without cons | iss Creek ideration of ba | ckwater effects | from Bypass Cr | eek | | | | |
| BLE | HA | YS COUNT | Y, TEXAS | ; | | | | | | |
| <u>1</u> 3 | AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM BPC-1 | | | | | |

| | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|------|--|--------------------------------|--------------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B C D | 738 2,247 3,419 3,876 | 410 280 240 185 ss Creek | 4,214 2,949 2,064 1,221 | 3.2 4.6 6.6 11.1 | 580.3 581.6 583.8 585.7 | 580.3 581.6 583.8 585.7 | 580.5 582.2 584.8 586.5 | 0.2 0.6 1.0 0.8 | |
| | | | | | | | | | | |
| TABL | | | | AGENCY | FLOODWAY DATA | | | | | |
| E 23 | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM BPC-2 | | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|------------------|-----------------------|-----------------|-------------------------------|----------------------------------|------------|--------------------------------|-----------------------------|----------|--|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| ٨ | 500 | 221 | 1 / 26 | 2.4 | 556 0 | 556 0 | 557 9 | 0.0 | |
| B | 1 1 3 0 | 226 | 920 | 5.4 | 550.9 | 550.9 | 559.6 | 0.9 | |
| C | 1,130 | 1/2 | 717 | 5.4 6 Q | 561.0 | 561 0 | 562.6 | 0.5 | |
| | 2 740 | 239 | 1 392 | 3.5 | 564.8 | 564.8 | 565.5 | 0.7 | |
| F | 3,620 | 208 | 1,333 | 37 | 565.9 | 565.9 | 566.8 | 0.9 | |
| F | 4,730 | 270 | 1,600 | 3.1 | 568.7 | 568.7 | 569.6 | 0.9 | |
| G | 5.830 | 203 | 1,138 | 4.3 | 570.5 | 570.5 | 571.3 | 0.8 | |
| Ĥ | 6.350 | 258 | 1,129 | 4.4 | 572.1 | 572.1 | 572.9 | 0.8 | |
| I | 7,300 | 191 | 1,209 | 4.1 | 574.1 | 574.1 | 575.0 | 0.9 | |
| J | 8,580 | 191 | 964 | 4.5 | 577.1 | 577.1 | 578.1 | 1.0 | |
| К | 9,670 | 135 | 695 | 6.3 | 581.1 | 581.1 | 581.8 | 0.7 | |
| L | 10,240 | 139 | 811 | 5.3 | 583.5 | 583.5 | 584.0 | 0.5 | |
| Μ | 11,100 | 217 | 671 | 6.4 | 586.9 | 586.9 | 587.2 | 0.3 | |
| Ν | 11,840 | 266 | 1,150 | 3.1 | 589.0 | 589.0 | 589.9 | 0.9 | |
| 0 | 13,200 | 172 | 753 | 4.1 | 591.8 | 591.8 | 592.5 | 0.7 | |
| Р | 14,780 | 304 | 1,297 | 2.4 | 595.0 | 595.0 | 595.9 | 0.9 | |
| Q | 16,000 | 301 | 959 | 2.2 | 597.9 | 597.9 | 598.8 | 0.9 | |
| R | 17,640 | 306 | 1,350 | 1.6 | 602.1 | 602.1 | 603.0 | 0.9 | |
| Feet above conf | luence with Brus | hy Creek | | | | | | | |
| | | | | | | | | | |
| | | | | FLOODWAY DATA | | | | | |
| | | | | FLOODING SOURCE: STREAM BRUSHY-1 | | | | | |

| | LOCAT | ΓΙΟΝ | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|-------|--|--|---|--|--|---|--|--|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | S T U W X Y Z AA AB | 19,260 20,080 21,520 22,550 23,340 24,050 24,550 24,940 25,600 26,150 | 134 185 124 112 77 112 107 146 165 116 | 437 893 408 360 218 413 340 440 618 215 | 4.4 2.2 4.2 4.3 6.3 3.1 3.8 2.4 1.7 5.0 | 607.4 613.0 617.9 622.7 631.9 633.0 635.9 641.5 643.5 | 607.4 613.0 617.9 622.7 627.7 631.9 633.0 635.9 641.5 643.5 | 608.0 613.7 618.4 623.7 628.6 632.7 633.7 636.4 641.7 643.5 | 0.6 0.7 0.5 1.0 0.9 0.8 0.7 0.5 0.2 0.0 | |
| TABL | FEDERAL EI | | | AGENCY | | FL | OODWAY [| DATA | | |
| -Ε 23 | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM BRUSHY-1 | | | | | |

| | LOCAT | ΓΙΟΝ | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE | |
|------|---|---|--|---|---|---|---|---|---|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B C D E F G H I J K | 560 830 1,250 1,600 2,020 2,610 3,100 3,860 4,370 5,050 5,550 | 117 187 126 134 97 113 170 181 493 362 201 | 301 601 331 338 263 249 948 552 6,291 3,119 881 | 4.4 2.2 4.0 3.9 5.0 4.9 1.3 1.6 0.1 0.3 0.8 | 596.4 598.1 599.7 601.6 603.7 606.8 614.9 615.2 630.9 630.9 630.9 | 596.4 598.1 599.7 601.6 603.7 606.8 614.9 615.2 630.9 630.9 630.9 | 597.1 598.6 599.9 602.2 604.5 607.6 615.9 616.2 631.8 631.8 631.8 | 0.7 0.5 0.2 0.6 0.8 0.8 1.0 1.0 0.9 0.9 0.9 | |
| TABL | FEDERAL EN | | | AGENCY | FLOODWAY DATA | | | | | |
| E 23 | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM BRUSHY-1A | | | | | |

| 1,257 2,495 3,523 4,488 5,535 6,706 7,863 | WIDTH (FEET) 593 532 448 569 688 404 | SECTION AREA (SQ. FEET) 1,213 1,040 1,047 718 | MEAN VELOCITY (FEET/SEC) 5.8 6.5 7.6 | REGULATORY 601.4 606.6 610.7 | WITHOUT FLOODWAY 601.4 606.6 610.7 | WITH FLOODWAY 601.4 606.6 | INCREASE 0.0 0.0 |
|---|---|---|--|---|--|---|---|
| 1,257 2,495 3,523 4,488 5,535 6,706 7,863 | 593 532 448 569 688 404 | 1,213 1,040 1,047 718 | 5.8 6.5 7.6 | 601.4 606.6 610.7 | 601.4 606.6 610.7 | 601.4 606.6 | 0.0 0.0 |
| 8,227 9,582 9,841 10,270 10,778 10,902 11,146 | 606 530 83 102 1,700 941 1,682 219 | 686 733 836 484 238 282 5,087 1,933 2,119 983 | 4.6 6.7 4.5 3.6 6.1 4.9 4.1 0.8 1.9 1.9 2.1 | 614.1 616.5 620.0 624.3 625.1 628.2 629.9 637.0 637.0 638.2 638.2 638.2 | 614.1 616.5 620.0 624.3 625.1 628.2 629.9 637.0 637.0 638.2 638.2 | 610.7 614.1 616.5 620.0 624.3 625.1 628.2 629.9 637.0 637.0 638.2 638.2 | 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 |
| GENCY MAN | NAGEMENT | AGENCY | | FL | OODWAY D | ΟΑΤΑ | |
| <u> </u> | 10,778 10,902 11,146 e with Cottor GENCY MAI COUNT CORPORAT | 10,778 941 10,902 1,682 11,146 219 e with Cottonwood Creek SENCY MANAGEMENT COUNTY, TEXAS CORPORATED AREAS | 10,778 941 1,933 10,902 1,682 2,119 11,146 219 983 e with Cottonwood Creek 983 GENCY MANAGEMENT AGENCY COUNTY, TEXAS CORPORATED AREAS | 10,778 941 1,933 1.9 10,902 1,682 2,119 1.9 11,146 219 983 2.1 e with Cottonwood Creek SENCY MANAGEMENT AGENCY | 10,778 941 1,933 1.9 637.0 10,902 1,682 2,119 1.9 638.2 11,146 219 983 2.1 638.2 e with Cottonwood Creek FL FL COUNTY, TEXAS FLOODING FLOODING | 10,778 941 1,933 1.9 637.0 637.0 10,902 1,682 2,119 1.9 638.2 638.2 11,146 219 983 2.1 638.2 638.2 e with Cottonwood Creek FLOODWAY E COUNTY, TEXAS FLOODING SOURCE: S | 10,778 941 1,933 1.9 637.0 637.0 637.0 10,902 1,682 2,119 1.9 638.2 638.2 638.2 11,146 219 983 2.1 638.2 638.2 638.2 e with Cottonwood Creek FLOODWAY DATA COUNTY, TEXAS FLOODING SOURCE: STREAM CC-1 |

| | LOCATION | | FLOODWAY | | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | |
|------|------------------------|-----------------------|-----------------|-------------------------------|--|---|-------------------------|-------------------------|-------------------|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C | 112 582 1,666 | 156 98 74 | 453 335 296 | 3.3 4.5 5.2 | 638.5 643.0 648.1 | 638.5 643.0 648.1 | 638.5 643.0 648.1 | 0.0 0.0 0.0 |
| | | | | | | | | | |
| TABL | | | | FLOODWAY DATA | | | | | |
| E 23 | AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM CC-1 SOUTH TRIBUTARY | | | | |

| | LOCAT | ION | FLOODWAY | | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | | |
|------|--|--|--|--|---|--|--|--|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B C D E F G H I J | 391 1,373 1,742 2,414 2,848 3,557 3,878 4,025 4,817 5,636 | 2,322 338 285 219 407 183 234 639 179 250 | 7,936 361 217 236 1,937 510 635 3,962 171 192 | 3.1 3.8 4.8 4.1 1.1 4.1 10.5 0.4 4.7 4.2 | 654.2 657.4 660.7 667.5 678.5 682.5 686.6 693.9 696.7 709.3 | 654.2 657.4 660.7 667.5 678.5 682.5 686.6 693.9 696.7 709.3 | 654.2 657.4 660.7 667.5 678.5 683.1 686.6 693.9 696.7 709.3 | 0.0 0.0 0.0 0.0 0.0 0.6 0.0 0.0 0.0 0.0 | |
| TABL | FEDERAL EN | | | AGENCY | FLOODWAY DATA | | | | | |
| Е 23 | AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM CC-2 | | | | | |

| | LOCAT | ION | FLOODWAY | | | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) | | | | | |
|------|------------------|----------------------------------|---------------------------|-------------------------------|--------------------------------|---|----------------------------------|----------------------------------|--------------------------|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | | |
| | A B C D | 1,148 1,428 1,999 3,630 | 667 348 1,326 25 | 694 173 3,700 30 | 3.6 7.8 0.2 2.4 | 641.0 643.8 654.2 656.9 | 641.0 643.8 654.2 656.9 | 641.0 643.8 654.2 656.9 | 0.0 0.0 0.0 0.0 | | |
| | | | | | | | | | | | |
| TARI | | | | FLOODWAY DATA | | | | | | | |
| F 23 | | AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM CC-2D | | | | | |
| ſ | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|---|--|---|--|--|--|--|---|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C D E F G H ¹ Feet above conflu ² Elevation comput | 522 1,083 1,369 1,565 1,837 2,069 2,450 3,324 3,324 | 167 19 16 112 260 261 50 128 m CC-1 ideration of ba | 33 19 20 126 77 130 29 95 95 | 3.3 5.7 5.4 0.9 1.4 0.9 3.8 2.0 | 636.9 637.0 640.0 641.6 648.0 649.8 652.2 655.0 | 633.7 ² 637.0 640.0 641.6 648.0 649.8 652.2 655.0 | 633.7 637.0 640.0 641.6 648.0 649.8 652.2 655.0 | 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 |
| | FEDERAL EN | IERGENCY MA | NAGEMENT | AGENCY | | FL | OODWAY [| DATA | |
| | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM CC-IH35 | | | | |

| | LOCAT | ION | | FLOODWAY | / | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|-------|--------------------------------------|--|---|--|--|---|---|---|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C D E F G H | 1,720 2,580 3,115 3,930 4,865 5,950 6,530 7,130 | 166 181 137 239 128 78 69 15 | 729 500 610 2,938 911 366 229 242 | 4.4 6.5 5.3 0.9 3.0 7.4 8.2 7.7 | 973.6 982.2 987.2 1007.1 1007.1 1016.2 1025.6 1033.8 | 973.6 982.2 987.2 1007.1 1007.1 1016.2 1025.6 1033.8 | 974.4 982.8 987.9 1007.2 1007.2 1016.2 1026.0 1033.9 | 0.8 0.6 0.7 0.1 0.1 0.0 0.4 0.1 |
| TABL | FEDERAL EN | | | AGENCY | | FL | OODWAY [| DATA | |
| -E 23 | HA AN | T S COUN I D INCORPORA | T, TEXAS | | FLOODING SOURCE: STREAM CYPRESS-1 | | | | |

| LOCA | TION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|--|--|---|--|--|--|---|--|--|
| CROSS SECTION | DISTANCE1 | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A B C D E F G H I J K L | 700 1,280 1,930 2,450 3,100 3,940 4,330 4,730 5,740 6,260 6,850 7,530 | 92 135 133 154 130 125 112 125 243 182 160 171 Bear Creek | 546 753 877 847 999 696 703 791 925 910 841 634 | 8.6 6.2 5.3 5.5 4.7 6.7 6.7 5.9 5.1 4.7 5.1 6.7 | 742.0 746.9 750.5 755.0 759.0 763.7 766.1 768.5 777.1 780.4 783.7 790.4 | 742.0 746.9 750.5 755.0 763.7 766.1 768.5 777.1 780.4 783.7 790.4 | 742.9 747.5 751.5 755.9 760.0 764.6 766.9 769.5 778.1 781.3 784.7 791.4 | 0.9 0.6 1.0 0.9 1.0 0.9 0.8 1.0 1.0 0.9 1.0 1.0 |
| FEDERAL E | MERGENCY MA | NAGEMENT | AGENCY | | FL | .00DWAY I | ΔΤΑ | |
| HA | HAYS COUNTY, TEXAS | | | | FLOODIN | G SOURCE: S | STREAM LB-1 | |

| | LOCAT | ION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE | |
|------|--|--|---------------------------------------|--|---|--|--|--|--|--|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE | |
| | A B C D E F ¹ Feet above conflu | 1,151 3,012 5,449 8,119 10,373 13,416 | 93 111 162 175 140 155 | 587 813 797 941 570 635 | 10.6 7.4 7.5 5.7 5.4 4.9 | 664.4 683.1 704.7 730.0 750.7 788.8 | 664.4 683.1 704.7 730.0 750.7 788.8 | 664.7 683.4 704.8 731.0 751.0 789.2 | 0.3 0.3 0.1 1.0 0.3 0.4 | |
| | | | | | | | | | | |
| TABL | | IERGENCY MA | NAGEMENT | AGENCY | | FL | OODWAY [| DATA | | |
| E 23 | ANI | | TED AREAS | , | FLOODING SOURCE: STREAM PC-1 | | | | | |

| LOCAT | ION | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|---|---|--|---|---|---|--|---|---|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A B C D E F G H I J K | 910 8,310 9,370 11,080 12,190 13,230 14,280 14,910 15,470 16,510 17,140 | 104 63 79 108 104 86 106 81 104 84 125 Creek ideration of ba | 329 243 306 426 275 310 402 251 255 316 259 | 4.0 8.6 5.6 4.0 5.3 4.7 3.7 5.1 5.0 3.5 4.3 | 631.9 663.4 672.9 683.5 689.6 697.5 706.2 710.6 715.3 723.5 729.0 | 627.1 ² 663.4 672.9 683.5 689.6 697.5 706.2 710.6 715.3 723.5 729.0 | 628.1 663.5 673.1 683.7 690.6 698.1 707.0 711.6 715.8 724.5 729.9 | 1.0 0.1 0.2 0.2 1.0 0.6 0.8 1.0 0.5 1.0 0.9 |
| FEDERAL EN | IERGENCY MA | NAGEMENT | AGENCY | | FL | OODWAY [| DATA | |
| HA` AN | YS COUNT D INCORPORA | Y, TEXAS ted areas | ; - | | FLOODING | SOURCE: ST | REAM PLUM- | 1 |

| | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|------|--|--------------------------------|------------------------|-------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C D | 479 1,464 2,374 2,823 | 129 51 163 88 | 411 171 195 195 | 5.3 8.1 5.1 5.1 | 677.0 689.0 701.3 706.6 | 677.0 689.0 701.3 706.6 | 677.3 689.0 701.4 707.6 | 0.3 0.0 0.1 1.0 |
| | | | | | | | | | |
| TABL | | | NAGEMENT | AGENCY | | FL | OODWAY [| ΟΑΤΑ | |
| E 23 | HAYS COUNTY, TEXAS AND INCORPORATED AREAS | | | | FLOODING SOURCE: STREAM WSC-1 | | | | |

| | LOCAT | ION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|------|--------------------------------|-----------------------|-------------------|-------------------------------|--------------------------------|-------------------------|--------------------------------|-----------------------------|-------------------|
| | CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | A B C | 441 1,342 2,641 | 405 952 330 | 1,158 1,519 713 | 3.5 2.2 3.5 | 583.5 587.5 591.1 | 583.5 587.5 591.1 | 583.5 587.5 591.1 | 0.0 0.0 0.0 |
| | ¹ Feet above conflu | ence with Willo | w Springs Cre | ek | | | | | |
| TABL | FEDERAL EN | | | AGENCY | | FL | OODWAY [| ΟΑΤΑ | |
| E 23 | ANI | | TED AREAS | , | FLOODING SOURCE: STREAM WSC-RR | | | | |

| LOCA | ΓΙΟΝ | | FLOODWAY | | 1% ANNU | AL CHANCE FLO ELEVATION (FE | OOD WATER SU EET NAVD88) | RFACE |
|------------------------------|-----------------------|-----------------|-------------------------------|--------------------------------|------------|--------------------------------|-----------------------------|----------|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| А | 4,296 | 371 | 1,147 | 5.1 | 574.5 | 574.5 | 574.5 | 0.0 |
| В | 5,540 | 843 | 2,018 | 2.8 | 577.6 | 577.6 | 577.6 | 0.0 |
| С | 7,018 | 480 | 1,011 | 5.8 | 580.5 | 580.5 | 580.5 | 0.0 |
| D | 8,000 | 323 | 1,057 | 3.1 | 583.4 | 583.4 | 583.4 | 0.0 |
| E | 9,212 | 299 | 677 | 4.1 | 589.7 | 589.7 | 589.7 | 0.0 |
| F | 10,307 | 345 | 838 | 5.3 | 595.0 | 595.0 | 595.0 | 0.0 |
| G | 11,637 | 304 | 489 | 5.8 | 601.5 | 601.5 | 601.5 | 0.0 |
| Н | 12,467 | 131 | 607 | 7.6 | 608.1 | 608.1 | 608.1 | 0.0 |
| I | 13,817 | 168 | 710 | 6.5 | 612.6 | 612.6 | 612.6 | 0.0 |
| J | 14,817 | 358 | 1,029 | 5.5 | 615.0 | 615.0 | 615.0 | 0.0 |
| K | 15,551 | 627 | 2,550 | 2.2 | 621.7 | 621.7 | 621.7 | 0.0 |
| L | 15,949 | 712 | 1,858 | 3.1 | 622.9 | 622.9 | 622.9 | 0.0 |
| Μ | 17,034 | 775 | 1,963 | 2.6 | 628.2 | 628.2 | 628.2 | 0.0 |
| Ν | 17,754 | 454 | 1,291 | 4.3 | 633.3 | 633.3 | 633.3 | 0.0 |
| 0 | 18,402 | 513 | 1,239 | 4.0 | 638.0 | 638.0 | 638.0 | 0.0 |
| Р | 20,224 | 178 | 1,031 | 4.9 | 651.3 | 651.3 | 651.9 | 0.6 |
| Q | 21,637 | 223 | 771 | 4.7 | 659.6 | 659.6 | 660.0 | 0.4 |
| R | 22,856 | 216 | 844 | 4.3 | 670.2 | 670.2 | 670.7 | 0.5 |
| S | 24,348 | 159 | 481 | 3.3 | 682.9 | 682.9 | 683.5 | 0.6 |
| Т | 25,640 | 254 | 293 | 5.5 | 694.5 | 694.5 | 694.8 | 0.3 |
| U | 26,186 | 188 | 420 | 2.9 | 701.0 | 701.0 | 701.7 | 0.7 |
| V | 27,475 | 220 | 241 | 5.0 | 716.6 | 716.6 | 716.6 | 0.0 |
| ¹ Feet above conf | luence with San I | Marcos River | | | | | | |
| FEDERAL E | | | AGENCY | | FL | OODWAY I | DATA | |
| HA | | Y, IEXAS | | F | | | W SPRINGS C | REEK |
| AN | ID INCORPORA | IED AREAS | | | | | | |

| LOCA | TION | | FLOODWAY | , | 1% ANNU | AL CHANCE FLO ELEVATION (FE | DOD WATER SU EET NAVD88) | RFACE |
|---|--|---|---|---|--|---|---|---|
| CROSS SECTION | DISTANCE ¹ | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A B C D E F G H I J K L M N O | 3,145 4,180 5,600 7,160 8,400 9,500 11,200 12,950 14,150 15,225 17,000 18,200 19,950 21,425 23,075 | 167 233 204 168 108 124 185 147 185 193 124 165 96 79 81 co River ideration of ba | 1,166 1,359 685 846 641 792 756 467 830 843 577 469 428 304 308 | 5.2 4.2 8.4 6.8 6.9 5.6 5.8 9.5 4.4 4.3 4.5 5.6 6.1 5.9 5.8 | 851.3 854.8 861.3 872.9 880.9 889.8 902.5 915.0 921.1 930.5 941.1 950.0 968.9 986.1 1005.0 | 847.5 ² 854.8 861.3 872.9 880.9 889.8 902.5 915.0 921.1 930.5 941.1 950.0 968.9 986.1 1005.0 | 848.5 854.8 861.3 873.5 881.8 903.0 915.0 921.8 931.4 942.0 950.7 969.9 986.8 1005.9 | $ \begin{array}{c} 1.0\\ 0.0\\ 0.6\\ 0.9\\ 1.0\\ 0.5\\ 0.0\\ 0.7\\ 0.9\\ 0.7\\ 1.0\\ 0.7\\ 0.9\\ 0.7\\ 1.0\\ 0.7\\ 0.9\\ 0.9\\ 0.7\\ 1.0\\ 0.7\\ 0.9\\ 0.9\\ 0.7\\ 0.9\\ 0.7\\ 0.9\\ 0.9\\ 0.9\\ 0.7\\ 0.9\\ 0.9\\ 0.7\\ 0.9\\ 0.9\\ 0.9\\ 0.9\\ 0.9\\ 0.9\\ 0.9\\ 0.9$ |
| FEDERAL E | | | AGENCY | | FL | OODWAY I | DATA | |
| HA Al | HAYS COUNTY, TEXAS | | | | FLOODING | SOURCE: W | ILSON CREEI | < |

Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

Table 25: Summary of Coastal Transect Mapping Considerations

[Not Applicable to this Flood Risk Project]

6.5 **FIRM** Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, "Map Repositories").

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA.

To obtain an application for a LOMA, visit www.fema.gov/floodplain-management/lettermap-amendment-loma and download the form "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill". Visit the "Flood Map-Related Fees" section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states

FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/floodplain-management/letter-map-amendment-loma for the "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill" or by calling the FEMA Mapping and Insurance eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the "Flood Map-Related Fees" section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/national-flood-insuranceprogram-flood-hazard-mapping/mt-2-application-forms-and-instructions and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Hays County FIRM are listed in Table 26. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

| Case Number | Effective Date | Flooding Source | FIRM Panel(s) |
|----------------|-------------------|--|---|
| 07-06-1372X | 4/30/2007 | Richmond Branch, Unnamed Tributary to Richmond Branch | 48209C0290G |
| 07-06-1313P | 1/23/2008 | Brushy Creek | 48209C0280G 48209C0285F ¹ |
| 08-06-2092P | 8/15/2008 | Unnamed Tributary 1 to Cedar Fork, Unnamed Tributary 1 to Unnamed Tributary 1 to Cedar Fork | 48209C0215G 48209C0220G |
| 08-06-0338P | 9/11/2008 | Spring Branch | 48209C0270G |
| 09-06-3428P | 12/17/2009 | Spring Branch | 48209C0270G |
| 10-06-1474P | 1/27/2011 | Unnamed Tributary to Blanco River | 48209C0355G |
| 11-06-3956P | 5/24/2012 | Wilson Creek | 48209C0355G |
| 12-06-2514P | 5/28/2013 | Cottonwood Creek | 48209C0478G |
| 14-06-2877P | 3/30/2015 | Unnamed Tributary to Cypress Creek | 48209C0225G |
| 16-06-3012P | 7/6/2017 | Porter Creek | 48209C0290G |
| 17-06-4216P | 7/12/2018 | Spring Branch | 48209C0270G 48209C0290G |
| 17-06-4031P | 8/16/2018 | Plum Creek | 48209C0270G |
| 18-06-2155P | 3/7/2019 | Spring Branch | 48209C0290G |
| 18-06-1845P | 4/4/2019 | Cottonwood Creek, Stream CC-1, Stream CC- 2 South Tributary, Stream CC-2, Stream CC-2D, Stream CC-IH35, Stream CC1-IH35 | 48209C0476G 48209C0477G 48209C0478G 48209C0479G 48209C0483G |

Table 26: Incorporated Letters of Map Change

| Case Number | Effective Date | Flooding Source | FIRM Panel(s) |
|----------------|-------------------|--|----------------------------|
| 18-06-1606P | 5/16/2019 | Lower Blanco River Tributary 3, Lower Blanco River Tributary 3A | 48209C0270G 48209C0385G |
| 18-06-3039P | 7/25/2019 | Bunton Branch | 48209C0290G |
| 20-06-1997P | 3/11/2021 | Hamilton Creek Tributary 1 | 48209C0050G |

Table 26: Incorporated Letters of Map Change (continued)

¹Although a portion of LOMR 07-06-1313P falls within the scope of this map revision, panel 48209C0285F was not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM Panel 48209C0285F

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Hays County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the

incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- Community Name includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- Initial Identification Date (First NFIP Map Published) is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.
- FHBM Revision Date(s) is the date(s) that the FHBM was revised, if applicable.
- Initial FIRM Effective Date is the date of the first effective FIRM for the community.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Hays County FIRMs in countywide format was 02/18/1998.

| Community Name | Initial Identification Date | Initial FHBM Effective Date | FHBM Revision Date(s) | Initial FIRM Effective Date | FIRM Revision Date(s) |
|--|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------------|--|
| Austin, City of | 9/13/1974 | 9/13/1974 | 5/31/1977 | 9/2/1981 | TBD 1/22/2020 12/20/2019 1/6/2016 8/18/2014 9/26/2008 1/19/2000 6/5/1997 6/16/1993 5/15/1986 9/27/1985 9/5/1984 |
| Bear Creek, Village of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Buda, City of | 6/2/1993 | N/A | N/A | 6/2/1993 | TBD 9/2/2005 2/18/1998 |
| Creedmoor, City of ² | 3/7/1978 | 3/7/1978 | N/A | 4/1/1982 | 1/22/2020 1/6/2016 9/26/2008 9/2/2005 2/18/1998 1/2/1987 9/27/1985 |
| Dripping Springs, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Hays, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Hays County, Unincorporated Areas | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Kyle, City of | 5/2/1975 | 5/2/1975 | N/A | 12/12/1978 | TBD 9/2/2005 2/18/1998 |
| Mountain City, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Niederwald, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | 6/19/2012 9/2/2005 2/18/1998 |

Table 27: Community Map History

| Community Name | Initial Identification Date | Initial FHBM Effective Date | FHBM Revision Date(s) | Initial FIRM Effective Date | FIRM Revision Date(s) |
|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------------|--|
| San Marcos, City of | 8/28/1971 | N/A | N/A | 8/28/1971 | TBD 12/30/2020 6/19/2012 9/2/2005 2/18/1998 9/5/1990 9/1/1983 11/19/1980 11/5/1976 7/1/1974 |
| Uhland, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | 6/19/2012 9/2/2005 2/18/1998 |
| Wimberley, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |
| Woodcreek, City of ¹ | 3/21/1978 | 3/21/1978 | N/A | 6/16/1993 | TBD 9/2/2005 2/18/1998 |

Table 27: Community Map History, (continued)

¹ Dates for this community were taken from Hays County, Unincorporated Areas ² Dates for this community were taken from Travis County, Unincorporated Areas

SECTION 7.0 - CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 **Contracted Studies**

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|--------------------------------|---------------------|------------|-----------------------|---------------------------|---|
| Barton Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Barton Creek | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 1 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 2 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 2-1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 3 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 39-1 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 39-2 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 39-3 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Barton Creek Tributary 40 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Bear Creek | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Hays County, Unincorporated Areas |

 Table 28: Summary of Contracted Studies Included in this FIS Report

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|------------------------------|---------------------|------------|----------------------|---------------------------|--|
| Bear Creek | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 1A | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Bear Creek, Village of; Hays County, Unincorporated Areas |
| Bear Creek Tributary 1B | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 1B-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 4 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 5 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 5-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 6 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 7 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary 7-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Bear Creek Tributary A | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|---|---------------------|-------------------|----------------------|---------------------------|--|
| Blanco-San Marcos Overflow | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Blanco Gardens Overflow | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos, City of |
| Blanco River | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of; Wimberley, City of |
| Blanco River Overflow Upstream of I- 35 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Brushy Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Niederwald, City of; Hays County, Unincorporated Areas; Uhland, City of; |
| Bypass Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Cambrian Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Cambrian Branch Tributary 1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Cottonwood Branch (Tributary to Roy Branch) | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Cottonwood Branch (Tributary to Onion Creek) | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Cottonwood Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|----------------------------------|---------------------|-------------------|-----------------------|---------------------------|--|
| Cottonwood Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; San Marcos, City of |
| Cypress Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 4/30/2016 | Hays County, Unincorporated Areas; Woodcreek, City of; Wimberley, City of; Woodcreek, City of |
| Dripping Springs | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Hays County, Unincorporated Areas |
| Dripping Springs Tributary | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas |
| Eskew Branch | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Fitzhugh Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Fitzhugh Creek Tributary 1 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Fitzhugh Creek Tributary 2 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Fitzhugh Creek Tributary 3 | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Flat Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Freestone Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Garlic Creek | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Buda, City of; Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|---------------------------------------|---------------------|-------------------|-----------------------|---------------------------|---|
| Garlic Creek Tributary | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Buda, City of; Hays County, Unincorporated Areas |
| Gatlin Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Grooms Branch | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Grooms Branch Tributary 1 | TBD | RAMPP | HSFE 06-14-J- 0001 | February 2015 | Hays County, Unincorporated Areas |
| Hog Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 4/30/2016 | Hays County, Unincorporated Areas; Wimberley, City of; Woodcreek, City of |
| Hog Creek Overflow | TBD | Compass PTS JV | HSFE06-15- J-0002 | 4/30/2016 | Woodcreek, City of |
| Jackson Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Jackson Branch Tributary | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Little Barton Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas |
| Little Bear Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Little Bear Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 1-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|---------------------------------------|---------------------|------------|----------------------|---------------------------|--|
| Little Bear Creek Tributary 1-2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 1A | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas; Hays, City of |
| Little Bear Creek Tributary 2 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 2-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 2A | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 2B | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 4 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 5 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 6 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Little Bear Creek Tributary 7 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Loneman Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Long Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|------------------------------------|---------------------|------------|----------------------|---------------------------|---|
| Long Branch 2 Tributary 1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Long Branch 2 Tributary 2 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas |
| Long Branch 2 Tributary 2-1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas |
| Millseat Branch | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas; Kyle, City of |
| Mustang Branch Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 2-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas; Mountain City, City of |
| Mustang Branch Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 4 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 5 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 6 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Mustang Branch Tributary 7 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|----------------------------|---------------------|-------------------|-----------------------|---------------------------|---|
| North Gatlin Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| NRCS Dam 1 Spillway | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas |
| NRCS Dam 2 Spillway | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas |
| NRCS Dam 3 Spillway | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos, City of |
| NRCS Dam 4 Spillway | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas |
| NRCS Dam 5 Spillway | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos, City of |
| Onion Creek | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Buda, City of; Hays County, Unincorporated Areas |
| Onion Creek | TBD | RAMPP | HSFE 06-14- J-0001 | February 2015 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 2 | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Buda, City of; Hays County, Unincorporated Areas |
| Onion Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 4 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 5 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|--------------------------------|---------------------|------------|----------------------|---------------------------|---|
| Onion Creek Tributary 5-1 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 5-1-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 6 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 7 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 8 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 8-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 8-1-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 9 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 10 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 11 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 12 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 13 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 14 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|-------------------------------|---------------------|------------|----------------------|---------------------------|---|
| Onion Creek Tributary 14-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 15 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 16 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 16-1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 17 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 18 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 19 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 20 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 21 | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas |
| Onion Creek Tributary 22 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 23 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Onion Creek Tributary 24 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Pier Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|-----------------------------------|---------------------|-------------------|----------------------|---------------------------|--|
| Plum Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; Kyle, City of; Uhland, City of |
| Pope Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas |
| Purgatory Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Purgatory Creek Diversion 1 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos, City of |
| Purgatory Creek UNT | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Purgatory Middle Diversion | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos, City of |
| Richmond Branch | TBD | N/A | N/A | 4/30/2007 | Hays County, Unincorporated Areas; Kyle, City of |
| Rocky Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Roy Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| San Marcos River | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; |
| San Marcos River | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| San Marcos Tributary | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas |
| Sessom Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos, City of |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|--------------------------------------|---------------------|-------------------|----------------------|---------------------------|---|
| Sink Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Smith Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; Wimbereley, City of |
| South Gatlin Creek | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| South Gatlin Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Gatlin Creek Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Gatlin Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Onion Creek | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Onion Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Onion Creek Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| South Onion Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Spring Branch | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Kyle, City of; Hays County, Unincorporated Areas |
| Spring Hollow | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas |
| Spring Hollow Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|------------------------------|---------------------|-------------------|----------------------|---------------------------|--|
| Spring Hollow Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Spring Hollow Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Stream Bear 1 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Bear Creek, Village of; Hays County, Unincorporated Areas |
| Stream Bear 2 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Stream BPC-1 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Stream BPC-2 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas |
| Stream Brushy-1 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; Niederwald, City of |
| Stream Brushy-1A | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Stream CC-1 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos, City of |
| Stream CC-1 South | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos, City of |
| Stream CC-2 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | Hays County, Unincorporated Areas; San Marcos, City of |
| Stream CC-2D | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; San Marcos, City of |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|---|---------------------|-------------------|----------------------|---------------------------|---|
| Stream CC- IH35 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; San Marcos, City of |
| Stream Cypress-1 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Stream LB-1 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Stream PC-1 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2106 | Hays County, Unincorporated Areas; San Marcos, City of |
| Stream PC-3 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos, City of |
| Stream Plum- 1 | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas; Kyle, City of |
| Stream WSC- 1 | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas |
| Stream WSC- 1 Split | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas |
| Stream WSC- RR | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos, City of |
| Tributary CC- 1A | TBD | Compass PTS JV | HSFE06-15- J-0002 | 10/31/2016 | Hays County, Unincorporated Areas; Woodcreek, City of |
| Tributary CC- 2A | TBD | Compass PTS JV | HSFE06-15- J-0002 | 10/31/2016 | Wimberley, City of |
| Unnamed Tributary To Blanco River | N/A | N/A | N/A | 1/27/2011 | Wimberley, City of |
| Unnamed Tributary 1 to Cedar Fork | N/A | N/A | N/A | 8/15/2008 | Hays County, Unincorporated Areas |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities | |
|--|---------------------|----------------------------------|----------------------|---------------------------|---|--|
| Unnamed Tributary 1 to Unnamed Tributary 1 to Cedar Fork | N/A | N/A | N/A | 8/15/2008 | Hays County, Unincorporated Areas | |
| Unnamed Tributary 2 to Unnamed Tributary to Cedar Fork | N/A | N/A | N/A | 8/15/2008 | Hays County, Unincorporated Areas | |
| Unnamed Tributary of Cypress Creek | N/A | Pro-Tech Engineering Group | N/A | 3/30/2015 | Hays County, Unincorporated Areas | |
| Unnamed Tributary to Plum Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas | |
| Walnut Spring | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Dripping Springs, City of | |
| Walnut Spring | TBD | HALFF | W9126G-09- D-0044 | August 2014 | Dripping Springs, City of; Hays County, Unincorporated Areas | |
| West Mustang Branch | TBD | HALFF | W9127S-10- D-0022 | August 2014 | Hays County, Unincorporated Areas | |
| West Mustang Branch Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas | |
| West Mustang Branch Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas | |
| West Mustang Branch Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas | |
| White Branch | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas | |
| White Branch Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas | |

| Flooding Source | FIS Report Dated | Contractor | Number | Work Completed Date | Affected Communities |
|--|---------------------|-------------------|----------------------|---------------------------|---|
| Willow Springs Creek | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | Hays County, Unincorporated Areas; San Marcos River, City of |
| Willow Springs Creek Diversion | TBD | Compass PTS JV | HSFE06-15- J-0002 | 8/31/2016 | San Marcos River, City of |
| Willow Springs Creek Lower Tributary | TBD | Compass PTS JV | HSFE06-15- J-0002 | 5/31/2016 | San Marcos River, City of |
| Wilson Creek | 2/18/1998 | USACE | EMW-94-E- 4317 | June 1995 | Hays County, Unincorporated Areas |
| Yorks Creek | TBD | HALFF | W9127S-10- D-0022 | February 2015 | Hays County, Unincorporated Areas |
| Yorks Creek Tributary 1 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Yorks Creek Tributary 2 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |
| Yorks Creek Tributary 3 | TBD | HALFF | 1008-07- 5510 | February 2013 | Hays County, Unincorporated Areas |

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

| Community | FIS Report Dated | Date of Meeting | Meeting Type | Attended By |
|--------------------------------------|------------------|-----------------|----------------------|---|
| Austin, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Bear Creek, Village of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Buda, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Creedmoor, City of | 09/02/2005 | * | * | * |
| Dripping Springs, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Hays County, Unincorporated Areas | | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| | TBD | 09/21/2016 | Hydrology Meeting | Hays County, Caldwell County, Cities of Luling, San Marcos, and Wimberley, Compass JV, FEMA, GBRA, TWDB, USGS, and USACE |
| | | 09/22/2016 | Flood Risk Review | Hays County, Caldwell County, City of San Marcos, TWDB, TDPS, GBRA, FEMA, and Compass JV |
| | | 10/19/2016 | Flood Risk Review | Hays County, Caldwell, Guadalupe County, Cities of Martindale, Woodcreek, San Marcos, Luling, Wimberley, FEMA, TWDB, Compass JV |
| Hays, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Kyle, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Mountain City, City of | TBD | 04/05/2016 | Flood Risk Review | Hays County, Cities of Austin and Buda, RAMPP, Compass JV, FEMA, TWDB, TDEM, and FEMA |
| Niederwald, City of | 09/02/2005 | * | * | * |

Table 29: Community Meetings, (continued)

| Community | FIS Report Dated | Date of Meeting | Meeting Type | Attended By |
|---------------------|------------------|-----------------|----------------------|---|
| | | 09/21/2016 | Hydrology Meeting | Hays County, Caldwell County, Cities of Luling, San Marcos, and Wimberley, Compass JV, FEMA, GBRA, TWDB, USGS, and USACE |
| San Marcos, City of | TBD | 09/22/2016 | Flood Risk Review | Hays County, Caldwell County, City of San Marcos, TWDB, TDPS, GBRA, FEMA, and Compass JV |
| | | 10/19/2016 | Flood Risk Review | Hays County, Caldwell, Guadalupe County, Cities of Martindale, Woodcreek, San Marcos, Luling, Wimberley, FEMA, TWDB, Compass JV |
| Uhland, City of | 09/02/2005 | * | * | * |
| Wimberley, City of | TBD | 09/21/2016 | Hydrology Meeting | Hays County, Caldwell County, Cities of Luling, San Marcos, and Wimberley, Compass JV, FEMA, GBRA, TWDB, USGS, and USACE |
| | | 09/22/2016 | Flood Risk Review | Hays County, Caldwell County, City of San Marcos, TWDB, TDPS, GBRA, FEMA, and Compass JV |
| | | 10/19/2016 | Flood Risk Review | Hays County, Caldwell, Guadalupe County, Cities of Martindale, Woodcreek, San Marcos, Luling, Wimberley, FEMA, TWDB, Compass JV |
| Woodcreek, City of | | 09/21/2016 | Hydrology Meeting | Hays County, Caldwell County, Cities of Luling, San Marcos, and Wimberley, Compass JV, FEMA, GBRA, TWDB, USGS, and USACE |
| | TBD | 09/22/2016 | Flood Risk Review | Hays County, Caldwell County, City of San Marcos, TWDB, TDPS, GBRA, FEMA, and Compass JV |
| | | 10/19/2016 | Flood Risk Review | Hays County, Caldwell, Guadalupe County, Cities of Martindale, Woodcreek, San Marcos, Luling, Wimberley, FEMA, TWDB, Compass JV |

*No Community Meetings were held for the 09/02/2005 FIS

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Hays County (FEMA 2005).

Table 30 is a list of the locations where FIRMs for Hays County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

| Community | Address | City | State | Zip Code |
|--------------------------------------|---|---------------------|-------|----------|
| Austin, City of | Floodplain Administrator's Office 8600 North Madrone Trail | Austin | тх | 78737 |
| Bear Creek, Village of | Village of Bear Creek Mayor's Office 6705 Highway 290 West | Austin | ТΧ | 78753 |
| Buda, City of | Engineering Department 405 East Loop Street, Building 100 | Buda | ТΧ | 78610 |
| Creedmoor, City of | City Hall 5008 Hartung Lane | Creedmoor | ТΧ | 78610 |
| Dripping Springs, City of | Public Works Department 511 Mercer Street | Dripping Springs | ТΧ | 78620 |
| Hays, City of | Hays City Hall 520 Country Lane | Buda | ТΧ | 78610 |
| Hays County, Unincorporated Areas | Hays County Development Services Department 2171 Yarrington Road, Suite 100 | Kyle | ТΧ | 78640 |
| Kyle, City of | Building Department 100 West Center Street | Kyle | ТΧ | 78640 |
| Mountain City, City of | City Hall 101 Mountain City Drive | Mountain City | ТΧ | 78610 |
| Niederwald, City of | City Hall 8807 Neiderwald Strasse | Niederwald | ТΧ | 78640 |

Table 30: Map Repositories

| Community | Address | City | State | Zip Code |
|---------------------|---|------------|-------|----------|
| Niederwald, City of | City Hall 8807 Neiderwald Strasse | Niederwald | ТΧ | 78640 |
| San Marcos, City of | Engineering Department San Marcos City Hall 630 East Hopkins Street | San Marcos | тх | 78666 |
| Uhland, City of | City Hall 15 North Old Spanish Trail | Uhland | ТΧ | 78640 |
| Wimberley, City of | Planning and Development Department 221 Stillwater Road | Wimberley | тх | 78676 |
| Woodcreek, City of | City Hall 41 Champions Circle | Woodcreek | тх | 78676 |

Table 30: Map Repositories, (continued)

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

| Table 31: | Additional | Information |
|-----------|------------|-------------|
|-----------|------------|-------------|

| FEMA and the NFIP | | | | |
|--|--|--|--|--|
| FEMA and FEMA Engineering Library website | www.fema.gov/national-flood-insurance-program-flood- hazard-mapping/engineering-library | | | |
| NFIP website | www.fema.gov/national-flood-insurance-program | | | |
| NFHL Dataset | msc.fema.gov | | | |
| Other Federal Agencies | | | | | | |
|--------------------------------------|---|--|--|--|--|--|
| USGS website | www.usgs.gov | | | | | |
| Hydraulic Engineering Center website | www.hec.usace.army.mil | | | | | |
| | State Agencies and Organizations | | | | | |
| State NFIP Coordinator | Michael Segner, CFM Texas Water Development Board 1700 North Congress Avenue P.O. Box 13231 Austin, TX 78711-3231 (512) 463-3509 x111 michael.segner@twdb.texas.gov | | | | | |
| State GIS Coordinator | Mike Ouimet State GIS Coordinator 300 West 15th Street P.O. Box 13564 Austin, TX 78711-3564 (512) 305-9076 Fax: (512) 475-4759 mike.ouimet@dir.state.tx.us | | | | | |

Table 31: Additional Information, (continued)

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 32: Bibliography and References

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|---|---|---------------|-------------------------|--|---------------------------------|
| CENSUS 1980 | U.S. Department of Commerce, Bureau of the Census | 1980 Census of Population, Number of Inhabitants, Texas | | Washington, D.C. | 1981 | www.census.gov |
| CENSUS 2000 | U.S. Department of Commerce, Bureau of the Census | Census 2000 Redistricting Data Summary File | | | | https://data.census.gov/cedsci/ |
| Compass 2022 | Compass PTS JV | Hydraulic Analysis Hays County, Guadalupe Blanco River Authority | | Washington, D.C. | October 28, 2022 | |
| DALMN 1987 | Dallas Morning News | The 1986-1987 Texas Almanac (Sesquicentennial Edition) | | | | |
| FEMA 1978 | Federal Emergency Management Agency | Flood Hazard Boundary Maps, Hays County, Texas (Unincorporated Areas) | | Washington, D.C. | March 1978 | https://msc.fema.gov |
| FEMA 1998 | Federal Emergency Management Agency | Flood Insurance Study, Hays County, Texas, and Incorporated Areas | | Washington, D.C. | February 18, 1998 | https://msc.fema.gov |
| FEMA 2005 | Federal Emergency Management Agency | Flood Insurance Rate Map | | Washington, D.C. | September 2, 2005 | https://msc.fema.gov |
| FEMA 2007 | Federal Emergency Management Agency | LOMR 07-06-1372X | | Washington, D.C. | April 30, 2007 | https://msc.fema.gov |
| FEMA 2008a | Federal Emergency Management Agency | LOMR 07-06-1313P | | Washington, D.C. | January 23, 2008 | https://msc.fema.gov |
| FEMA 2008b | Federal Emergency Management Agency | LOMR 08-06-2092P | | Washington, D.C. | August 15, 2008 | https://msc.fema.gov |

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|--|---|---------------|-------------------------|--|----------------------|
| FEMA 2008c | Federal Emergency Management Agency | LOMR 08-06-0338P | | Washington, D.C. | September 11, 2008 | https://msc.fema.gov |
| FEMA 2009 | Federal Emergency Management Agency | LOMR 09-06-3428P | | Washington, D.C. | December 17, 2009 | https://msc.fema.gov |
| FEMA 2011 | Federal Emergency Management Agency | LOMR 10-06-1474P | | Washington, D.C. | January 27, 2011 | https://msc.fema.gov |
| FEMA 2012 | Federal Emergency Management Agency | LOMR 11-06-3956P | | Washington, D.C. | May 24, 2012 | https://msc.fema.gov |
| FEMA 2013 | Federal Emergency Management Agency | LOMR 12-06-2514P | | Washington, D.C. | May 28, 2013 | https://msc.fema.gov |
| FEMA 2015 | Federal Emergency Management Agency | LOMR 14-06-2877P | | Washington, D.C. | March 30, 2015 | https://msc.fema.gov |
| FEMA 2017 | Federal Emergency Management Agency | LOMR 16-06-3012P | | Washington, D.C. | July 6, 2017 | https://msc.fema.gov |
| FEMA 2018a | Federal Emergency Management Agency | LOMR 17-06-4216P | | Washington, D.C. | July 12, 2018 | https://msc.fema.gov |
| FEMA 2018b | Federal Emergency Management Agency | LOMR 17-06-4031P | | Washington, D.C. | August 16, 2018 | https://msc.fema.gov |
| FEMA 2019a | Federal Emergency Management Agency | LOMR 18-06-2155P | | Washington, D.C. | March 7, 2019 | https://msc.fema.gov |

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|---|---|---------------|-------------------------|--|--|
| FEMA 2019b | Federal Emergency Management Agency | LOMR 18-06-1845P | | Washington, D.C. | April 4, 2019 | https://msc.fema.gov |
| FEMA 2019c | Federal Emergency Management Agency | LOMR 18-06-1606P | | Washington, D.C. | May 16, 2019 | https://msc.fema.gov |
| FEMA 2019d | Federal Emergency Management Agency | LOMR 18-06-3039P | | Washington, D.C. | July 25, 2019 | https://msc.fema.gov |
| FEMA 2021 | Federal Emergency Management Agency | LOMR 20-06-1997P | | Washington, D.C. | March 11, 2021 | https://msc.fema.gov |
| NOAA 1977 | National Oceanic and Atmospheric Administration, National Weather Service | Five to 60-Minute Precipitation Frequency for the Eastern and Central United States Technical Memorandum NWS Hydro- 35 | | Washington, D.C. | June 1977 | https://www.weather.gov/media/ owp/hdsc_documents/Technical Memo_HYDRO35.pdf |
| NOAA 1994 | National Oceanic and Atmospheric Administration | Precipitation Return Frequencies for Hays County, Texas | | Washington, D.C. | 1994 | |
| NRCS 2013 | USDA/NRCS | 8 Digit Watershed Boundary Dataset | | Fort Worth, TX | 2013 | |
| SM 2015 | City of San Marcos, Texas | San Marcos Drainage Master Plan Hydrology and Hydraulics Final Report | | San Marcos, TX | May 2015 | |
| TNRIS 2015 | TNRIS | Orthoimagery top1415_nc- cir_hays_209.jp2 | | Austin, TX | June 2015 | |

| Citation in this FIS | Publisher/ Issuer | <i>Publication Title,</i> "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|---|--|------------------|-------------------------|--|--------------------|
| TNRIS 2016 | TNRIS | City TxDOT - Political Areas | | Austin, TX | February 2016 | |
| TxDOT 2010a | Texas Department of Transportation | Hays Roads | | Austin, TX | April 2010 | |
| TxDOT 2010b | Texas Department of Transportation | Hays Railroads | | Austin, TX | April 2010 | |
| TXHA 1952 | Texas State Historical Association | The Handbook of Texas | | Austin, TX | 1952 | |
| USACE 1957 | U.S. Department of the Army, Corps of Engineers | Standard Project Flood Determinations | | Davis, CA | March 26, 1957 | www.usace.army.mil |
| USACE 1970a | U.S. Department of the Army, Corps of Engineers | Synthetic Unit Hydrograph Relationships, Trinity River Tributaries, Fort Worth- Dallas Urban Area | Thomas Nelson | Davis, CA | September 1970 | www.usace.army.mil |
| USACE 1970b | U.S. Department of the Army, Corps of Engineers | HEC-1 Flood Hydrograph Package | | Davis, CA | October 1970 | www.usace.army.mil |
| USACE 1977 | U.S. Department of the Army, Corps of Engineers | Effects of urbanization on Various Frequency Peak Discharges | Paul Roadman | Davis, CA | October 1977 | www.usace.army.mil |
| USACE 1982 | U.S. Department of the Army, Corps of Engineers | Computer Program NUDALLAS | | Fort Worth, TX | 1982 | www.usace.army.mil |

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|--|---|---------------|-------------------------|--|--------------------|
| USACE 1984 | U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center | HEC-2 Water-Surface Profiles, Generalized Computer Program | | Davis, CA | April 1984 | www.usace.army.mil |
| USACE 1986 | U.S. Department of the Army, Corps of Engineers | NUDALLAS Documentation and Supporting Appendices | | Davis, CA | September 1986 | www.usace.army.mil |
| USACE 1994 | U.S. Department of the Army, Corps of Engineers | Multiple-Regression Equations to Estimate Peak Streamflow Frequency for Streams in Hays County, Texas | | Washington, D.C. | 1994 | www.usace.army.mil |
| USACE 1997 | U.S. Department of the Army, Corps of Engineers | Uncertainty Estimates for Nonanalytic Frequency Curves, ETL 1110-2-537 | | Davis, CA | October 1997 | www.usace.army.mil |
| USACE 2010a | U.S. Department of the Army, Corps of Engineers | HEC-HMS Flood Hydrograph Package v3.5 | | Davis, CA | August 2010 | www.usace.army.mil |
| USACE 2010b | U.S. Department of the Army, Corps of Engineers | HEC-RAS River Analysis System v4.1 | | Davis, CA | 2010 | www.usace.army.mil |
| USACE 2015a | U.S. Department of the Army, Corps of Engineers | HEC-HMS Flood Hydrograph Package v4.1 | | Davis, CA | July 2015 | www.usace.army.mil |

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|--|---|---------------|-------------------------|--|--|
| USACE 2015b | U.S. Department of the Army, Corps of Engineers | Lower Guadalupe Basin Guadalupe-Blanco River Authority Interim Feasibility Study - Phase 2, Technical Report Notebook (TRN) Engineering Analysis - Hydrology and Hydraulics | | Davis, CA | May 2015 | www.usace.army.mil |
| USACE 2016a | U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center | HEC-RAS River Analysis System v5.0.3 | | Davis, CA | February 2016 | www.usace.army.mil |
| USACE 2016b | U.S. Department of the Army, Corps of Engineers | Interagency Flood Risk Management (InFRM) Hydrology Report for the San Marcos River Basin | | Davis, CA | September 2016 | www.usace.army.mil |
| USDOC 1961 | U.S. Department of Commerce, Weather Bureau | Rainfall Frequency Atlas of the United States, Technical Paper No. 40 | | Washington, D.C. | 1961 | https://www.weather.gov/gyx/TP 40s.htm |
| USGS 1967 | U.S. Department of Interior, Geological Survey | 7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Intervals 10 and 20 feet | | Washington, D.C. | 1967 | https://www.usgs.gov/programs/ national-geospatial- program/topographic-maps |
| USGS 1981 | U.S. Department of Interior, Geological Survey | Guidelines for Determining Flood Flow Frequency, Bulletin 17B of the Hydrology Subcommittee | | Washington, D.C. | September 1981 | |
| USGS 1986 | U.S. Department of Interior, Geological Survey | The Effects of Urbanization on Floods in the Austin Metropolitan Area, Texas | | Washington, D.C. | 1986 | www.usgs.gov |

| Citation in this FIS | Publisher/ Issuer | Publication Title, "Article," Volume, Number, etc. | Author/Editor | Place of Publication | Publication Date/ Date of Issuance | Link |
|----------------------------|--|---|--|-------------------------|--|------|
| USGS 1993 | U.S. Department of Interior, Geological Survey | Flood Characteristics of Urban Watersheds in the United States | | Washington, D.C. | 1993 | |
| USGS 1994 | U.S. Department of Interior, Geological Survey | Nationwide Summary of U.S. Geological Survey Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993 | M.E. Jennings, W.O. Thomas Jr., H.C. Riggs | Reston, VA | 1994 | |
| USGS 2004 | U.S. Department of Interior, Geological Survey | Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas SIR 2004-5041 | William Asquith, Meghan Roussel | Washington, D.C. | 2004 | |
| USGS 2016 | U.S. Department of Interior, Geological Survey | USGS National Hydrography Dataset (NHD) Best Resolution HU4-1209 20161104 for HU-4 Subregion FileGDB 10.1 Model Version 2.2.1 | | Reston, VA | November 2016 | |
| USGS 2017 | U.S. Department of Interior, Geological Survey | USGS Gage Locations | | Washington, D.C. | 2017 | |

































