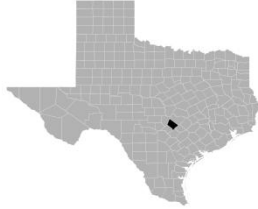


# FLOOD INSURANCE STUDY

## FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 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,<br>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  
**48209CV002B**

Version Number 2.3.3.3



# FEMA

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### **Published Separately**

Flood Insurance Rate Map (FIRM)

Figure 7: Frequency Discharge-Drainage Area Curves

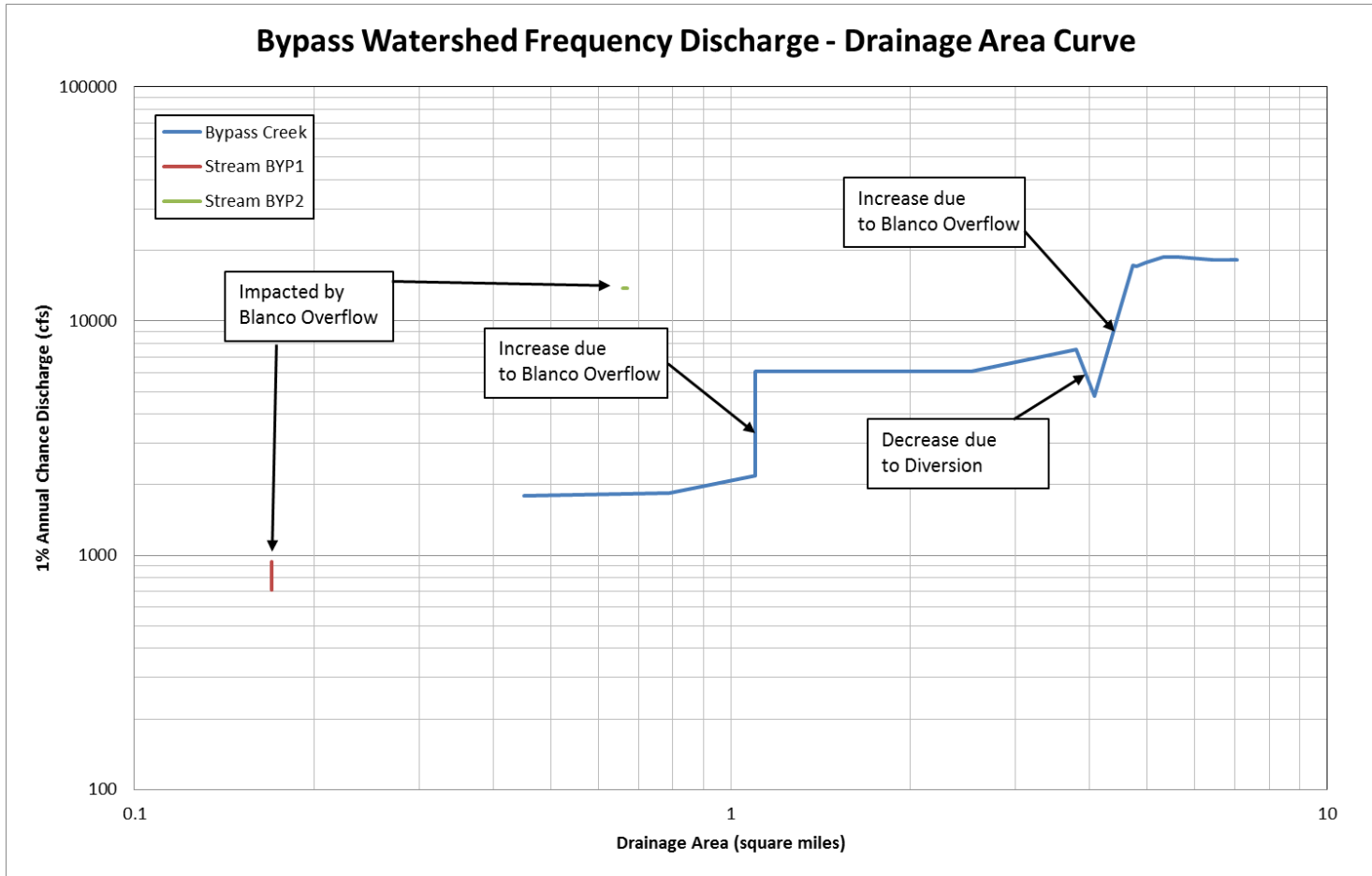


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

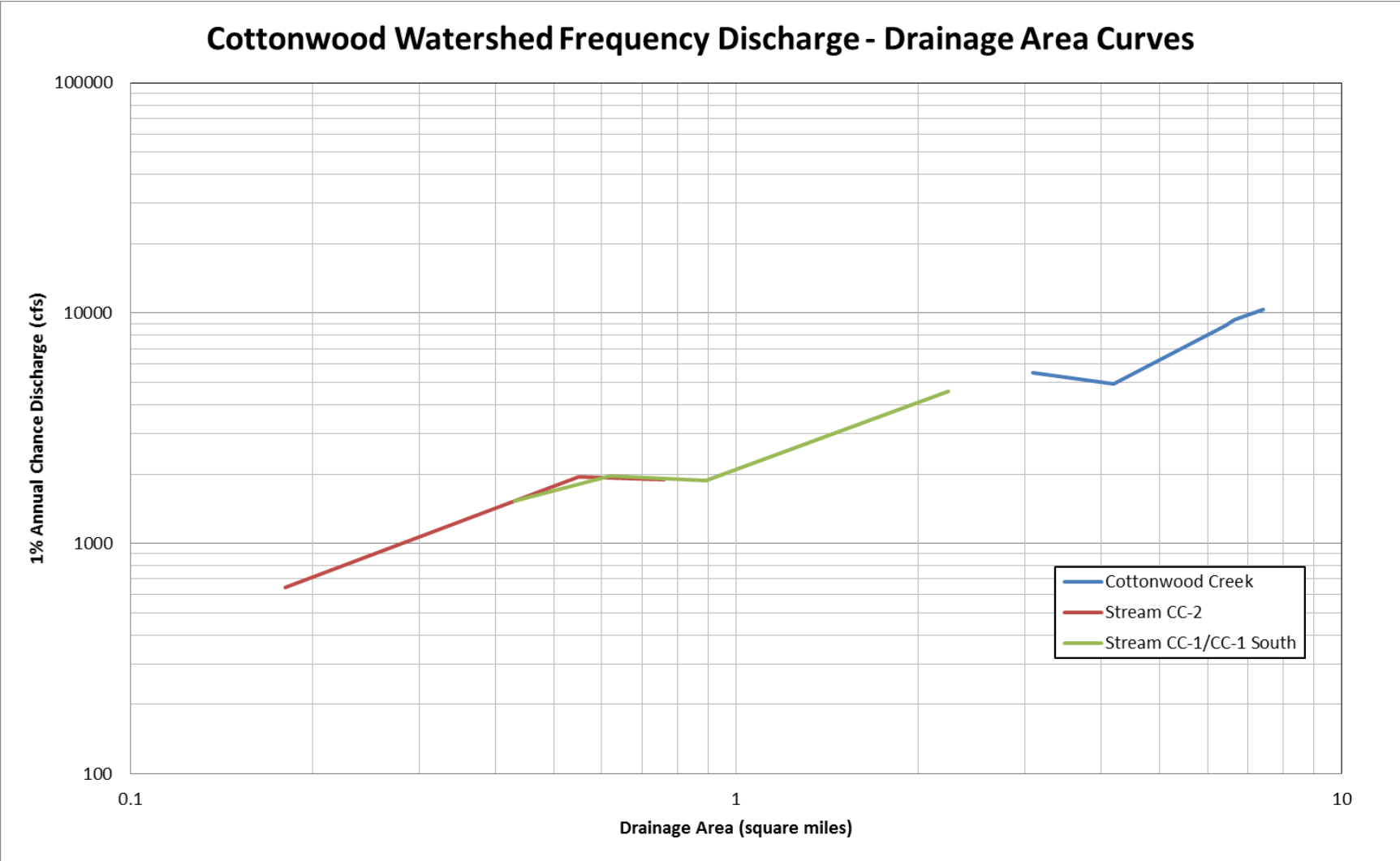




Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

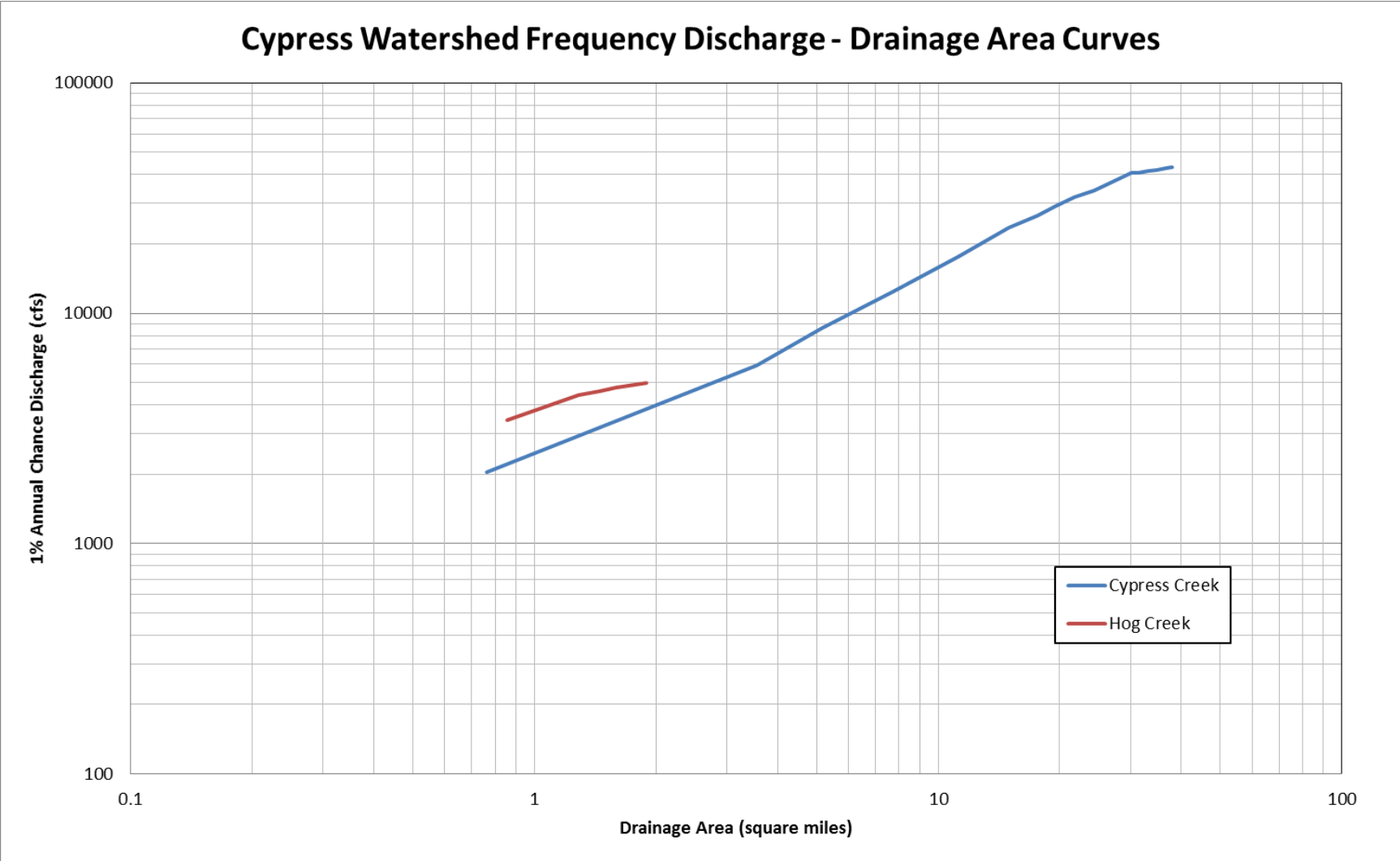


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

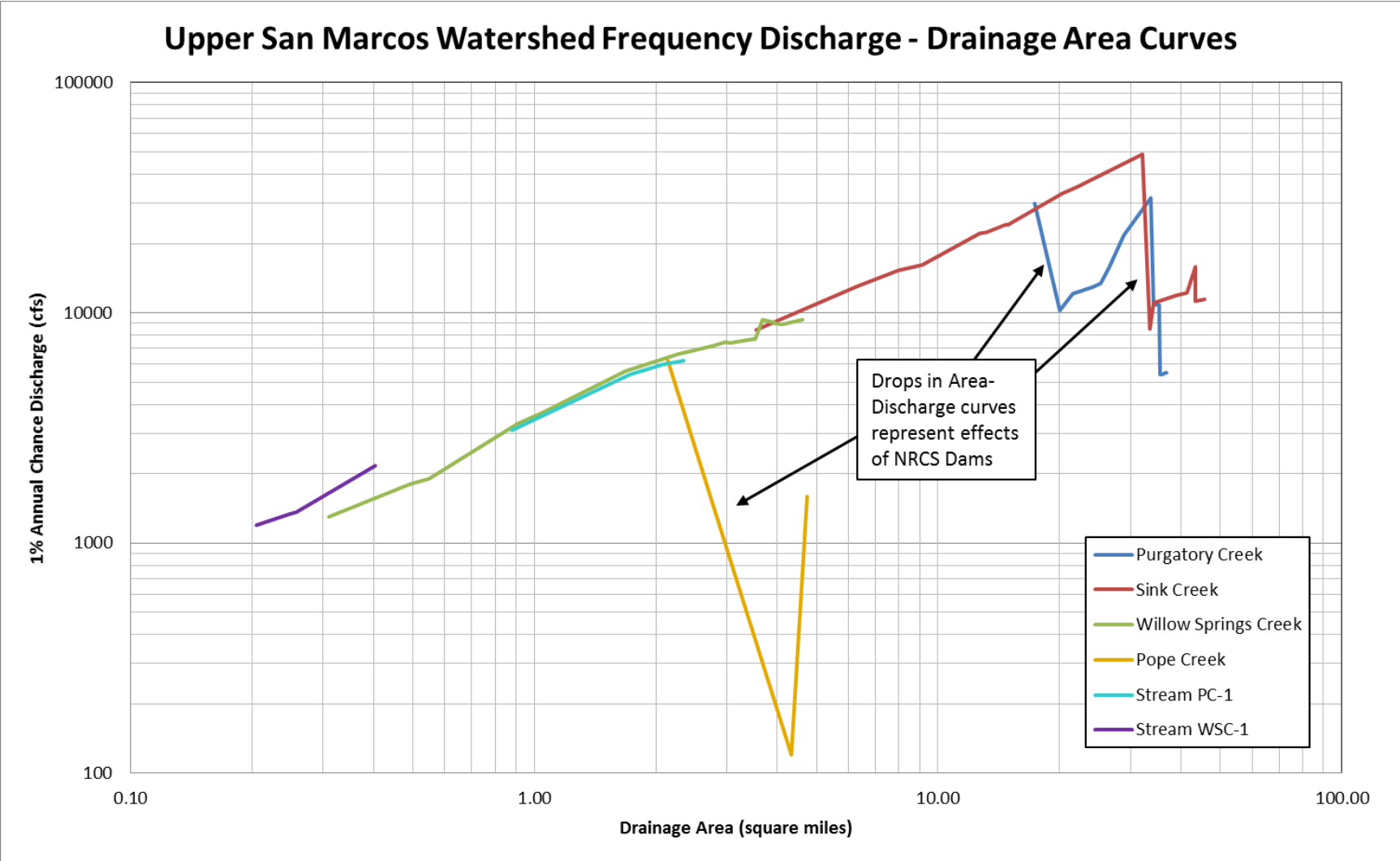
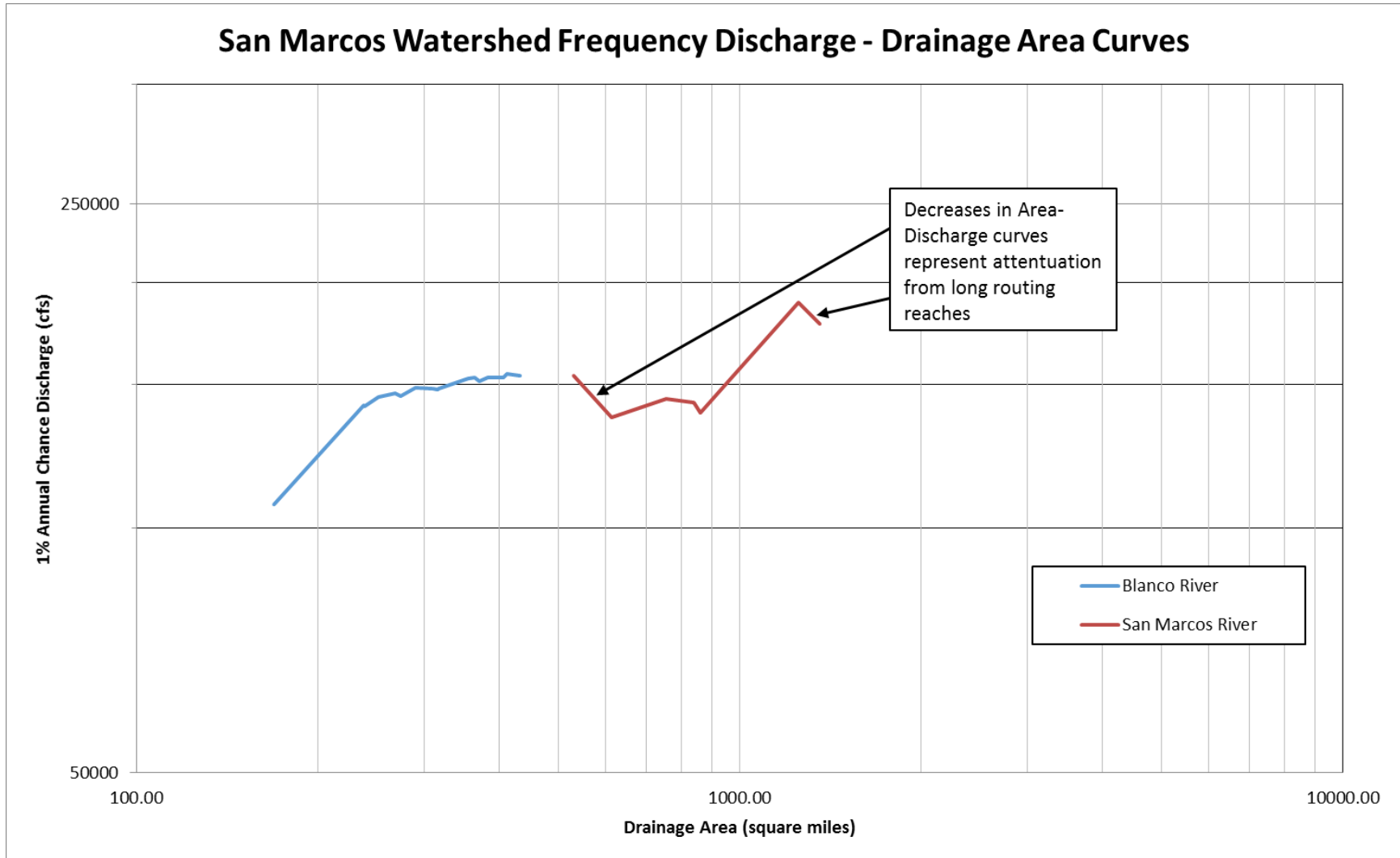


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)



**Table 10: Summary of Non-Coastal Stillwater Elevations**

| Flooding Source                 | Location                                 | Elevations (feet NAVD88) |                  |                  |                  |                    |
|---------------------------------|--|--------------------------|------------------|------------------|------------------|--------------------|
|                                 |  | 10% Annual Chance        | 4% Annual Chance | 2% Annual Chance | 1% Annual Chance | 0.2% Annual Chance |
| Brushy Creek                    | At SCS Dam No. 10                        | 678.8                    | *                | 682.2            | 683.4            | 685.2              |
| Brushy Creek                    | At SCS Dam No. 12                        | 613.1                    | *                | 616.0            | 617.2            | 619.0              |
| Cottonwood Creek/Unnamed Lake   | At SCS Dam No. 13                        | 585.3                    | *                | 590.7            | 592.2            | 594.9              |
| Cottonwood Creek                | At San Marcos Outlet Mall Detention Pond | 638.9                    | *                | 639.8            | 640.2            | 641.0              |
| Plum Creek                      | At SCS Dam No. 1                         | 750.9                    | *                | 754.2            | 755.6            | 758.6              |
| Pope Creek                      | At NRCS Dam No. 2                        | 708.6                    | 712.0            | 714.6            | 716.5            | 719.8              |
| Stream Plum-1                   | At SCS Dam No. 2                         | 655.6                    | *                | 658.6            | 659.7            | 663.5              |
| Unnamed Tributary to Plum Creek | At SCS Dam No. 3                         | *                        | *                | *                | 660.4            | *                  |

\*Not calculated for this Flood Risk Project

**Table 11: Stream Gage Information used to Determine Discharges**

| Flooding Source  | Gage Identifier | Agency that Maintains Gage | Site Name                                | Drainage Area (Square Miles) | Period of Record |            |
|------------------|-----------------|----------------------------|--|------------------------------|------------------|------------|
|                  |                 |                            |  |                              | From             | To         |
| Bear Creek       | 08158810        | USGS                       | Bear Creek bl FM 1826 near Driftwood, TX | 12.2                         | 07/07/1979       | Present    |
| Blanco River     | 08171000        | USGS                       | Blanco River at Wimberly, TX             | 355                          | 08/06/1924       | Present    |
| Blanco River     | 08171300        | USGS                       | Blanco River near Kyle, TX               | 412                          | 05/29/1956       | Present    |
| Onion Creek      | 08158700        | USGS                       | Onion Creek near Driftwood, TX           | 124                          | 07/01/1979       | Present    |
| Onion Creek      | 08158800        | USGS                       | Onion Creek at Buda, TX                  | 166                          | 07/01/1979       | 02/20/1996 |
| San Marcos River | 08170500        | USGS                       | San Marcos River at San Marcos, TX       | 48.9                         | 07/1915          | Present    |

## 5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles. For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, "Floodway Data."

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

**Table 12: Summary of Hydrologic and Hydraulic Analyses**

| Flooding Source             | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-----------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Barton Creek                | At Hays County<br>political boundary  | Approximately<br>300 feet<br>downstream of<br>Twin Oaks Trail                                   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Barton Creek                | At Bell Springs<br>Rd and Upstream<br>Limit of Detailed<br>Study                                | Approximately<br>500 feet<br>downstream of<br>Twin Oaks Trl<br>Lane                             | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2015              | A                        |                        |
| Barton Creek<br>Tributary   | At confluence<br>with Barton<br>Creek   | Approximately<br>1,325 feet<br>upstream of<br>confluence with<br>Barton Creek                   | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Barton Creek<br>Tributary 1 | Approximately<br>130 feet<br>downstream of<br>confluence with<br>Barton Creek<br>Tributary 39-3 | Approximately<br>1,650 feet<br>upstream of<br>confluence with<br>Barton Creek<br>Tributary 39-3 | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Barton Creek<br>Tributary 1 | At confluence<br>with Barton<br>Creek   | At confluence<br>with Barton<br>Creek Tributary<br>39-3   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |                        |
| Barton Creek<br>Tributary 2 | At confluence<br>with Barton<br>Creek   | Approximately<br>4,220 feet<br>upstream of Hart<br>Lane   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                | Study Limits<br>Downstream Limit                  | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--------------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Barton Creek<br>Tributary 2-1  | At confluence<br>with Barton<br>Creek Tributary 2 | Approximately<br>770 feet<br>upstream of Bells<br>Springs Road                          | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Barton Creek<br>Tributary 3    | At confluence<br>with Barton<br>Creek             | Approximately<br>5,450 feet<br>upstream of Bells<br>Springs Road                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Barton Creek<br>Tributary 39-1 | At confluence<br>with Barton<br>Creek Tributary 1 | Approximately<br>1,350 feet<br>upstream of<br>Barton Creek<br>Tributary                 | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Barton Creek<br>Tributary 39-2 | At confluence<br>with Barton<br>Creek             | Approximately<br>2,150 feet<br>upstream of W<br>Fitzhugh Road                           | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Barton Creek<br>Tributary 39-3 | At confluence<br>with Barton<br>Creek Tributary 1 | Approximately<br>1,750 feet<br>upstream of<br>Barton Creek<br>Tributary 1<br>confluence | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Barton Creek<br>Tributary 40   | At confluence<br>with Barton<br>Creek             | Approximately<br>2,000 feet<br>upstream of<br>Barton Creek<br>confluence                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |



**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source              | Study Limits<br>Downstream Limit                     | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Bear Creek                   | Hays County<br>boundary                              | Approximately<br>1,970 feet<br>upstream of<br>Wildwood Hills<br>Lane                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Bear Creek                   | At upstream limit<br>of Bear Creek<br>detailed study | Approximately<br>2,250 feet<br>upstream of<br>Aspen Drive                                   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Bear Creek<br>Tributary 1    | At Hays County<br>political boundary                 | Approximately<br>3,650 feet<br>upstream of Hays<br>County political<br>boundary             | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 1A   | At confluence<br>with Stream<br>Bear-1               | Approximately<br>6,094 feet<br>upstream of<br>confluence with<br>Stream Bear-1              | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Bear Creek<br>Tributary 1B   | At Hays County<br>political boundary                 | Approximately<br>1,000 feet<br>upstream of Old<br>Baldy Trail                               | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 1B-1 | At confluence<br>with Bear Creek<br>Tributary 1B     | Approximately<br>1,100 feet<br>upstream of<br>confluence with<br>Bear Creek<br>Tributary 1B | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source             | Study Limits<br>Downstream Limit                | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-----------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Bear Creek<br>Tributary 3   | At confluence<br>with Bear Creek                | Approximately<br>3,675 feet<br>upstream of FM<br>1826                       | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 4   | At confluence<br>with Bear Creek                | Approximately<br>5,500 feet<br>upstream of<br>Crosscreek Drive              | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 5   | At confluence<br>with Bear Creek                | Approximately<br>1,400 feet<br>upstream of<br>Signal Hill Road              | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 5-1 | At confluence<br>with Bear Creek<br>Tributary 5 | Approximately<br>1,400 feet<br>upstream of<br>Signal Hill Road              | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 6   | At confluence<br>with Bear Creek                | Approximately<br>2,400 feet<br>upstream of<br>confluence with<br>Bear Creek | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Bear Creek<br>Tributary 7   | At confluence<br>with Bear Creek                | Approximately<br>5,000 feet<br>upstream of<br>Belterra Drive                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                  | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations  |
|----------------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Bear Creek<br>Tributary 7-1      | At confluence<br>with Bear Creek<br>Tributary 7                           | Approximately<br>1,700 feet<br>upstream of the<br>confluence with<br>Bear Creek<br>Tributary 7                              | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Bear Creek<br>Tributary A        | At confluence<br>with Bear Creek  | Approximately<br>5,620 feet<br>upstream of the<br>confluence with<br>Bear Creek   | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Blanco-San<br>Marcos<br>Overflow | From divergence<br>with Blanco River<br>downstream of<br>Martindale Road  | Convergence<br>with San Marcos<br>River<br>approximately<br>2,500 feet<br>upstream of<br>Blanco/San<br>Marcos<br>confluence | N/A                                | HEC-RAS<br>5.0.3                     | February<br>2013              | AO                       | Flows are taken from lateral weirs in the<br>Blanco unsteady hydraulic model. |
| Blanco<br>Gardens<br>Overflow    | From divergence<br>with Blanco River<br>downstream of<br>State Highway 80 | Convergence<br>with San Marcos<br>River<br>approximately<br>600 feet<br>upstream of<br>Cape Road                            | N/A                                | HEC-RAS 4.1                          | 8/31/2016                     | AO                       | Flows are taken from lateral weirs in the<br>Blanco unsteady hydraulic model  |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                        | Study Limits<br>Downstream Limit   | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations  |
|--|--|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Blanco River                           | Approximately 1.2 miles upstream of Post Road                                      | At the Hays County Line  | HEC-HMS v. 4.1                     | HEC-RAS 5.0.3                        | 8/31/2016                     | AE w/<br>Floodway        | Unsteady analysis calibrated to May 2015 high water marks.                                    |
| Blanco River Overflow Upstream of I-35 | From divergence with Blanco River approximately 700 feet upstream of Interstate 35 | Confluence with Blanco River approximately 1,600 feet upstream of Uhland Road    | N/A                                | HEC-RAS 5.0.3                        | 8/31/2016                     | AE w/<br>Floodway        | Flows are taken from lateral weirs in the Blanco unsteady hydraulic model.                    |
| Brushy Creek                           | Approximately 5,770 feet downstream of the Hays County boundary                    | Approximately 1,150 feet upstream of Satterwhite Road                            | Regression Equations               | HEC-2                                | June 1995                     | AE                       |   |
| Bypass Creek                           | Confluence with San Marcos River   | Approximately 2 miles upstream of Harris Hill Road                               | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | Overflow hydrographs from Blanco River were taken from Blanco River unsteady hydraulic model. |
| Cambrian Branch                        | At confluence with Barton Creek  | Approximately 3,400 feet upstream of confluence with Cambrian Branch Tributary 1 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |   |
| Cambrian Branch Tributary 1            | At confluence with Cambrian Branch   | Approximately 1,980 feet upstream of confluence with Cambrian Branch             | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |   |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                                 | Study Limits<br>Downstream Limit                       | Study Limits<br>Upstream Limit                          | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations                              |
|---|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Cottonwood Branch<br>(Tributary to Roy Branch)  | At confluence with Roy Branch                          | Approximately 1,010 feet upstream of Hidden Hills Drive | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |   |
| Cottonwood Branch<br>(Tributary to Onion Creek) | At confluence with Onion Creek                         | Approximately 1,220 feet upstream of Loop 165           | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |   |
| Cottonwood Creek                                | Approximately 0.1 miles downstream of Old Bastrop Road | Approximately 380 feet downstream of E McCarty Lane     | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 5/31/2016                     | AE w/<br>Floodway        | Overflows upstream of Interstate 35 modeled in HMS. |
| Cottonwood Creek                                | Approximately 380 feet downstream of E McCarty Lane    | Approximately 180 feet upstream of Centerpoint Road     | Regression Equations               | HEC-2                                | June 1995                     | AE w/<br>Floodway        |   |
| Cypress Creek                                   | Confluence with Blanco River                           | Approximately 3.7 miles upstream of Pump Station Road   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 4/30/2016                     | AE w/<br>Floodway        |   |
| Dripping Springs                                | At confluence with Onion Creek                         | Approximately 4,160 feet upstream of Mercer Street      | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |   |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source            | Study Limits<br>Downstream Limit     | Study Limits<br>Upstream Limit                                     | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|----------------------------|--------------------------------------|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Dripping Springs Tributary | At confluence with Drippings Springs | Approximately 130 feet downstream of Youth Sports Association Road | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |                        |
| Eskew Branch               | At confluence with Onion Creek       | Approximately 700 feet downstream of FM 165                        | Regression Equations               | HEC-RAS 4.1                          | February 2013                 | A                        |                        |
| Fitzhugh Creek             | At confluence with Barton Creek      | Approximately 3,800 feet downstream of Bell Springs Road           | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Fitzhugh Creek Tributary 1 | At confluence with Fitzhugh Creek    | Approximately 3,450 feet upstream of W Fitzhugh Road               | Regression Equations               | HEC-RAS 4.1                          | February 2015                 | A                        |                        |
| Fitzhugh Creek Tributary 2 | At confluence with Fitzhugh Creek    | Approximately 3,450 feet upstream of Fitzhugh Creek                | Regression Equations               | HEC-RAS 4.1                          | February 2015                 | A                        |                        |
| Fitzhugh Creek Tributary 3 | At confluence with Fitzhugh Creek    | Approximately 2,500 feet upstream of Fitzhugh Creek                | Regression Equations               | HEC-RAS 4.1                          | February 2015                 | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source           | Study Limits<br>Downstream Limit           | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|---------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Flat Creek                | At confluence<br>with Onion Creek          | Approximately<br>11,500 feet<br>upstream of<br>Covered Bridge<br>Drive                | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Freestone<br>Branch       | At confluence<br>with South Onion<br>Creek | Approximately<br>9,100 feet<br>upstream of<br>confluence with<br>South Onion<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Garlic Creek              | At Hays County<br>political boundary       | Approximately<br>2,855 feet<br>upstream of<br>Maybrook Drive                          | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |                        |
| Garlic Creek<br>Tributary | At confluence<br>with Garlic Creek         | Approximately<br>155 feet<br>upstream of<br>Remuda Trail                              | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |                        |
| Gatlin Creek              | At confluence<br>with Onion Creek          | Approximately<br>1,880 feet<br>downstream of<br>FM 12                                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Grooms Branch             | At confluence<br>with South Onion<br>Creek | Approximately<br>3,000 feet<br>upstream of<br>Pursley Road                            | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                | Study Limits<br>Downstream Limit           | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations                              |
|--------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Grooms Branch<br>Tributary 1   | At the confluence<br>with Grooms<br>Branch | Approximately<br>700 feet<br>upstream of the<br>confluence with<br>Grooms Branch    | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Hog Creek                      | At confluence<br>with Cypress<br>Creek     | At FM 12  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 4/30/2016                     | AE w/<br>Floodway        | Split flow modeled at golf course overflow<br>area. |
| Hog Creek<br>Overflow          | At the<br>convergence with<br>Hog Creek    | At the divergence<br>with Hog Creek   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 4/30/2016                     | A                        |   |
| Jackson<br>Branch              | At confluence<br>with Onion Creek          | Approximately<br>4,200 feet<br>upstream of<br>Cross Creek                           | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |   |
| Jackson<br>Branch<br>Tributary | At confluence<br>with Jackson<br>Branch    | Approximately<br>6,400 feet<br>upstream of the<br>confluence with<br>Jackson Branch | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Little Barton<br>Creek         | At confluence<br>with Barton<br>Creek      | Approximately<br>2,620 feet<br>upstream of<br>Springlake Drive                      | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |   |
| Little Bear<br>Creek           | Hays County<br>boundary                    | Approximately<br>2,700 feet<br>upstream of<br>Arbor Trail                           | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |   |



**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                       | Study Limits<br>Downstream Limit                             | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|---------------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Little Bear<br>Creek                  | Approximately<br>2,700 feet<br>upstream of<br>Arbor Trail    | Approximately<br>12,000 feet<br>upstream of FM<br>967   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Little Bear<br>Creek Tributary<br>1   | Approximately<br>500 feet<br>downstream of<br>Chaparral Road | Approximately<br>13,500 feet<br>upstream of<br>Chaparral Road                                       | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Little Bear<br>Creek Tributary<br>1-1 | At the confluence<br>of Little Bear<br>Creek Tributary 1     | Approximately<br>5,350 feet<br>upstream of the<br>confluence of<br>Little Bear Creek<br>Tributary 1 | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>1-2 | At the confluence<br>of Little Bear<br>Creek Tributary 1     | Approximately<br>1,700 feet<br>upstream of the<br>confluence of<br>Little Bear Creek<br>Tributary 1 | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>1A  | At the confluence<br>of Little Bear<br>Creek                 | Approximately<br>3,800 feet<br>upstream of FM<br>1626   | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>2   | At the confluence<br>of Little Bear<br>Creek                 | Approximately<br>10,100 feet<br>upstream of the<br>confluence of<br>Little Bear Creek               | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                       | Study Limits<br>Downstream Limit                         | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|---------------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Little Bear<br>Creek Tributary<br>2-1 | At the confluence<br>of Little Bear<br>Creek Tributary 2 | Approximately<br>5,900 feet<br>upstream of the<br>confluence of<br>Little Bear Creek<br>Tributary 2 | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>2A  | At the confluence<br>of Little Bear<br>Creek             | Approximately<br>8,900 feet<br>upstream of the<br>confluence of<br>Little Bear Creek                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>2B  | At the confluence<br>of Little Bear<br>Creek             | Approximately<br>4,380 feet<br>upstream of the<br>confluence of<br>Little Bear Creek                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>3   | At the confluence<br>of Little Bear<br>Creek             | Approximately<br>2,900 feet<br>upstream of the<br>confluence of<br>Little Bear Creek                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>4   | At the confluence<br>of Little Bear<br>Creek             | Approximately<br>2,500 feet<br>upstream of the<br>confluence of<br>Little Bear Creek                | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                     | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-------------------------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Little Bear<br>Creek Tributary<br>5 | At the confluence<br>of Little Bear<br>Creek                                    | Approximately<br>1,550 feet<br>upstream of the<br>confluence of<br>Little Bear Creek | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>6 | At the confluence<br>of Little Bear<br>Creek                                    | Approximately<br>3,100 feet<br>upstream of the<br>confluence of<br>Little Bear Creek | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Little Bear<br>Creek Tributary<br>7 | At the confluence<br>of Little Bear<br>Creek                                    | Approximately<br>3,400 feet<br>upstream of the<br>confluence of<br>Little Bear Creek | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Loneman<br>Creek                    | Confluence with<br>the Blanco River   | Approximately<br>11,030 feet<br>upstream of Deer<br>Lake Estates<br>Road             | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Long Branch                         | Approximately<br>360 feet<br>downstream of<br>Hays County<br>political boundary | Approximately<br>650 feet<br>downstream of<br>Pemberton Way                          | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |
| Long Branch 2<br>Tributary 1        | At the confluence<br>of Long Branch   | Approximately<br>1,550 feet<br>upstream of the<br>confluence of<br>Long Branch       | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                    | Study Limits<br>Downstream Limit                         | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|------------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Long Branch 2<br>Tributary 2       | At the confluence<br>of Long Branch                      | Approximately<br>2,400 feet<br>upstream of the<br>confluence of<br>Long Branch                | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Long Branch 2<br>Tributary 2-1     | At the confluence<br>of Long Branch 2<br>Tributary 2     | Approximately<br>600 feet<br>upstream of the<br>confluence of<br>Long Branch 2<br>Tributary 2 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Millseat Branch                    | At the confluence<br>of Onion Creek                      | Approximately<br>3,000 feet<br>upstream of US<br>290  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Mustang<br>Branch                  | At the confluence<br>of Onion Creek                      | At FM 150   | Regression<br>Equations            | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Mustang<br>Branch<br>Tributary 1   | At the confluence<br>of Mustang<br>Branch                | At Jack C Hays<br>Trail   | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Mustang<br>Branch<br>Tributary 2   | At the confluence<br>of Mustang<br>Branch                | Approximately<br>3,675 feet<br>upstream of<br>Indian Creek<br>Road                            | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Mustang<br>Branch<br>Tributary 2-1 | At the confluence<br>of Mustang<br>Branch Tributary<br>2 | At Maple Drive  | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                  | Study Limits<br>Downstream Limit          | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|----------------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Mustang<br>Branch<br>Tributary 3 | At the confluence<br>of Mustang<br>Branch | Approximately<br>2,525 feet<br>upstream of the<br>confluence of<br>Mustang Branch | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Mustang<br>Branch<br>Tributary 4 | At the confluence<br>of Mustang<br>Branch | Approximately<br>2,350 feet<br>upstream of the<br>confluence of<br>Mustang Branch | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Mustang<br>Branch<br>Tributary 5 | At the confluence<br>of Mustang<br>Branch | Approximately<br>2,075 feet<br>upstream of the<br>confluence of<br>Mustang Branch | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Mustang<br>Branch<br>Tributary 6 | At the confluence<br>of Mustang<br>Branch | Approximately<br>4,525 feet<br>upstream of the<br>confluence of<br>Mustang Branch | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Mustang<br>Branch<br>Tributary 7 | At the confluence<br>of Mustang<br>Branch | Approximately<br>1,725 feet<br>upstream of the<br>confluence of<br>Mustang Branch | Regression<br>Equations            | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| North Gatlin<br>Creek            | At the confluence<br>of Gatlin Creek      | At Mt Olive<br>School Road  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source        | Study Limits<br>Downstream Limit                               | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|------------------------|--|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| NRCS Dam 1<br>Spillway | Confluence with<br>Sink Creek                                  | Approximately<br>0.64 miles<br>upstream of Sink<br>Creek confluence                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |
| NRCS Dam 2<br>Spillway | Confluence with<br>Pope Creek                                  | Approximately<br>0.31 miles<br>upstream of Pope<br>Creek confluence                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |
| NRCS Dam 3<br>Spillway | Confluence with<br>Sink Creek                                  | Approximately<br>0.32 miles<br>upstream of Sink<br>Creek confluence                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |
| NRCS Dam 4<br>Spillway | Confluence with<br>Purgatory Creek                             | Approximately<br>0.23 miles<br>upstream of<br>Purgatory Creek<br>confluence                | HEC-HMS 3.5                        | HEC-RAS<br>5.0.3`                    | 8/31/2016                     | A                        |                        |
| NRCS Dam 5<br>Spillway | Confluence with<br>Purgatory Creek<br>at Wonder World<br>Drive | Approximately<br>0.61 miles<br>upstream of<br>Purgatory Creek<br>confluence                | HEC-HMS 3.5                        | HEC-RAS<br>5.0.3`                    | 8/31/2016                     | A                        |                        |
| Onion Creek            | At confluence<br>with Colorado<br>River                        | Approximately<br>700 feet<br>upstream of<br>confluence with<br>Onion Creek<br>Tributary 22 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE w/<br>Floodway        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source         | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit                                     | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-------------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek             | Approximately 700 feet upstream of confluence with Onion Creek Tributary 22 | At Hays County political boundary                                  | Regression Equations               | HEC-RAS 4.1                          | February 2013                 | A                        |                        |
| Onion Creek Tributary 1 | At the confluence of Onion Creek  | At N Loop 4  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek Tributary 2 | At the confluence of Onion Creek  | Approximately 2,350 feet upstream of N Loop 4                      | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek Tributary 3 | At the confluence of Onion Creek  | Approximately 9,500 feet upstream of the confluence of Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February 2013                 | A                        |                        |
| Onion Creek Tributary 4 | At the confluence of Onion Creek  | Approximately 4,750 feet upstream of the confluence of Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February 2013                 | A                        |                        |
| Onion Creek Tributary 5 | At the confluence of Onion Creek  | Approximately 4 miles upstream of the confluence of Onion Creek    | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                | Study Limits<br>Downstream Limit                     | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek<br>Tributary 5-1   | At the confluence<br>of Onion Creek<br>Tributary 5   | Approximately<br>3.1 miles<br>upstream of the<br>confluence of<br>Orion Creek<br>Tributary 5    | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek<br>Tributary 5-1-1 | At the confluence<br>of Onion Creek<br>Tributary 5-1 | Approximately<br>3,100 feet<br>upstream of the<br>confluence of<br>Orion Creek<br>Tributary 5-1 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 6     | At the confluence<br>of Onion Creek                  | Approximately<br>4,800 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 7     | At the confluence<br>of Onion Creek                  | Approximately<br>6,350 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 8     | At the confluence<br>of Onion Creek                  | Approximately<br>4,875 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |



**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                | Study Limits<br>Downstream Limit                     | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--------------------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek<br>Tributary 8-1   | At the confluence<br>of Onion Creek<br>Tributary 8   | Approximately<br>2,000 feet<br>upstream of the<br>confluence of<br>Orion Creek<br>Tributary 8   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 8-1-1 | At the confluence<br>of Onion Creek<br>Tributary 8-1 | Approximately<br>1,650 feet<br>upstream of the<br>confluence of<br>Orion Creek<br>Tributary 8-1 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 9     | At the confluence<br>of Onion Creek                  | Approximately<br>2,400 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 10    | At the confluence<br>of Onion Creek                  | Approximately<br>6,275 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 11    | At the confluence<br>of Onion Creek                  | Approximately<br>2,550 feet<br>upstream of the<br>confluence of<br>Onion Creek                  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source               | Study Limits<br>Downstream Limit                    | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-------------------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek<br>Tributary 12   | At the confluence<br>of Onion Creek                 | Approximately<br>3,150 feet<br>upstream of the<br>confluence of<br>Onion Creek                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 13   | At the confluence<br>of Onion Creek                 | Approximately<br>3,250 feet<br>upstream of the<br>confluence of<br>Onion Creek                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 14   | At the confluence<br>of Onion Creek                 | Approximately<br>4,450 feet<br>upstream of the<br>confluence of<br>Onion Creek                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 14-1 | At the confluence<br>of Onion Creek<br>Tributary 14 | Approximately<br>1,350 feet<br>upstream of the<br>confluence of<br>Onion Creek<br>Tributary 14 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 15   | At the confluence<br>of Onion Creek                 | Approximately<br>2,800 feet<br>upstream of the<br>confluence of<br>Onion Creek                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 16   | At the confluence<br>of Onion Creek                 | Approximately<br>1,500 feet<br>upstream of FM<br>1826  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source               | Study Limits<br>Downstream Limit                    | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-------------------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek<br>Tributary 16-1 | At the confluence<br>of Onion Creek<br>Tributary 16 | At FM 1826   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 17   | At the confluence<br>of Onion Creek                 | Approximately<br>4,000 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 18   | At the confluence<br>of Onion Creek                 | Approximately<br>2,850 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek<br>Tributary 19   | At the confluence<br>of Onion Creek                 | Approximately<br>5,375 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek<br>Tributary 20   | At the confluence<br>of Onion Creek                 | Approximately<br>1,000 feet<br>upstream of<br>Trebbled Waters<br>Trail         | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Onion Creek<br>Tributary 21   | At the confluence<br>of Onion Creek                 | Approximately<br>6,000 feet<br>upstream of<br>Onion Creek                      | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source             | Study Limits<br>Downstream Limit       | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-----------------------------|--|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Onion Creek<br>Tributary 22 | At the confluence<br>of Onion Creek    | Approximately<br>1,700 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 23 | At the confluence<br>of Onion Creek    | Approximately<br>5,275 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Onion Creek<br>Tributary 24 | At the confluence<br>of Onion Creek    | Approximately<br>6,575 feet<br>upstream of the<br>confluence of<br>Onion Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Pier Branch                 | At the confluence<br>of Onion Creek    | At Huck Finn<br>Trail  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Plum Creek                  | City of Uhland<br>coporate<br>boundary | Approximately<br>4,550 feet<br>upstream of the<br>Union Pacific<br>Railroad    | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Pope Creek                  | At the confluence<br>with Sink Creek   | Approximately<br>0.3 miles<br>upstream of<br>NRCS Dam No.2                     | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                   | Study Limits<br>Downstream Limit                    | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used                           | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-----------------------------------|---|---|------------------------------------|--|-------------------------------|--------------------------|------------------------|
| Purgatory<br>Creek                | At the confluence<br>with the San<br>Marcos River   | Approximately<br>3.8 miles<br>upstream of<br>NRCS Dam No.2                        | HEC-HMS 3.5                        | HEC-RAS<br>5.0.3`  | 8/31/2016                     | AE w/<br>Floodway        |                        |
| Purgatory<br>Creek<br>Diversion 1 | At the<br>convergence of<br>Purgatory Creek         | At the<br>Divergence of<br>Purgatory Creek  | HEC-HMS 3.5                        | HEC-RAS<br>5.0.3   | 8/31/2016                     | AE w/<br>Floodway        |                        |
| Purgatory<br>Creek UNT            | At the confluence<br>with Stream PC-3               | Approximately<br>13,400 feet<br>upstream of the<br>confluence with<br>Stream PC-3 | HEC-HMS 3.5                        | HEC-RAS 4.1  | 8/31/2016                     | A                        |                        |
| Purgatory<br>Middle<br>Diversion  | At the confluence<br>with Purgatory<br>Creek        | Divergence with<br>Purgatory Creek<br>at Hunter Road                              | HEC-HMS 3.5                        | HEC-RAS 4.1  | 8/31/2016                     | A                        |                        |
| Richmond<br>Branch                | Approximately<br>400 feet<br>upstream of Dacy<br>Ln | At Windy Hill<br>Road   | IPB_Hydrology                      | Based on SCS<br>Type III 100-<br>year 24-hour<br>precipitation | 1/25/2007                     | AE                       |                        |
| Rocky Branch                      | At the confluence<br>with Onion Creek               | Approximately<br>4,575 feet<br>upstream of La<br>Ventana Parkway                  | HEC-HMS 3.5                        | HEC-RAS 4.1  | August 2014                   | A                        |                        |
| Roy Branch                        | At the confluence<br>with Barton<br>Creek           | Approximately<br>2,410 feet<br>upstream of N<br>Canyonwood<br>Drive               | HEC-HMS 3.5                        | HEC-RAS 4.1  | August 2014                   | AE w/<br>Floodway        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source      | Study Limits<br>Downstream Limit                                    | Study Limits<br>Upstream Limit                                      | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations                                     |
|----------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|--|
| San Marcos River     | Hays County boundary  | Approximately 0.56 miles downstream of Blanco/San Marcos confluence | HEC-HMS 3.5                        | Unsteady HEC-RAS 5.0.3               | 8/31/2016                     | AE w/ Floodway           |  |
| San Marcos River     | Approximately 0.56 miles downstream of Blanco/San Marcos confluence | Approximately 0.3 miles upstream of Lime Kiln Road                  | HEC-HMS 4.1                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/ Floodway           | Unsteady analysis calibrated to May 2015 high water marks. |
| San Marcos Tributary | At the confluence with San Marcos River                             | Approximately 2.7 miles upstream of San Marcos River confluence     | HEC-HMS 3.5                        | Unsteady HEC-RAS 5.0.3               | 8/31/2016                     | A                        |  |
| Sessom Creek         | At the confluence with San Marcos River                             | Approximately 0.1 miles upstream of West Sessom Drive               | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |  |
| Sink Creek           | At the confluence with the San Marcos River                         | Approximately 0.3 miles upstream of Ranch Road 12                   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/ Floodway           |  |
| Smith Creek          | At the confluence with Loneman Creek                                | Approximately 4,680 feet upstream of Deer Lake Road/FM 3237         | Regression Equations               | HEC-2                                | June 1995                     | AE w/ Floodway           |  |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                      | Study Limits<br>Downstream Limit                | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--------------------------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| South Gatlin<br>Creek                | At the confluence<br>with Gatlin Creek          | Approximately<br>10,600 feet<br>upstream of FM<br>12                                       | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| South Gatlin<br>Creek Tributary<br>1 | At the confluence<br>with South Gatlin<br>Creek | Approximately<br>2,900 feet<br>upstream of the<br>confluence with<br>South Gatlin<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| South Gatlin<br>Creek Tributary<br>2 | At the confluence<br>with South Gatlin<br>Creek | Approximately<br>4,675 feet<br>upstream of the<br>confluence with<br>South Gatlin<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| South Gatlin<br>Creek Tributary<br>3 | At the confluence<br>with South Gatlin<br>Creek | Approximately<br>4,850 feet<br>upstream of the<br>confluence with<br>South Gatlin<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| South Onion<br>Creek                 | At the confluence<br>with Onion Creek           | Approximately<br>18,000 feet<br>upstream of the<br>confluence with<br>Freestone<br>Branch  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                     | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|-------------------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| South Onion<br>Creek Tributary<br>1 | At the confluence<br>with South Onion<br>Creek                                  | Approximately<br>2,350 feet<br>upstream of the<br>confluence with<br>South Onion<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| South Onion<br>Creek Tributary<br>2 | At the confluence<br>with South Onion<br>Creek                                  | Approximately<br>4,825 feet<br>upstream of the<br>confluence with<br>South Onion<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| South Onion<br>Creek Tributary<br>3 | At the confluence<br>with South Onion<br>Creek                                  | Approximately<br>1,700 feet<br>upstream of the<br>confluence with<br>South Onion<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Spring Branch                       | Approximately<br>1,500 feet<br>upstream of the<br>confluence with<br>Plum Creek | Approximately<br>1,125 feet<br>upstream of<br>Spring Branch<br>Drive                      | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Spring Hollow                       | At the confluence<br>with Bear Creek  | Approximately<br>4,400 feet<br>upstream of Cool<br>Spring Way                             | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |



**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source              | Study Limits<br>Downstream Limit           | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations  |
|------------------------------|--|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Spring Hollow<br>Tributary 1 | At the confluence<br>with Spring<br>Hollow | Approximately<br>1,700 feet<br>upstream of the<br>confluence of<br>Spring Hollow | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Spring Hollow<br>Tributary 2 | At the confluence<br>with Spring<br>Hollow | Approximately<br>3,425 feet<br>upstream of the<br>confluence of<br>Spring Hollow | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Spring Hollow<br>Tributary 3 | At the confluence<br>with Spring<br>Hollow | Approximately<br>4,600 feet<br>upstream of the<br>confluence of<br>Spring Hollow | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |   |
| Stream Bear 1                | At confluence<br>with Bear Creek           | Approximately<br>1,200 feet<br>upstream of N<br>Madrone Trail                    | HEC-2                              | HEC-2                                | September<br>1990             | AE w/<br>Floodway        |   |
| Stream Bear 2                | At confluence<br>with Bear Creek           | Approximately<br>1,500 feet<br>upstream of<br>Reunion<br>Boulevard               | HEC-2                              | HEC-2                                | September<br>1990             | AE w/<br>Floodway        |   |
| Stream BPC-1                 | At the confluence<br>with Bypass<br>Creek  | At West Uhland<br>Road   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | Overflow hydrographs from Blanco River<br>were taken from Blanco River unsteady<br>hydraulic model. |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source   | Study Limits<br>Downstream Limit        | Study Limits<br>Upstream Limit                                       | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations  |
|-------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Stream BPC-2      | At the confluence with Bypass Creek     | Approximately 0.4 miles upstream of State Highway 21                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | Overflow hydrographs from Blanco River were taken from Blanco River unsteady hydraulic model.     |
| Stream Brushy-1   | Confluence with Brushy Creek            | Approximately 670 feet upstream of County Road 131/Windy Hill Road   | Regression Equations               | HEC-2                                | June 1995                     | AE w/<br>Floodway        |   |
| Stream Brushy-1A  | Confluence with Stream Brushy-1         | Approximately 2,660 feet upstream of County Road 125                 | Regression Equations               | HEC-2                                | June 1995                     | AE w/<br>Floodway        |   |
| Stream CC-1       | At the confluence with Cottonwood Creek | Approximately 0.5 miles upstream of Interstate Highway 35            | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | Overflow to Willow Springs watershed modeled with lateral weir and was not included in HMS model. |
| Stream CC-1 South | At the confluence with Stream CC-1      | Approximately 1,900 feet upstream of the confluence with Stream CC-1 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | This stream is included in stream CC-1 RAS model.   |
| Stream CC-2       | Union Pacific Railroad                  | Approximately 0.3 miles upstream of Hunter Road                      | HEC-HMS 3.5                        | HEC-RAS 4.1                          | June 1995                     | AE w/<br>Floodway        | Overflows upstream of Interstate 35 modeled in HMS.   |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source     | Study Limits<br>Downstream Limit                      | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|---------------------|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Stream CC-2D        | Confluence with<br>Cottonwood<br>Creek                | Approximately<br>145 feet<br>upstream of I-35<br>South<br>Bound/Frontage<br>Road | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Stream CC-<br>IH35  | Confluence with<br>Stream CC-1                        | Approximately<br>5,250 feet<br>upstream of<br>McCarty<br>Lane/County<br>Road 233 | Regression<br>Equations            | HEC-2                                | 8/15/2008                     | AE w/<br>Floodway        |                        |
| Stream<br>Cypress-1 | Confluence with<br>Cypress Creek                      | Approximately<br>3,850 feet<br>upstream of<br>Valley Spring<br>Road              | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Stream LB-1         | At the<br>downstream limit<br>of Little Bear<br>Creek | Approximately<br>1,100 feet<br>upstream of<br>Chaparral Lane                     | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Stream PC-1         | At the confluence<br>with Purgatory<br>Creek          | Approximately<br>1.1 miles<br>upstream of<br>McCarty Lane                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 3/30/2015                     | AE w/<br>Floodway        |                        |
| Stream PC-3         | At the confluence<br>with Purgatory<br>Creek          | Approximately<br>0.2 miles<br>upstream of<br>Castle Creek<br>Road                | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                   | Study Limits<br>Downstream Limit                    | Study Limits<br>Upstream Limit                        | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations  |
|-----------------------------------|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|---|
| Stream Plum-1                     | At the confluence with Plum Creek                   | Approximately 40 feet upstream of South Sledge Street | Regression Equations               | HEC-2                                | June 1995                     | AE w/<br>Floodway        |   |
| Stream WSC-1                      | At the confluence with Willow Springs Creek         | Approximately 0.3 miles upstream of W McCarty Lane    | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        |   |
| Stream WSC-1 Split                | At the Confluence with Stream WSC-1                 | Approximately 250 feet upstream of W McCarty Lane     | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |   |
| Stream WSC-RR                     | At the convergence with Willow Springs Creek        | At the divergence with Willow Springs Creek           | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        | This is a split flow reach within the Willow Springs Creek RAS model. |
| Tributary CC-1A                   | At the confluence with Cypress Creek                | Approximately 1 mile upstream of Mount Sharp Road     | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |   |
| Tributary CC-2A                   | At the confluence with Cypress Creek                | Just downstream of Winters Mill Parkway               | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |   |
| Unnamed Tributary To Blanco River | Approximately 780 feet downstream of Deer Lake Road | Approximately 220 upstream of Deer Lake Road          | HEC-1                              | HEC-RAS 4.0                          | 1/27/2011                     | AE                       |   |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source  | Study Limits<br>Downstream Limit  | Study Limits<br>Upstream Limit  | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--|---|---|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Unnamed<br>Tributary 1 to<br>Cedar Fork                              | Approximately<br>4,100 feet<br>upstream of<br>confluence with<br>Cedar Fork             | Approximately<br>5,300 feet<br>upstream of the<br>downstream limit  | HEC-1                              | HEC-2                                | June 1995                     | A                        |                        |
| Unnamed<br>Tributary 1 to<br>Unnamed<br>Tributary 1 to<br>Cedar Fork | At the confluence<br>with Unnamed<br>Tributary 1 to<br>Cedar Fork                       | Approximately<br>2,000 feet<br>upstream of the<br>downstream limit  | HEC-1                              | HEC-2                                | 8/15/2008                     | A                        |                        |
| Unnamed<br>Tributary 2 to<br>Unnamed<br>Tributary to<br>Cedar Fork   | Confluence with<br>Unnamed<br>Tributary 1 to<br>Unnamed<br>Tributary 1 to<br>Cedar Fork | Approximately<br>1,764 feet<br>upstream of<br>confluence with<br>Unnamed<br>Tributary 1 to<br>Unnamed<br>Tributary 1 to<br>Cedar Fork | HEC-1                              | HEC-2                                | 8/15/2008                     | A                        |                        |
| Unnamed<br>Tributary of<br>Cypress Creek                             | Confluence with<br>Cypres Creek   | Approximately<br>698 feet<br>upstream of<br>Shadow Valley   | N/A                                | HEC-RAS 4.1                          | 3/30/2015                     | A                        |                        |
| Unnamed<br>Tributary to<br>Plum Creek                                | Confluence with<br>Plum Creek   | Approximately<br>270 feet<br>upstream of<br>Arbor Knot Drive  | Regression<br>Equations            | HEC-2                                | June 1995                     | AE                       |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                 | Study Limits<br>Downstream Limit           | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|---------------------------------|--|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Walnut Spring                   | At Needham Road                            | Approximately 150 feet upstream of Founders Park Road                        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | AE                       |                        |
| Walnut Spring                   | At the confluence with Onion Creek         | Approximately 2,000 feet upstream of Needham Road                            | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| West Mustang Branch             | At the confluence with Onion Creek         | Approximately 22,650 feet upstream of the confluence with Onion Creek        | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| West Mustang Branch Tributary 1 | At the confluence with West Mustang Branch | Approximately 1,350 feet upstream of the confluence with West Mustang Branch | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| West Mustang Branch Tributary 2 | At the confluence with West Mustang Branch | Approximately 1,200 feet upstream of the confluence with West Mustang Branch | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source                            | Study Limits<br>Downstream Limit                    | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|--|---|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| West Mustang<br>Branch<br>Tributary 3      | At the confluence<br>with West<br>Mustang Branch    | Approximately<br>2,500 feet<br>upstream of the<br>confluence with<br>West Mustang<br>Branch  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| White Branch                               | At the confluence<br>with Onion Creek               | Approximately<br>14,400 feet<br>upstream of the<br>confluence with<br>Onion Creek            | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| White Branch<br>Tributary 1                | At the confluence<br>with White<br>Branch           | Approximately<br>3,125 feet<br>upstream of the<br>confluence with<br>White Branch            | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Willow Springs<br>Creek                    | At the confluence<br>with San Marcos<br>River       | Approximately<br>2,700 feet<br>upstream of W<br>McCarty Lane                                 | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | AE w/<br>Floodway        |                        |
| Willow Springs<br>Creek<br>Diversion       | At the<br>convergence of<br>Willow Springs<br>Creek | At the divergence<br>of Willow Springs<br>Creek  | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |
| Willow Springs<br>Creek Lower<br>Tributary | At the confluence<br>with Willow<br>Springs Creek   | Approximately<br>1,700 feet<br>upstream of the<br>confluence with<br>Willow Springs<br>Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | 8/31/2016                     | A                        |                        |

**Table 12: Summary of Hydrologic and Hydraulic Analyses, (continued)**

| Flooding Source            | Study Limits<br>Downstream Limit      | Study Limits<br>Upstream Limit   | Hydrologic Model<br>or Method Used | Hydraulic<br>Model or<br>Method Used | Date<br>Analyses<br>Completed | Flood<br>Zone on<br>FIRM | Special Considerations |
|----------------------------|---------------------------------------|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|
| Wilson Creek               | Confluence with<br>the Blanco River   | Approximately<br>6,945 feet<br>upstream of the<br>confluence with<br>Stream WC-1 | Regression<br>Equations            | HEC-2                                | June 1995                     | AE w/<br>Floodway        |                        |
| Yorks Creek                | At the confluence<br>with Onion Creek | Approximately<br>6,400 feet<br>upstream of<br>Stepping Stone<br>Crossing         | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Yorks Creek<br>Tributary 1 | At the confluence<br>with Yorks Creek | Approximately<br>1,750 feet<br>upstream of the<br>confluence of<br>Yorks Creek   | HEC-HMS 3.5                        | HEC-RAS 4.1                          | August 2014                   | A                        |                        |
| Yorks Creek<br>Tributary 2 | At the confluence<br>with Yorks Creek | Approximately<br>5,000 feet<br>upstream of<br>Rolling Oaks<br>Drive              | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |
| Yorks Creek<br>Tributary 3 | At the confluence<br>with Yorks Creek | Approximately<br>6,925 feet<br>upstream of the<br>confluence with<br>Yorks Creek | HEC-HMS 3.5                        | HEC-RAS 4.1                          | February<br>2013              | A                        |                        |



**Table 13: Roughness Coefficients**

| Flooding Source                              | Channel “n” | Overbank “n” |
|--|-------------|--------------|
| Barton Creek                                 | 0.023-0.065 | 0.060-0.120  |
| Barton Creek Tributary 1                     | 0.023-0.070 | 0.060-0.100  |
| Barton Creek Tributary 2                     | 0.050-0.070 | 0.060-0.120  |
| Barton Creek Tributary 2-1                   | 0.055-0.070 | 0.060-0.120  |
| Barton Creek Tributary 3                     | 0.050-0.065 | 0.060-0.100  |
| Bear Creek (With Survey)                     | 0.023-0.065 | 0.060-0.120  |
| Bear Creek (Without Survey)                  | 0.023-0.07  | 0.060-0.100  |
| Bear Creek Tributary 1                       | 0.055-0.065 | 0.060-0.100  |
| Bear Creek Tributary 1A                      | 0.045-0.070 | 0.060-0.100  |
| Bear Creek Tributary 1B                      | 0.060-0.065 | 0.060-0.100  |
| Bear Creek Tributary 1B.1                    | 0.055-0.065 | 0.060-0.100  |
| Bear Creek Tributary 2                       | 0.050-0.055 | 0.060-0.100  |
| Bear Creek Tributary 3                       | 0.023-0.065 | 0.060-0.100  |
| Bear Creek Tributary 4                       | 0.050-0.065 | 0.060-0.100  |
| Bear Creek Tributary 5                       | 0.050-0.065 | 0.060-0.100  |
| Bear Creek Tributary 5.1                     | 0.050-0.060 | 0.060-0.100  |
| Bear Creek Tributary 6                       | 0.055-0.065 | 0.060-0.100  |
| Bear Creek Tributary 7                       | 0.023-0.070 | 0.060-0.100  |
| Bear Creek Tributary 7.1                     | 0.055-0.065 | 0.090-0.100  |
| Bear Creek Tributary A                       | 0.055-0.060 | 0.060-0.100  |
| Blanco River                                 | 0.030-0.100 | 0.035-0.120  |
| Blanco River Overflow Upstream of I-35       | *           | *            |
| Brushy Creek                                 | 0.035-0.050 | 0.070-0.080  |
| Bypass Creek                                 | 0.040-0.060 | 0.050-0.120  |
| Cambrian Branch                              | 0.050-0.070 | 0.060-0.100  |
| Cambrian Branch Tributary                    | 0.055       | 0.080-0.090  |
| Cottonwood Branch (Tributary to Roy Branch)  | 0.065-0.075 | 0.060-0.100  |
| Cottonwood Branch (Tributary to Onion Creek) | 0.060-0.065 | 0.060-0.100  |
| Cottonwood Creek                             | 0.050       | 0.060-0.120  |
| Cypress Creek                                | 0.045-0.070 | 0.045-0.100  |

**Table 13: Roughness Coefficients, (continued)**

| Flooding Source                                | Channel “n” | Overbank “n” |
|--|-------------|--------------|
| Dripping Springs                               | 0.045-0.060 | 0.060-0.100  |
| Dripping Springs Tributary                     | 0.045-0.060 | 0.050-0.100  |
| Eskew Branch                                   | 0.045-0.065 | 0.060-0.090  |
| Fitzhugh Creek                                 | 0.055-0.075 | 0.060-0.100  |
| Flat Creek                                     | 0.050-0.065 | 0.060-0.120  |
| Freestone Branch                               | 0.050-0.070 | 0.060-0.100  |
| Garlic Creek                                   | 0.050-0.070 | 0.060-0.120  |
| Garlic Creek Tributary                         | 0.020-0.065 | 0.060-0.120  |
| Gatlin Creek                                   | 0.050-0.065 | 0.060-0.100  |
| Grooms Branch                                  | 0.055-0.065 | 0.060-0.100  |
| Grooms Branch Tributary 1                      | 0.055       | 0.080-0.090  |
| Hog Creek                                      | 0.030-0.090 | 0.030-0.100  |
| Jackson Branch                                 | 0.050-0.070 | 0.060-0.100  |
| Jackson Branch Tributary                       | 0.060-0.065 | 0.080-0.100  |
| Little Barton Creek                            | 0.055-0.070 | 0.060-0.100  |
| Little Bear Creek (With Survey)                | 0.065-0.075 | 0.060-0.100  |
| Little Bear Creek (Without Survey)             | 0.050-0.075 | 0.060-0.100  |
| Little Bear Creek Tributary 1 (With Survey)    | 0.055-0.060 | 0.070-0.100  |
| Little Bear Creek Tributary 1 (Without Survey) | 0.055-0.060 | 0.060-0.100  |
| Little Bear Creek Tributary 1.1                | 0.055       | 0.090-0.100  |
| Little Bear Creek Tributary 1.2                | 0.060       | 0.060-0.100  |
| Little Bear Creek Tributary 1A                 | 0.050-0.065 | 0.060-0.100  |
| Little Bear Creek Tributary 2                  | 0.055-0.060 | 0.060-0.100  |
| Little Bear Creek Tributary 2A                 | 0.055-0.060 | 0.060-0.100  |
| Little Bear Creek Tributary 2B                 | 0.050-0.060 | 0.060-0.100  |
| Little Bear Creek Tributary 3                  | 0.055       | 0.060-0.080  |
| Little Bear Creek Tributary 4                  | 0.050-0.060 | 0.060-0.100  |
| Little Bear Creek Tributary 5                  | 0.050-0.060 | 0.060-0.080  |
| Little Bear Creek Tributary 6                  | 0.055-0.060 | 0.060-0.100  |

**Table 13: Roughness Coefficients, (continued)**

| Flooding Source               | Channel “n” | Overbank “n” |
|-------------------------------|-------------|--------------|
| Little Bear Creek Tributary 7 | 0.045-0.050 | 0.060-0.100  |
| Loneman Creek                 | 0.055-0.070 | 0.065-0.080  |
| Long Branch                   | 0.055-0.065 | 0.060-0.100  |
| Millseat Branch               | 0.023-0.065 | 0.060-0.100  |
| Mustang Branch                | 0.050-0.070 | 0.060-0.100  |
| Mustang Branch Tributary 1    | 0.050-0.065 | 0.060-0.100  |
| Mustang Branch Tributary 2    | 0.045-0.050 | 0.060-0.100  |
| Mustang Branch Tributary 2.1  | 0.045-0.060 | 0.060-0.100  |
| Mustang Branch Tributary 3    | 0.055-0.065 | 0.060-0.100  |
| Mustang Branch Tributary 4    | 0.050-0.060 | 0.090        |
| Mustang Branch Tributary 5    | 0.055-0.060 | 0.090        |
| Mustang Branch Tributary 6    | 0.055-0.065 | 0.060-0.090  |
| Mustang Branch Tributary 7    | 0.045       | 0.060-0.090  |
| North Gatlin Creek            | 0.050-0.070 | 0.060-0.100  |
| Onion Creek (With Survey)     | 0.050-0.070 | 0.060-0.120  |
| Onion Creek (Without Survey)  | 0.045-0.065 | 0.060-0.100  |
| Onion Creek Tributary 1       | 0.050-0.060 | 0.060-0.080  |
| Onion Creek Tributary 2       | 0.023-0.060 | 0.060-0.100  |
| Onion Creek Tributary 3       | 0.050-0.065 | 0.060-0.090  |
| Onion Creek Tributary 4       | 0.050-0.060 | 0.060-0.100  |
| Onion Creek Tributary 5       | 0.055-0.070 | 0.060-0.120  |
| Onion Creek Tributary 5-1     | 0.055-0.070 | 0.060-0.100  |
| Onion Creek Tributary 5-1-1   | 0.050-0.060 | 0.060-0.090  |
| Onion Creek Tributary 6       | 0.050-0.070 | 0.060-0.100  |
| Onion Creek Tributary 7       | 0.050-0.065 | 0.060-0.100  |
| Onion Creek Tributary 8       | 0.050-0.060 | 0.060-0.090  |
| Onion Creek Tributary 8-1     | 0.055       | 0.060-0.090  |
| Onion Creek Tributary 8-1-1   | 0.055-0.060 | 0.060-0.090  |
| Onion Creek Tributary 9       | 0.055-0.060 | 0.060-0.090  |
| Onion Creek Tributary 10      | 0.050-0.060 | 0.060-0.090  |
| Onion Creek Tributary 11      | 0.055-0.060 | 0.060-0.090  |
| Onion Creek Tributary 12      | 0.045-0.060 | 0.060-0.100  |

**Table 13: Roughness Coefficients, (continued)**

| Flooding Source                | Channel “n” | Overbank “n” |
|--------------------------------|-------------|--------------|
| Onion Creek Tributary 13       | 0.055-0.060 | 0.060-0.100  |
| Onion Creek Tributary 14       | 0.050-0.055 | 0.060-0.100  |
| Onion Creek Tributary 14-1     | 0.050       | 0.090-0.100  |
| Onion Creek Tributary 15       | 0.045-0.055 | 0.060-0.100  |
| Onion Creek Tributary 16       | 0.020-0.065 | 0.060-0.100  |
| Onion Creek Tributary 17       | 0.050-0.060 | 0.060-0.090  |
| Onion Creek Tributary 18       | 0.055-0.065 | 0.090-0.100  |
| Onion Creek Tributary 19       | 0.055-0.060 | 0.060-0.100  |
| Onion Creek Tributary 20       | 0.055-0.060 | 0.060-0.100  |
| Onion Creek Tributary 21       | 0.023-0.065 | 0.023-0.100  |
| Onion Creek Tributary 22       | 0.055-0.065 | 0.080-0.100  |
| Onion Creek Tributary 23       | 0.023-0.060 | 0.060-0.100  |
| Onion Creek Tributary 24       | 0.050-0.060 | 0.060-0.090  |
| Pier Branch                    | 0.060-0.070 | 0.060-0.100  |
| Plum Creek                     | 0.050-0.065 | 0.065-0.070  |
| Pope Creek                     | 0.045-0.065 | 0.060-0.090  |
| Purgatory Creek                | 0.040-0.060 | 0.030-0.120  |
| Purgatory Creek UNT            | 0.060-0.075 | 0.050-0.085  |
| Rocky Branch                   | 0.040-0.065 | 0.060-0.100  |
| Roy Branch                     | 0.055-0.075 | 0.060-0.120  |
| San Marcos River               | 0.045-0.070 | 0.060-0.120  |
| San Marcos Tributary           | 0.045-0.060 | 0.060-0.100  |
| School House Hollow            | 0.070       | 0.065-0.085  |
| Sessom Creek                   | 0.023-0.05  | 0.03-0.12    |
| Sink Creek                     | 0.045-0.055 | 0.045-0.090  |
| Smith Creek                    | 0.055-0.070 | 0.065-0.080  |
| South Gatlin Creek             | 0.050-0.060 | 0.060-0.100  |
| South Gatlin Creek Tributary 1 | 0.055-0.060 | 0.060-0.100  |
| South Gatlin Creek Tributary 2 | 0.050-0.065 | 0.060-0.090  |
| South Gatlin Creek Tributary 3 | 0.050-0.060 | 0.060-0.100  |
| South Onion Creek              | 0.023-0.070 | 0.060-0.100  |
| South Onion Creek Tributary 1  | 0.023-0.060 | 0.060-0.090  |

**Table 13: Roughness Coefficients, (continued)**

| Flooding Source                 | Channel “n” | Overbank “n” |
|---------------------------------|-------------|--------------|
| South Onion Creek Tributary 2   | 0.050-0.060 | 0.060-0.100  |
| South Onion Creek Tributary 3   | 0.050-0.060 | 0.100        |
| Spring Branch                   | *           | *            |
| Spring Hollow                   | 0.013-0.065 | 0.060-0.100  |
| Stream BPC-1                    | 0.030-0.050 | 0.050-0.090  |
| Stream BPC-2                    | 0.045-0.060 | 0.050-0.090  |
| Stream Brushy-1                 | 0.050-0.055 | 0.075-0.080  |
| Stream Brushy-1A                | 0.035-0.050 | 0.070-0.075  |
| Stream CC-1                     | 0.045-0.055 | 0.050-0.120  |
| Stream CC-1 South Tributary     | 0.045-0.055 | 0.060-0.120  |
| Stream CC-2                     | 0.050       | 0.060-0.120  |
| Stream CC-2D                    | 0.060       | 0.065        |
| Stream CC-IH35                  | 0.055       | 0.065        |
| Stream Cypress-1                | 0.050-0.075 | 0.065-0.085  |
| Stream CYP-1A                   | 0.045-0.06  | 0.07-0.09    |
| Stream CYP-2A                   | 0.045-0.07  | 0.07-0.09    |
| Stream LB-1                     | 0.055-0.060 | 0.070-0.080  |
| Stream PC-1                     | 0.050-0.070 | 0.045-0.085  |
| Stream PC-3                     | 0.045-0.065 | 0.050-0.120  |
| Stream Plum-1                   | 0.055-0.060 | 0.065        |
| Stream Purgatory Diversion 1    | 0.055       | 0.030-0.120  |
| Stream WSC-1                    | 0.045-0.055 | 0.060-0.090  |
| Stream WSC-RR                   | 0.045       | 0.050-0.065  |
| Unnamed Tributary to Plum Creek | *           | *            |
| Walnut Spring                   | 0.050-0.065 | 0.060-0.120  |
| West Mustang Branch             | 0.023-0.060 | 0.060-0.100  |
| West Mustang Branch Tributary 1 | 0.055-0.060 | 0.060-0.090  |
| West Mustang Branch Tributary 2 | 0.045-0.055 | 0.060-0.100  |
| West Mustang Branch Tributary 3 | 0.055-0.060 | 0.060-0.100  |

**Table 13: Roughness Coefficients, (continued)**

| Flooding Source                | Channel "n" | Overbank "n" |
|--------------------------------|-------------|--------------|
| White Branch                   | 0.023-0.050 | 0.060-0.100  |
| White Branch Tributary 1       | 0.060       | 0.060-0.100  |
| Willow Springs Creek           | 0.015-0.070 | 0.040-0.120  |
| Willow Springs Lower Tributary | 0.040-0.050 | 0.050-0.120  |
| Wilson Creek                   | 0.035-0.065 | 0.035-0.080  |
| Yorks Creek                    | 0.050-0.070 | 0.060-0.100  |
| Yorks Creek Tributary 1        | 0.050-0.055 | 0.060-0.090  |
| Yorks Creek Tributary 2        | 0.050-0.070 | 0.060-0.100  |
| Yorks Creek Tributary 3        | 0.045-0.070 | 0.090-0.100  |

### **5.3 Coastal Analyses**

This section is not applicable to this Flood Risk Project.

#### **Table 14: Summary of Coastal Analyses**

**[Not Applicable to this Flood Risk Project]**

#### **5.3.1 Total Stillwater Elevations**

This section is not applicable to this Flood Risk Project.

#### **Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas**

**[Not Applicable to this Flood Risk Project]**

#### **Table 15: Tide Gage Analysis Specifics**

**[Not Applicable to this Flood Risk Project]**

#### **5.3.2 Waves**

This section is not applicable to this Flood Risk Project.

#### **5.3.3 Coastal Erosion**

This section is not applicable to this Flood Risk Project.

#### **5.3.4 Wave Hazard Analyses**

This section is not applicable to this Flood Risk Project.

#### **Table 16: Coastal Transect Parameters**

**[Not Applicable to this Flood Risk Project]**

#### **Figure 9: Transect Location Map**

**[Not Applicable to this Flood Risk Project]**

### **5.4 Alluvial Fan Analyses**

This section is not applicable to this Flood Risk Project.

**Table 17: Summary of Alluvial Fan Analyses**

**[Not Applicable to this Flood Risk Project]**

**Table 18: Results of Alluvial Fan Analyses**

**[Not Applicable to this Flood Risk Project]**



## SECTION 6.0 – MAPPING METHODS

### 6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov), or contact the National Geodetic Survey (NGS) at the following address:

NGS Information Services  
NOAA, N/NGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

The countywide conversion factor of 0.32 feet was calculated for Hays County.

#### **Table 19: Countywide Vertical Datum Conversion**

**[Not Applicable to this Flood Risk Project]**

**Table 20: Stream-Based Vertical Datum Conversion**

**[Not Applicable to this Flood Risk Project]**

**6.2 Base Map**

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA’s FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA’s *Guidelines and Standards for Flood Risk Analysis and Mapping*, [www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping](http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping).

Base map information shown on the FIRM was derived from the sources described in Table 21.

**Table 21: Base Map Sources**

| Data Type               | Data Provider   | Data Date | Data Scale | Data Description  |
|-------------------------|---|-----------|------------|---|
| Digital Orthophoto      | Texas Natural Resources Information System            | 2015      | 50 cm      | Color orthoimagery was provided for the county  |
| Political Boundaries    | Texas Natural Resources Information System            | 2016      | 1:12,000   | Municipal and county boundaries   |
| Transportation Features | TxDOT   | 2010      | 1:12,000   | This dataset covers the state of Texas and includes on-systems routes (those that TxDOT maintains), such as interstate highways, U.S. highways, state highways, farm and ranch roads, as well as off-system routes, such as county roads and local streets. |
| Surface Water Features  | USGS, National Geospatial Technical Operations Center | 2016      | 1:24,000   | Streams, rivers, and lakes were derived from NHD data   |
| Watershed Boundaries    | USDA Natural Resources Conservation Service           | 2013      | 1:12,000   | HUC-8 watershed boundaries  |

### 6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, "Floodway Data."

**Table 22: Summary of Topographic Elevation Data used in Mapping**

| Community  | Flooding Source      | Source for Topographic Elevation Data |        |                  |                   |                       |                                      |
|--|----------------------|---------------------------------------|--------|------------------|-------------------|-----------------------|--------------------------------------|
|  |                      | Description                           | Scale  | Contour Interval | RMSE <sub>z</sub> | Accuracy <sub>z</sub> | Citation                             |
| Hays County, Unincorporated Areas; San Marcos, City of | Purgatory Creek      | Topo Survey                           | N/A    | N/A              | .16 deg           | + / - 2 cm            | Half 2016                            |
| San Marcos, City of                                    | Blanco River         | CAD Drawings                          | 1:3600 | 1 ft             | N/A               | N/A                   | Blanco Vista Tract 2015              |
| San Marcos, City of                                    | Willow Springs Creek | CAD Drawings                          | 1:360  | 1 ft             | N/A               | N/A                   | Retreat at Willow Creek Phase 4 2015 |
| San Marcos, City of                                    | Blanco River         | CAD Drawings                          | 1:240  | 1 ft             | N/A               | N/A                   | Hilton Garden Inn 2014               |
| San Marcos, City of                                    | Bypass Creek         | CAD Drawings                          | 1:720  | 1 ft             | N/A               | N/A                   | Saddle Brooke 2014                   |
| San Marcos, City of                                    | Willow Springs Creek | CAD Drawings                          | 1:1200 | 1 ft             | N/A               | N/A                   | Retreat at Willow Creek Phase 2 2013 |

**Table 22: Summary of Topographic Elevation Data used in Mapping, (continued)**

| Community  | Flooding Source   | Source for Topographic Elevation Data    |        |                  |                   |                       |                                      |
|--|---|--|--------|------------------|-------------------|-----------------------|--------------------------------------|
|  |   | Description                              | Scale  | Contour Interval | RMSE <sub>z</sub> | Accuracy <sub>z</sub> | Citation                             |
| San Marcos, City of  | Willow Springs Creek  | CAD Drawings                             | 1:600  | 1 ft             | N/A               | N/A                   | Retreat at Willow Creek Phase 1 2012 |
| San Marcos, City of  | Willow Springs Creek  | CAD Drawings                             | 1:240  | 0.5 ft           | N/A               | N/A                   | South End, Wonderworld Dr 2011       |
| Hays County, Unincorporated Areas  | Willow Springs Creek  | CAD Drawings                             | 1:360  | 1 ft             | N/A               | N/A                   | Government Center 2010               |
| Bear Creek, Village of; Buda, City of; Dripping Springs, City of; Hays County, Unincorporated Areas; Hays, City of; Kyle, City of; Mountain City, City of; San Marcos, City of; Wimberley, City of; Woodcreek, City of | All sources within HUC 12100203 & 12090205 studied in 2014-2016 except those found in CAPCOG 2007 or LCRA 2007                        | Light Detection and Ranging data (LiDAR) | N/A    | N/A              | 18.5 cm           | 36.2 cm               | CAPCOG 2008                          |
| Hays County, Unincorporated Areas  | Cottonwood Branch (Tributary to Onion Creek); Eskew Branch; Onion Creek Zone A detailed study; White Branch; White Branch Tributary 1 | Light Detection and Ranging data (LiDAR) | N/A    | 5 ft             | 1.52 ft           | 2.98 ft               | CAPCOG 2007                          |
| Hays County, Unincorporated Areas  | Barton Creek Tributary 1 and tributaries; Fitzhugh Creek and tributaries  | Light Detection and Ranging data (LiDAR) | N/A    | 5 ft             | 18.5 cm           | 37.0 cm               | LCRA 2007                            |
| San Marcos, City of  | Blanco River  | CAD Drawings                             | 1:2400 | 1 ft             | N/A               | N/A                   | Blanco Riverwalk 2005                |

**Table 22: Summary of Topographic Elevation Data used in Mapping, (continued)**

| Community   | Flooding Source             | Source for Topographic Elevation Data    |          |                  |                   |                       |          |
|---|-----------------------------|--|----------|------------------|-------------------|-----------------------|----------|
|   |                             | Description                              | Scale    | Contour Interval | RMSE <sub>z</sub> | Accuracy <sub>z</sub> | Citation |
| Hays County, Unincorporated Areas   | Various within 12100203     | Light Detection and Ranging data (LiDAR) | N/A      | N/A              | 18.59 cm          | 36.4 cm               | COA 2003 |
| Bear Creek, Village of; Hays County, Unincorporated Areas; Kyle, City of; Niederwald, City of; San Marcos, City of; Uhland, City of; Wimberley, City of | Bear Creek Tributary 1 & 2; | 7.5-Minute Topographic Series            | 1:24,000 | 10 and 20 ft     | N/A               | N/A                   | USGS     |

BFEs shown at cross sections on the FIRM represent the 1% annual chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report.

**Table 23: Floodway Data**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 180,489               | 441          | 4,760                   | 17.1                     | 943.1  | 943.1            | 943.4         | 0.3      |
| B             | 182,338               | 402          | 5,334                   | 11.8                     | 950.4  | 950.4            | 951.2         | 0.8      |
| C             | 184,703               | 450          | 6,313                   | 13.7                     | 956.7  | 956.7            | 957.6         | 0.9      |
| D             | 185,539               | 584          | 8,092                   | 8.4                      | 959.3  | 959.3            | 960.2         | 0.9      |
| E             | 186,947               | 400          | 6,103                   | 9.0                      | 962.2  | 962.2            | 962.9         | 0.7      |
| F             | 187,966               | 330          | 5,487                   | 10.6                     | 966.3  | 966.3            | 966.8         | 0.5      |
| G             | 188,703               | 320          | 4,845                   | 12.0                     | 968.1  | 968.1            | 968.8         | 0.7      |
| H             | 189,343               | 240          | 3,885                   | 13.6                     | 970.1  | 970.1            | 970.9         | 0.8      |
| I             | 191,499               | 250          | 4,622                   | 15.7                     | 977.7  | 977.7            | 977.9         | 0.2      |
| J             | 192,986               | 270          | 4,634                   | 12.6                     | 981.7  | 981.7            | 982.7         | 1.0      |
| K             | 193,861               | 330          | 5,647                   | 12.2                     | 985.6  | 985.6            | 986.0         | 0.4      |
| L             | 196,132               | 330          | 5,887                   | 9.4                      | 991.2  | 991.2            | 991.9         | 0.7      |
| M             | 197,632               | 335          | 5,726                   | 9.4                      | 993.6  | 993.6            | 994.5         | 0.9      |
| N             | 199,385               | 285          | 3,821                   | 15.4                     | 999.7  | 999.7            | 1,000.1       | 0.4      |
| O             | 200,768               | 243          | 4,422                   | 11.4                     | 1,006.0  | 1,006.0          | 1,006.3       | 0.4      |
| P             | 202,730               | 224          | 3,805                   | 13.7                     | 1,011.9  | 1,011.9          | 1,012.4       | 0.5      |
| Q             | 204,461               | 156          | 3,298                   | 12.4                     | 1,015.7  | 1,015.7          | 1,016.7       | 1.0      |
| R             | 206,402               | 332          | 4,537                   | 11.0                     | 1,023.4  | 1,023.4          | 1,023.6       | 0.2      |

<sup>1</sup>Feet above confluence with the Colorado River

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BARTON CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 207,416               | 465          | 6,578                   | 2.7                      | 1,028.7  | 1,028.7          | 1,029.2       | 0.5      |
| T             | 209,439               | 261          | 4,966                   | 9.0                      | 1,033.3  | 1,033.3          | 1,034.0       | 0.6      |
| U             | 210,930               | 280          | 4,406                   | 12.2                     | 1,036.3  | 1,036.3          | 1,037.2       | 0.8      |
| V             | 212,752               | 240          | 3,645                   | 11.1                     | 1,041.6  | 1,041.6          | 1,042.5       | 1.0      |
| W             | 214,129               | 222          | 2,834                   | 12.8                     | 1,045.2  | 1,045.2          | 1,045.8       | 0.6      |
| X             | 217,100               | 190          | 2,652                   | 12.3                     | 1,055.8  | 1,055.8          | 1,056.5       | 0.7      |
| Y             | 218,817               | 165          | 2,549                   | 9.9                      | 1,064.6  | 1,064.6          | 1,065.1       | 0.5      |
| Z             | 219,390               | 155          | 2,662                   | 9.8                      | 1,066.3  | 1,066.3          | 1,066.5       | 0.2      |
| AA            | 220,505               | 220          | 2,019                   | 15.1                     | 1,068.0  | 1,068.0          | 1,068.4       | 0.4      |
| AB            | 221,096               | 141          | 2,033                   | 10.8                     | 1,071.8  | 1,071.8          | 1,072.7       | 1.0      |
| AC            | 222,508               | 150          | 2,008                   | 10.5                     | 1,077.2  | 1,077.2          | 1,078.0       | 0.8      |
| AD            | 223,216               | 120          | 1,769                   | 11.6                     | 1,080.1  | 1,080.1          | 1,080.4       | 0.3      |
| AE            | 224,783               | 127          | 1,798                   | 10.5                     | 1,085.4  | 1,085.4          | 1,086.3       | 0.9      |
| AF            | 225,603               | 162          | 2,369                   | 9.3                      | 1,088.7  | 1,088.7          | 1,089.3       | 0.5      |
| AG            | 227,809               | 130          | 1,468                   | 15.2                     | 1,097.7  | 1,097.7          | 1,097.8       | 0.0      |
| AH            | 228,269               | 115          | 1,579                   | 11.3                     | 1,101.4  | 1,101.4          | 1,102.1       | 0.8      |
| AI            | 229,046               | 118          | 1,464                   | 11.2                     | 1,109.2  | 1,109.2          | 1,109.7       | 0.5      |
| AJ            | 230,950               | 125          | 1,562                   | 10.9                     | 1,118.2  | 1,118.2          | 1,118.2       | 0.0      |
| AK            | 232,270               | 220          | 2,125                   | 7.7                      | 1,128.1  | 1,128.1          | 1,128.1       | 0.0      |
| AL            | 233,201               | 510          | 2,857                   | 8.3                      | 1,137.6  | 1,137.6          | 1,137.6       | 0.0      |

<sup>1</sup>Feet above confluence with the Colorado River

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BARTON CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 484                   | 52           | 447                     | 8.4                      | 1,099.0  | 1,099.0          | 1,099.7       | 0.7      |
| B             | 1,068                 | 35           | 278                     | 13.6                     | 1,107.4  | 1,107.4          | 1,107.5       | 0.1      |
| C             | 1,177                 | 47           | 474                     | 8.0                      | 1,111.0  | 1,111.0          | 1,111.9       | 0.9      |
| D             | 1,476                 | 63           | 400                     | 9.4                      | 1,114.4  | 1,114.4          | 1,114.9       | 0.5      |
| E             | 1,841                 | 78           | 445                     | 8.5                      | 1,120.0  | 1,120.0          | 1,120.1       | 0.1      |
| F             | 2,274                 | 51           | 321                     | 11.1                     | 1,125.8  | 1,125.8          | 1,126.2       | 0.4      |
| G             | 2,867                 | 88           | 543                     | 6.6                      | 1,134.2  | 1,134.2          | 1,134.9       | 0.7      |
| H             | 3,213                 | 45           | 322                     | 11.1                     | 1,137.4  | 1,137.4          | 1,138.2       | 0.8      |
| I             | 3,891                 | 92           | 503                     | 7.1                      | 1,148.2  | 1,148.2          | 1,148.9       | 0.7      |
| J             | 4,276                 | 116          | 689                     | 2.5                      | 1,153.9  | 1,153.9          | 1,154.9       | 1.0      |
| K             | 4,806                 | 75           | 229                     | 7.4                      | 1,161.3  | 1,161.3          | 1,161.4       | 0.1      |
| L             | 5,576                 | 64           | 223                     | 7.6                      | 1,172.9  | 1,172.9          | 1,173.1       | 0.2      |
| M             | 5,844                 | 87           | 240                     | 7.1                      | 1,176.4  | 1,176.4          | 1,177.0       | 0.6      |
| N             | 5,949                 | 86           | 262                     | 6.5                      | 1,178.9  | 1,178.9          | 1,179.7       | 0.8      |
| O             | 6,291                 | 97           | 270                     | 6.3                      | 1,184.4  | 1,184.4          | 1,184.8       | 0.4      |
| P             | 6,800                 | 127          | 289                     | 3.5                      | 1,190.7  | 1,190.7          | 1,191.7       | 1.0      |
| Q             | 7,372                 | 100          | 105                     | 6.4                      | 1,201.2  | 1,201.2          | 1,201.4       | 0.2      |
| R             | 7,592                 | 107          | 247                     | 4.1                      | 1,204.4  | 1,204.4          | 1,205.4       | 1.0      |

<sup>1</sup>Feet above confluence with Barton Creek

|                 |  |  |
|-----------------|--|--|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                             |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |  |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BARTON CREEK TRIBUTARY 2</b> |



**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 8,395                 | 36           | 105                     | 9.7                      | 1,215.6  | 1,215.6          | 1,215.9       | 0.3      |
| T             | 8,932                 | 67           | 204                     | 5.0                      | 1,223.1  | 1,223.1          | 1,223.9       | 0.8      |
| U             | 9,176                 | 69           | 159                     | 6.4                      | 1,227.9  | 1,227.9          | 1,228.1       | 0.2      |
| V             | 9,601                 | 45           | 152                     | 6.7                      | 1,233.4  | 1,233.4          | 1,233.9       | 0.5      |

<sup>1</sup>Feet above confluence with Barton Creek

|          |  |  |
|----------|--|--|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                             |
|          |  | <b>FLOODING SOURCE: BARTON CREEK TRIBUTARY 2</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 320                   | 104          | 329                     | 5.9                      | 1,160.2  | 1,160.2          | 1,160.6       | 0.4      |
| B             | 658                   | 63           | 227                     | 8.6                      | 1,165.0  | 1,165.0          | 1,165.1       | 0.1      |
| C             | 1,156                 | 59           | 256                     | 7.6                      | 1,172.5  | 1,172.5          | 1,173.3       | 0.8      |
| D             | 1,582                 | 73           | 223                     | 8.7                      | 1,180.9  | 1,180.9          | 1,181.1       | 0.2      |
| E             | 2,015                 | 116          | 576                     | 2.4                      | 1,187.5  | 1,187.5          | 1,188.4       | 0.9      |
| F             | 2,198                 | 42           | 133                     | 10.2                     | 1,188.1  | 1,188.1          | 1,188.3       | 0.2      |
| G             | 3,461                 | 39           | 152                     | 8.9                      | 1,205.2  | 1,205.2          | 1,205.3       | 0.1      |
| H             | 3,707                 | 43           | 155                     | 8.8                      | 1,210.0  | 1,210.0          | 1,210.3       | 0.3      |
| I             | 4,211                 | 131          | 221                     | 6.2                      | 1,219.0  | 1,219.0          | 1,219.3       | 0.3      |
| J             | 4,362                 | 121          | 262                     | 5.2                      | 1,221.7  | 1,221.7          | 1,221.7       | 0.0      |
| K             | 4,795                 | 83           | 192                     | 7.1                      | 1,228.7  | 1,228.7          | 1,229.0       | 0.3      |

<sup>1</sup>Feet above confluence with Barton Creek Tributary 2

|          |  |  |
|----------|--|--|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                               |
|          |  | <b>FLOODING SOURCE: BARTON CREEK TRIBUTARY 2-1</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                     |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|---------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY    | WITH FLOODWAY | INCREASE |
| A             | 427                   | 67           | 557                     | 7.0                      | 1120.4   | 1119.9 <sup>2</sup> | 1120.0        | 0.1      |
| B             | 880                   | 70           | 792                     | 5.0                      | 1129.0   | 1129.0              | 1129.7        | 0.7      |
| C             | 1,382                 | 52           | 376                     | 10.4                     | 1130.8   | 1130.8              | 1131.0        | 0.2      |
| D             | 1,710                 | 110          | 568                     | 6.9                      | 1139.8   | 1139.8              | 1140.1        | 0.3      |
| E             | 2,321                 | 132          | 843                     | 3.7                      | 1145.9   | 1145.9              | 1146.7        | 0.8      |
| F             | 2,399                 | 103          | 639                     | 4.8                      | 1146.0   | 1146.0              | 1146.8        | 0.8      |
| G             | 2,503                 | 70           | 433                     | 7.1                      | 1146.1   | 1146.1              | 1146.8        | 0.7      |
| H             | 2,761                 | 80           | 633                     | 4.9                      | 1150.8   | 1150.8              | 1151.8        | 1.0      |
| I             | 3,466                 | 60           | 342                     | 9.0                      | 1158.7   | 1158.7              | 1158.8        | 0.1      |
| J             | 3,738                 | 85           | 448                     | 6.9                      | 1163.0   | 1163.0              | 1163.0        | 0.0      |
| K             | 3,815                 | 193          | 860                     | 3.6                      | 1166.7   | 1166.7              | 1166.7        | 0.0      |
| L             | 4,477                 | 90           | 434                     | 7.1                      | 1173.9   | 1173.9              | 1174.2        | 0.3      |
| M             | 4,844                 | 93           | 383                     | 8.0                      | 1177.6   | 1177.6              | 1177.9        | 0.3      |
| N             | 4,994                 | 90           | 392                     | 7.9                      | 1183.5   | 1183.5              | 1184.4        | 0.9      |
| O             | 5,499                 | 130          | 805                     | 1.3                      | 1187.0   | 1187.0              | 1187.2        | 0.2      |
| P             | 5,663                 | 183          | 760                     | 1.4                      | 1192.5   | 1192.5              | 1192.5        | 0.0      |
| Q             | 6,568                 | 25           | 146                     | 7.1                      | 1203.1   | 1203.1              | 1203.3        | 0.2      |

<sup>1</sup>Feet above confluence with Barton Creek

<sup>2</sup>Elevation computed without consideration of backwater effects from Barton Creek

|                 |  |  |
|-----------------|--|--|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                             |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |  |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BARTON CREEK TRIBUTARY 3</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| R             | 6,658                 | 42           | 153                     | 6.8                      | 1209.9   | 1209.9           | 1210.1        | 0.2      |
| S             | 8,074                 | 59           | 180                     | 5.8                      | 1240.5   | 1240.5           | 1240.6        | 0.1      |
| T             | 9,267                 | 31           | 120                     | 8.7                      | 1261.9   | 1261.9           | 1262.4        | 0.5      |

<sup>1</sup>Feet above confluence with Barton Creek

|                 |  |  |
|-----------------|--|--|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b>                 | <b>FLOODWAY DATA</b>                             |
|                 | <b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODING SOURCE: BARTON CREEK TRIBUTARY 3</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 38,923                | 277          | 3,350                   | 12.7                     | 807.1  | 807.1            | 807.8         | 0.8      |
| B             | 39,580                | 282          | 3,980                   | 9.2                      | 809.7  | 809.7            | 810.3         | 0.6      |
| C             | 41,186                | 256          | 3,014                   | 12.8                     | 812.3  | 812.3            | 812.9         | 0.5      |
| D             | 42,584                | 219          | 2,599                   | 13                       | 816.6  | 816.6            | 817.2         | 0.6      |
| E             | 44,062                | 295          | 2,725                   | 14.3                     | 822.9  | 822.9            | 823.3         | 0.5      |
| F             | 44,830                | 710          | 7,509                   | 7.7                      | 827.1  | 827.1            | 827.8         | 0.7      |
| G             | 45,107                | 535          | 5,121                   | 10.7                     | 827.2  | 827.2            | 827.8         | 0.7      |
| H             | 46,130                | 389          | 4,020                   | 10.6                     | 831.0  | 831.0            | 831.6         | 0.6      |
| I             | 47,550                | 398          | 3,973                   | 10.2                     | 836.7  | 836.7            | 837.2         | 0.5      |
| J             | 48,853                | 290          | 3,115                   | 12.1                     | 840.6  | 840.6            | 841.3         | 0.7      |
| K             | 50,068                | 214          | 2,972                   | 14.7                     | 845.6  | 845.6            | 846.1         | 0.5      |
| L             | 51,086                | 340          | 4,668                   | 8.1                      | 850.8  | 850.8            | 851.3         | 0.5      |
| M             | 51,856                | 313          | 3,318                   | 9.4                      | 852.6  | 852.6            | 853.1         | 0.5      |
| N             | 52,971                | 227          | 2,424                   | 10.8                     | 856.3  | 856.3            | 856.7         | 0.4      |
| O             | 54,011                | 420          | 4,567                   | 6.7                      | 862.7  | 862.7            | 863.4         | 0.7      |
| P             | 55,091                | 249          | 2,806                   | 10.9                     | 865.5  | 865.5            | 866.0         | 0.5      |
| Q             | 56,581                | 306          | 2,961                   | 12.1                     | 871.2  | 871.2            | 871.7         | 0.5      |
| R             | 57,727                | 321          | 3,539                   | 9.2                      | 876.1  | 876.1            | 876.7         | 0.6      |

<sup>1</sup>Feet above confluence with Onion Creek

|                 |  |                                    |
|-----------------|--|------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>               |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                    |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BEAR CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 59,293                | 201          | 2,900                   | 9.4                      | 883.3  | 883.3            | 884.0         | 0.7      |
| T             | 60,217                | 298          | 3,015                   | 8.3                      | 885.3  | 885.3            | 886.1         | 0.8      |
| U             | 61,341                | 164          | 2,041                   | 11.7                     | 889.6  | 889.6            | 890.4         | 0.8      |
| V             | 62,502                | 193          | 2,061                   | 12.5                     | 894.0  | 894.0            | 894.6         | 0.6      |
| W             | 63,700                | 206          | 2,299                   | 10.7                     | 900.4  | 900.4            | 900.9         | 0.5      |
| X             | 65,275                | 647          | 3,839                   | 5.7                      | 908.0  | 908.0            | 908.5         | 0.5      |
| Y             | 65,861                | 455          | 2,057                   | 10.0                     | 908.8  | 908.8            | 909.3         | 0.5      |
| Z             | 66,623                | 249          | 1,741                   | 9.5                      | 913.0  | 913.0            | 913.9         | 0.9      |
| AA            | 68,421                | 255          | 2,186                   | 6.8                      | 924.5  | 924.5            | 925.0         | 0.5      |
| AB            | 69,930                | 265          | 1,843                   | 6.8                      | 932.8  | 932.8            | 933.6         | 0.8      |
| AC            | 71,019                | 227          | 1,642                   | 8.4                      | 938.3  | 938.3            | 938.8         | 0.5      |
| AD            | 71,859                | 354          | 1,903                   | 8.9                      | 944.7  | 944.7            | 944.9         | 0.2      |
| AE            | 73,172                | 352          | 1,505                   | 10.8                     | 951.9  | 951.9            | 952.2         | 0.3      |
| AF            | 74,941                | 189          | 1,066                   | 13.3                     | 963.0  | 963.0            | 963.5         | 0.5      |
| AG            | 76,524                | 152          | 970                     | 9.1                      | 975.6  | 975.6            | 976.0         | 0.4      |
| AH            | 77,289                | 371          | 2,161                   | 3.3                      | 985.6  | 985.6            | 986.1         | 0.5      |

<sup>1</sup>Feet above confluence with Onion Creek

|                 |  |                                    |
|-----------------|--|------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>               |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                    |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BEAR CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 488                   | 48           | 326                     | 7.7                      | 853.4  | 853.4            | 853.5         | 0.1      |
| B             | 1,134                 | 71           | 375                     | 6.7                      | 862.8  | 862.8            | 863.0         | 0.2      |
| C             | 1,891                 | 93           | 420                     | 6.0                      | 873.9  | 873.9            | 874.2         | 0.3      |
| D             | 2,325                 | 199          | 1,755                   | 1.4                      | 884.5  | 884.5            | 885.4         | 0.9      |
| E             | 2,784                 | 80           | 428                     | 5.8                      | 887.2  | 887.2            | 887.8         | 0.6      |
| F             | 3,367                 | 67           | 202                     | 4.0                      | 894.2  | 894.2            | 894.3         | 0.1      |
| G             | 4,399                 | 34           | 127                     | 6.3                      | 902.9  | 902.9            | 903.1         | 0.2      |
| H             | 5,590                 | 67           | 208                     | 3.9                      | 921.4  | 921.4            | 922.0         | 0.6      |
| I             | 6,116                 | 63           | 361                     | 2.2                      | 927.9  | 927.9            | 928.6         | 0.7      |
| J             | 7,201                 | 35           | 100                     | 8.0                      | 939.8  | 939.8            | 940.4         | 0.6      |
| K             | 7,872                 | 52           | 138                     | 5.8                      | 953.5  | 953.5            | 954.2         | 0.7      |
| L             | 8,764                 | 58           | 157                     | 5.1                      | 970.5  | 970.5            | 970.5         | 0.0      |
| M             | 9,580                 | 62           | 142                     | 5.6                      | 983.9  | 983.9            | 984.9         | 1.0      |
| N             | 10,200                | 51           | 153                     | 5.2                      | 995.3  | 995.3            | 995.9         | 0.6      |
| O             | 11,268                | 44           | 103                     | 7.8                      | 1019.5   | 1019.5           | 1019.5        | 0.0      |
| P             | 11,878                | 71           | 160                     | 5.0                      | 1030.8   | 1030.8           | 1031.1        | 0.3      |

<sup>1</sup>Feet above confluence with Stream Bear-1

|          |  |   |
|----------|--|---|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                            |
|          |  | <b>FLOODING SOURCE: BEAR CREEK TRIBUTARY 1A</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 10,815                | 960          | 17,180                  | 6.1                      | 581.7  | 581.7            | 581.9         | 0.2      |
| B             | 18,972                | 2,986        | 17,789                  | 9.0                      | 589.1  | 589.1            | 589.1         | 0.0      |
| C             | 23,170                | 2,057        | 19,136                  | 7.2                      | 596.5  | 596.5            | 596.5         | 0.0      |
| D             | 30,842                | 1,625        | 30,026                  | 5.2                      | 606.0  | 606.0            | 606.0         | 0.0      |
| E             | 38,880                | 1,309        | 24,239                  | 6.3                      | 616.7  | 616.7            | 616.7         | 0.0      |
| F             | 43,417                | 1,157        | 17,967                  | 8.6                      | 621.0  | 621.0            | 621.0         | 0.0      |
| G             | 46,001                | 2,146        | 18,622                  | 8.3                      | 627.4  | 627.4            | 628.1         | 0.7      |
| H             | 51,519                | 1,431        | 18,832                  | 8.6                      | 637.3  | 637.3            | 637.3         | 0.0      |
| I             | 56,435                | 923          | 14,817                  | 10.5                     | 643.6  | 643.6            | 643.7         | 0.1      |
| J             | 64,561                | 1,889        | 30,849                  | 5.0                      | 660.1  | 660.1            | 660.3         | 0.2      |
| K             | 73,294                | 2,047        | 24,598                  | 6.3                      | 673.5  | 673.5            | 674.3         | 0.8      |
| L             | 75,295                | 1,644        | 17,815                  | 8.7                      | 678.1  | 678.1            | 678.1         | 0.0      |
| M             | 77,819                | 586          | 15,939                  | 9.7                      | 682.2  | 682.2            | 683.0         | 0.8      |
| N             | 80,395                | 651          | 15,304                  | 10.1                     | 687.1  | 687.1            | 687.9         | 0.8      |
| O             | 82,884                | 467          | 12,353                  | 12.5                     | 695.0  | 695.0            | 695.7         | 0.7      |
| P             | 86,023                | 463          | 14,740                  | 10.5                     | 703.4  | 703.4            | 704.0         | 0.6      |
| Q             | 88,885                | 465          | 14,206                  | 10.8                     | 712.3  | 712.3            | 712.8         | 0.5      |
| R             | 92,429                | 372          | 12,194                  | 12.5                     | 719.5  | 719.5            | 720.1         | 0.6      |
| S             | 94,721                | 401          | 13,835                  | 11.1                     | 723.9  | 723.9            | 724.6         | 0.7      |
| T             | 96,109                | 418          | 15,136                  | 10.1                     | 726.8  | 726.8            | 727.4         | 0.6      |
| U             | 98,871                | 437          | 14,331                  | 10.7                     | 731.7  | 731.7            | 732.2         | 0.5      |

<sup>1</sup>Feet above confluence with San Marcos River

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BLANCO RIVER</b> |



**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| V             | 102,311               | 496          | 13,897                  | 11.0                     | 737.5  | 737.5            | 738.0         | 0.5      |
| W             | 104,480               | 551          | 16,186                  | 9.5                      | 742.8  | 742.8            | 743.3         | 0.5      |
| X             | 107,957               | 561          | 16,424                  | 9.3                      | 748.1  | 748.1            | 748.7         | 0.6      |
| Y             | 111,961               | 705          | 24,799                  | 6.2                      | 754.0  | 754.0            | 754.6         | 0.6      |
| Z             | 113,830               | 383          | 11,122                  | 13.8                     | 755.0  | 755.0            | 755.7         | 0.7      |
| AA            | 116,492               | 427          | 13,930                  | 11.0                     | 762.1  | 762.1            | 762.1         | 0.0      |
| AB            | 118,546               | 401          | 13,485                  | 11.2                     | 764.7  | 764.7            | 765.7         | 1.0      |
| AC            | 122,246               | 439          | 13,050                  | 11.6                     | 771.1  | 771.1            | 771.8         | 0.7      |
| AD            | 124,422               | 336          | 10,693                  | 14.2                     | 774.9  | 774.9            | 775.6         | 0.7      |
| AE            | 126,336               | 529          | 13,148                  | 11.5                     | 779.7  | 779.7            | 780.3         | 0.6      |
| AF            | 127,728               | 455          | 15,589                  | 9.7                      | 781.9  | 781.9            | 782.9         | 1.0      |
| AG            | 132,314               | 490          | 13,328                  | 11.5                     | 790.4  | 790.4            | 790.9         | 0.5      |
| AH            | 137,833               | 409          | 10,662                  | 14.3                     | 799.3  | 799.3            | 799.9         | 0.6      |
| AI            | 141,023               | 464          | 13,174                  | 11.6                     | 810.4  | 810.4            | 811.1         | 0.7      |
| AJ            | 143,382               | 567          | 14,331                  | 10.7                     | 814.7  | 814.7            | 815.3         | 0.6      |

<sup>1</sup>Feet above confluence with San Marcos River

|                 |  |                                      |
|-----------------|--|--------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                 |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                      |
|                 | <b>AND INCORPORATED AREAS</b>              |                                      |
|                 |  | <b>FLOODING SOURCE: BLANCO RIVER</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| AK            | 145,413               | 443          | 12,083                  | 12.7                     | 818.7  | 818.7            | 819.2         | 0.5      |
| AL            | 147,655               | 344          | 10,818                  | 14.1                     | 822.2  | 822.2            | 823.2         | 1.0      |
| AM            | 150,049               | 535          | 13,710                  | 11.1                     | 827.0  | 827.0            | 827.9         | 0.9      |
| AN            | 152,455               | 309          | 9,670                   | 15.8                     | 831.0  | 831.0            | 832.0         | 1.0      |
| AO            | 155,661               | 583          | 15,215                  | 10.0                     | 841.9  | 841.9            | 842.5         | 0.6      |
| AP            | 156,865               | 377          | 12,271                  | 12.4                     | 843.4  | 843.4            | 843.9         | 0.5      |
| AQ            | 158,482               | 359          | 10,501                  | 14.1                     | 845.4  | 845.4            | 846.1         | 0.7      |
| AR            | 161,561               | 325          | 11,154                  | 13.3                     | 851.8  | 851.8            | 852.8         | 1.0      |
| AS            | 163,805               | 372          | 10,730                  | 13.8                     | 857.4  | 857.4            | 858.3         | 0.9      |
| AT            | 166,928               | 432          | 13,794                  | 10.7                     | 864.9  | 864.9            | 865.6         | 0.7      |
| AU            | 170,283               | 393          | 14,339                  | 10.3                     | 871.6  | 871.6            | 872.1         | 0.5      |
| AV            | 171,712               | 620          | 17,325                  | 8.6                      | 873.6  | 873.6            | 874.5         | 0.9      |
| AW            | 174,191               | 645          | 15,826                  | 9.4                      | 876.5  | 876.5            | 877.5         | 1.0      |
| AX            | 176,757               | 705          | 20,012                  | 7.4                      | 881.6  | 881.6            | 882.5         | 0.9      |
| AY            | 179,545               | 586          | 13,134                  | 11.3                     | 883.9  | 883.9            | 884.9         | 1.0      |
| AZ            | 180,344               | 710          | 19,831                  | 7.5                      | 888.0  | 888.0            | 888.3         | 0.3      |
| BA            | 182,986               | 424          | 12,763                  | 11.7                     | 892.1  | 892.1            | 892.6         | 0.5      |
| BB            | 186,168               | 562          | 16,009                  | 9.3                      | 899.1  | 899.1            | 900.1         | 1.0      |

<sup>1</sup>Feet above confluence with San Marcos River

|                 |  |                                      |
|-----------------|--|--------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                 |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                      |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BLANCO RIVER</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| BC            | 188,231               | 411          | 12,655                  | 11.8                     | 902.0  | 902.0            | 903.0         | 1.0      |
| BD            | 190,299               | 493          | 15,525                  | 9.6                      | 907.1  | 907.1            | 907.9         | 0.8      |
| BE            | 193,048               | 484          | 14,548                  | 10.2                     | 911.9  | 911.9            | 912.9         | 1.0      |
| BF            | 194,225               | 558          | 15,291                  | 9.7                      | 913.8  | 913.8            | 914.7         | 0.9      |
| BG            | 195,674               | 531          | 16,123                  | 9.2                      | 916.2  | 916.2            | 917.1         | 0.9      |
| BH            | 198,901               | 793          | 18,244                  | 8.0                      | 920.9  | 920.9            | 921.6         | 0.7      |
| BI            | 201,772               | 682          | 18,600                  | 7.8                      | 924.7  | 924.7            | 925.5         | 0.8      |
| BJ            | 202,683               | 439          | 11,986                  | 12.1                     | 925.1  | 925.1            | 925.7         | 0.6      |
| BK            | 205,695               | 367          | 13,629                  | 10.7                     | 939.1  | 939.1            | 939.1         | 0.0      |
| BL            | 207,833               | 450          | 14,797                  | 9.8                      | 941.4  | 941.4            | 941.7         | 0.3      |
| BM            | 210,195               | 230          | 7,960                   | 18.4                     | 945.2  | 945.2            | 945.7         | 0.5      |
| BN            | 212,503               | 329          | 12,273                  | 11.9                     | 952.3  | 952.3            | 952.6         | 0.3      |
| BO            | 213,745               | 346          | 12,207                  | 12.0                     | 955.1  | 955.1            | 955.2         | 0.1      |
| BP            | 217,237               | 530          | 14,655                  | 10.0                     | 959.9  | 959.9            | 960.5         | 0.6      |
| BQ            | 218,388               | 460          | 14,466                  | 10.1                     | 963.3  | 963.3            | 964.3         | 1.0      |
| BR            | 221,438               | 555          | 15,751                  | 9.3                      | 967.4  | 967.4            | 968.2         | 0.8      |
| BS            | 223,734               | 484          | 12,598                  | 11.6                     | 970.4  | 970.4            | 970.8         | 0.4      |
| BT            | 226,159               | 434          | 14,502                  | 10.0                     | 974.9  | 974.9            | 975.8         | 0.9      |

<sup>1</sup>Feet above confluence with San Marcos River

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BLANCO RIVER</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| BU            | 228,708               | 391          | 12,453                  | 11.6                     | 978.8  | 978.8            | 979.8         | 1.0      |
| BV            | 230,739               | 286          | 10,178                  | 14.2                     | 982.8  | 982.8            | 983.7         | 0.9      |
| BW            | 232,833               | 339          | 10,904                  | 13.3                     | 987.7  | 987.7            | 988.5         | 0.8      |
| BX            | 235,006               | 332          | 11,903                  | 12.2                     | 992.7  | 992.7            | 993.5         | 0.8      |
| BY            | 237,176               | 497          | 15,178                  | 9.5                      | 998.8  | 998.8            | 999.5         | 0.7      |
| BZ            | 239,403               | 449          | 14,323                  | 10.1                     | 1,005.6  | 1,005.6          | 1,006.4       | 0.8      |
| CA            | 241,519               | 395          | 12,332                  | 11.7                     | 1,009.2  | 1,009.2          | 1,010.2       | 1.0      |
| CB            | 242,581               | 459          | 14,722                  | 9.8                      | 1,014.0  | 1,014.0          | 1,014.9       | 0.9      |
| CC            | 245,418               | 378          | 11,398                  | 12.7                     | 1,019.7  | 1,019.7          | 1,020.4       | 0.7      |
| CD            | 246,669               | 391          | 12,521                  | 11.6                     | 1,022.4  | 1,022.4          | 1,023.3       | 0.9      |
| CE            | 248,952               | 321          | 10,465                  | 13.5                     | 1,026.7  | 1,026.7          | 1,027.5       | 0.8      |
| CF            | 251,118               | 366          | 13,052                  | 10.8                     | 1,033.2  | 1,033.2          | 1,034.1       | 0.9      |
| CG            | 254,664               | 215          | 8,021                   | 13.3                     | 1,040.7  | 1,040.7          | 1,041.4       | 0.7      |
| CH            | 257,726               | 233          | 7,091                   | 15.1                     | 1,046.4  | 1,046.4          | 1,047.0       | 0.6      |
| CI            | 264,097               | 230          | 6,958                   | 15.4                     | 1,063.4  | 1,063.4          | 1,063.5       | 0.1      |
| CJ            | 269,283               | 250          | 7,357                   | 14.5                     | 1,092.6  | 1,092.6          | 1,093.5       | 0.9      |

<sup>1</sup>Feet above confluence with San Marcos River

|                 |  |                                      |
|-----------------|--|--------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                 |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                      |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BLANCO RIVER</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 3,943                 | 2,308        | 1,405                   | 0.5                      | 604.2  | 604.2            | 604.2         | 0.0      |
| B             | 4,992                 | 1,999        | 1,652                   | 1.0                      | 606.4  | 606.4            | 606.4         | 0.0      |
| C             | 5,930                 | 1,634        | 1,866                   | 0.4                      | 608.2  | 608.2            | 608.2         | 0.0      |

<sup>1</sup>Feet above confluence with Blanco River

|                 |  |  |
|-----------------|--|--|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>   |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |  |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BLANCO RIVER OVERFLOW<br/>UPSTREAM OF I-35</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 24,880                | 1,086        | 6,493                   | 1.5                      | 542.3  | 542.3            | 542.4         | 0.1      |
| B             | 25,900                | 881          | 4,727                   | 2.0                      | 542.7  | 542.7            | 543.0         | 0.3      |
| C             | 27,400                | 570          | 2,785                   | 3.5                      | 544.9  | 544.9            | 545.5         | 0.6      |
| D             | 29,300                | 416          | 2,698                   | 3.3                      | 548.9  | 548.9            | 549.7         | 0.8      |
| E             | 30,940                | 684          | 3,509                   | 2.2                      | 552.5  | 552.5            | 553.3         | 0.8      |
| F             | 32,750                | 467          | 1,733                   | 4.3                      | 554.6  | 554.6            | 555.5         | 0.9      |
| G             | 34,750                | 395          | 1,494                   | 2.3                      | 557.8  | 557.8            | 558.5         | 0.7      |
| H             | 35,900                | 265          | 1,078                   | 3.2                      | 561.0  | 561.0            | 561.8         | 0.8      |
| I             | 37,450                | 373          | 1,314                   | 2.7                      | 564.0  | 564.0            | 564.9         | 0.9      |
| J             | 38,970                | 393          | 1,438                   | 2.3                      | 565.7  | 565.7            | 566.7         | 1.0      |
| K             | 40,650                | 742          | 1,103                   | 3.0                      | 568.6  | 568.6            | 569.5         | 0.9      |
| L             | 41,990                | 250          | 1,032                   | 2.4                      | 571.6  | 571.6            | 572.3         | 0.7      |
| M             | 43,180                | 261          | 1,072                   | 2.3                      | 574.5  | 574.5            | 575.3         | 0.8      |
| N             | 44,590                | 283          | 990                     | 2.5                      | 576.1  | 576.1            | 576.9         | 0.8      |
| O             | 45,970                | 280          | 1,014                   | 2.4                      | 577.5  | 577.5            | 578.4         | 0.9      |
| P             | 46,880                | 272          | 777                     | 3.0                      | 578.7  | 578.7            | 579.6         | 0.9      |
| Q             | 48,380                | 231          | 1,121                   | 2.1                      | 581.4  | 581.4            | 582.3         | 0.9      |
| R             | 50,150                | 277          | 1,054                   | 2.0                      | 584.0  | 584.0            | 584.8         | 0.8      |

<sup>1</sup>Feet above confluence with Plum Creek

|                 |  |                                      |
|-----------------|--|--------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                 |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                      |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: BRUSHY CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 51,430                | 325          | 1,167                   | 1.8                      | 585.4  | 585.4            | 586.3         | 0.9      |
| T             | 52,660                | 192          | 687                     | 3.1                      | 588.6  | 588.6            | 589.2         | 0.6      |
| U             | 53,560                | 191          | 1,017                   | 2.1                      | 590.1  | 590.1            | 591.1         | 1.0      |
| V             | 54,780                | 137          | 644                     | 3.3                      | 592.9  | 592.9            | 593.7         | 0.8      |
| W             | 55,950                | 157          | 1,104                   | 1.9                      | 596.5  | 596.5            | 597.3         | 0.8      |
| X             | 62,810                | 207          | 529                     | 4.7                      | 618.3  | 618.3            | 618.3         | 0.0      |
| Y             | 64,460                | 122          | 571                     | 4.0                      | 623.0  | 623.0            | 623.5         | 0.5      |
| Z             | 65,450                | 212          | 1,008                   | 2.3                      | 625.7  | 625.7            | 626.7         | 1.0      |
| AA            | 66,540                | 190          | 673                     | 3.0                      | 630.1  | 630.1            | 630.7         | 0.6      |
| AB            | 67,550                | 101          | 451                     | 4.4                      | 633.3  | 633.3            | 634.3         | 1.0      |
| AC            | 68,240                | 111          | 305                     | 6.1                      | 636.0  | 636.0            | 636.5         | 0.5      |
| AD            | 69,640                | 127          | 388                     | 3.9                      | 640.9  | 640.9            | 641.8         | 0.9      |
| AE            | 70,740                | 160          | 353                     | 4.0                      | 643.8  | 643.8            | 644.7         | 0.9      |
| AF            | 72,260                | 130          | 407                     | 2.8                      | 649.3  | 649.3            | 649.8         | 0.5      |
| AG            | 72,900                | 106          | 247                     | 2.3                      | 650.5  | 650.5            | 651.2         | 0.7      |
| AH            | 73,830                | 75           | 155                     | 3.7                      | 652.8  | 652.8            | 653.8         | 1.0      |
| AI            | 78,285                | 256          | 425                     | 4.5                      | 683.4  | 683.4            | 683.4         | 0.0      |
| AJ            | 79,285                | 248          | 401                     | 3.5                      | 687.4  | 687.4            | 687.5         | 0.1      |

<sup>1</sup>Feet above confluence with Plum Creek

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BRUSHY CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| AK            | 80,165                | 114          | 492                     | 1.9                      | 693.5  | 693.5            | 694.1         | 0.6      |
| AL            | 80,215                | 240          | 1,966                   | 0.5                      | 698.8  | 698.8            | 698.9         | 0.1      |
| AM            | 80,805                | 190          | 1,036                   | 0.6                      | 709.5  | 709.5            | 709.5         | 0.0      |
| AN            | 81,382                | 163          | 808                     | 0.6                      | 710.0  | 710.0            | 710.0         | 0.0      |
| AO            | 82,612                | 60           | 42                      | 4.2                      | 726.8  | 726.8            | 726.8         | 0.0      |

<sup>1</sup>Feet above confluence with Plum Creek

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BRUSHY CREEK</b> |



**Table 23: Floodway Data (continued)**

| LOCATION                                  |                       | FLOODWAY             |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---|-----------------------|----------------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION                             | DISTANCE <sup>2</sup> | WIDTH (FEET)         | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A-J <sup>1</sup><br>K<br>L-N <sup>1</sup> | 12,564                | 571/103 <sup>3</sup> | 6,573                   | 2.7                      | 579.9  | 579.9            | 579.9         | 0.0      |
| O   | 18,448                | 362                  | 1,830                   | 3.7                      | 588.1  | 588.1            | 588.8         | 0.7      |
| P   | 19,182                | 295                  | 1,444                   | 4.7                      | 591.0  | 591.0            | 591.6         | 0.6      |
| Q   | 21,326                | 290                  | 1,490                   | 4.5                      | 596.7  | 596.7            | 597.6         | 0.9      |
| R   | 22,392                | 307                  | 1,849                   | 3.6                      | 598.7  | 598.7            | 599.6         | 0.9      |
| S   | 23,761                | 300                  | 1,799                   | 3.7                      | 601.1  | 601.1            | 602.0         | 0.9      |
| T   | 25,159                | 649                  | 1,311                   | 1.7                      | 604.0  | 604.0            | 604.4         | 0.4      |
| U   | 29,699                | 121                  | 233                     | 7.9                      | 615.6  | 615.6            | 615.6         | 0.0      |
| V   | 31,660                | 251                  | 537                     | 3.3                      | 626.2  | 626.2            | 626.4         | 0.2      |
| W   | 34,236                | 673                  | 891                     | 2.0                      | 636.6  | 636.6            | 636.6         | 0.0      |

<sup>1</sup>Floodway is located entirely within Caldwell County at these cross sections

<sup>2</sup>Stream distance in feet above confluence with San Marcos River

<sup>3</sup>Total floodway width / width within Hays County

|          |  |                                      |
|----------|--|--------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><br><b>HAYS COUNTY, TEXAS</b><br><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                 |
|          |  | <b>FLOODING SOURCE: BYPASS CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                    |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|--------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY   | WITH FLOODWAY | INCREASE |
| A             | 1,485                 | 120          | 870                     | 8.4                      | 953.3  | 953.2 <sup>2</sup> | 954.2         | 1.0      |
| B             | 2,613                 | 69           | 514                     | 12.3                     | 962.8  | 962.8              | 963.5         | 0.6      |
| C             | 3,282                 | 75           | 613                     | 10.5                     | 973.5  | 973.5              | 973.9         | 0.4      |
| D             | 4,096                 | 70           | 521                     | 6.7                      | 980.9  | 980.9              | 980.9         | 0.0      |
| E             | 4,591                 | 50           | 244                     | 12.9                     | 984.2  | 984.2              | 984.3         | 0.0      |
| F             | 5,741                 | 81           | 398                     | 8.1                      | 1004.6   | 1004.6             | 1004.9        | 0.3      |
| G             | 6,668                 | 96           | 529                     | 7.0                      | 1018.8   | 1018.8             | 1019.0        | 0.2      |
| H             | 7,050                 | 160          | 631                     | 5.0                      | 1023.0   | 1023.0             | 1023.0        | 0.0      |
| I             | 8,215                 | 112          | 609                     | 5.5                      | 1035.3   | 1035.3             | 1036.3        | 1.0      |
| J             | 8,807                 | 110          | 354                     | 11.2                     | 1043.1   | 1043.1             | 1043.6        | 0.5      |
| K             | 9,449                 | 106          | 486                     | 7.0                      | 1053.2   | 1053.2             | 1053.4        | 0.2      |
| L             | 9,547                 | 115          | 492                     | 6.7                      | 1053.6   | 1053.6             | 1053.7        | 0.1      |
| M             | 10,307                | 75           | 284                     | 11.4                     | 1063.2   | 1063.2             | 1063.3        | 0.0      |
| N             | 11,415                | 95           | 285                     | 11.1                     | 1080.8   | 1080.8             | 1080.9        | 0.1      |
| O             | 12,151                | 49           | 138                     | 9.8                      | 1092.1   | 1092.1             | 1092.2        | 0.1      |
| P             | 12,848                | 30           | 158                     | 9.4                      | 1105.9   | 1105.9             | 1106.3        | 0.4      |
| Q             | 13,827                | 25           | 141                     | 9.2                      | 1124.8   | 1124.8             | 1125.6        | 0.8      |
| R             | 15,121                | 68           | 193                     | 8.2                      | 1155.4   | 1155.4             | 1155.5        | 0.1      |

<sup>1</sup>Feet above confluence with Barton Creek

<sup>2</sup>Elevations computed without consideration of backwater effects from Barton Creek

|          |  |   |
|----------|--|---|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                    |
|          |  | <b>FLOODING SOURCE: CAMBRIAN BRANCH</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 297                   | 52           | 135                     | 7.1                      | 1089.1   | 1089.1           | 1089.1        | 0.0      |
| B             | 682                   | 52           | 133                     | 7.2                      | 1096.1   | 1096.1           | 1096.1        | 0.0      |
| C             | 1,278                 | 35           | 113                     | 8.5                      | 1108.1   | 1108.1           | 1108.1        | 0.0      |
| D             | 1,549                 | 42           | 121                     | 7.9                      | 1115.3   | 1115.3           | 1115.3        | 0.0      |
| E             | 1,980                 | 42           | 117                     | 8.2                      | 1128.4   | 1128.4           | 1128.5        | 0.1      |

<sup>1</sup>Feet above confluence with Cambrian Branch

|                 |  |   |
|-----------------|--|---|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                                |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |   |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: CAMBRIAN BRANCH TRIBUTARY 1</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 533                   | 54           | 378                     | 9.5                      | 998.3  | 998.3            | 998.8         | 0.5      |
| B             | 920                   | 42           | 290                     | 12.4                     | 1003.1   | 1003.1           | 1003.5        | 0.4      |
| C             | 1,185                 | 67           | 443                     | 8.1                      | 1007.1   | 1007.1           | 1007.2        | 0.1      |
| D             | 2,056                 | 77           | 319                     | 9.1                      | 1021.1   | 1021.1           | 1021.2        | 0.1      |
| E             | 2,337                 | 59           | 433                     | 6.7                      | 1024.0   | 1024.0           | 1024.9        | 0.9      |
| F             | 2,636                 | 87           | 852                     | 3.4                      | 1032.4   | 1032.4           | 1033.0        | 0.6      |
| G             | 4,272                 | 111          | 464                     | 6.3                      | 1051.3   | 1051.3           | 1050.3        | 0.0      |
| H             | 5,152                 | 69           | 448                     | 6.4                      | 1060.6   | 1060.6           | 1060.7        | 0.1      |
| I             | 5,495                 | 64           | 456                     | 6.4                      | 1065.1   | 1065.1           | 1065.4        | 0.3      |
| J             | 5,732                 | 98           | 557                     | 5.2                      | 1066.6   | 1066.6           | 1066.7        | 0.1      |
| K             | 5,779                 | 158          | 357                     | 8.1                      | 1070.7   | 1070.7           | 1070.7        | 0.0      |
| L             | 5,917                 | 202          | 594                     | 4.9                      | 1074.1   | 1074.1           | 1074.1        | 0.0      |
| M             | 6,484                 | 214          | 753                     | 3.9                      | 1082.3   | 1082.3           | 1082.4        | 0.1      |
| N             | 6,744                 | 175          | 404                     | 7.2                      | 1083.7   | 1083.7           | 1083.7        | 0.0      |
| O             | 7,234                 | 60           | 369                     | 7.9                      | 1089.4   | 1089.4           | 1090.2        | 0.8      |
| P             | 7,800                 | 66           | 348                     | 8.3                      | 1096.6   | 1096.6           | 1097.3        | 0.7      |

<sup>1</sup>Feet above confluence with Roy Branch

|                 |  |   |
|-----------------|--|---|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>  |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |   |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: COTTONWOOD BRANCH (TRIBUTARY TO ROY BRANCH)</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                    |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|--------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY   | WITH FLOODWAY | INCREASE |
| A             | 58,281                | 1,419        | 9,209                   | 1.1                      | 592.2  | 591.8 <sup>2</sup> | 591.8         | 0.0      |
| B             | 59,897                | 887          | 3,887                   | 2.6                      | 592.3  | 592.3              | 592.3         | 0.0      |
| C             | 61,193                | 964          | 3,626                   | 2.5                      | 594.0  | 594.0              | 594.0         | 0.0      |
| D             | 62,356                | 852          | 5,041                   | 1.7                      | 599.4  | 599.4              | 599.4         | 0.0      |
| E             | 64,829                | 841          | 2,175                   | 2.2                      | 600.2  | 600.2              | 600.2         | 0.0      |
| F             | 66,256                | 569          | 1,318                   | 8.2                      | 603.6  | 603.6              | 603.6         | 0.0      |
| G             | 66,922                | 411          | 1,362                   | 3.5                      | 607.8  | 607.8              | 607.8         | 0.0      |
| H             | 67,917                | 476          | 1,499                   | 4.1                      | 610.8  | 610.8              | 610.8         | 0.0      |
| I             | 69,246                | 275          | 1,391                   | 3.8                      | 614.9  | 614.9              | 615.9         | 1.0      |
| J             | 69,965                | 266          | 1,013                   | 5.2                      | 617.1  | 617.1              | 617.7         | 0.6      |
| K             | 71,093                | 692          | 1,631                   | 3.2                      | 620.1  | 620.1              | 620.3         | 0.2      |
| L             | 72,269                | 1,229        | 2,922                   | 4.2                      | 624.2  | 624.2              | 624.2         | 0.0      |
| M             | 72,690                | 1,189        | 2,431                   | 2.2                      | 628.5  | 628.5              | 628.5         | 0.0      |
| N             | 73,841                | 911          | 2,216                   | 1.9                      | 629.9  | 629.9              | 629.9         | 0.0      |
| O             | 74,608                | 770          | 1,341                   | 3.2                      | 632.2  | 632.2              | 632.2         | 0.0      |
| P             | 76,192                | 756          | 1,009                   | 3.7                      | 639.0  | 639.0              | 639.0         | 0.0      |
| Q             | 77,341                | 705          | 1,127                   | 2.3                      | 642.2  | 642.2              | 642.2         | 0.0      |

<sup>1</sup>Feet above confluence with Yorks Creek

<sup>2</sup>Elevation computed without consideration of backwater effects from Yorks Creek

|          |  |  |
|----------|--|--|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                     |
|          |  | <b>FLOODING SOURCE: COTTONWOOD CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| R             | 78,582                | 148          | 815                     | 3.2                      | 646.8  | 646.8            | 646.8         | 0.0      |
| S             | 79,560                | 39           | 139                     | 11.2                     | 649.3  | 649.3            | 649.3         | 0.0      |
| T             | 80,327                | 271          | 657                     | 3.1                      | 656.4  | 656.4            | 656.4         | 0.0      |
| U             | 81,391                | 492          | 3,149                   | 0.7                      | 666.0  | 666.0            | 660.8         | 0.8      |
| V             | 82,037                | 114          | 236                     | 8.3                      | 668.0  | 668.0            | 668.0         | 0.0      |
| W             | 83,483                | 114          | 253                     | 7.7                      | 680.1  | 680.1            | 680.1         | 0.0      |

<sup>1</sup>Feet above confluence with Yorks Creek

|                 |  |  |
|-----------------|--|--|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                     |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |  |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: COTTONWOOD CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 3,546                 | 320          | 4,944                   | 10.2                     | 851.9  | 851.9            | 852.7         | 0.8      |
| B             | 4,967                 | 338          | 5,267                   | 8.2                      | 856.1  | 856.1            | 857.0         | 0.9      |
| C             | 6,710                 | 484          | 5,138                   | 8.3                      | 864.3  | 864.3            | 865.0         | 0.7      |
| D             | 7,964                 | 495          | 6,338                   | 6.8                      | 869.2  | 869.2            | 870.0         | 0.8      |
| E             | 9,441                 | 511          | 7,121                   | 6.0                      | 874.8  | 874.8            | 875.6         | 0.8      |
| F             | 10,528                | 375          | 4,660                   | 9.0                      | 878.0  | 878.0            | 878.6         | 0.6      |
| G             | 11,967                | 424          | 6,153                   | 6.8                      | 884.9  | 884.9            | 885.7         | 0.8      |
| H             | 14,209                | 390          | 5,386                   | 7.7                      | 893.6  | 893.6            | 894.4         | 0.8      |
| I             | 15,857                | 348          | 5,446                   | 7.7                      | 900.6  | 900.6            | 901.6         | 1.0      |
| J             | 16,672                | 358          | 5,213                   | 8.0                      | 904.4  | 904.4            | 905.2         | 0.8      |
| K             | 17,379                | 338          | 5,218                   | 8.0                      | 909.0  | 909.0            | 910.0         | 1.0      |
| L             | 18,446                | 499          | 8,717                   | 4.8                      | 914.1  | 914.1            | 914.9         | 0.8      |
| M             | 19,976                | 493          | 6,231                   | 6.6                      | 921.1  | 921.1            | 922.1         | 1.0      |
| N             | 21,672                | 465          | 4,882                   | 8.3                      | 925.2  | 925.2            | 926.2         | 1.0      |
| O             | 23,168                | 468          | 5,023                   | 8.1                      | 931.5  | 931.5            | 932.1         | 0.6      |
| P             | 24,109                | 684          | 7,984                   | 5.1                      | 935.1  | 935.1            | 935.8         | 0.7      |
| Q             | 25,380                | 582          | 6,907                   | 4.9                      | 938.8  | 938.8            | 939.8         | 1.0      |
| R             | 26,088                | 385          | 4,050                   | 8.4                      | 940.6  | 940.6            | 941.5         | 0.9      |
| S             | 27,435                | 519          | 5,575                   | 5.7                      | 947.5  | 947.5            | 947.9         | 0.4      |

<sup>1</sup>Feet above confluence with Blanco River

|                 |  |                                       |
|-----------------|--|---------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                  |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                       |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: CYPRESS CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION,     |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| T             | 30,158                | 593          | 6,615                   | 4.8                      | 955.5  | 955.5            | 956.3         | 0.8      |
| U             | 31,588                | 891          | 6,172                   | 5.9                      | 960.2  | 960.2            | 961.0         | 0.8      |
| V             | 33,331                | 280          | 3,501                   | 9.1                      | 968.9  | 968.9            | 969.6         | 0.7      |
| W             | 34,732                | 230          | 2,685                   | 11.9                     | 973.2  | 973.2            | 974.2         | 1.0      |
| X             | 36,776                | 243          | 2,681                   | 9.9                      | 982.7  | 982.7            | 983.3         | 0.6      |
| Y             | 37,857                | 216          | 2,341                   | 11.4                     | 987.4  | 987.4            | 988.3         | 0.9      |
| Z             | 39,752                | 268          | 3,328                   | 8.0                      | 999.3  | 999.3            | 1000.3        | 1.0      |
| AA            | 40,484                | 197          | 2,038                   | 11.6                     | 1001.3   | 1001.3           | 1002.3        | 1.0      |
| AB            | 41,409                | 114          | 1,534                   | 15.4                     | 1005.7   | 1005.7           | 1006.6        | 0.9      |
| AC            | 43,004                | 193          | 1,764                   | 13.4                     | 1016.6   | 1016.6           | 1016.6        | 0.0      |
| AD            | 44,052                | 210          | 2,650                   | 8.9                      | 1024.0   | 1024.0           | 1024.9        | 0.9      |
| AE            | 44,975                | 308          | 2,376                   | 9.9                      | 1028.2   | 1028.2           | 1028.4        | 0.2      |
| AF            | 46,115                | 384          | 3,258                   | 7.2                      | 1035.2   | 1035.2           | 1035.8        | 0.6      |
| AG            | 46,923                | 178          | 1,885                   | 9.4                      | 1037.7   | 1037.7           | 1038.7        | 1.0      |
| AH            | 47,733                | 119          | 1,290                   | 9.6                      | 1042.0   | 1042.0           | 1043.0        | 1.0      |
| AI            | 49,117                | 150          | 1,675                   | 7.4                      | 1054.7   | 1054.7           | 1054.8        | 0.1      |
| AJ            | 50,494                | 124          | 1,186                   | 10.4                     | 1060.8   | 1060.8           | 1060.8        | 0.0      |

<sup>1</sup>Feet above confluence with Blanco River

|          |  |                                       |
|----------|--|---------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                  |
|          |  | <b>FLOODING SOURCE: CYPRESS CREEK</b> |



**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| AK            | 51,976                | 175          | 1,535                   | 8.0                      | 1071.1   | 1071.1           | 1071.8        | 0.7      |
| AL            | 52,866                | 93           | 952                     | 9.0                      | 1074.5   | 1074.5           | 1075.4        | 0.9      |
| AM            | 53,893                | 91           | 759                     | 11.3                     | 1079.8   | 1079.8           | 1080.0        | 0.2      |
| AN            | 55,250                | 185          | 1,186                   | 7.2                      | 1088.8   | 1088.8           | 1089.6        | 0.8      |
| AO            | 56,391                | 120          | 844                     | 10.2                     | 1099.7   | 1099.7           | 1099.8        | 0.1      |
| AP            | 57,649                | 136          | 1,017                   | 8.4                      | 1111.2   | 1111.2           | 1111.2        | 0.0      |
| AQ            | 59,011                | 149          | 892                     | 9.6                      | 1121.8   | 1121.8           | 1122.4        | 0.6      |
| AR            | 60,835                | 123          | 515                     | 11.6                     | 1134.3   | 1134.3           | 1135.0        | 0.7      |
| AS            | 62,023                | 110          | 577                     | 10.3                     | 1146.7   | 1146.7           | 1147.4        | 0.7      |
| AT            | 63,125                | 200          | 711                     | 8.4                      | 1156.4   | 1156.4           | 1156.7        | 0.3      |
| AU            | 64,474                | 165          | 938                     | 6.3                      | 1169.0   | 1169.0           | 1169.9        | 0.9      |
| AV            | 65,674                | 161          | 797                     | 7.5                      | 1177.1   | 1177.1           | 1178.0        | 0.9      |
| AW            | 68,938                | 202          | 574                     | 6.4                      | 1201.5   | 1201.5           | 1202.5        | 1.0      |
| AX            | 72,178                | 81           | 366                     | 5.6                      | 1230.2   | 1230.2           | 1230.7        | 0.5      |
| AY            | 73,041                | 169          | 673                     | 3.1                      | 1237.4   | 1237.4           | 1238.0        | 0.6      |
| AZ            | 74,344                | 117          | 315                     | 6.5                      | 1247.8   | 1247.8           | 1247.9        | 0.1      |
| BA            | 75,275                | 70           | 298                     | 6.9                      | 1257.4   | 1257.4           | 1258.0        | 0.6      |

<sup>1</sup>Feet above confluence with Blanco River

|          |  |                                       |
|----------|--|---------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                  |
|          |  | <b>FLOODING SOURCE: CYPRESS CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| BB            | 76,129                | 76           | 247                     | 8.3                      | 1264.9   | 1264.9           | 1265.2        | 0.3      |
| BC            | 77,278                | 154          | 465                     | 4.4                      | 1277.0   | 1277.0           | 1277.5        | 0.5      |
| BD            | 78,127                | 95           | 332                     | 6.2                      | 1287.9   | 1287.9           | 1288.3        | 0.4      |
| BE            | 78,881                | 80           | 304                     | 6.7                      | 1298.6   | 1298.6           | 1298.7        | 0.1      |
| BF            | 79,765                | 95           | 374                     | 5.5                      | 1307.8   | 1307.8           | 1308.5        | 0.7      |

<sup>1</sup>Feet above confluence with Blanco River

|                 |  |                                       |
|-----------------|--|---------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                  |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                       |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: CYPRESS CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 688                   | 206          | 3,338                   | 1.5                      | 918.9  | 918.9            | 919.2         | 0.3      |
| B             | 1,565                 | 134          | 2,276                   | 2.1                      | 924.2  | 924.2            | 924.6         | 0.4      |
| C             | 2,330                 | 154          | 613                     | 7.8                      | 947.2  | 947.2            | 947.6         | 0.4      |
| D             | 3,545                 | 175          | 686                     | 6.9                      | 959.8  | 959.8            | 960.8         | 1.0      |
| E             | 4,401                 | 145          | 545                     | 8.4                      | 968.2  | 968.2            | 968.4         | 0.2      |
| F             | 5,556                 | 118          | 551                     | 8.3                      | 984.5  | 984.5            | 984.9         | 0.4      |
| G             | 7,163                 | 186          | 1,324                   | 3.3                      | 1,007.8  | 1,007.8          | 1,008.7       | 0.9      |
| H             | 8,492                 | 193          | 694                     | 5.0                      | 1,020.7  | 1,020.7          | 1,021.0       | 0.3      |
| I             | 8,956                 | 90           | 376                     | 9.2                      | 1,026.8  | 1,026.8          | 1,026.9       | 0.1      |
| J             | 10,019                | 120          | 542                     | 6.3                      | 1,037.3  | 1,037.3          | 1,038.3       | 1.0      |

<sup>1</sup>Feet above confluence with Cypress Creek

|                 |  |                                   |
|-----------------|--|-----------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>              |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                   |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: HOG CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 1,648                 | 82           | 1,170                   | 12.4                     | 997.9  | 997.9            | 998.3         | 0.4      |
| B             | 2,261                 | 94           | 1,240                   | 11.7                     | 1002.2   | 1002.2           | 1002.6        | 0.4      |
| C             | 2,607                 | 93           | 1,210                   | 12.0                     | 1004.5   | 1004.5           | 1004.9        | 0.4      |
| D             | 3,242                 | 131          | 1,667                   | 8.7                      | 1009.7   | 1009.7           | 1010.6        | 0.9      |
| E             | 3,687                 | 74           | 828                     | 16.1                     | 1011.1   | 1011.1           | 1011.6        | 0.5      |
| F             | 4,789                 | 105          | 1,442                   | 9.2                      | 1025.6   | 1025.6           | 1026.0        | 0.4      |
| G             | 5,524                 | 146          | 1,631                   | 8.2                      | 1029.8   | 1029.8           | 1030.0        | 0.2      |
| H             | 6,336                 | 186          | 1,642                   | 8.1                      | 1034.0   | 1034.0           | 1034.2        | 0.2      |
| I             | 7,415                 | 152          | 1,141                   | 9.5                      | 1044.7   | 1044.7           | 1045.4        | 0.7      |
| J             | 8,667                 | 553          | 1,167                   | 7.0                      | 1056.7   | 1056.7           | 1056.9        | 0.2      |
| K             | 9,523                 | 145          | 822                     | 10.0                     | 1066.5   | 1066.5           | 1066.5        | 0.0      |
| L             | 10,567                | 169          | 851                     | 9.7                      | 1073.9   | 1073.9           | 1073.9        | 0.0      |
| M             | 11,543                | 166          | 787                     | 7.5                      | 1083.9   | 1083.9           | 1084.0        | 0.1      |
| N             | 12,385                | 105          | 521                     | 11.4                     | 1092.0   | 1092.0           | 1092.0        | 0.0      |
| O             | 14,133                | 105          | 463                     | 9.7                      | 1111.8   | 1111.8           | 1111.9        | 0.1      |
| P             | 15,241                | 135          | 682                     | 6.6                      | 1121.9   | 1121.9           | 1122.4        | 0.5      |
| Q             | 16,076                | 292          | 3,919                   | 1.1                      | 1140.5   | 1140.5           | 1141.5        | 1.0      |

<sup>1</sup>Feet above confluence with Barton Creek

|                 |  |   |
|-----------------|--|---|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                        |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |   |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: LITTLE BARTON CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| R             | 16,909                | 105          | 456                     | 9.9                      | 1142.6   | 1142.6           | 1142.8        | 0.2      |
| S             | 18,102                | 103          | 632                     | 7.1                      | 1155.6   | 1155.6           | 1156.6        | 1.0      |
| T             | 18,879                | 67           | 258                     | 8.5                      | 1163.3   | 1163.3           | 1163.5        | 0.2      |
| U             | 19,773                | 158          | 382                     | 4.1                      | 1180.6   | 1180.6           | 1181.5        | 0.9      |
| V             | 20,759                | 135          | 345                     | 4.6                      | 1191.6   | 1191.6           | 1192.5        | 0.9      |
| W             | 21,509                | 63           | 262                     | 6.0                      | 1199.6   | 1199.6           | 1200.1        | 0.5      |
| X             | 21,922                | 97           | 377                     | 4.2                      | 1205.8   | 1205.8           | 1206.6        | 0.8      |
| Y             | 22,303                | 58           | 165                     | 9.5                      | 1210.4   | 1210.4           | 1210.5        | 0.1      |
| Z             | 22,795                | 71           | 177                     | 8.9                      | 1220.2   | 1220.2           | 1220.2        | 0.0      |
| AA            | 24,422                | 64           | 147                     | 6.5                      | 1248.1   | 1248.1           | 1248.5        | 0.4      |

<sup>1</sup>Feet above confluence with Barton Creek

|                 |  |   |
|-----------------|--|---|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                        |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |   |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: LITTLE BARTON CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 5,000                 | 134          | 1,800                   | 8.8                      | 650.3  | 650.3            | 651.2         | 0.9      |
| B             | 9,420                 | 457          | 4,205                   | 3.5                      | 672.7  | 672.7            | 673.6         | 0.9      |
| C             | 10,100                | 269          | 2,296                   | 6.5                      | 674.7  | 674.7            | 675.6         | 0.9      |
| D             | 11,220                | 223          | 2,627                   | 5.6                      | 679.5  | 679.5            | 680.5         | 1.0      |
| E             | 11,810                | 226          | 2,140                   | 6.9                      | 682.0  | 682.0            | 682.7         | 0.7      |
| F             | 12,540                | 393          | 3,634                   | 4.1                      | 686.7  | 686.7            | 687.7         | 1.0      |
| G             | 13,530                | 297          | 2,550                   | 5.8                      | 690.4  | 690.4            | 691.3         | 0.9      |
| H             | 14,180                | 236          | 2,358                   | 6.3                      | 693.2  | 693.2            | 694.2         | 1.0      |
| I             | 14,680                | 155          | 1,955                   | 7.6                      | 695.5  | 695.5            | 696.3         | 0.8      |
| J             | 15,660                | 171          | 2,353                   | 6.3                      | 699.9  | 699.9            | 700.9         | 1.0      |
| K             | 16,790                | 248          | 2,782                   | 5.3                      | 706.0  | 706.0            | 706.7         | 0.7      |
| L             | 17,790                | 203          | 2,106                   | 6.3                      | 711.0  | 711.0            | 711.9         | 0.9      |
| M             | 19,040                | 318          | 2,897                   | 4.6                      | 714.3  | 714.3            | 715.2         | 0.9      |
| N             | 20,160                | 377          | 2,341                   | 5.7                      | 719.8  | 719.8            | 720.7         | 0.9      |
| O             | 21,080                | 248          | 2,533                   | 5.3                      | 724.9  | 724.9            | 725.6         | 0.7      |
| P             | 22,000                | 203          | 2,517                   | 5.3                      | 727.4  | 727.4            | 728.2         | 0.8      |
| Q             | 23,070                | 171          | 1,662                   | 8.0                      | 731.7  | 731.7            | 732.4         | 0.7      |
| R             | 24,200                | 160          | 2,112                   | 6.3                      | 736.2  | 736.2            | 737.2         | 1.0      |

<sup>1</sup>Feet above confluence with Bear Creek

|          |  |   |
|----------|--|---|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                      |
|          |  | <b>FLOODING SOURCE: LITTLE BEAR CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 25,180                | 156          | 2,096                   | 6.3                      | 739.3  | 739.3            | 740.2         | 0.9      |
| T             | 26,410                | 180          | 1,669                   | 6.6                      | 743.8  | 743.8            | 744.8         | 1.0      |
| U             | 27,110                | 132          | 1,632                   | 6.7                      | 746.4  | 746.4            | 747.3         | 0.9      |
| V             | 27,700                | 190          | 1,729                   | 6.3                      | 748.9  | 748.9            | 749.6         | 0.7      |
| W             | 28,800                | 139          | 1,777                   | 6.2                      | 752.2  | 752.2            | 753.1         | 0.9      |
| X             | 30,000                | 183          | 1,689                   | 6.5                      | 756.4  | 756.4            | 757.2         | 0.8      |
| Y             | 30,970                | 163          | 1,947                   | 5.6                      | 759.6  | 759.6            | 760.5         | 0.9      |
| Z             | 31,920                | 212          | 1,701                   | 6.4                      | 763.3  | 763.3            | 764.0         | 0.7      |
| AA            | 33,030                | 221          | 2,021                   | 5.4                      | 768.6  | 768.6            | 769.6         | 1.0      |
| AB            | 33,650                | 178          | 2,004                   | 5.5                      | 770.6  | 770.6            | 771.5         | 0.9      |
| AC            | 34,410                | 223          | 1,698                   | 6.5                      | 773.1  | 773.1            | 773.8         | 0.7      |
| AD            | 35,640                | 202          | 1,870                   | 5.9                      | 777.8  | 777.8            | 778.6         | 0.8      |
| AE            | 36,200                | 209          | 2,354                   | 4.7                      | 779.4  | 779.4            | 780.2         | 0.8      |
| AF            | 37,330                | 211          | 1,846                   | 5.9                      | 783.0  | 783.0            | 783.3         | 0.3      |
| AG            | 38,500                | 271          | 2,051                   | 5.3                      | 789.0  | 789.0            | 789.4         | 0.4      |
| AH            | 39,280                | 1,002        | 3,527                   | 3.1                      | 792.4  | 792.4            | 792.9         | 0.5      |
| AI            | 40,120                | 374          | 2,191                   | 5.0                      | 795.2  | 795.2            | 795.7         | 0.5      |
| AJ            | 40,680                | 263          | 2,113                   | 4.4                      | 797.3  | 797.3            | 797.8         | 0.5      |

<sup>1</sup>Feet above confluence with Bear Creek

|          |  |   |
|----------|--|---|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                      |
|          |  | <b>FLOODING SOURCE: LITTLE BEAR CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| AK            | 41,550                | 171          | 1,692                   | 5.5                      | 799.3  | 799.3            | 800.3         | 1.0      |
| AL            | 42,550                | 180          | 1,925                   | 4.8                      | 804.4  | 804.4            | 805.2         | 0.8      |
| AM            | 43,170                | 167          | 1,402                   | 6.6                      | 806.1  | 806.1            | 806.9         | 0.8      |
| AN            | 43,840                | 205          | 1,562                   | 6.0                      | 809.5  | 809.5            | 810.3         | 0.8      |
| AO            | 44,740                | 299          | 1,749                   | 5.3                      | 815.1  | 815.1            | 816.0         | 0.9      |

<sup>1</sup>Feet above confluence with Bear Creek

|                 |  |   |
|-----------------|--|---|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b>                 | <b>FLOODWAY DATA</b>                      |
|                 | <b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODING SOURCE: LITTLE BEAR CREEK</b> |



**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 2,700                 | 94           | 1,249                   | 9.7                      | 765.4  | 765.4            | 765.5         | 0.1      |
| B             | 4,175                 | 98           | 1,379                   | 8.8                      | 772.7  | 772.7            | 773.7         | 1.0      |
| C             | 6,200                 | 120          | 1,222                   | 9.3                      | 783.4  | 783.4            | 784.2         | 0.8      |
| D             | 8,725                 | 117          | 1,447                   | 7.9                      | 806.0  | 806.0            | 806.9         | 0.9      |
| E             | 11,700                | 119          | 1,896                   | 6.0                      | 825.7  | 825.7            | 826.6         | 0.9      |
| F             | 14,320                | 128          | 1,427                   | 7.4                      | 835.6  | 835.6            | 836.5         | 0.9      |
| G             | 18,240                | 116          | 1,486                   | 7.1                      | 857.8  | 857.8            | 858.5         | 0.7      |
| H             | 20,450                | 150          | 1,139                   | 9.2                      | 866.1  | 866.1            | 866.9         | 0.8      |
| I             | 21,625                | 131          | 1,036                   | 7.1                      | 876.1  | 876.1            | 876.9         | 0.8      |
| J             | 23,450                | 92           | 955                     | 7.7                      | 891.3  | 891.3            | 892.0         | 0.7      |
| K             | 24,845                | 93           | 995                     | 7.4                      | 910.6  | 910.6            | 911.4         | 0.8      |
| L             | 25,920                | 157          | 806                     | 8.0                      | 922.4  | 922.4            | 923.2         | 0.8      |
| M             | 26,595                | 145          | 1,036                   | 6.2                      | 926.7  | 926.7            | 927.4         | 0.7      |
| N             | 28,495                | 136          | 821                     | 7.9                      | 939.3  | 939.3            | 940.0         | 0.7      |
| O             | 30,150                | 112          | 923                     | 7.0                      | 951.0  | 951.0            | 952.0         | 1.0      |
| P             | 32,155                | 127          | 935                     | 6.9                      | 973.0  | 973.0            | 973.8         | 0.8      |
| Q             | 33,020                | 163          | 1,538                   | 3.5                      | 980.7  | 980.7            | 981.6         | 0.9      |
| R             | 35,900                | 93           | 812                     | 6.6                      | 993.1  | 993.1            | 993.7         | 0.6      |

<sup>1</sup>Feet above confluence with Blanco River

|          |  |                                       |
|----------|--|---------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                  |
|          |  | <b>FLOODING SOURCE: LONEMAN CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| S             | 38,375                | 74           | 563                     | 7.6                      | 1012.4   | 1012.4           | 1013.0        | 0.6      |
| T             | 39,670                | 92           | 553                     | 7.8                      | 1023.6   | 1023.6           | 1024.5        | 0.9      |
| U             | 40,320                | 58           | 630                     | 6.8                      | 1030.1   | 1030.1           | 1030.5        | 0.4      |
| V             | 40,850                | 68           | 646                     | 6.6                      | 1033.8   | 1033.8           | 1034.6        | 0.8      |
| W             | 41,880                | 149          | 707                     | 6.1                      | 1043.3   | 1043.3           | 1044.2        | 0.9      |

<sup>1</sup>Feet above confluence with Blanco River

|                 |  |                                       |
|-----------------|--|---------------------------------------|
| <b>TABLE 23</b> | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b> | <b>FLOODWAY DATA</b>                  |
|                 | <b>HAYS COUNTY, TEXAS</b>                  |                                       |
|                 | <b>AND INCORPORATED AREAS</b>              | <b>FLOODING SOURCE: LONEMAN CREEK</b> |

**Table 23: Floodway Data (continued)**

| LOCATION      |                       | FLOODWAY     |                         |                          | 1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88) |                  |               |          |
|---------------|-----------------------|--------------|-------------------------|--------------------------|--|------------------|---------------|----------|
| CROSS SECTION | DISTANCE <sup>1</sup> | WIDTH (FEET) | SECTION AREA (SQ. FEET) | MEAN VELOCITY (FEET/SEC) | REGULATORY   | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| A             | 0                     | 104          | 522                     | 13.5                     | 1,034.7  | 1,034.7          | 1,034.9       | 0.2      |
| B             | 220                   | 111          | 753                     | 8.6                      | 1,038.3  | 1,038.3          | 1,039.2       | 0.9      |
| C             | 992                   | 132          | 774                     | 10.8                     | 1,044.5  | 1,044.5          | 1,045.0       | 0.5      |
| D             | 1,902                 | 108          | 644                     | 9.6                      | 1,051.4  | 1,051.4          | 1,052.3       | 0.9      |
| E             | 3,068                 | 75           | 436                     | 5.5                      | 1,059.0  | 1,059.0          | 1,059.4       | 0.4      |
| F             | 3,738                 | 56           | 226                     | 12.3                     | 1,064.5  | 1,064.5          | 1,064.5       | 0.0      |
| G             | 4,495                 | 157          | 531                     | 6.0                      | 1,071.6  | 1,071.6          | 1,071.8       | 0.2      |
| H             | 5,142                 | 83           | 254                     | 10.1                     | 1,077.4  | 1,077.4          | 1,077.5       | 0.1      |
| I             | 5,661                 | 161          | 669                     | 4.8                      | 1,087.9  | 1,087.9          | 1,088.0       | 0.1      |
| J             | 6,075                 | 102          | 448                     | 5.7                      | 1,092.3  | 1,092.3          | 1,092.7       | 0.4      |
| K             | 6,971                 | 89           | 307                     | 9.9                      | 1,100.4  | 1,100.4          | 1,100.7       | 0.3      |
| L             | 7,959                 | 82           | 374                     | 6.4                      | 1,113.6  | 1,113.6          | 1,114.3       | 0.7      |
| M             | 9,096                 | 84           | 444                     | 3.7                      | 1,128.1  | 1,128.1          | 1,128.1       | 0.0      |
| N             | 9,842                 | 65           | 189                     | 9.1                      | 1,134.4  | 1,134.4          | 1,134.4       | 0.0      |
| O             | 10,226                | 100          | 763                     | 2.2                      | 1,146.1  | 1,146.1          | 1,146.1       | 0.0      |
| P             | 10,552                | 73           | 170                     | 9.6                      | 1,151.4  | 1,151.4          | 1,151.8       | 0.4      |

<sup>1</sup>Feet from County Boundary

|          |  |                                     |
|----------|--|-------------------------------------|
| TABLE 23 | <b>FEDERAL EMERGENCY MANAGEMENT AGENCY</b><br><b>HAYS COUNTY, TEXAS</b><br><b>AND INCORPORATED AREAS</b> | <b>FLOODWAY DATA</b>                |
|          |  | <b>FLOODING SOURCE: LONG BRANCH</b> |