Upper Guadalupe HUC-8 Subshed, TX Base Level Engineering (BLE) Results

Contract #HSFE60-15-D-0003, Task Order #HSFE60-15-J-0002
December 2016

Prepared for:

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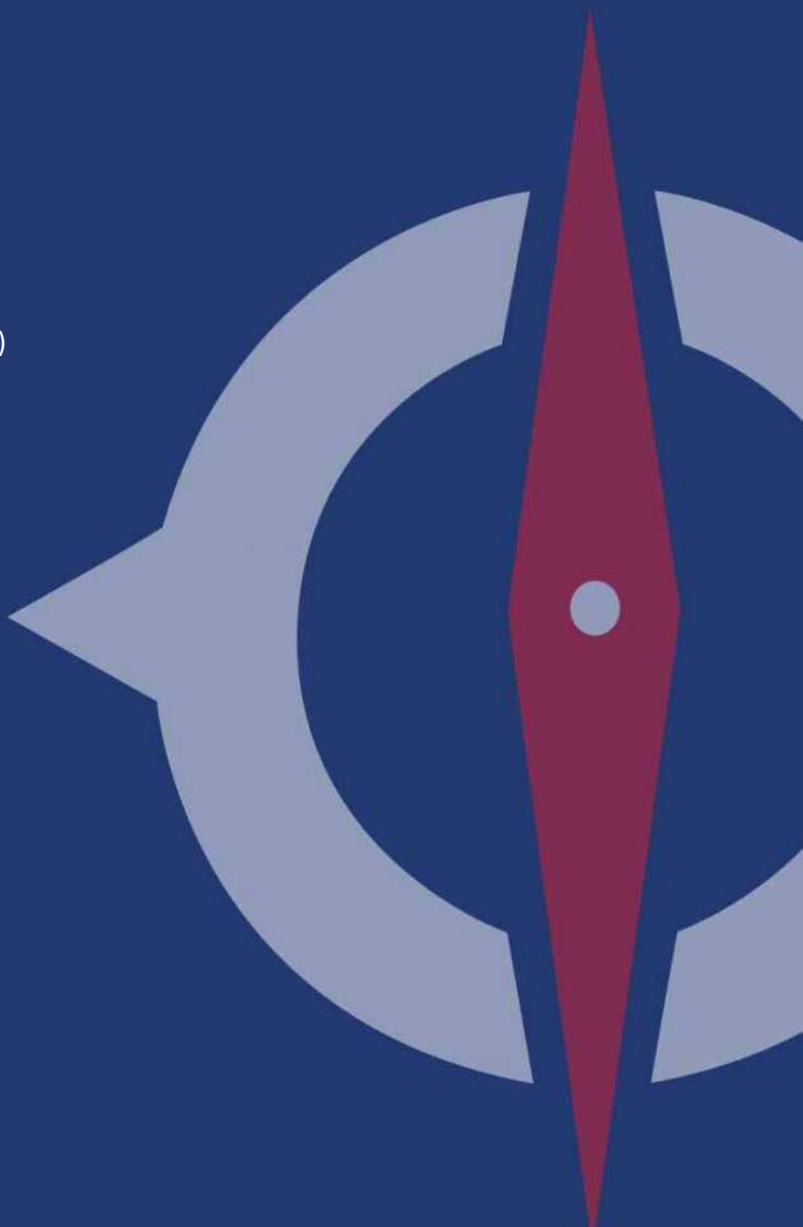

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DOCUMENT HISTORY

DOCUMENT LOCATION

K:/R06/TEXAS_48/KENDALL_48259/KENDALL_259C/16-06-1111S/SUBMISSIONUPLOAD/HYDRAULICS/2183756

REVISION HISTORY

Version Number	Version Date	Summary Changes	Team/Author
1.0	December 2016	Base Level Engineering effort	AECOM

APPROVALS

This document requires the approval of the following persons:

Role	Name	Phone Extension	Title (CLIN/RMC)	Review Date	Approved Date

CLIENT DISTRIBUTION

Name	Title/Organization	Location
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Executive Summary

FEMA Region VI contracted Compass to complete a Base Level Engineering (BLE) analysis for the Guadalupe Blanco Watershed in South Central Texas, to support FEMA's Discovery process and validation of effective Zone A Special Flood Hazard Area (SFHA). The BLE process involves using best available data and incorporating automated techniques with traditional model development procedures to produce regulatory quality flood hazard boundaries for the 1-percent annual chance event as well as estimates of flood hazard boundaries for multiple recurrence intervals.

The source digital terrain data used for surface model development in support of hydrologic and hydraulic (H&H) analysis as well as mapping activities were made available through coordination with the Guadalupe-Blanco River Authority (GBRA), Federal Emergency Management Agency (FEMA), Texas Natural Resources Information System (TNRIS), Halff Associates Inc., and United States Geological Survey (USGS). The five datasets used for this project area were the 3-foot (ft) digital elevation model (DEM) from Light Detection and Ranging (LiDAR), TNRIS 2011 50-centimeters (cm), TNRIS 2011 61-cm, and TNRIS 2014 50-cm LiDAR, and USGS National Elevation Dataset (NED) DEM data.

Flood discharges for this study were calculated using USGS regression equations with a multiplier to calibrate to gage analysis. Regression Equations obtained from the Scientific Investigations Report (SIR) 2009-5087, Regression Equations for Estimation of Annual Peak-Streamflow Frequency for Undeveloped Watersheds in Texas Using an L-moment-Based, PRESS-Minimized, Residual-Adjusted Approach (2009) were used while PeakFQ version 7.1 was used to perform Flood Frequency Analysis (FFA).

The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program version 4.1 was used to compute water surface elevations on a stream by stream basis. All hydraulic models were computed using 1-D steady state analysis.

The stream mile network that was validated for Upper Guadalupe Watershed was compiled using FEMA's Coordinated Needs Management Strategy (CNMS inventory in conjunction with the National Hydrography Dataset (NHD) 24K High Resolution. Table ES-1 lists the stream miles identified by each source for this BLE validation analysis.

Table ES-1. Summary of Stream Miles

Source	Upper Guadalupe Stream Miles
CNMS	952.7
NHD	779.8
Total	**1732.5**

The full CNMS inventory of Zone A studies (952.7miles) in the Upper Guadalupe Watershed were evaluated. Of those miles only 1.1 miles were classified as VALID. Based on the validation assessment, CNMS has been updated to reflect 902.0 miles of UNVERIFIED and 55.1 miles of VALID.

Total miles validated in CNMS are summarized in Table ES-2 and illustrated in Figure ES-1 below.

Table ES-2: Zone A Validation Results

Validation Status	Status Type	Total Miles
VALID	NVUE COMPLIANT	55.1
UNVERIFIED	TO BE STUDIED	902.0

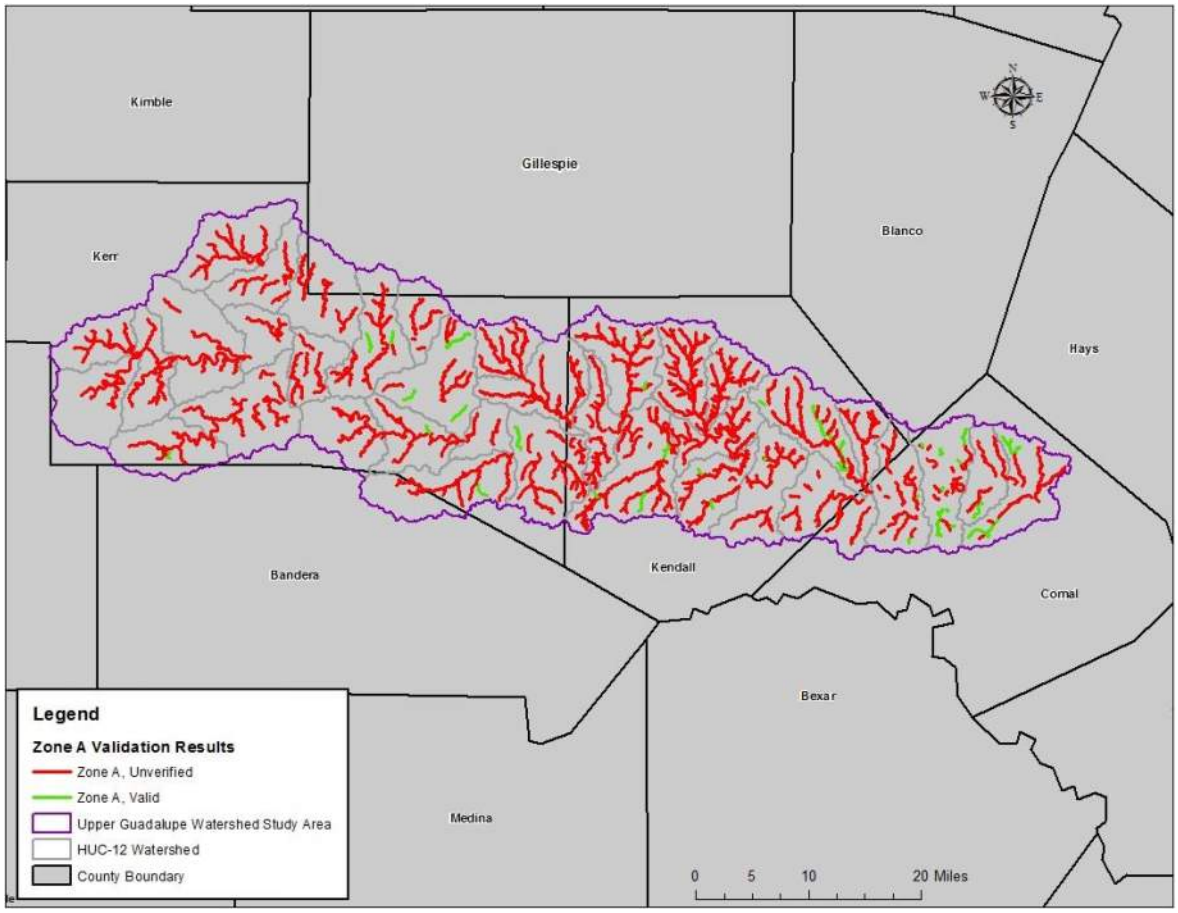

Figure ES-1. Upper Guadalupe HUC-8 Subshed CNMS Validation Results

An overall risk for each HUC-12 watershed was calculated using the National Flood Risk Percentages Dataset and its proportional area. The weighted risk was multiplied by the percentage of points in the watershed that failed the CNMS comparison to effective to determine the priority score. Figure ES-2 below shows the range of the Upper Guadalupe HUC-8 priority scores which can be used to initiate discussions during the Discovery phase. Tegener Creek-Guadalupe River HUC-12 was determined to have the highest priority score and the most need while Tom Creek-Canyon Lake HUC-12 has the lowest score.

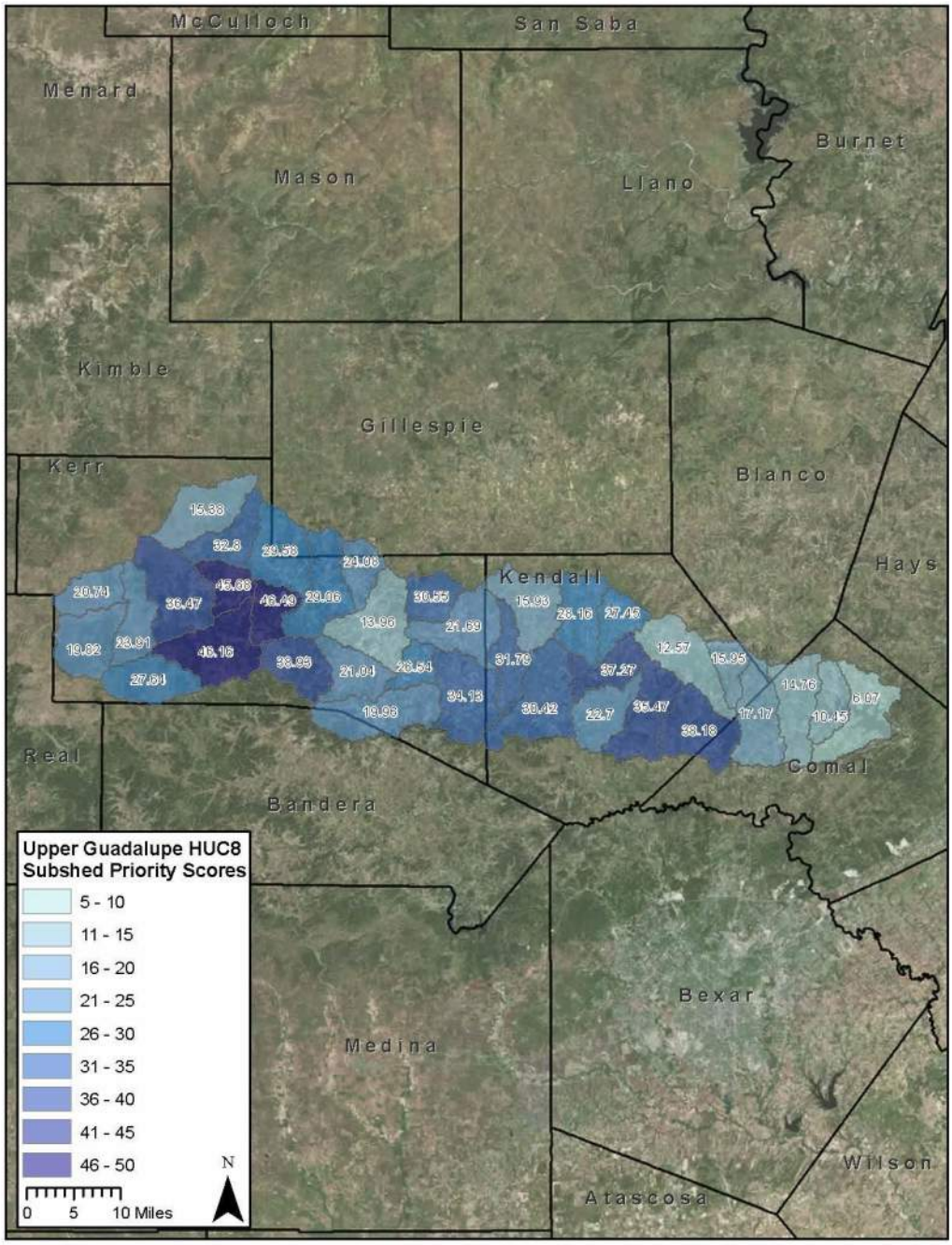

Figure ES-2. Ranking of Upper Guadalupe HUC-8 Subshed

Base Level Engineering (BLE) Methodology

Recent innovations and efficiencies in floodplain mapping have allowed the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) to develop a process called Base Level Engineering (BLE), which can be used to address current program challenges, including the validation of Zone A studies and the availability of flood risk data in the early stages of a Flood Risk Project. The BLE process involves using best available data and incorporating automated techniques with traditional model development procedures to produce regulatory quality flood hazard boundaries for the 1-percent annual chance event as well as estimates of flood hazard boundaries for multiple recurrence intervals. The cost for developing the data and estimates resulting from the BLE process are lower than standard flood production costs. The BLE results may be used for eventual production of regulatory and non-regulatory products.

As described in Title 42 of the Code of Federal Regulations, Chapter III, Section 4101(e), once every five years, FEMA must evaluate whether the information on Flood Insurance Rate Maps (FIRMs) reflects the current risks in floodprone areas. FEMA makes this determination of flood hazard data validity by examining flood study attributes and change characteristics, as specified in the Validation Checklist of the Coordinated Needs Management Strategy (CNMS) Technical Reference. The CNMS Validation Checklist provides a series of critical and secondary checks to determine the validity of flood hazard areas studied by detailed methods (e.g., Zone AE, AH, or AO). While the critical and secondary elements in CNMS provide a comprehensive method of evaluating the validity of Zone AE studies, a cost-effective approach for evaluating Zone A studies has been lacking.

In addition to the need for Zone A validation guidance, FEMA standards require flood risk data to be provided in the early stages of a Flood Risk Project. FEMA Program Standard SID #29 requires that during Discovery, data must be identified that illustrates potential changes in flood elevation and mapping that may result from the proposed project scope. If available data does not clearly illustrate the likely changes, an analysis is required that estimates the likely changes. This data and any associated analyses should be shared and results should be discussed with stakeholders.

An important goal of the BLE process is the scalability of the results. Scalability means that the results of a BLE analysis can not only be used for CNMS evaluations of Zone A studies, but can also be leveraged throughout the Risk MAP program. The data resulting from a BLE analysis can be updated as needed and used for the eventual production of regulatory and non-regulatory products, outreach and risk communication, and MT-1 processing. Leveraging this data outside the Risk MAP program may also be valuable to external stakeholders.

FEMA Region VI contracted Compass to complete a BLE analysis for the Guadalupe-Blanco Watershed in South Central Texas, to support FEMA's Discovery process and validation of effective Zone A Special Flood Hazard Area (SFHA). The study extents include portions of Bandera, Bastrop, Blanco, Caldwell, Comal, DeWitt, Fayette, Gillespie, Goliad, Gonzales, Guadalupe, Hays, Karnes, Kendall, Kerr, Travis, Victoria, and Wilson Counties and include the following communities: Cities of Blanco, Bulverde, Cuero, Garden Ridge, Gonzales, Ingram, Kerrville, Kyle, Lockhart, Luling, Martindale, Mountain City, Mustang Ridge, New Braunfels, Niederwald, Nixon, San Marcos, Schertz, Seguin, Smiley, Victoria, Waelder, Woodcreek and the Towns of Flatonia and Uhland. The study area consisted of four HUC-8 basins: Lower Guadalupe

River, Middle Guadalupe River, San Marcos River, and Upper Guadalupe River. Figure 1 shows the orientation of the Guadalupe-Blanco River HUC-8 basins with respect to the counties.

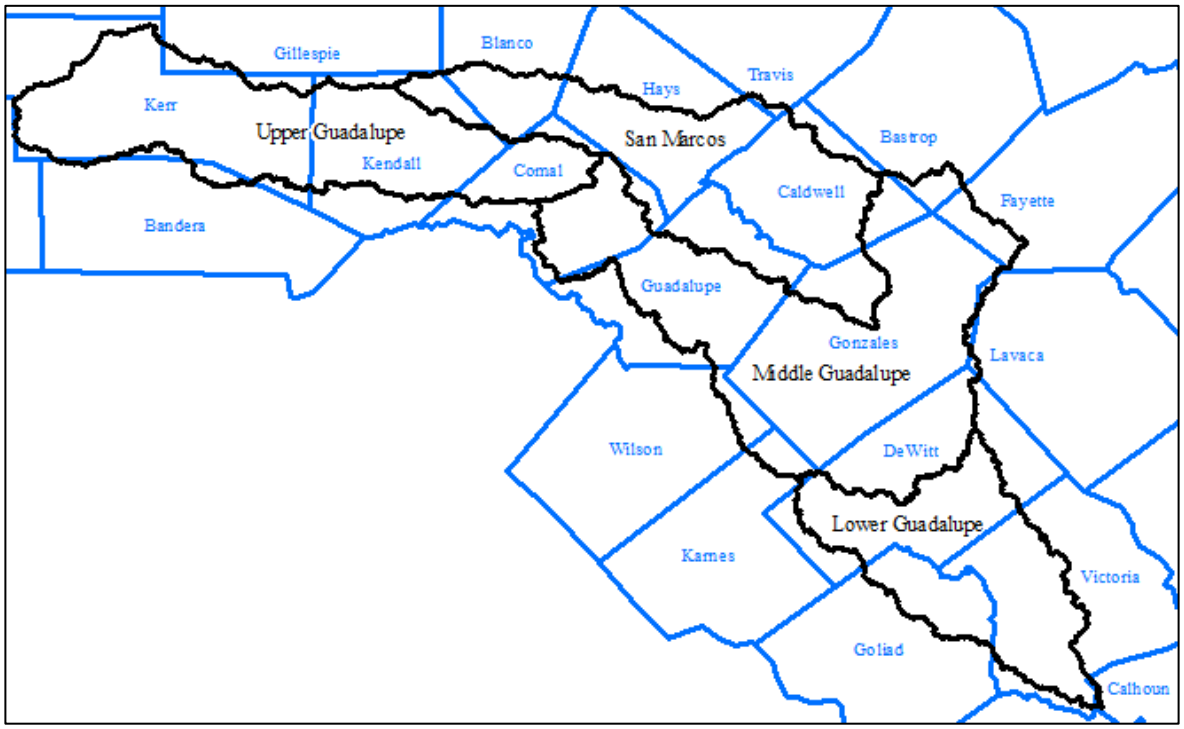

Figure 1. Guadalupe-Blanco Watershed HUC-8 Basins

Compass studied approximately 1,713 miles of stream reaches within the Upper Guadalupe Watershed with a minimum drainage area tolerance of one square mile. The selection and extent of stream reaches studied was based upon the number of stream miles with minimum drainage area of one square mile and not the number of effective Zone A stream miles. Study reaches were extended above this one square mile threshold as appropriate to ensure all effective Zone A floodplain received an updated analysis. The following sections will summarize the BLE process and will discuss the results along with their recommended use.

1.1 Topographic Data

The primary topographic datasets were made available through coordination with the Guadalupe-Blanco River Authority (GBRA), Federal Emergency Management Agency (FEMA), Texas Natural Resources Information System (TNRIS), Halff Associates Inc., and United States Geological Survey (USGS). The five datasets used for this project area were the 3-foot (ft) digital elevation model (DEM) from LiDAR, TNRIS 2011 50-centimeters (cm), TNRIS 2011 61-cm, and TNRIS 2014 50-cm LiDAR, and USGS National Elevation Dataset (NED) DEM data. Figure 2 shows the extents of these terrain sources.

The 3-ft DEM from Light Detection and Ranging (LiDAR) was created by Halff Associates Inc. using existing topographic and elevation data (previously flown and processed). The result of this effort

consisted of a basin wide terrain dataset. Multiple sources of data were utilized including, but not limited to data from U.S. Army Corps of Engineers (USACE), Federal Emergency Management Association (FEMA), Capital Area Council of Governments (CAPCOG), TNRIS, USGS, and the City of Austin (COA).

TNRIS 2011 50-cm LiDAR was acquired and processed from July 18, 2011 through August 3, 2011 with a publication date of November 28, 2011. The project area for this task order consisted of two areas of interest (AOIs) covering six counties in Texas. Combined, the sites covered approximately 3,241 square miles. The Fundamental Vertical Accuracy (FVA) reported for the TNRIS 2011 50cm LiDAR dataset used for Upper Guadalupe was 18.13cm at the 95% confidence level.

FEMA 2011 61-cm LiDAR was acquired and processed from November 20, 2010 through September 1, 2011 with a publication date of September 30, 2011. The project area for this task order consisted of an AOI covering two counties in Texas. The combined sites covered approximately 1,305 square miles. The FVA reported for the FEMA 2011 61-cm LiDAR dataset used for Upper Guadalupe Watershed was 4.08 cm at the 95% confidence level.

TNRIS 2014 50-cm LiDAR was acquired and processed from June 25, 2014 through September 29, 2014 with a publication date of November 14, 2014. The project area for this task order consisted of an AOI covering ten counties in Texas. The combined sites covered approximately 3,250 square miles. The FVA reported for the TNRIS 2014 50-cm LiDAR dataset used for Upper Guadalupe Watershed was 12.17 cm at the 95% confidence level.

The USGS NED 1/3 Arc Second DEM was used as a low priority data source to buffer the project beyond the basin extent. The data was downloaded from the USGS NED website and processed to match the projection and units of the other data sources. This DEM is a compilation of the best source data by the USGS.

All above mentioned data sets were used to create a seamless Triangular Irregular Network (TIN) for the Upper Guadalupe Watershed. The data sets had very little area of overlap. The TNRIS 2014 50-cm LiDAR, FEMA 61-cm 2011 LiDAR, and TNRIS 50-cm 2011 were determined to be the best available data in the areas where they were located within the HUC and were prioritized above the 3-ft DEM from LiDAR in those areas. The 3-ft DEM was the second highest priority dataset and the USGS NED 1/3 Arc Second DEM was used as the lowest prioritized data where better source data was unavailable.

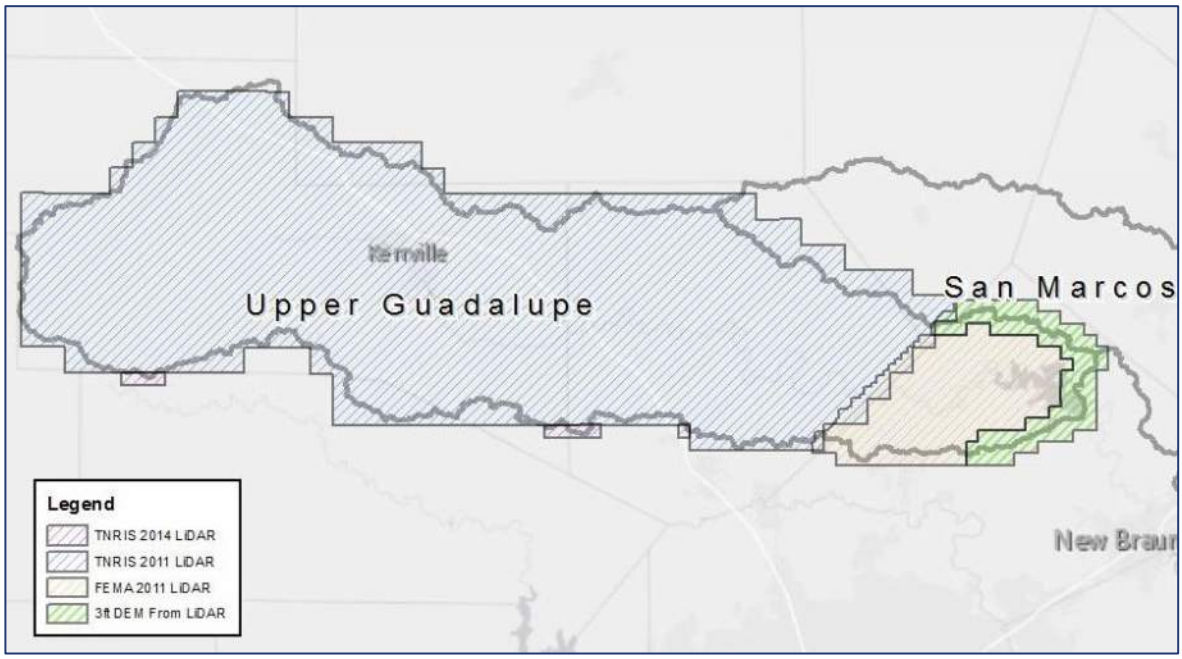

Figure 2. Extent of LiDAR Data

1.1.1 Leveraged Data Descriptions

1.1.1.1 3-ft DEM from LiDAR

The 3-ft DEM from LiDAR terrain data set utilizes the best available topographic information. Halff Associates Inc. compiled LiDAR data from previous studies and sources within the GBRA study area. Where there was overlapping LiDAR data, the LiDAR with the highest quality was used and USGS data was used in areas with no available LiDAR data. It was assumed that the LiDAR datasets obtained from the different sources had been previously evaluated for quality control by the contractor that collected the data. Any issues discovered after the LiDAR data was compiled in to a terrain dataset were reported to the respective source and addressed appropriately. Table 1 shows the multiple LiDAR sources that make up the 3-ft DEM.

Table 1. LiDAR Sources for 3-ft DEM

County	Age	Accuracy	Source & Contact	Approximate Footprint (sq mi)
Bastrop	2008	0.70m	CAPCOG	65
Caldwell	2007	1.40m	CAPCOG	750
	2008	0.70m	CAPCOG	150
Comal	2011	0.61m	FEMA	600
Dewitt		DEM	TNRIS	350
	2012	0.51m	USACE	50
Fayette	2008	0.70m	CAPCOG	120

County	Age	Accuracy	Source & Contact	Approximate Footprint (sq mi)
Guadalupe	2008	1.40m	CAPCOG	10
	2007	1.40m	CAPCOG	90
	2011	0.61m	FEMA	600
Gonzales	2009	1.00m	TNRIS	1200
Hays	2008	0.70m	CAPCOG	750
	2003	1.70m	COA	130
	2011	0.61m	FEMA	25
Victoria	2006	1.40m	FEMA	650

The resulting dataset was a seamless 3-ft DEM covering Lower Guadalupe, Middle Guadalupe, San Marcos and a small portion of Upper Guadalupe Watersheds. The portion of the 3-ft DEM covering Upper Guadalupe was then extracted out for use in this project.

1.1.1.2 TNRIS 2011 50-cm LiDAR

The TNRIS 2011 50-cm LiDAR project was completed in 2011 by URS for TNRIS. Two AOI's were flown for this data set. The acquisitions took place from July 18, 2011 through August 3, 2011 covering approximately 3,241 square miles over six counties in Texas. For the purposes of this project the LiDAR points were gridded 3-ft by 3-ft in an effort to save processing time and space due to the density of the original LiDAR points. The LiDAR dataset used for this project tested to .180-meter fundamental vertical accuracy at 95% confidence level based on a consolidated RMSEz (0.092-meter) which meet project accuracy specifications of the National Standard for Spatial Data Accuracy (NSSDA).

1.1.1.3 FEMA 2011 61-cm LiDAR

The TNRIS 2011 61-cm LiDAR project was completed in 2011, acquired by RAMPP and processed by Fugro EarthData Inc. and Tuck Mapping Solution Inc. The acquisitions took place from November 20, 2010 through December 6, 2010. The project AOI cover two counties in Texas covering 1,305 square miles. For the purposes of this project, the LiDAR points were gridded 3-ft by 3-ft in an effort to save processing time and space due to the density of the original LiDAR points. The LiDAR dataset used for this project tested to .041-meter fundamental vertical accuracy at 95% confidence level based on a consolidated RMSEz (0.164-meter) which meet project accuracy specifications of the NSSDA.

1.1.1.4 TNRIS 2014 50-cm LIDAR

The TNRIS 2014 50-cm LiDAR project was completed in 2014 by URS for TNRIS. Three AOI's were flown for this data set. The acquisitions took place from June 25, 2014 through September 29, 2014 covering approximately 3,250 square miles in Texas. For the purposes of this project the LiDAR points were gridded 3-ft by 3-ft in an effort to save processing time and space due to the density of the original LiDAR points. The LiDAR dataset used for this project tested to .121-meter

fundamental vertical accuracy at 95% confidence level based on a consolidated RMSEz (0.062-meter) which meet project accuracy specifications of the NSSDA.

1.1.1.5 USGS NED 1/3 Arc Second DEM

The NED 1/3 Arc Second DEM, a product of the USGS, is a seamless gridded dataset representing the best available raster elevation data available to the USGS for the conterminous United States, Alaska, Hawaii, and territorial islands. The NED is derived from diverse source data that are processed to a common coordinate system and unit of vertical measure. The NED serves the Upper Guadalupe Watershed topographic data development activity for hydrology needs only and is being used outside the county boundary for calculating contributing drainage area.

1.1.2 Data Processing

The Watershed Information System (WISE) software platform was utilized in order to create a digital surface model for the Upper Guadalupe HUC project area. This module allows source data from a variety of sources to be prioritized based on level of accuracy or preference of the user. For the Upper Guadalupe HUC, the TNRIS 2014, TNRIS 2011, and FEMA 2011 LiDAR datasets were used as the primary data source for TIN surface creation. The 3-ft DEM was also used and prioritized second highest. The USGS NED DEM data was used as the lowest priority data source for areas where LIDAR did not exist.

A new composite surface of the combined source topographic datasets, a seamless TIN, was constructed using the WISE Terrain Analyst tools. The TIN was developed using the 3-ft DEM, TNRIS 2014, TNRIS 2011, FEMA 2011, LiDAR sets, and the USGS NED data to create a seamless surface. A DEM was sampled from the TIN based on the user defined grid resolution of minor cells (in this case a 3-ft DEM was sampled). Root Mean Square Error (RMSE) was calculated on the leveraged LiDAR-derivative DEM data used in this BLE analysis. The vertical accuracy of the source DEMs was calculated using QC checkpoints for the entire project area from original LiDAR QC reports acquired with the TNRIS data. The entire project area tested at 3.77 cm RMSEz, well within the 12.5 cm FEMA requirement for leveraged topographic data.

After TIN creation, A 10-ft DEM was sampled from the composite TIN and was used as the primary source for cross section takeoffs supporting hydraulic analyses. This 10-ft DEM was also used for visual QC and to support floodplain mapping tasks. Lastly, a 50-ft DEM was sampled from the TIN for hydro enforcement to support hydrology tasks including flow vector and basin delineation. Proprietary software was used to identify natural sinks, peaks and flat areas in the 50-ft DEM surface. Elevations of the cells in the DEM were algorithmically calculated and the best path to route flow was determined without filling sinks in the DEM. Once all calculations were completed, the flow was checked confirming that all drainage flowed downstream correctly and routed to outside of the project area.

In addition to the quantitative assessment of the source digital terrain, a qualitative visual inspection of the composite DEM was performed using a hillshade derived from the 10-ft DEM. The visual inspection indicated no unusual or non-terrestrial features were observed in the composite DEM assuring the surface files used for hydrologic and hydraulic (H&H) analysis and floodplain mapping activities are sufficient for BLE analysis.

1.2 Hydrology

Flood discharges for this study were calculated using USGS regression equations with multipliers to calibrate to gage analysis. USGS Scientific Investigations Report (SIR) 2009-5087, "Regression Equations for Estimation of Annual Peak-Streamflow Frequency for Undeveloped Watersheds in Texas Using an L-moment-Based, PRESS-Minimized, Residual-Adjusted Approach" (2009) contains the most recent regression equations for Texas and was used as the basis for regression calculations.

The WISE computer program was used to delineate drainage basins in shapefile format using the 50-ft resolution DEM. WISE was used to calculate the main-channel slope for each basin. The basin shapefile attribution was automated by WISE with drainage area and main-channel slope.

In order to perform the regression analysis and attribute each basin with appropriate discharge values, a script was written in Python and run in ESRI's ArcCatalog. This script required input of drainage area and main-channel slope (from WISE), as well as mean annual precipitation, OmegaEM and the calibration adjustment discussed below.

Regression equations were reviewed by comparing the results to updated flood frequency analyses for USGS stream gages in the Guadalupe-Blanco basin, as well as available USACE watershed modeling that was completed as of the time of this study. The completed USACE watershed modeling includes results for the San Marcos River basin from its headwater to its confluence with Plum Creek. These results are presented in a Technical Memorandum, dated March 30, 2016, from the USACE Fort Worth District to FEMA Region VI and titled "Preliminary Flow Frequency Analyses for the San Marcos River Basin".

The 19 gages used for comparison include 3 discontinued gages, Rebecca Creek near Spring Branch (08167600), San Marco River at Ottine (08173500), and Coleto Creek near Schroeder (08177000); the flood frequency estimates for these 3 gages were taken from USGS WRIR 96-4307, "Regional Equations for Estimation of Peak Streamflow Frequency for Natural Basins in Texas". The flood frequency estimates for most of the 16 active gages were updated using data through the 2015 water year, which ended in September 2015. The frequency analyses for 2 gages on the Blanco River, however, were updated using the peak flows recorded during the October 2015 flood, under the assumption that this flood will turn out to be annual maximum peak for the 2016 water year. The updated gage flood frequency analyses for 11 of 16 active gage locations were performed using the USGS PeakFQ software, following Bulletin 17B guidelines. Updated flood frequency analyses for 5 gages, however, were provided by the USACE. Flood frequency analyses for 3 gages in the San Marcos River basin were provided by the USACE in the previously referenced March 30, 2016 Technical Memorandum and flood frequency analyses for 2 gages on the Blanco River were provided in a Technical Memorandum, dated September 25, 2015 "Flow Frequency Analyses for the Blanco River at Wimberley and Kyle, Texas in Response to the May 2015 Flood Event".

The USGS regression equations exhibited a bias toward under-prediction when compared to the 19 USGS stream gages in the Guadalupe-Blanco River basin. As a result of this bias, use of the regression equations to develop the hydrology for the Guadalupe-Blanco BLE study resulted in discharges that were consistently less than the gage estimates for comparable drainage area streams. Regression multipliers were developed for each recurrence interval.

In order to develop a suitable adjustment or calibration to the discharge estimates at the 19 Guadalupe-Blanco River basin stream gages, the drainage area and discharge estimates were transformed to log10 units. The original SIR 2009-5087 regression analysis was performed in log10 space, which is standard practice in statistical hydrology because the log10-transform results in distributions of the variables that more closely resemble normal distributions and because the relations between peak discharge and the watershed characteristics are more linear in log10 space. A plot of log10 of drainage area versus the log10 of the 100-year recurrence interval peak discharges with linear best-fit lines for both the gage peak discharges and the regression peak discharges confirms the under-prediction bias of the regression estimates and indicates that the slopes of the best-fit line for the regression and the gage discharge estimates are similar (though not the same). This similarity in slope indicates that the under-prediction bias is relatively consistent across the range of observed drainage areas and therefore a simple multiplier adjustment would serve to correct the regression equation estimates and reduce the bias toward under-prediction.

The adjustment factor is computed by taking the average of the differences between log10 of the gage discharge estimates and the regression discharge estimates for each of the 19 stream gages. This average difference is added to the log10 of the regression discharge estimate, or equivalently, the average difference is converted back to arithmetic space and used as a simple multiplier adjustment factor on the computed regression discharge. The average difference between the gage and regression discharge estimates for the 100-year recurrence interval was 0.1942 log10 units, which translates to a multiplier of 1.564. Similar analyses were performed for the 10-, 25-, 50-, and 500-year recurrence interval regression equations with similar results.

It is important to note that the adjustment for each recurrence interval is less than the residual standard error reported for each recurrence interval in USGS SIR 2009-5087.

Any modeling at a higher level of detail than the base level engineering should utilize a more detailed method to determine hydrology, including hydrologic modeling or more detailed, site-specific gage comparison and adjustment.

Table 2 shows the published equations, the 1-percent-plus and 1-percent-minus equations and regression multipliers that were used for this study. In these equations, Qi represents peak streamflow for i-recurrence interval (annual chance exceedance (a.c.e.)) in cubic feet per second, P represents mean annual precipitation in inches, S represents dimensionless main-channel slope, Ω represents the OmegaEM parameter, and A is cumulative drainage area in square miles.

Table 2. Summary of Regression Equations (SIR 2009-5087)

Recurrence Interval	Equation[1]	Regression Multiplier
$Q_{10\%}$	$P^{1.203}S^{0.403} \times 10^{[0.918\,\Omega\,+13.62-11.97A\wedge(-0.0289)]}$	1.121
$Q_{4\%}$	$P^{1.140}S^{0.446} \times 10^{[0.945\,\Omega\,+11.79-9.819A\wedge(-0.0374)]}$	1.321
$Q_{2\%}$	$P^{1.105}S^{0.476} \times 10^{[0.961\,\Omega\,+11.17-8.997A\wedge(-0.0424)]}$	1.454

Recurrence Interval	Equation[1]	Regression Multiplier
$Q_{1\%}$	$P^{1.071}S^{0.507} \times 10^{[0.969\ \Omega\ +10.82-8.448A\^(-0.0467)]}$	1.564
$Q_{0.2\%}$	$P^{0.988}S^{0.569} \times 10^{[0.976\ \Omega\ +10.40-7.605A\^(-0.0554)]}$	1.789
$Q_{1\%plus}$	$10^{(LOG(Q_{1\%}) / LOG(10)+0.3)}$	*
$Q_{1\%minus}$	$10^{(LOG(Q_{1\%}) / LOG(10)-0.3)}$	*

[1] Variables:

Q_i peak flow for i recurrence interval (a.c.e.), in cubic feet per second;

P, Mean Annual Precipitation in Inches;

S, Main-channel slope (dimensionless);

Ω, OmegaEM parameter;

A, Cumulative Drainage Area in square miles

Discharges for the 1-percent plus and 1-percent minus a.c.e. were calculated by applying the mean residual standard error for the $Q_{1\%}$ equation.

The mean annual precipitation values were determined based on shapefile coverage obtained from the Texas Water Development Board and available for download from the following location: http://www.twdb.texas.gov/mapping/gisdata/doc/Precipitation_Shapefile.zip

The annual precipitation values reflect data for the climatological period 1981-2010 as recorded by the Natural Resources Conservation Service (NRCS).

Main channel slope was calculated in WISE. An automated routine was used to determine the longest flowpath from the upstream of a reach to the outlet of the sub-basin of interest based on flowpaths developed from the 50-ft DEM. Once the length of the flowpath was delineated, elevations for the endpoints were determined based on the TIN developed from the LiDAR. The slope was calculated by dividing the fall by the reach distance and the result was reported in ft/ft. Although a few of the streams have slopes which are larger than the maximum value of 0.0703 feet/feet for use of the USGS regression equations, all of the streams studied in this watershed behave similarly to those gaged streams used in defining the regression equations, upon which these ranges of 'applicable' slope values are based; therefore, the slopes were left unadjusted.

From USGS SIR 2009-5087, the OmegaEM parameter is a generalized terrain and climate index that expresses relative differences in peak-streamflow potential. A shapefile was developed and populated with OmegaEM values based on Figure 2 in SIR 2009-5087. This shapefile was used, along with a python script in ArcCatalog, to determine OmegaEM values on a sub-basin basis. For sub-basins that are split, the dominant OmegaEM value for the sub-basin was used.

Drainage area for each sub-basin was determined based on automated basin delineations performed in WISE. Basin break points were set by the user with a sub-basin target of one square mile in size. This criterion was adjusted for streams with larger drainage areas in order to avoid excessive and unnecessary discharge breaks. Break points were also set just upstream of stream confluences. Cumulative drainage area was determined based on these automated delineations

performed by WISE in combination with a stream connectivity routine that defined the stream reach segments with upstream and downstream neighbors.

As discussed in previously, a Python script in ArcCatalog was used to compute discharges for each sub-basin. The sub-basin shapefile was attributed with the computed discharges as part of the automated script. From the sub-watershed basin shapefile the discharges were incorporated into the HEC-RAS models using an automated routine in WISE. Discharges, as well as water surface elevation results, were associated with the hydraulic cross sections prior to generation of floodplain boundaries and grid mapping. Those results are available in GIS format as part of this BLE submittal package.

BLE analysis was compared with effective discharge data, where available. At these locations, the general trend showed that the effective discharges match considerably well with the discharges computed for this study.

1.3 Hydraulics

The hydraulic approach for BLE analysis for the Upper Guadalupe Watershed consisted of using the terrain model described in section 1.1 in combination with hydrology input computed as described in section 1.2 to establish water surface elevations using 1-D steady state analysis. The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program version 4.1 was chosen as the computer model to compute water surface elevations on a stream by stream basis. The WISE computer program was used to establish model stream orientation, initial hydraulic cross section layout and stationing, assign n-values to cross sections, and to develop all input files for the HEC-RAS program. ESRI's ArcMap program was used to review and refine cross section layout orientation.

First pass cross section layout was performed using an automated routine in WISE based on the drainage area at the cross section location. A first draft model was created based on this initial cross section layout and draft boundaries were developed. At this stage, a second pass inspection for cross section placement occurred. Significant refinement occurred during this step. To improve the hydraulic models, additional cross sections were added as needed to better define the BLE floodplain boundary. Cross sections were extended in locations where overtopping occurred. Orientation of cross sections was refined to improve on the perpendicular orientation to flow. Additional cross sections were added at floodplain constrictions and at downstream portions of tributaries to ensure a proper tie-in with receiving streams. Cross sections were adjusted to remove sections that intersected hydraulic crossings in the floodplain. For some of the largest studied streams, cross sections were laid out manually in order to have more reasonable spacing and better capture the constrictions in the floodplain.

Cross sections were not drawn on top of roadways or railroads. Cross sections were placed at the upstream and downstream face of major roads and railroads. Major roads are those designated in the Texas Department of Transportation (TxDOT) road coverage as On System Highways. The road coverage can be acquired in shapefile format from the TNRIS website at the following link: https://tnris.org/data-catalog/entry/txdot-roadways/. Ineffective flow stations were placed in the hydraulic models as appropriate to account for flow constrictions at crossings as well as at locations deemed by the engineer to be ineffective at conveying flow downstream.

Cross sections were drawn on dam tops for significant dams with well-defined spillways in order to better represent ponded water upstream of the structures. It was assumed in doing this that the vast majority of the flow during a flood event would pass the spillway and that the hydraulic model would reasonably estimate flow across the spillway as represented in the hydraulic cross section.

The downstream boundary conditions of the Guadalupe River model, beginning just downstream of Canyon Lake Dam, were set based on effective recurrence interval stillwater elevations using newly derived discharges, and an outflow discharge of 100 cfs (as provided from a concurrent ongoing study). Figure 3 below shows the rating curve used for the starting WSEL's at Canyon Lake Dam.

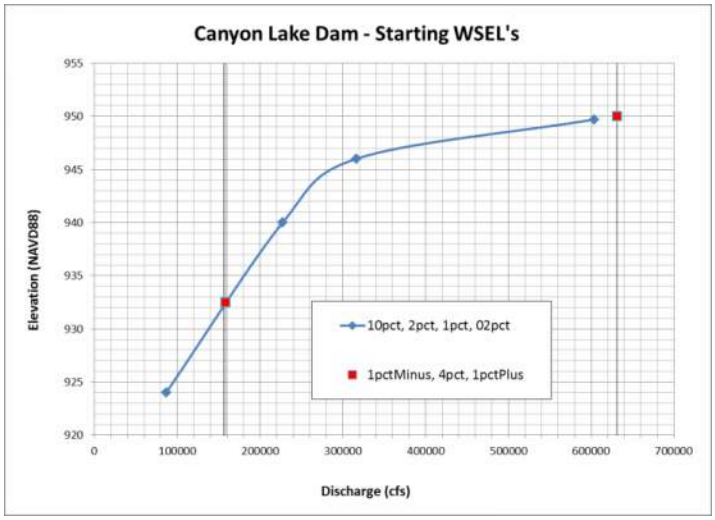

Figure 3: Starting WSEL Rating Curve for the Guadalupe River at Canyon Lake Dam

Significant effort was made to start all tributaries below the receiving water surface elevations but this was not always achieved, particularly in wide, flat floodplains where small tributaries ran parallel to large streams or where road crossings or dams interfered with cross section alignments.

The relationship between drainage area and assigned channel geometry is shown in Table 3. These default values for dimensions and spacing are subject to change based on the details noted above as well as the judgment of the responsible engineer. Channel widths were spot checked against aerial imagery and adjusted accordingly.

Table 3: Cross Section Default Parameters

Drainage area (upper limit)	XS Spacing	Channel Top Width	Channel Bottom Width	Channel Depth
1.0	500	4	3.5	0.5
2.0	500	6	5	0.5
4.0	500	11	10	0.5
8.0	500	18	17	0.5
10.0	500	20	19	0.5
15.0	600	26	25	0.5
20.0	600	32	31	0.5
25.0	600	38	36	0.5
30.0	600	43	41	0.5
40.0	600	52	50	0.5
50.0	600	60	57	1
75.0	750	68	65	1
100.0	750	76	73	1
150.0	1000	91	88	1
250.0	1000	122	119	2
500.0	1500	198	195	2
1000.0	2500	351	346	3
2000.0	4000	657	652	3
5000.0	4000	1575	1565	3
>5000.0	4000	2000	1990	4

Manning's roughness coefficients (n-values) were determined using the 2011 National Land Cover Data (NLCD) dataset in combination with n-values from Chow (1959) and Calenda, et al. (2005). The association between the n-values and the NLCD Classification is shown in Table 4. Manning's n-value takeoffs were performed by WISE and the n-values were adjusted in some locations based on engineering judgment. N-values within channel banks were limited by the automated routine to a range of 0.030 to 0.050.

Table 4: Manning's "n" Roughness Based on 2001 NLCD Classification (Moore, 2011)

NLCD Classification	Minimum	Normal	Maximum	Source
Open Water	.025	.03	.033	Chow 1959
Developed, Open Space	.01	.013	.016	Calenda, et al. 2005
Developed, Low Intensity	.038	.05	.063	Calenda, et al. 2005
Developed, Medium Intensity	.056	.075	.094	Calenda, et al. 2005
Developed, High Intensity	.075	.1	.125	Calenda, et al. 2005
Barren Land	.025	.03	.035	Chow 1959
Deciduous Forest	.1	.12	.16	Chow 1959
Evergreen Forest	.1	.12	.16	Chow 1959
Mixed Forest	.1	.12	.16	Chow 1959
Scrub/Shrub	.035	.05	.07	Chow 1959
Grassland/Herbaceous	.025	.03	.035	Chow 1959
Pasture/Hay	.03	.04	.05	Chow 1959

NLCD Classification	Minimum	Normal	Maximum	Source
Cultivated Crops	.025	.035	.045	Chow 1959
Woody Wetlands	.08	.1	.12	Chow 1959
Emergent Herbaceous Wetland	.075	.1	.15	Chow 1959

The boundary condition used for the majority of the study streams was normal depth with a default value of 0.005 ft/ft. For streams with names in the National Flood Hazard Layer (NFHL) and streams with large drainage areas (generally greater than 8 square miles), the normal depth slope was calculated based on the HEC-RAS profile invert.

1.4 Quality Control

Following the initial BLE analysis in each watershed, the flood hazard area delineations created by the BLE process were reviewed for areas where the results were not ideal.

QC results indicated that some of the models should be extended to cover the scope of effective flood hazard data. Those streams were extended farther upstream to match the extents of the SFHA data.

Typical manual editing resulting from reasonability checks included adding cross sections, adjusting orientation of cross sections, trimming cross sections and reduction of the default "V" angle of cross sections. It is estimated that 50 percent of cross sections were adjusted in some work areas while other areas did not require as much editing. Other examples of manual editing included adding cross sections at confluence areas, modification to improve perpendicular orientation at the channel, adjustment of discharge breaks to better represent flow addition points, revisions to dam spillways and dam tops, and revisions to n-values.

A major component of the QC process was an automated check that identified locations where the 1-percent a.c.e profile was crossed by another frequency or by the 1-percent plus or 1-percent minus profile. Significant effort was made to reasonably resolve all of these instances. Another automated check identified locations where there was a drawdown of greater than 0.5 feet on the 1-percent a.c.e. water surface profile. This check is particularly useful for identifying errors in the model such as a channel that is too wide, a poorly placed cross section, or a need for additional cross sections. Again, significant effort was made to reasonable resolve these drawdown situations. Examples of this process are shown below as Figures 4 and 5.

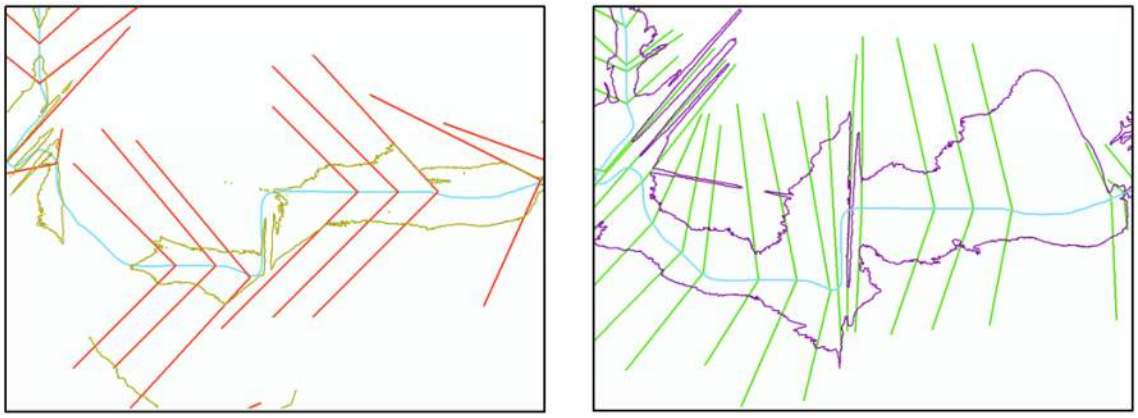

Figure 4: Default "V" angle cross sections automated by WISE (left). Manually edited cross sections to more accurately capture terrain (right). Resulting flood boundaries shown in gold (left) or purple (right) for clarity.

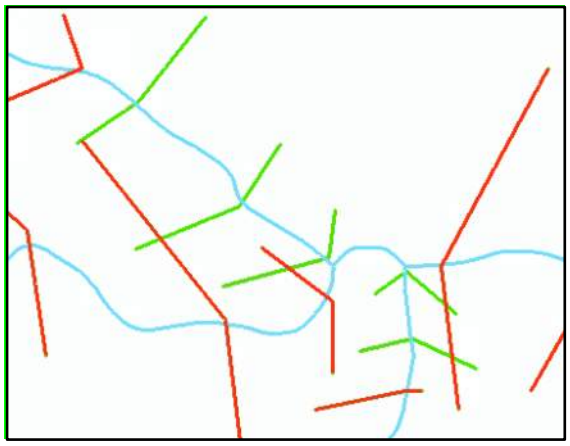

Figure 5: Manually added cross sections (green) to improve accuracy of tie-ins at confluences.

1.5 One-percent Special Flood Hazard Area Delineation

The 1-percent and 0.2-percent boundaries were mapped using a routine that develops water surface elevation grids based on the 10-ft cell size DEM developed from the TNRIS LiDAR. This product was converted to a polygon for cleaning. The cleaning routine involved manual inspection of the polygons to identify and remove areas of disconnected flooding. In general, areas with a size of less than 5,000 square feet were removed and all others were investigated to determine whether they should be considered as potentially part of the special flood hazard area (SFHA). This investigation was aided by the ground DEM and aerial imagery. Manual adjustments to the polygons were made to account for spillways on dams which could not be accurately modeled using HEC-RAS as well as disconnected areas along the flooding source that should reasonably be connected.

Following the removal of disconnected flooding areas and other boundary adjustments, the small islands in the floodplain were filled. Islands with a size between roughly 5,000 and 30,000 square feet were inspected and, in general, islands that were less than 10,000 square feet were filled.

Once the island filling process was complete, the water surface raster mapping routine was run and set to conform to the polygon boundary. This ensures that the water surface raster and the flood plain boundary are consistent with each other. The depth raster product was created at the end of the process by performing a raster subtraction with the water surface elevation raster and the ground DEM.

Challenges

Challenges encountered during BLE analyses will vary based on available data on which to run the analysis. The Upper Guadalupe Watershed analysis presented challenges as summarized in the following paragraphs.

As noted in Section 1.2 above, regression equations under-predicted discharges compared to gage estimates. Regression multipliers were developed to calibrate each recurrence interval. Also noted is the retention at dams in some locations. An equivalent drainage area was used to reflect the effective detailed studies at the outlets of the dams.

As noted in Section 1.3 above, significant effort was made to start all tributaries below the receiving water surface elevation, but this was not always achieved, particularly in wide, flat floodplains where small tributaries ran parallel to large streams or where road crossings or dams interfered with cross section alignments.

As noted in Section 1.4 above, multiple streamlines did not extend far enough to fully capture effective flood hazard data. The streamlines generated in the development of the one square mile basins were extended in order to more closely match the effective areas and CNMS streams.

Due to the flat topography in areas throughout the watershed, it was often difficult to obtain relief without overflows and spillover into adjacent floodplains. Cross sections were extended and re-oriented in a manner to most reasonably model and map these areas.

Results and Recommendations

The BLE results for the Upper Guadalupe Watershed produced an SFHA that compares reasonably well with the effective SFHA in most cases, and provides an additional estimated SFHA in areas that do not currently have an SFHA mapped. These results provide context for flood risk communication as part of the Discovery process, and should be verified through community work map meetings before being applied to a regulatory product.

A map showing the BLE results are included as Appendix B.

3.1 Validation of Effective Zone A SFHA

A large portion of the Zone A studies (952.7 miles) in the Upper Guadalupe Watershed were classified in CNMS with a validation status of “UNVERIFIED.” 55.1 miles of Zone A studies have been classified in CNMS with a validation status of “VALID” and status type of “NVUE COMPLIANT.” The following is a summary of the results of the CNMS validation assessment for the effective Zone A studies in the study area. Initial Assessment checks A1-A3 were evaluated for the CNMS inventory of Zone A studies.

INITIAL ASSESSMENT A1 – SIGNIFICANT TOPOGRAPHY UPDATE CHECK

This check involves determining whether a topographic data source is available that is significantly better than what was used for the effective Zone A modeling and mapping. For the Upper Guadalupe Watershed study area, the effective Zone A topographic data leveraged a variety of sources, but primarily based upon USGS 24K map products. The TNRIS 2007 and 2011 LiDAR, and 2011 FEMA LiDAR within the study area represents a significant improvement from the assumed effective Zone A topographic source, and therefore check A1 was set to fail with the exception of one reach that is part of a Letter of Map Revision.

INITIAL ASSESSMENT A2 – CHECK FOR SIGNIFICANT HYDROLOGY CHANGES

This check involves first determining whether regression equations were used in the effective study. If they were then it was determined if new regression equations have become available from the USGS since the date of the effective Zone A study. If newer regression equations exist for the area of interest, then an engineer must determine whether these regression equations would significantly affect the 1-percent-annual-chance flow. Scientific Investigations Report 2009-5087, Regression Equations for Estimation of Annual Peak-Streamflow Frequency for Undeveloped Watersheds in Texas Using an L-moment-Based, PRESS-Minimized, Residual-Adjusted Approach (2009) contains the most recent regression equations for Texas. Because the hydrology methods for Comal County effective Zone A studies used regression equations published prior to 2009, the assessment check A2 was failed for those reaches. The hydrology methods for all other effective Zone A reaches were unknown, and therefore, the A2 check was set to pass.

INITIAL ASSESSMENT A3 – CHECK FOR SIGNIFICANT DEVELOPMENT

This check involves using the National Urban Change Indicator (NUCI) dataset to assess increased urbanization in the watershed of the Zone A study. If the percentage of urban area within the HUC-12 watershed containing the effective Zone A study is 15% or more, and has increased by 50% or more since the effective analysis, the study would fail this check. Although the NUCI data provide year-to-year changes in urbanization, the NLCD also is needed to establish a baseline of urban land cover for this analysis. Because none of the HUC12 watersheds within the Upper Guadalupe Watershed study area can be classified as urban, check A3 was set to pass for all studies.

Table 5: Zone A Initial Assessment Results

Assessment Check	Pass / Fail	Notes
A1 – Topography	Fail	Several LiDAR sources are significantly better than effective USGS topo source.
A2 – Hydrology	Pass/Fail	Effective Hydrology methods unknown/New equations published in 2009
A3- Development	Pass	No increase of 50% or more since effective study (non-urban watersheds)

VALIDATION CHECK A4 – CHECK OF STUDIES BACKED BY TECHNICAL DATA

Zone A studies that pass all initial assessment checks described above may be categorized as "Valid" in the CNMS Inventory only if the effective Zone A study is supported by modeling or sound engineering judgment and all regulatory products are in agreement. If the effective Zone A study passes all initial assessment checks, but is not supported by modeling, or if the original engineering method used is unsupported or undocumented, a comparison of the BLE results and effective Zone A's is performed. Most of the Zone A studies in the Upper Guadalupe Watershed failed this test, as their effective and historical FIS' made no mention of sound engineering judgment or technical-based methods used. Only the miles in Comal County passed this check because the engineering methods were known and appropriate.

VALIDATION CHECK A5 – COMPARISON OF BLE AND EFFECTIVE ZONE A

The BLE /effective Zone A comparison method leverages the existing Floodplain Boundary Standard (FBS) certification procedures described in FEMA SID 113, but with a slight modification. This modified FBS comparison approach uses the 1-percent plus and 1-percent minus flood profiles and horizontal and vertical tolerances described in the First Order Approximation—Methodology, Validation, and Scalability Guidance Procedures (Version 1.5). For the comparison of BLE and effective Zone A in the Texas study area, the following vertical and horizontal tolerances were used to conduct the modified FBS procedure. Two points at each cross section, left and right side, were intersected at the cross section and floodplain boundary for comparison.

Vertical Tolerance: +/- 5 feet (one-half contour interval of assumed effective topographic source).
Horizontal Tolerance: +/-75 feet (standard horizontal tolerance for BLE comparison testing).

Of the 854 modeled BLE streams in the study area, 46 were found to correspond (within the tolerance limits) with effective Zone A flood zones. Comparison results for these streams were grouped at the HUC-12 level and are summarized in Table 7 below to better understand the general health of the HUC-12 watershed, but the validation check was performed at the stream level. Streams where the percentage of passing FBS sample points is greater than or equal to 85% are marked as "Pass", otherwise marked as "Fail".

VALIDATION RESULTS

Based on the validation assessments and BLE comparison results described above, the CNMS inventory of Zone A studies in Upper Guadalupe Watershed study area has been updated, with 902.0 miles categorized as and 55.1 miles categorized as VALID. Total miles in each of these categories are summarized in Table 6 and illustrated in Figure 6 below.

Table 6: Zone A Validation Results

Validation Status	Status Type	Total Miles
VALID	NVUE COMPLIANT	55.1
UNVERIFIED	TO BE STUDIED	902.0

Table 7: BLE Comparison Results

HUC-12 Watershed		Total FBS points	Fail	Pass	%Pass	BLE Comparison Pass? (>85%)	Priority Score
Watershed Name	Watershed Number						
Upper Guadalupe	All Streams	25128	10465	14663	58.3	Fail	n/a
Headwaters North Fork Guadalupe River	121002010101	498	206	292	58.6	Fail	20.74
Boneyard Draw	121002010102	328	130	198	60.4	Fail	19.82
Upper North Fork Guadalupe River	121002010103	619	296	323	52.2	Fail	23.91
Middle North Fork Guadalupe River	121002010104	582	346	236	40.5	Fail	36.47
Lower North Fork Guadalupe River	121002010105	244	150	94	38.5	Fail	45.68
Upper South Fork Guadalupe River	121002010106	658	265	393	59.7	Fail	27.64
Lower South Fork Guadalupe River	121002010107	948	646	302	31.9	Fail	46.16
Tegener Creek-Guadalupe River	121002010108	647	376	271	41.9	Fail	46.49
Upper Johnson Creek	121002010109	793	230	563	71.0	Fail	15.38
Middle Johnson Creek	121002010110	491	233	258	52.5	Fail	32.80
Lower Johnson creek	121002010111	501	218	283	56.5	Fail	29.58
Goat Creek-Guadalupe River	121002010201	1103	446	657	59.6	Fail	29.06
Town Creek	121002010202	324	128	196	60.5	Fail	24.08
Quinlan Creek-Guadalupe River	121002010203	995	216	779	78.3	Fail	13.96
Upper Turtle Creek	121002010204	590	294	296	50.2	Fail	38.93
Lower Turtle Creek	121002010205	762	209	553	72.6	Fail	21.04
Steel Creek-Guadalupe River	121002010206	162	63	99	61.1	Fail	26.54
Verde Creek	121002010207	894	223	671	75.1	Fail	19.96

HUC-12 Watershed		Total	Fail	Pass	%Pass	BLE	Priority
Cherry Creek-Guadalupe River	121002010208	1311	558	753	57.4	Fail	34.13
Upper Cypress Creek	121002010209	897	548	349	38.9	Fail	30.55
Lower Cypress Creek	121002010210	1109	408	701	63.2	Fail	21.69
Block Creek	121002010301	902	285	617	68.4	Fail	15.93
Flat Rock Creek-Guadalupe River	121002010302	631	299	332	52.6	Fail	31.79
Joshua Creek-Guadalupe River	121002010303	1502	663	839	55.9	Fail	30.42
West Sister Creek	121002010304	1275	704	571	44.8	Fail	28.16
East Sister Creek	121002010305	810	444	366	45.2	Fail	27.45
Sister Creek-Guadalupe River	121002010306	636	403	233	36.6	Fail	37.27
Wasp Creek-Guadalupe River	121002010307	720	248	472	65.6	Fail	22.70
Goss Creek-Guadalupe River	121002010308	567	292	275	48.5	Fail	35.47
Honey Creek-Guadalupe River	121002010401	558	281	277	49.6	Fail	38.18
Simmons Creek	121002010402	398	127	271	68.1	Fail	15.95
Curry Creek	121002010403	1034	260	774	74.9	Fail	12.57
Spring Branch-Guadalupe River	121002010404	603	131	472	78.3	Fail	17.17
Rebecca Creek-Canyon Lake	121002010405	450	83	367	81.6	Fail	14.76
Jentsch Creek-Canyon Lake	121002010406	222	29	193	86.9	Pass	10.45
Tom Creek-Canyon Lake	121002010407	364	27	337	92.6	Pass	6.07

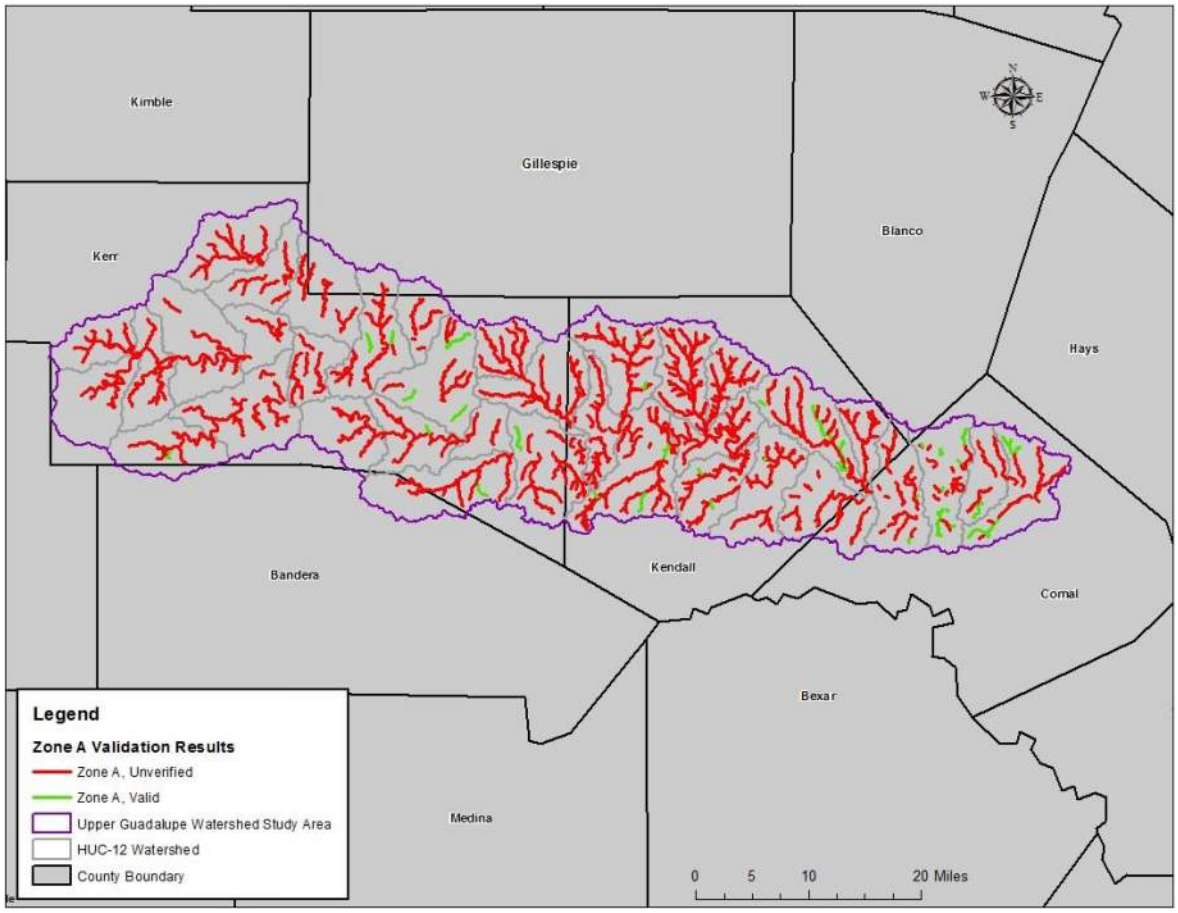

Figure 6. Upper Guadalupe Watershed CNMS Validation Results

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Appendix A Summary of Peak Qs

Table A-1. Summary of Hydrology

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Ahern Creek	0.74	3,437	1,723	6,858
Ahern Creek	1.01	4,384	2,197	8,748
Ahern Creek	2.01	6,728	3,372	13,423
Ahern Creek	2.77	8,370	4,195	16,700
ALLEN CREEK	0.58	3,208	1,608	6,400
ALLEN CREEK	1.25	6,051	3,033	12,073
ALLEN CREEK	2.25	8,573	4,297	17,106
ALLEN CREEK	2.42	8,803	4,412	17,564
ASKEY CREEK	0.33	1,610	807	3,213
ASKEY CREEK	0.48	2,146	1,076	4,283
ASKEY CREEK	1.14	4,326	2,168	8,631
ASKEY CREEK	1.92	6,150	3,082	12,271
ASKEY CREEK	2.52	7,208	3,613	14,383
ASKEY CREEK	3.23	8,697	4,359	17,352
ASKEY CREEK	3.56	9,007	4,514	17,970
BEAR CREEK	0.19	789	396	1,575
BEAR CREEK	0.49	2,126	1,066	4,242
BEAR CREEK	1.20	4,385	2,198	8,750
BEAR CREEK	1.59	5,217	2,615	10,409
Bear Creek_US	0.96	4,363	2,187	8,706
Bear Creek_US	2.22	8,301	4,160	16,563
Bear Creek_US	3.49	11,377	5,702	22,700
Bear Creek_US	3.96	12,544	6,287	25,029
Bear Creek_US	4.61	13,699	6,866	27,332
Bear Creek_US	5.54	15,488	7,762	30,902
Bear Creek_US	6.58	17,620	8,831	35,157
Bear Creek_US	7.50	18,891	9,468	37,693
Bear Creek_US	7.63	18,949	9,497	37,809
Bear Creek 2	0.19	655	328	1,306
Bear Creek 2	1.19	3,891	1,950	7,763
Bear Creek 2	2.03	5,330	2,671	10,634
Bear Creek 2	4.12	9,325	4,673	18,605
Bear Creek 2	6.49	13,474	6,753	26,884
Bear Creek 2	8.75	16,921	8,481	33,762
Bear Creek 2	12.26	20,736	10,392	41,373

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Bear Creek 2	12.42	20,916	10,483	41,734
Bear Creek 2	13.81	22,523	11,288	44,939
Bear Creek 2	14.80	23,587	11,821	47,062
Bear Creek 2	15.41	24,273	12,166	48,432
Bear Creek 2	16.36	24,792	12,425	49,467
Bear Creek 2	16.66	24,810	12,434	49,502
Bear Creek 2	19.48	27,651	13,858	55,170
Bear Creek 2	20.33	28,421	14,244	56,707
Bear Creek 2	28.29	38,051	19,071	75,923
Bear Creek 2	30.59	39,727	19,911	79,266
Bear Creek 2	31.40	40,092	20,093	79,993
Bear Creek 2	32.01	40,495	20,296	80,799
Bee Caves Creek	0.14	765	384	1,527
Bee Caves Creek	1.10	4,413	2,212	8,805
Bee Caves Creek	2.01	6,824	3,420	13,615
Bee Caves Creek	2.70	8,350	4,185	16,660
Bee Caves Creek	4.95	12,620	6,325	25,180
Bee Caves Creek	5.18	12,666	6,348	25,271
BIG JOSHUA CREEK	0.16	787	394	1,570
BIG JOSHUA CREEK	0.42	1,981	993	3,953
BIG JOSHUA CREEK	0.74	3,215	1,611	6,415
BIG JOSHUA CREEK	1.61	6,312	3,164	12,595
BIG JOSHUA CREEK	2.16	7,091	3,554	14,148
BIG JOSHUA CREEK	2.16	7,091	3,554	14,148
BIG JOSHUA CREEK	3.82	10,780	5,403	21,508
BIG JOSHUA CREEK	4.73	12,014	6,021	23,971
BIG JOSHUA CREEK	5.00	12,394	6,212	24,729
BIG JOSHUA CREEK	5.88	13,363	6,697	26,662
BIG JOSHUA CREEK	6.38	14,238	7,136	28,408
BIG JOSHUA CREEK	6.73	14,509	7,272	28,950
BIG JOSHUA CREEK	6.99	14,898	7,466	29,724
BIG JOSHUA CREEK	7.38	15,080	7,558	30,089
BIG JOSHUA CREEK	8.97	17,643	8,843	35,203
BIG JOSHUA CREEK	9.94	18,789	9,417	37,488
BIG JOSHUA CREEK	10.81	19,894	9,971	39,693
BIG JOSHUA CREEK	11.79	21,030	10,540	41,960
BIG JOSHUA CREEK	12.73	22,156	11,104	44,206
BIG JOSHUA CREEK	13.28	22,355	11,204	44,604

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
BIG JOSHUA CREEK	14.28	23,278	11,667	46,445
BIG JOSHUA CREEK	14.80	24,132	12,095	48,149
BIG JOSHUA CREEK	16.67	26,143	13,103	52,162
BIG JOSHUA CREEK	17.67	26,975	13,519	53,822
BIG JOSHUA CREEK	18.64	27,844	13,955	55,556
BIG JOSHUA CREEK	19.25	28,066	14,066	55,999
BLACK CREEK	0.14	851	427	1,698
BLACK CREEK	0.62	2,999	1,503	5,984
BLACK CREEK	1.44	6,093	3,054	12,158
BLACK CREEK	1.78	6,559	3,287	13,087
BLACK CREEK	2.75	8,953	4,487	17,864
BLACK CREEK	3.06	9,554	4,789	19,064
BLACK CREEK	4.46	12,793	6,412	25,526
BLOCK CREEK	0.27	1,129	566	2,252
BLOCK CREEK	1.01	3,487	1,747	6,957
BLOCK CREEK	1.14	3,588	1,798	7,160
BLOCK CREEK	2.21	6,117	3,066	12,206
BLOCK CREEK	3.05	7,753	3,886	15,470
BLOCK CREEK	3.97	9,180	4,601	18,317
BLOCK CREEK	5.14	11,032	5,529	22,013
BLOCK CREEK	8.69	16,801	8,420	33,522
BLOCK CREEK	9.56	16,533	8,286	32,987
BLOCK CREEK	12.11	19,513	9,779	38,933
BLOCK CREEK	14.80	21,868	10,960	43,633
BLOCK CREEK	20.70	28,371	14,219	56,608
BLOCK CREEK	21.35	28,372	14,220	56,609
BLOCK CREEK	25.04	31,674	15,875	63,198
BLOCK CREEK	29.68	34,670	17,376	69,176
BLOCK CREEK	31.03	37,069	18,579	73,963
BLOCK CREEK	32.37	38,000	19,045	75,819
BLOCK CREEK	32.79	38,025	19,058	75,870
BLOCK CREEK	33.64	37,960	19,025	75,741
BLOCK CREEK	35.28	39,109	19,601	78,032
BLOCK CREEK	39.65	42,049	21,074	83,898
BLOCK CREEK	41.74	42,704	21,403	85,205
BLOCK CREEK	41.96	50,729	25,425	101,218
BLOCK CREEK	44.45	52,164	26,144	104,080
Bluff Creek	1.49	8,001	4,010	15,964

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Bluff Creek	2.19	6,850	3,433	13,667
Bluff Creek	3.14	8,796	4,408	17,550
Bluff Creek	3.99	10,551	5,288	21,053
Bluff Creek	4.67	16,005	8,021	31,934
Bluff Creek	5.27	12,694	6,362	25,327
Bruins Creek	0.06	459	230	916
Bruins Creek	0.39	2,091	1,048	4,172
Bruins Creek	1.07	4,734	2,373	9,446
Bruins Creek	1.19	5,109	2,560	10,193
Bruins Creek	1.41	5,612	2,813	11,198
Bruins Creek	2.01	7,034	3,525	14,034
Bruins Creek	4.50	12,728	6,379	25,396
Bruins Creek	4.82	13,110	6,571	26,159
Bruins Creek	5.57	13,916	6,974	27,765
Bruins Creek	6.30	14,991	7,513	29,911
Bruins Creek	9.16	20,294	10,171	40,491
Bruins Creek	9.44	20,157	10,103	40,219
Bruins Creek	9.93	20,497	10,273	40,898
Buffalo Creek	0.49	2,207	1,106	4,404
Buffalo Creek	1.01	3,817	1,913	7,615
Buffalo Creek	1.58	4,949	2,480	9,874
Buffalo Creek	3.76	9,849	4,936	19,651
Buffalo Creek	4.82	11,708	5,868	23,360
Buffalo Creek	5.76	13,170	6,601	26,278
Buffalo Creek	6.02	13,536	6,784	27,008
Buffalo Creek	6.23	13,830	6,931	27,594
Bushwhack Creek	0.07	506	253	1,009
Bushwhack Creek	0.58	3,496	1,752	6,975
Bushwhack Creek	1.00	4,863	2,437	9,703
Bushwhack Creek	1.70	7,529	3,774	15,023
Bushwhack Creek	2.65	10,657	5,341	21,264
Bushwhack Creek	3.12	11,738	5,883	23,420
Bushwhack Creek	3.44	12,524	6,277	24,990
Bushwhack Creek	5.24	16,793	8,417	33,507
Bushwhack Creek	5.62	17,493	8,767	34,903
Bushwhack Creek	7.21	20,827	10,438	41,556
Bushwhack Creek	8.02	22,206	11,129	44,306
Bushwhack Creek	8.45	21,787	10,919	43,470

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Bushwhack Creek	8.95	22,176	11,114	44,246
Byas Branch	0.25	1,277	640	2,548
Byas Branch	1.15	4,881	2,446	9,739
Byas Branch	2.04	7,659	3,839	15,282
Byas Branch	2.52	8,863	4,442	17,683
Byas Branch	2.91	9,726	4,875	19,407
Byas Branch	3.15	10,195	5,110	20,343
Calf Run	1.04	4,980	2,496	9,936
Calf Run	1.39	5,662	2,838	11,298
Camp Meeting Creek	0.24	1,712	858	3,416
Camp Meeting Creek	0.93	4,597	2,304	9,172
Camp Meeting Creek	1.69	7,160	3,588	14,286
Camp Meeting Creek	2.04	8,198	4,109	16,357
Camp Meeting Creek	2.28	8,901	4,461	17,760
Camp Meeting Creek	2.85	10,306	5,165	20,562
Camp Meeting Creek	3.41	11,620	5,824	23,184
Camp Meeting Creek	3.85	12,821	6,425	25,580
Camp Meeting Creek	4.75	14,456	7,245	28,844
Camp Meeting Creek	5.12	15,126	7,581	30,181
Camp Meeting Creek	8.83	22,909	11,482	45,709
Camp Meeting Creek	9.83	23,990	12,023	47,866
Camp Meeting Creek	10.21	24,033	12,045	47,952
Cherry Creek_DS	0.68	2,926	1,466	5,837
Cherry Creek	1.64	6,032	3,023	12,036
Cherry Creek	1.74	6,272	3,144	12,515
Cherry Creek	2.46	7,651	3,835	15,266
Cherry Creek	2.92	8,448	4,234	16,857
Cherry Creek	3.43	9,388	4,705	18,731
Cherry Creek	3.65	9,638	4,830	19,230
Cherry Creek	6.06	14,403	7,219	28,738
Cherry Creek	6.47	14,690	7,362	29,310
Cherry Creek	6.91	15,081	7,558	30,091
Cherry Creek	8.29	17,048	8,544	34,015
Cherry Creek	13.49	25,084	12,572	50,048
Cherry Creek	16.72	28,219	14,143	56,304
Cherry Creek	17.80	28,219	14,143	56,304
Cherry Creek	18.91	29,412	14,741	58,685
Cherry Creek	21.57	32,031	16,054	63,910

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Cherry Creek	21.99	32,312	16,195	64,472
Cherry Creek_2	1.08	5,407	2,710	10,787
Coker Hollow	0.67	4,089	2,050	8,159
Contrary Creek	0.24	880	441	1,755
Contrary Creek	1.04	3,380	1,694	6,743
Contrary Creek	1.86	5,303	2,658	10,582
Contrary Creek	2.79	7,450	3,734	14,864
Contrary Creek	3.79	9,763	4,893	19,480
Contrary Creek	4.24	10,092	5,058	20,136
Contrary Creek	5.29	11,942	5,985	23,827
Contrary Creek	5.89	12,853	6,442	25,645
Contrary Creek	8.52	17,578	8,810	35,072
Contrary Creek	9.22	18,664	9,354	37,240
Contrary Creek	10.41	20,355	10,202	40,614
Contrary Creek	10.93	20,921	10,485	41,743
Cow Creek	1.00	5,449	2,731	10,872
Cow Creek	1.55	6,915	3,465	13,796
Cow Creek	2.53	10,363	5,194	20,676
Cow Creek	3.46	12,659	6,345	25,258
CURRY CREEK	0.43	2,130	1,068	4,250
CURRY CREEK	1.01	3,870	1,939	7,721
CURRY CREEK	1.32	4,539	2,275	9,056
CURRY CREEK	2.92	8,618	4,319	17,196
CURRY CREEK	4.19	10,633	5,329	21,216
CURRY CREEK	7.08	18,846	9,445	37,602
CURRY CREEK	7.87	16,099	8,069	32,122
CURRY CREEK	8.74	20,846	10,448	41,593
CURRY CREEK	9.03	20,585	10,317	41,072
CURRY CREEK	13.45	27,467	13,766	54,803
CURRY CREEK	14.19	27,788	13,927	55,444
CURRY CREEK	14.64	28,297	14,182	56,460
CURRY CREEK	15.61	29,333	14,701	58,527
CURRY CREEK	24.25	40,463	20,280	80,735
CURRY CREEK	24.95	40,892	20,495	81,591
CURRY CREEK	25.93	40,781	20,439	81,368
CURRY CREEK	26.90	40,348	20,222	80,505
CURRY CREEK	27.73	40,880	20,489	81,567
CURRY CREEK	38.77	51,139	25,630	102,035

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
CURRY CREEK	40.50	51,977	26,050	103,708
CURRY CREEK	42.26	51,202	25,662	102,162
CURRY CREEK	43.58	53,721	26,924	107,187
CURRY CREEK	45.68	55,418	27,775	110,573
CURRY CREEK	46.50	55,365	27,748	110,468
CURRY CREEK	47.54	55,182	27,657	110,103
CURRY CREEK	68.23	71,088	35,628	141,839
CURRY CREEK	69.18	71,037	35,603	141,737
Cypress Creek	0.16	759	381	1,515
Cypress Creek	1.21	3,868	1,939	7,719
Cypress Creek	1.60	4,420	2,215	8,820
Cypress Creek	2.88	6,940	3,478	13,847
Cypress Creek	9.89	17,241	8,641	34,401
Cypress Creek	10.13	17,352	8,696	34,621
Cypress Creek	10.89	18,401	9,222	36,715
Cypress Creek	11.73	18,749	9,397	37,409
Cypress Creek_US	0.15	971	487	1,937
Cypress Creek_US	0.33	1,978	991	3,947
Cypress Creek_US	1.58	6,644	3,330	13,256
Cypress Creek_US	3.63	12,522	6,276	24,985
Cypress Creek_US	3.99	13,185	6,608	26,307
Cypress Creek_US	4.19	13,546	6,789	27,027
Cypress Creek_US	5.67	17,154	8,598	34,227
Cypress Creek_US	6.07	17,673	8,858	35,263
Cypress Creek_US	8.66	22,572	11,313	45,037
Cypress Creek_US	9.11	23,290	11,673	46,470
Cypress Creek_US	14.78	19,775	9,911	39,455
Cypress Creek_US	25.56	30,170	15,121	60,197
Cypress Creek_US	25.85	30,265	15,168	60,387
Cypress Creek_US	27.07	31,025	15,549	61,903
Cypress Creek_US	27.77	30,697	15,385	61,248
Cypress Creek_US	28.14	30,888	15,481	61,630
Cypress Creek_US	28.76	30,883	15,478	61,619
Cypress Creek_US	38.71	37,247	18,667	74,317
Cypress Creek_US	42.30	47,284	23,698	94,345
Cypress Creek_US	42.56	48,761	24,439	97,292
Cypress Creek_US	50.17	55,179	27,655	110,096
Cypress Creek_US	50.97	54,427	27,278	108,596

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Cypress Creek_US	55.87	57,148	28,642	114,026
Cypress Creek_US	70.97	67,098	33,629	133,879
Cypress Creek_US	71.52	67,007	33,583	133,696
Cypress Creek_US	71.95	66,624	33,391	132,933
Cypress Creek_US	72.93	67,143	33,651	133,968
Cypress Creek_US	73.26	66,974	33,566	133,630
Cypress Creek_US	73.50	66,233	33,195	132,151
Cypress Creek 2	1.27	5,769	2,892	11,511
Cypress Creek 2	1.43	5,956	2,985	11,883
Cypress Creek 2	4.42	12,942	6,487	25,823
Cypress Creek 2	8.15	21,514	10,782	42,926
Cypress Creek 2	9.26	21,771	10,912	43,440
Cypress Creek 2	10.01	21,952	11,002	43,800
Cypress Creek 2	10.42	22,922	11,488	45,736
Cypress Creek 2	11.32	24,407	12,233	48,698
Cypress Tributary 1	0.27	1,251	627	2,496
Cypress Tributary 1	0.44	1,696	850	3,383
Cypress Tributary 2	0.26	1,131	567	2,257
Cypress Tributary 2	1.14	3,773	1,891	7,527
Cypress Tributary 2	2.14	5,695	2,854	11,364
Cypress Tributary 2	3.18	7,522	3,770	15,009
Cypress Tributary 2	4.82	10,530	5,277	21,010
Cypress Tributary 2	5.68	11,662	5,845	23,268
Cypress Tributary 2	6.02	11,927	5,978	23,798
Cypress Tributary 2A	0.48	1,538	771	3,069
Cypress Tributary 2A	0.70	2,057	1,031	4,104
Cypress Tributary 4	1.03	2,975	1,491	5,937
Cypress Tributary 4	1.55	3,936	1,973	7,854
Cypress Tributary 5	0.47	2,221	1,113	4,431
Cypress Tributary 5	0.90	3,748	1,879	7,479
DARMSTADT CREEK	0.25	1,291	647	2,576
DARMSTADT CREEK	0.73	3,169	1,588	6,322
DARMSTADT CREEK	1.64	5,587	2,800	11,147
DARMSTADT CREEK	2.81	8,984	4,503	17,925
DARMSTADT CREEK	3.53	10,836	5,431	21,621
DARMSTADT CREEK	4.24	11,897	5,963	23,738
DARMSTADT CREEK	5.41	14,286	7,160	28,505
Devils Hollow	1.10	4,500	2,256	8,979

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Devils Hollow	1.80	6,605	3,311	13,180
Devils Hollow	4.19	12,185	6,107	24,313
Devils Hollow	5.11	14,098	7,066	28,130
Devils Hollow	6.00	14,903	7,469	29,735
Devils Hollow	6.57	15,158	7,597	30,245
Devils Hollow Tributary 5	0.12	674	338	1,344
Devils Hollow Tributary 5	0.41	1,839	922	3,669
Devils Hollow Tributary 5	1.33	5,213	2,613	10,401
Devils Hollow Tributary 5	1.88	6,268	3,141	12,506
Dry Branch	1.11	4,381	2,196	8,741
Dry Branch	1.77	5,818	2,916	11,608
Dry Branch	2.55	7,868	3,943	15,698
Dry Branch	3.53	9,924	4,974	19,800
Dry Branch	3.91	10,935	5,481	21,819
Dry Branch	4.53	12,069	6,049	24,081
Dry Branch	4.62	12,266	6,147	24,474
Dry Branch	4.97	12,945	6,488	25,829
Dry Branch	9.72	21,236	10,643	42,372
Dry Branch	10.33	21,889	10,971	43,675
Dry Branch	10.85	22,363	11,208	44,620
Dry Branch	11.10	22,708	11,381	45,309
Dry Creek	0.12	738	370	1,472
Dry Creek	1.29	5,558	2,786	11,090
Dry Creek	2.19	7,763	3,891	15,489
Dry Creek	2.58	8,674	4,347	17,307
Dry Creek	3.21	9,779	4,901	19,511
DRY CREEK 1	1.05	4,568	2,290	9,115
DRY CREEK 1	2.05	6,861	3,438	13,689
DRY CREEK 1	3.05	9,789	4,906	19,532
DRY CREEK 1	3.60	10,693	5,359	21,335
DRY CREEK 1	4.31	12,315	6,172	24,572
DRY CREEK 2	1.00	3,355	1,682	6,695
DRY CREEK 2	1.70	4,615	2,313	9,208
EAST SISTER CREEK	0.10	639	320	1,275
EAST SISTER CREEK	0.23	1,182	592	2,359
EAST SISTER CREEK	1.31	4,899	2,456	9,776
EAST SISTER CREEK	1.82	6,251	3,133	12,472
EAST SISTER CREEK	2.16	7,001	3,509	13,970

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
EAST SISTER CREEK	3.14	8,549	4,285	17,058
EAST SISTER CREEK	3.28	8,607	4,314	17,174
EAST SISTER CREEK	6.81	15,880	7,959	31,684
EAST SISTER CREEK	7.26	16,006	8,022	31,937
EAST SISTER CREEK	7.68	16,546	8,293	33,014
EAST SISTER CREEK	15.29	26,535	13,299	52,945
EAST SISTER CREEK	16.51	27,213	13,639	54,298
EAST SISTER CREEK	20.10	32,401	16,239	64,649
EAST SISTER CREEK	20.47	32,489	16,283	64,823
EAST SISTER CREEK	21.35	33,215	16,647	66,273
EAST SISTER CREEK	22.13	39,938	20,017	79,688
EAST SISTER CREEK	22.57	40,418	20,257	80,644
EAST SISTER CREEK	22.91	40,538	20,317	80,884
EAST SISTER CREEK	23.36	39,693	19,894	79,198
EAST SISTER CREEK	24.86	39,879	19,987	79,569
East Town Creek	0.12	816	409	1,629
East Town Creek	0.82	4,347	2,178	8,673
East Town Creek	1.54	7,637	3,828	15,238
East Town Creek	1.93	8,412	4,216	16,784
East Town Creek	2.91	11,239	5,633	22,425
East Town Creek	3.30	11,940	5,984	23,823
East Town Creek	3.94	13,348	6,690	26,633
East Town Creek	4.64	15,147	7,591	30,221
East Town Creek	5.43	16,290	8,164	32,503
East Town Creek	5.96	16,735	8,387	33,390
Edmunson Creek	0.41	2,272	1,139	4,533
Edmunson Creek	0.87	3,970	1,990	7,920
Elm Creek	0.03	310	155	618
Elm Creek	0.55	3,623	1,816	7,228
Elm Creek	1.05	6,356	3,185	12,681
Elm Creek	1.52	7,810	3,914	15,583
Elm Creek	2.45	10,831	5,428	21,610
Elm Creek	2.98	12,626	6,328	25,191
Elm Creek	3.50	13,876	6,955	27,687
Elm Creek	3.97	14,898	7,467	29,725
Elm Creek	4.39	15,500	7,768	30,926
Elm Creek	5.39	17,766	8,904	35,447
Elm Creek	5.66	18,132	9,087	36,177

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Elm Creek	6.06	18,705	9,375	37,322
Elm Creek	6.39	19,264	9,655	38,436
Elm Creek	7.15	20,508	10,279	40,920
Elm Creek_DS	0.21	1,174	589	2,343
Elm Creek_DS	0.57	2,564	1,285	5,116
Elm Creek_DS	1.15	4,349	2,180	8,677
Elm Creek_DS	2.12	6,245	3,130	12,460
Elm Creek_DS	6.12	14,553	7,294	29,037
Elm Creek_2	0.12	1,070	536	2,135
Elm Creek_2	0.45	3,507	1,757	6,996
Elm Creek_2	0.58	3,960	1,985	7,901
Elm Creek_2	0.94	5,115	2,563	10,205
Fall Branch	1.04	4,236	2,123	8,451
Fall Branch	1.38	5,136	2,574	10,248
Fall Branch	2.39	8,332	4,176	16,624
Fall Branch	3.38	10,501	5,263	20,952
Fall Branch	3.87	11,726	5,877	23,397
Fall Branch	8.36	20,466	10,257	40,836
Fall Branch	9.01	21,218	10,634	42,335
Fall Branch	10.99	23,614	11,835	47,116
Fall Branch	12.02	25,018	12,539	49,918
Fall Creek	1.07	5,705	2,859	11,384
Fall Creek	2.00	8,425	4,223	16,811
Fall Creek	2.53	9,982	5,003	19,916
Fall Creek	3.45	12,648	6,339	25,236
Fall Creek	4.17	13,894	6,963	27,722
Fall Creek	5.14	16,477	8,258	32,876
Fall Creek	6.12	18,208	9,126	36,330
Fall Creek	6.56	18,649	9,347	37,209
Fall Creek	7.09	19,425	9,735	38,758
Fall Creek	7.41	19,775	9,911	39,457
Fessenden Branch	0.10	490	246	978
Fessenden Branch	1.05	3,935	1,972	7,852
Fessenden Branch	1.85	5,851	2,932	11,673
Fessenden Branch	2.83	7,962	3,991	15,887
Fessenden Branch	3.51	9,459	4,741	18,874
Fessenden Branch	3.94	10,225	5,125	20,402
Fessenden Branch	4.43	11,026	5,526	22,000

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Fessenden Branch	4.97	11,763	5,895	23,470
Fessenden Branch	6.65	14,982	7,509	29,893
Fessenden Branch	6.98	15,505	7,771	30,936
Fessenden Branch	7.98	16,607	8,323	33,136
Fessenden Branch	8.53	17,536	8,789	34,989
FLAT ROCK CREEK	0.29	1,242	623	2,479
FLAT ROCK CREEK	1.14	3,556	1,782	7,095
FLAT ROCK CREEK	1.35	3,907	1,958	7,796
FLAT ROCK CREEK	2.12	5,666	2,840	11,304
FLAT ROCK CREEK	3.11	7,553	3,786	15,070
FLAT ROCK CREEK	4.00	9,177	4,600	18,311
FLAT ROCK CREEK	4.53	9,847	4,935	19,648
FLAT ROCK CREEK	5.31	11,223	5,625	22,393
FLAT ROCK CREEK	6.45	12,536	6,283	25,013
FLAT ROCK CREEK	7.17	16,014	8,026	31,953
FLAT ROCK CREEK	8.57	17,285	8,663	34,489
FLAT ROCK CREEK	9.90	19,128	9,587	38,165
Flat Rock Creek_US	0.25	1,041	522	2,078
Flat Rock Creek_US	1.01	3,321	1,664	6,626
Flat Rock Creek_US	1.52	4,827	2,419	9,631
Flat Rock Creek_US	5.59	11,392	5,709	22,730
Flat Rock Creek_US	8.71	15,962	8,000	31,848
Flat Rock Creek_US	9.71	16,843	8,442	33,607
Flat Rock Creek_US	19.42	27,485	13,775	54,839
Flat Rock Creek_US	19.95	27,637	13,851	55,142
Flat Rock Creek_US	20.94	28,492	14,280	56,848
Flat Rock Creek_US	21.06	28,629	14,348	57,122
Flat Rock Creek 2	6.87	12,503	6,266	24,947
Flat Rock Creek 2	7.80	13,679	6,856	27,293
Flat Rock Creek 2	8.14	14,056	7,045	28,045
Flat Rock Creek 2	8.39	14,262	7,148	28,457
Flat Rock Creek 2	8.68	14,517	7,276	28,966
Flat Rock Creek 2	9.60	15,726	7,882	31,377
Frank Baker Creek	0.09	577	289	1,152
Frank Baker Creek	1.08	4,585	2,298	9,149
Frank Baker Creek	1.99	6,457	3,236	12,884
Frank Baker Creek	2.99	8,721	4,371	17,401
Frank Baker Creek	3.35	9,373	4,698	18,702

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
George Hollow	1.01	4,690	2,351	9,359
George Hollow	1.55	6,230	3,122	12,430
Goat Creek	1.28	5,652	2,833	11,278
Goat Creek	2.04	7,752	3,885	15,466
Goat Creek	5.00	14,437	7,235	28,805
Goat Creek	10.15	25,245	12,653	50,371
Goat Creek	12.55	28,677	14,373	57,219
Goat Creek	12.73	28,882	14,475	57,627
Goat Creek	13.28	28,638	14,353	57,140
Goat Creek	15.81	33,831	16,956	67,502
Goat Creek	17.41	35,721	17,903	71,272
Goat Creek	18.19	36,410	18,248	72,648
Goat Creek	19.07	36,239	18,162	72,306
Goat Creek	19.55	36,807	18,447	73,440
GOSS CREEK	1.05	4,902	2,457	9,782
GOSS CREEK	2.04	7,779	3,899	15,521
GOSS CREEK	3.03	9,991	5,007	19,934
GOSS CREEK	3.34	10,204	5,114	20,359
GOSS CREEK	4.56	12,334	6,182	24,610
Guadalupe River	1.02	3,094	1,551	6,173
Guadalupe River	1.81	4,750	2,381	9,478
Guadalupe River	2.70	6,517	3,266	13,003
Guadalupe River	3.67	8,224	4,122	16,409
Guadalupe River	3.75	8,194	4,107	16,350
Guadalupe River	6.79	12,592	6,311	25,125
Guadalupe River	7.15	13,292	6,662	26,521
Guadalupe River	8.71	15,363	7,700	30,653
Guadalupe River	14.36	22,742	11,398	45,376
Guadalupe River	15.70	23,858	11,957	47,603
Guadalupe River	15.95	23,855	11,956	47,597
Guadalupe River	17.96	26,133	13,098	52,143
Guadalupe River	18.24	25,725	12,893	51,329
Guadalupe River	18.33	25,595	12,828	51,068
Guadalupe River	18.42	25,420	12,740	50,719
Guadalupe River	19.37	25,256	12,658	50,393
Guadalupe River	19.71	25,407	12,734	50,694
Guadalupe River	34.68	38,339	19,215	76,497
Guadalupe River	37.66	41,090	20,594	81,986

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	37.76	40,864	20,480	81,534
Guadalupe River	38.06	40,505	20,301	80,818
Guadalupe River	38.83	40,968	20,533	81,742
Guadalupe River	39.61	41,397	20,748	82,598
Guadalupe River	40.11	41,488	20,793	82,780
Guadalupe River	41.06	41,615	20,857	83,033
Guadalupe River	41.37	41,402	20,750	82,608
Guadalupe River	65.95	58,761	29,450	117,244
Guadalupe River	66.22	58,653	29,396	117,027
Guadalupe River	66.35	58,685	29,412	117,092
Guadalupe River	73.76	63,356	31,753	126,413
Guadalupe River	75.34	63,773	31,962	127,243
Guadalupe River	77.21	63,946	32,049	127,589
Guadalupe River	77.99	63,552	31,852	126,803
Guadalupe River	98.96	76,021	38,101	151,682
Guadalupe River	102.50	77,088	38,636	153,811
Guadalupe River	102.99	76,993	38,588	153,621
Guadalupe River	103.72	76,747	38,465	153,131
Guadalupe River	109.27	79,323	39,756	158,270
Guadalupe River	109.49	79,343	39,766	158,311
Guadalupe River	110.13	78,967	39,577	157,560
Guadalupe River	111.44	79,070	39,629	157,765
Guadalupe River	111.70	79,201	39,695	158,027
Guadalupe River	117.59	85,241	42,722	170,078
Guadalupe River	118.57	84,349	42,275	168,298
Guadalupe River	119.41	83,453	41,826	166,510
Guadalupe River	122.98	84,729	42,465	169,056
Guadalupe River	155.00	100,008	50,123	199,542
Guadalupe River	156.76	100,957	50,599	201,436
Guadalupe River	159.19	101,887	51,065	203,292
Guadalupe River	159.47	101,502	50,872	202,523
Guadalupe River	159.63	101,972	51,107	203,461
Guadalupe River	161.64	101,952	51,097	203,421
Guadalupe River	161.91	101,915	51,079	203,348
Guadalupe River	163.45	101,892	51,067	203,301
Guadalupe River	165.67	102,474	51,359	204,462
Guadalupe River	166.41	102,491	51,367	204,496
Guadalupe River	166.85	102,222	51,233	203,961

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	167.47	102,224	51,234	203,964
Guadalupe River	180.90	111,745	56,005	222,960
Guadalupe River	181.30	111,817	56,041	223,104
Guadalupe River	182.87	112,060	56,163	223,590
Guadalupe River	280.24	150,180	75,268	299,648
Guadalupe River	286.64	151,327	75,843	301,936
Guadalupe River	289.17	152,603	76,483	304,483
Guadalupe River	292.29	153,255	76,809	305,783
Guadalupe River	299.93	154,611	77,489	308,489
Guadalupe River	300.83	154,451	77,409	308,170
Guadalupe River	301.29	154,268	77,317	307,805
Guadalupe River	302.83	154,952	77,660	309,169
Guadalupe River	303.70	154,998	77,683	309,263
Guadalupe River	304.38	154,080	77,223	307,431
Guadalupe River	431.03	195,516	97,990	390,106
Guadalupe River	439.86	198,831	99,651	396,720
Guadalupe River	440.61	197,956	99,213	394,974
Guadalupe River	441.10	197,891	99,180	394,844
Guadalupe River	443.39	204,732	102,609	408,493
Guadalupe River	463.01	209,991	105,245	418,987
Guadalupe River	470.72	212,216	106,360	423,426
Guadalupe River	471.06	211,691	106,097	422,379
Guadalupe River	472.37	211,763	106,133	422,523
Guadalupe River	475.60	211,556	106,029	422,110
Guadalupe River	477.68	210,672	105,586	420,346
Guadalupe River	479.75	211,184	105,843	421,367
Guadalupe River	504.98	217,310	108,913	433,591
Guadalupe River	517.49	219,286	109,903	437,532
Guadalupe River	527.79	222,015	111,271	442,978
Guadalupe River	528.96	220,493	110,508	439,941
Guadalupe River	542.59	223,039	111,784	445,021
Guadalupe River	543.70	216,775	108,645	432,523
Guadalupe River	547.89	217,242	108,879	433,454
Guadalupe River	554.60	225,460	112,998	449,852
Guadalupe River	555.91	225,238	112,886	449,408
Guadalupe River	627.86	244,362	122,471	487,566
Guadalupe River	629.81	244,576	122,578	487,993
Guadalupe River	630.48	244,756	122,669	488,352

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	633.11	245,528	123,056	489,894
Guadalupe River	635.55	244,417	122,499	487,677
Guadalupe River	643.56	245,085	122,834	489,009
Guadalupe River	645.04	245,335	122,959	489,509
Guadalupe River	700.56	258,255	129,434	515,287
Guadalupe River	706.92	190,267	95,359	379,633
Guadalupe River	708.93	196,549	98,508	392,167
Guadalupe River	731.73	199,852	100,163	398,757
Guadalupe River	732.31	199,500	99,987	398,054
Guadalupe River	742.45	200,995	100,736	401,037
Guadalupe River	743.42	200,529	100,502	400,108
Guadalupe River	750.01	201,005	100,741	401,058
Guadalupe River	750.87	200,588	100,532	400,226
Guadalupe River	754.17	199,798	100,136	398,650
Guadalupe River	826.57	215,374	107,943	429,728
Guadalupe River	828.35	511,033	256,123	1,019,645
Guadalupe River	830.84	455,587	228,334	909,015
Guadalupe River	840.69	507,503	254,354	1,012,601
Guadalupe River	851.16	475,439	238,284	948,626
Guadalupe River	852.91	454,595	227,837	907,036
Guadalupe River	854.65	450,773	225,922	899,411
Guadalupe River	900.11	426,576	213,794	851,130
Guadalupe River	900.51	418,124	209,558	834,267
Guadalupe River	902.25	411,863	206,421	821,776
Guadalupe River	903.43	415,987	208,487	830,003
Guadalupe River	905.39	407,966	204,467	813,998
Guadalupe River	908.60	404,997	202,979	808,074
Guadalupe River	908.84	403,382	202,170	804,854
Guadalupe River	909.47	399,582	200,265	797,270
Guadalupe River	911.75	396,496	198,719	791,114
Guadalupe River	912.41	390,333	195,630	778,817
Guadalupe River	916.19	389,985	195,456	778,123
Guadalupe River	917.06	399,738	200,343	797,581
Guadalupe River	917.92	395,071	198,004	788,270
Guadalupe River	918.92	382,386	191,647	762,960
Guadalupe River	919.19	388,925	194,924	776,008
Guadalupe River	961.80	391,893	196,412	781,928
Guadalupe River	964.01	386,223	193,570	770,617

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	964.12	384,728	192,821	767,633
Guadalupe River	965.02	382,890	191,899	763,965
Guadalupe River	966.86	377,915	189,406	754,039
Guadalupe River	971.78	373,863	187,375	745,955
Guadalupe River	1,036.40	387,126	194,023	772,418
Guadalupe River	1,038.20	386,241	193,579	770,651
Guadalupe River	1,038.69	381,728	191,317	761,647
Guadalupe River	1,039.26	380,766	190,835	759,729
Guadalupe River	1,040.25	376,815	188,855	751,846
Guadalupe River	1,041.15	372,370	186,627	742,976
Guadalupe River	1,049.94	369,476	185,177	737,201
Guadalupe River	1,050.18	368,149	184,512	734,554
Guadalupe River	1,050.72	366,332	183,601	730,928
Guadalupe River	1,051.55	364,151	182,508	726,577
Guadalupe River	1,052.43	358,709	179,780	715,718
Guadalupe River	1,055.97	356,310	178,578	710,932
Guadalupe River	1,057.37	355,930	178,387	710,173
Guadalupe River	1,057.81	355,291	178,067	708,899
Guadalupe River	1,058.65	364,646	182,756	727,564
Guadalupe River	1,059.58	362,444	181,652	723,170
Guadalupe River	1,075.08	363,272	182,067	724,822
Guadalupe River	1,076.97	360,792	180,824	719,874
Guadalupe River	1,091.52	362,684	181,773	723,650
Guadalupe River	1,091.91	361,892	181,376	722,069
Guadalupe River	1,093.12	359,151	180,002	716,601
Guadalupe River	1,093.50	358,389	179,620	715,081
Guadalupe River	1,095.65	355,882	178,363	710,077
Guadalupe River	1,096.62	354,164	177,502	706,650
Guadalupe River	1,097.50	350,220	175,526	698,781
Guadalupe River	1,098.51	337,265	169,033	672,931
Guadalupe River	1,100.22	337,030	168,915	672,464
Guadalupe River	1,100.28	336,271	168,535	670,949
Guadalupe River	1,105.25	335,267	168,031	668,945
Guadalupe River	1,105.45	335,193	167,994	668,798
Guadalupe River	1,109.04	334,147	167,470	666,710
Guadalupe River	1,111.24	332,097	166,443	662,622
Guadalupe River	1,112.67	332,129	166,459	662,685
Guadalupe River	1,113.48	331,381	166,084	661,191

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	1,114.33	329,384	165,083	657,208
Guadalupe River	1,115.14	328,858	164,819	656,157
Guadalupe River	1,115.36	328,599	164,690	655,641
Guadalupe River	1,116.13	327,511	164,144	653,470
Guadalupe River	1,116.40	326,720	163,748	651,891
Guadalupe River	1,138.80	328,512	164,646	655,468
Guadalupe River	1,139.67	326,731	163,753	651,914
Guadalupe River	1,148.52	326,428	163,602	651,310
Guadalupe River	1,149.21	326,111	163,443	650,677
Guadalupe River	1,151.09	325,686	163,230	649,829
Guadalupe River	1,151.80	324,772	162,772	648,006
Guadalupe River	1,152.76	323,217	161,992	644,902
Guadalupe River	1,155.64	322,920	161,843	644,310
Guadalupe River	1,156.64	312,534	156,638	623,587
Guadalupe River	1,157.64	311,612	156,176	621,747
Guadalupe River	1,158.64	310,448	155,593	619,425
Guadalupe River	1,159.31	309,004	154,869	616,545
Guadalupe River	1,164.07	309,503	155,119	617,540
Guadalupe River	1,165.57	308,136	154,434	614,813
Guadalupe River	1,166.64	307,275	154,002	613,094
Guadalupe River	1,173.73	307,527	154,128	613,596
Guadalupe River	1,174.39	306,734	153,731	612,015
Guadalupe River	1,175.38	305,427	153,076	609,406
Guadalupe River	1,175.92	303,848	152,285	606,256
Guadalupe River	1,186.17	304,133	152,427	606,824
Guadalupe River	1,186.47	304,222	152,472	607,002
Guadalupe River	1,186.83	302,875	151,797	604,316
Guadalupe River	1,256.71	313,764	157,255	626,042
Guadalupe River	1,258.79	302,067	151,392	602,704
Guadalupe River	1,260.10	301,223	150,969	601,018
Guadalupe River	1,261.09	300,355	150,534	599,286
Guadalupe River	1,261.35	299,733	150,223	598,047
Guadalupe River	1,272.60	299,429	150,070	597,440
Guadalupe River	1,273.11	299,441	150,076	597,464
Guadalupe River	1,273.31	298,705	149,707	595,995
Guadalupe River	1,284.13	299,396	150,053	597,373
Guadalupe River	1,290.28	300,376	150,545	599,329
Guadalupe River	1,302.40	300,786	150,750	600,147

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe River	1,303.55	300,386	150,549	599,348
Guadalupe River	1,304.50	298,514	149,611	595,613
Guadalupe River	1,313.02	299,500	150,106	597,581
Guadalupe River	1,315.03	298,536	149,622	595,657
Guadalupe River	1,317.16	297,729	149,218	594,047
Guadalupe River	1,317.34	298,115	149,412	594,818
Guadalupe River	1,319.05	298,337	149,523	595,260
Guadalupe River	1,319.44	298,054	149,381	594,695
Guadalupe River	1,321.44	295,294	147,998	589,189
Guadalupe River	1,321.99	292,750	146,722	584,113
Guadalupe River	1,323.44	292,527	146,611	583,668
Guadalupe River	1,324.29	291,425	146,059	581,470
Guadalupe River	1,324.84	289,538	145,113	577,704
Guadalupe River	1,340.32	291,435	146,063	581,489
Guadalupe River	1,347.83	298,554	149,631	595,693
Guadalupe River	1,348.83	297,771	149,239	594,130
Guadalupe River	1,349.79	286,502	143,591	571,646
Guadalupe River	1,350.16	295,164	147,932	588,929
Guadalupe River	1,357.79	294,705	147,702	588,013
Guadalupe River	1,359.14	293,927	147,312	586,462
Guadalupe River	1,366.22	293,470	147,084	585,550
Guadalupe River	1,369.37	292,801	146,748	584,214
Guadalupe River	1,375.24	294,379	147,539	587,363
Guadalupe River	1,375.54	303,960	152,341	606,481
Guadalupe River	1,388.02	307,869	154,300	614,280
Guadalupe River	1,388.19	308,088	154,410	614,716
Guadalupe River	1,400.58	310,567	155,652	619,663
Guadalupe River	1,410.34	312,261	156,501	623,042
Guadalupe River	1,417.46	314,162	157,454	626,836
Guadalupe River	1,418.46	314,440	157,593	627,390
Guadalupe River	1,418.99	315,097	157,923	628,702
Guadalupe River	1,419.81	315,585	158,167	629,674
Guadalupe River	1,420.76	316,291	158,521	631,083
Guadalupe Tributary 36	1.03	4,629	2,320	9,236
Guadalupe Tributary 36	1.85	7,003	3,510	13,973
Guadalupe Tributary 36	2.61	8,844	4,433	17,646
Guadalupe Tributary 36	3.50	10,876	5,451	21,700
Guadalupe Tributary 36	4.46	12,858	6,444	25,655

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe Tributary 36	5.18	13,744	6,889	27,424
Guadalupe Tributary 36	6.23	14,222	7,128	28,376
Guadalupe Tributary 46	1.00	4,110	2,060	8,200
Guadalupe Tributary 46	1.45	5,088	2,550	10,152
Guadalupe Tributary 49	1.06	4,526	2,268	9,030
Guadalupe Tributary 49	1.72	6,020	3,017	12,012
Guadalupe Tributary 51	1.01	3,588	1,798	7,158
Guadalupe Tributary 51	1.82	5,417	2,715	10,809
Guadalupe Tributary 51	2.55	6,966	3,491	13,899
Guadalupe Tributary 51	3.50	8,785	4,403	17,529
Guadalupe Tributary 51	4.47	9,481	4,752	18,917
Guadalupe Tributary 51	5.11	9,909	4,966	19,770
Guadalupe Tributary 53	1.11	4,163	2,087	8,307
Guadalupe Tributary 53	2.14	6,206	3,110	12,382
Guadalupe Tributary 53	2.39	6,265	3,140	12,500
Guadalupe Tributary 55	1.09	4,780	2,395	9,537
Guadalupe Tributary 55	1.67	5,891	2,953	11,755
Guadalupe Tributary 58	1.02	3,957	1,983	7,896
Guadalupe Tributary 58	1.75	6,025	3,019	12,021
Guadalupe Tributary 58	3.82	10,938	5,482	21,824
Guadalupe Tributary 58	4.81	12,951	6,491	25,841
Guadalupe Tributary 58	5.79	13,464	6,748	26,863
Guadalupe Tributary 58	6.47	13,697	6,865	27,328
Guadalupe Tributary 61	0.24	1,073	538	2,140
Guadalupe Tributary 61	0.53	2,158	1,082	4,306
Guadalupe Tributary 62	1.00	3,467	1,738	6,918
Guadalupe Tributary 62	1.42	4,211	2,111	8,403
Guadalupe Tributary 65	0.91	3,205	1,606	6,395
Guadalupe Tributary 65b	0.21	1,021	512	2,037
Guadalupe Tributary 66	1.05	4,729	2,370	9,436
Guadalupe Tributary 66	1.66	6,127	3,071	12,226
Guadalupe Tributary 67	0.16	605	303	1,208
Guadalupe Tributary 68	1.02	3,420	1,714	6,823
Guadalupe Tributary 68	1.84	5,474	2,743	10,922
Guadalupe Tributary 70	0.21	1,220	611	2,433
Guadalupe Tributary 70	1.12	5,005	2,508	9,986
Guadalupe Tributary 73	0.53	2,176	1,091	4,342
Guadalupe Tributary 73	0.64	2,410	1,208	4,809

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Guadalupe Tributary 76	0.24	1,109	556	2,213
Guadalupe Tributary 76	0.39	1,646	825	3,285
Guadalupe Tributary 78	1.03	3,787	1,898	7,556
Guadalupe Tributary 78	1.18	4,179	2,095	8,339
HAAG CREEK	0.78	3,638	1,823	7,258
HAAG CREEK	2.53	7,750	3,884	15,463
HAAG CREEK	3.26	8,833	4,427	17,625
HAAG CREEK	3.85	10,055	5,040	20,063
HAAG CREEK	5.79	13,898	6,965	27,729
HAAG CREEK	6.65	14,697	7,366	29,325
HAAG CREEK	7.18	15,101	7,568	30,130
Hanz Creek	2.54	7,872	3,945	15,707
Hanz Creek	3.60	9,689	4,856	19,332
Hanz Tributary 3	0.44	2,111	1,058	4,212
Hanz Tributary 3	1.54	6,108	3,061	12,187
Happy Hollow	1.30	6,918	3,467	13,803
Happy Hollow	1.54	7,061	3,539	14,089
Hasenwinkel Creek	0.80	2,779	1,393	5,546
Hasenwinkel Creek	2.92	7,297	3,657	14,559
Hasenwinkel Creek	3.52	8,520	4,270	16,999
Hasenwinkel Creek	5.73	11,492	5,760	22,930
Hasenwinkel Creek	6.65	12,516	6,273	24,973
Hasenwinkel Creek	7.58	13,074	6,552	26,086
Henderson Branch	1.49	6,996	3,506	13,959
Henderson Branch	2.42	9,106	4,564	18,169
Henderson Branch	3.48	11,793	5,910	23,529
Henderson Branch	4.13	13,245	6,638	26,427
Henderson Branch	4.55	14,151	7,092	28,235
Henderson Branch	5.00	14,818	7,427	29,565
Henderson Branch	5.62	16,047	8,042	32,018
Henderson Branch	8.03	20,814	10,432	41,530
HOLLIDAY CREEK	0.11	907	454	1,809
HOLLIDAY CREEK	0.23	1,523	763	3,039
HOLLIDAY CREEK	0.65	3,591	1,800	7,165
HOLLIDAY CREEK	2.26	7,537	3,778	15,039
HOLLIDAY CREEK	3.14	9,445	4,734	18,845
HOLLIDAY CREEK	3.59	10,599	5,312	21,148
HOLLIDAY CREEK	4.23	11,876	5,952	23,696

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
HOLLIDAY CREEK	4.66	12,668	6,349	25,276
HOLLIDAY CREEK	5.20	13,432	6,732	26,799
HOLLIDAY CREEK	7.83	17,657	8,849	35,230
HOLLIDAY CREEK	8.66	18,754	9,399	37,418
HOLLIDAY CREEK	9.54	19,952	10,000	39,809
Honey Creek	0.23	1,218	611	2,431
Honey Creek	1.28	5,485	2,749	10,943
Honey Creek	1.68	5,653	2,833	11,279
Honey Creek	2.55	7,920	3,970	15,803
Honey Creek	3.00	8,726	4,373	17,410
Honey Creek	4.78	12,213	6,121	24,368
Honey Creek	5.52	13,655	6,844	27,245
Honey Creek	8.03	17,505	8,773	34,927
Honey Creek	8.66	18,123	9,083	36,161
Honey Creek	9.55	19,267	9,656	38,443
Honey Creek_US	0.30	1,401	702	2,795
Honey Creek_US	1.00	3,719	1,864	7,420
Honey Creek_US	1.78	6,032	3,023	12,035
Honey Creek_US	2.34	7,409	3,713	14,783
Honey Creek_US	3.06	9,087	4,554	18,131
Honey Creek_US	3.84	11,013	5,519	21,973
Honey Creek_US	4.27	11,539	5,783	23,023
Honey Creek_US	5.25	13,369	6,700	26,675
Honey Creek_US	5.63	14,211	7,122	28,355
Honey Creek_US	7.48	17,487	8,764	34,891
Honey Creek_US	8.33	19,479	9,763	38,867
Honey Creek_US	8.85	19,922	9,985	39,750
Honey Creek_US	10.75	22,789	11,422	45,470
Honey Creek_US	13.25	25,919	12,990	51,716
Honey Tributary 10	1.00	3,325	1,667	6,635
Honey Tributary 10	1.15	3,689	1,849	7,360
Honey Tributary 5	1.00	3,620	1,814	7,223
Honey Tributary 5	1.47	5,114	2,563	10,203
Indian Branch	1.40	6,486	3,251	12,942
Indian Branch	1.67	6,733	3,374	13,434
Indian Creek 01	0.20	811	407	1,618
Indian Creek 01	1.08	3,781	1,895	7,544
Indian Creek 01	2.06	6,255	3,135	12,480

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Indian Creek 01	6.40	13,624	6,828	27,184
Indian Creek 01	7.03	14,594	7,315	29,120
Indian Creek 02	1.00	4,763	2,387	9,503
Indian Creek 02	1.99	7,642	3,830	15,247
Indian Creek 02	2.86	9,144	4,583	18,245
Indian Creek 02	4.08	12,093	6,061	24,129
Indian Creek 03	0.87	4,251	2,130	8,481
Indian Creek 03	1.42	6,391	3,203	12,751
Indian Creek 03	1.84	7,338	3,678	14,641
Indian Creek 03	2.02	7,878	3,949	15,719
Indian Creek 03	3.08	11,079	5,553	22,106
Indian Creek 03	3.40	11,139	5,583	22,225
Indian Creek 03	3.94	12,202	6,115	24,346
Indian Creek 03	6.47	18,085	9,064	36,085
Indian Creek 03	7.36	19,293	9,670	38,495
Indian Creek 03	8.15	19,725	9,886	39,356
Indian Creek 04	0.35	2,333	1,169	4,655
JACOBS CREEK	0.65	4,104	2,057	8,188
JACOBS CREEK	1.41	7,778	3,898	15,519
JACOBS CREEK	1.73	8,901	4,461	17,760
JACOBS CREEK	2.32	10,796	5,411	21,542
JACOBS CREEK	3.26	12,229	6,129	24,400
Jacobs Creek 2	0.58	2,537	1,271	5,061
Jacobs Creek 2	1.13	4,489	2,250	8,956
Jacobs Creek 2	2.12	6,604	3,310	13,176
Jacobs Creek 2	3.08	8,050	4,035	16,063
Jacobs Creek 2	3.50	8,190	4,105	16,340
Jentsch Creek	0.52	2,219	1,112	4,428
Jentsch Creek	1.31	4,889	2,450	9,754
Jentsch Creek	1.75	5,617	2,815	11,207
Jentsch Creek	3.91	10,699	5,362	21,347
Jentsch Creek	4.94	11,850	5,939	23,645
Jentsch Creek	7.25	14,672	7,353	29,274
Jentsch Tributary 2	0.10	506	254	1,010
Jentsch Tributary 2	0.32	1,358	681	2,710
Jentsch Tributary 2	1.24	4,180	2,095	8,340
Jentsch Tributary 2	1.46	4,415	2,213	8,809
Jentsch Tributary 3	0.45	2,064	1,034	4,117

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Jentsch Tributary 3	0.64	2,689	1,348	5,365
Jentsch Tributary 4	1.05	4,454	2,232	8,886
Jentsch Tributary 4	2.08	6,851	3,434	13,670
Johnson Creek	0.61	2,053	1,029	4,096
Johnson Creek	2.36	5,815	2,914	11,602
Johnson Creek	3.57	8,293	4,156	16,546
Johnson Creek	5.06	10,859	5,442	21,666
Johnson Creek	5.70	11,715	5,871	23,374
Johnson Creek	8.05	15,277	7,656	30,481
Johnson Creek	9.74	17,519	8,780	34,954
Johnson Creek	10.18	18,066	9,055	36,047
Johnson Creek	10.84	18,700	9,372	37,312
Johnson Creek	15.45	24,578	12,318	49,040
Johnson Creek	15.78	24,663	12,361	49,210
Johnson Creek	18.43	27,359	13,712	54,588
Johnson Creek	19.18	27,843	13,955	55,554
Johnson Creek	27.26	36,482	18,284	72,792
Johnson Creek	27.96	37,028	18,558	73,880
Johnson Creek	28.43	37,444	18,766	74,711
Johnson Creek	32.60	41,822	20,961	83,445
Johnson Creek	32.93	41,812	20,956	83,426
Johnson Creek	48.00	54,690	27,410	109,122
Johnson Creek	48.49	54,693	27,411	109,126
Johnson Creek	59.82	63,411	31,781	126,523
Johnson Creek	62.34	66,608	33,383	132,899
Johnson Creek	66.43	69,028	34,596	137,728
Johnson Creek	75.10	75,659	37,919	150,960
Johnson Creek	75.92	75,447	37,813	150,536
Johnson Creek	76.09	75,358	37,768	150,359
Johnson Creek	79.74	76,707	38,445	153,051
Johnson Creek	80.81	76,683	38,433	153,003
Johnson Creek	92.15	84,082	42,141	167,765
Johnson Creek	94.49	85,367	42,785	170,329
Johnson Creek	95.13	84,788	42,495	169,175
Johnson Creek	97.61	86,025	43,115	171,642
Johnson Creek	99.11	85,918	43,061	171,430
Johnson Creek	111.70	92,614	46,417	184,789
Johnson Creek	113.92	92,889	46,555	185,339

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Johnson Creek	114.89	93,105	46,663	185,769
Johnson Creek	115.82	92,796	46,508	185,153
Johnson Creek	124.44	96,813	48,522	193,168
Johnson Creek	125.34	96,788	48,509	193,118
Johnson Creek	126.08	97,011	48,621	193,563
Johnson Creek	126.79	96,796	48,513	193,134
JOSHUA CREEK	38.43	47,909	24,011	95,591
JOSHUA CREEK	39.21	49,818	24,968	99,400
JOSHUA CREEK	40.06	49,942	25,030	99,647
JOSHUA CREEK	40.98	50,159	25,139	100,081
JOSHUA CREEK	41.34	49,799	24,959	99,362
JOSHUA CREEK	41.98	50,217	25,168	100,196
JUNG CREEK	0.21	1,109	556	2,214
JUNG CREEK	0.42	1,894	949	3,779
JUNG CREEK	1.08	4,076	2,043	8,133
JUNG CREEK	1.29	4,241	2,125	8,461
JUNG CREEK	2.55	7,422	3,720	14,808
JUNG CREEK	3.45	9,248	4,635	18,453
JUNG CREEK	4.34	10,158	5,091	20,269
JUNG CREEK	4.97	11,189	5,608	22,325
JUNG CREEK	5.25	11,566	5,797	23,078
JUNG CREEK	5.68	11,884	5,956	23,711
Kelley Creek	1.51	6,026	3,020	12,023
Kelley Creek	2.34	8,224	4,122	16,410
Kelley Creek	3.33	10,672	5,348	21,293
Kelley Creek	3.91	11,644	5,836	23,233
Kelley Creek	4.78	13,532	6,782	27,000
Kelley Creek	5.68	15,229	7,632	30,385
Kelley Creek	6.68	17,213	8,627	34,344
Klein Hollow	1.17	6,694	3,355	13,356
Klein Hollow	2.05	9,049	4,535	18,054
Klein Hollow	3.13	11,914	5,971	23,772
KRAUSE CREEK	0.39	2,438	1,222	4,864
KRAUSE CREEK	0.67	3,485	1,747	6,953
KRAUSE CREEK	1.89	8,255	4,137	16,471
KRAUSE CREEK	2.45	9,641	4,832	19,236
KRAUSE CREEK	5.23	16,274	8,156	32,470
KRAUSE CREEK	6.27	18,491	9,267	36,894

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
KRAUSE CREEK	7.09	20,116	10,082	40,136
KRAUSE CREEK	7.49	20,449	10,249	40,801
Lambs Creek	0.17	1,065	534	2,125
Lambs Creek	1.00	5,380	2,696	10,734
Lambs Creek	1.77	7,688	3,853	15,340
Lambs Creek	4.02	14,667	7,351	29,265
Lambs Creek	4.46	15,223	7,630	30,375
Lambs Creek	4.76	15,549	7,793	31,024
Lambs Creek	5.05	16,125	8,081	32,173
Lambs Creek	5.53	16,924	8,482	33,768
Lambs Creek	6.19	17,500	8,771	34,917
Lin Prong	1.05	4,960	2,486	9,896
Lin Prong	2.05	7,621	3,820	15,206
LITTLE JOSHUA CREEK	0.30	1,732	868	3,456
LITTLE JOSHUA CREEK	0.94	4,269	2,139	8,517
LITTLE JOSHUA CREEK	1.97	7,690	3,854	15,343
LITTLE JOSHUA CREEK	4.17	11,964	5,996	23,872
LITTLE JOSHUA CREEK	5.17	13,548	6,790	27,031
LITTLE JOSHUA CREEK	5.64	14,318	7,176	28,568
LITTLE JOSHUA CREEK	9.11	20,841	10,445	41,584
LITTLE JOSHUA CREEK	9.76	21,320	10,686	42,540
LITTLE JOSHUA CREEK	10.27	21,925	10,989	43,747
LITTLE JOSHUA CREEK	16.16	31,317	15,695	62,485
LITTLE JOSHUA CREEK	17.08	31,293	15,683	62,437
LITTLE JOSHUA CREEK	18.54	32,430	16,253	64,706
Little Lamb Creek	0.12	932	467	1,860
Little Lamb Creek	1.11	6,420	3,218	12,809
Little Lamb Creek	2.11	9,606	4,815	19,167
Little Lamb Creek	2.91	11,223	5,625	22,393
Marshall Creek	1.02	4,808	2,410	9,593
Marshall Creek	1.28	5,429	2,721	10,833
Mico Creek	1.00	5,553	2,783	11,080
Mico Creek	1.78	7,972	3,995	15,906
Mico Creek	3.38	13,040	6,535	26,018
Mico Creek	4.19	14,709	7,372	29,347
Miller Creek	2.07	6,078	3,046	12,128
Miller Creek	2.64	7,237	3,627	14,439
Miller Creek	4.67	10,563	5,294	21,075

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Miller Creek	8.41	16,165	8,101	32,253
Miller Tributary 1	1.03	3,610	1,809	7,204
Miller Tributary 1	1.32	4,364	2,187	8,707
Miller Tributary 1	3.01	8,270	4,145	16,501
Miller Tributary 2	0.76	2,959	1,483	5,903
Miller Tributary 2	1.09	3,790	1,900	7,562
Miller Tributary 4	1.00	4,032	2,021	8,046
Miller Tributary 4	1.11	4,158	2,084	8,295
Miller Tributary 8	1.07	3,642	1,825	7,267
Mullen Creek	0.18	1,060	531	2,114
Mullen Creek	1.34	5,189	2,601	10,354
Mullen Creek	2.17	6,986	3,501	13,938
Mullen Creek	3.29	9,610	4,817	19,175
Mullen Creek	4.69	12,486	6,258	24,914
Mullen Creek	4.83	12,251	6,140	24,444
Mullen Creek	5.04	12,705	6,368	25,351
Nichols Creek	0.56	3,171	1,589	6,327
Nichols Creek	0.79	4,223	2,116	8,426
Nichols Creek	1.75	7,004	3,510	13,974
North Creek	0.48	1,889	947	3,768
North Creek	1.00	3,251	1,629	6,487
North Creek	1.88	5,195	2,603	10,364
North Creek	3.56	8,329	4,175	16,619
North Creek	5.50	11,629	5,828	23,202
North Creek	7.28	14,429	7,232	28,790
North Creek	7.65	14,714	7,374	29,358
North Creek	9.06	16,452	8,246	32,826
North Creek	9.68	17,591	8,816	35,098
North Creek	10.60	18,218	9,130	36,349
North Creek	11.13	18,742	9,393	37,396
North Creek	13.59	20,539	10,294	40,981
North Creek	14.55	25,645	12,853	51,169
North Creek	14.74	25,864	12,963	51,605
North Fork Cypress Creek	1.00	3,156	1,582	6,297
North Fork Cypress Creek	3.64	7,791	3,905	15,546
North Fork Cypress Creek	5.72	11,019	5,522	21,985
North Fork Cypress Creek	9.50	16,416	8,227	32,753
North Fork Cypress Creek	9.99	16,329	8,184	32,581

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
North Fork Cypress Creek	10.08	16,325	8,182	32,573
North Fork Cypress Creek	10.70	16,715	8,377	33,350
North Fork Guadalupe River_US	0.37	1,447	725	2,887
North Fork Guadalupe River_US	1.06	3,423	1,715	6,829
North Fork Guadalupe River_US	1.79	4,940	2,476	9,857
North Fork Guadalupe River_US	11.31	18,235	9,139	36,383
North Fork Guadalupe River_US	13.50	20,633	10,341	41,169
North Fork Guadalupe River_US	14.36	21,051	10,551	42,003
North Fork Guadalupe River_US	14.75	21,005	10,528	41,911
North Fork Guadalupe River_US	17.92	24,395	12,226	48,674
North Fork Guadalupe River_US	19.75	26,235	13,149	52,346
North Fork Guadalupe River_US	20.29	26,740	13,402	53,353
North Fork Guadalupe River_US	21.27	27,879	13,973	55,626
North Fork Guadalupe River_US	21.37	28,009	14,038	55,886
North Fork Guadalupe River_US	22.22	28,198	14,132	56,262
North Fork Guadalupe River_US	27.70	32,857	16,467	65,558
Palmer Creek	1.87	8,915	4,468	17,788
Palmer Creek	2.84	12,062	6,045	24,066
Palmer Creek	3.09	12,631	6,330	25,202
Palmer Creek	4.00	14,621	7,328	29,173
Palmer Creek	4.70	15,196	7,616	30,321
Palmer Creek	5.79	17,481	8,761	34,878
Palmer Creek	8.79	22,035	11,044	43,966
Palmer Creek	9.74	23,485	11,770	46,859
Palmer Creek	10.72	24,752	12,406	49,387
Palmer Creek	10.88	24,492	12,275	48,868
PANTHER CREEK	1.01	3,352	1,680	6,687
PANTHER CREEK	1.14	3,631	1,820	7,244
PANTHER CREEK	2.86	7,783	3,901	15,528
PANTHER CREEK	3.66	9,187	4,605	18,331
PANTHER CREEK	4.29	9,905	4,964	19,764
PANTHER CREEK	4.75	10,311	5,168	20,573
Pass Creek	0.35	2,417	1,211	4,822
Pass Creek	1.02	5,223	2,618	10,421
Pass Creek	1.62	6,857	3,437	13,682
Pass Creek	1.92	7,982	4,001	15,927
Pass Creek	2.62	9,998	5,011	19,948
Pass Creek	3.00	10,870	5,448	21,688

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Pass Creek	3.62	12,163	6,096	24,269
Pass Creek	4.08	12,636	6,333	25,212
Pecan Creek	1.30	5,960	2,987	11,891
Pecan Creek	2.24	8,172	4,096	16,305
Pecan Creek	3.23	10,377	5,201	20,705
Peterson Creek	0.38	2,265	1,135	4,520
PLATTE CREEK	1.02	4,184	2,097	8,348
PLATTE CREEK	1.64	5,601	2,807	11,176
POLECAT SPRING CREEK	1.00	3,676	1,842	7,334
POLECAT SPRING CREEK	1.78	5,405	2,709	10,785
POLECAT SPRING CREEK	2.21	6,266	3,140	12,502
POLECAT SPRING CREEK	3.20	8,490	4,255	16,939
POLECAT SPRING CREEK	3.60	8,503	4,262	16,966
POSSUM CREEK	1.01	4,713	2,362	9,403
POSSUM CREEK	1.57	6,168	3,091	12,307
Potter Creek	0.27	1,519	761	3,030
Potter Creek	1.22	4,651	2,331	9,279
Potter Creek	1.78	5,873	2,944	11,718
Potter Creek	3.48	9,670	4,847	19,295
Potter Creek	6.16	14,285	7,160	28,503
Potter Creek	6.82	14,350	7,192	28,633
Potter Creek	10.68	19,158	9,602	38,224
Potter Creek	11.50	20,246	10,147	40,396
Potter Tributary 1	0.59	2,616	1,311	5,219
Potter Tributary 1	0.92	3,565	1,787	7,113
Potter Tributary 1	1.71	6,191	3,103	12,352
Potter Tributary 2	0.58	2,276	1,141	4,541
Potter Tributary 3	0.90	3,601	1,805	7,185
Puter Creek	0.68	2,886	1,446	5,759
Puter Creek	1.65	6,058	3,036	12,086
Puter Creek Tributary 1	0.47	2,070	1,038	4,131
Quinlan Creek	0.05	393	197	785
Quinlan Creek	0.26	1,792	898	3,576
Quinlan Creek	0.69	4,054	2,032	8,089
Quinlan Creek	1.32	6,669	3,342	13,306
Quinlan Creek	1.97	8,267	4,143	16,495
Quinlan Creek	2.78	10,418	5,222	20,788
Quinlan Creek	7.07	21,640	10,846	43,178

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Quinlan Creek	7.34	21,610	10,831	43,118
Quinlan Creek	7.87	22,490	11,271	44,873
Quinlan Creek	8.68	24,030	12,044	47,947
Quinlan Creek	9.51	24,680	12,369	49,242
Quinlan Creek	10.50	26,183	13,122	52,241
Quinlan Creek	11.58	26,363	13,213	52,601
Rattlesnake Creek	0.08	511	256	1,020
Rattlesnake Creek	0.29	1,884	944	3,759
Rattlesnake Creek	0.40	2,354	1,180	4,697
Rattlesnake Creek	1.27	6,404	3,210	12,778
Rattlesnake Creek	1.38	6,508	3,262	12,986
Rattlesnake Creek	1.54	7,143	3,580	14,251
Rattlesnake Creek	1.82	7,838	3,928	15,638
Rattlesnake Creek	3.57	12,846	6,438	25,631
RAWLS CREEK	0.43	2,617	1,311	5,221
RAWLS CREEK	1.30	5,661	2,837	11,294
RAWLS CREEK	2.26	9,315	4,668	18,585
RAWLS CREEK	3.98	14,037	7,035	28,008
RAWLS CREEK	6.97	20,352	10,200	40,608
RAWLS CREEK	7.21	20,003	10,025	39,911
RAWLS CREEK	9.36	23,540	11,798	46,969
RAWLS CREEK	10.54	25,350	12,705	50,581
Rebecca Creek	0.88	3,413	1,710	6,809
Rebecca Creek	2.19	7,144	3,580	14,254
Rebecca Creek	4.57	12,166	6,097	24,274
Rebecca Creek	8.19	18,755	9,400	37,422
Rebecca Creek	9.86	21,036	10,543	41,972
Rebecca Creek	10.76	21,928	10,990	43,753
Rebecca Creek	11.78	22,038	11,045	43,971
Rebecca Creek	13.65	23,612	11,834	47,112
Rebecca Creek	15.46	25,788	12,925	51,454
Rebecca Tributary 2	1.00	3,859	1,934	7,699
Rebecca Tributary 2	1.12	3,971	1,990	7,923
Rebecca Tributary 3	0.39	1,966	985	3,923
Rebecca Tributary 3	1.14	4,366	2,188	8,712
Rebecca Tributary 3	1.41	4,893	2,452	9,764
Rebecca Tributary 3	3.15	9,201	4,612	18,359
Rebecca Tributary 4	1.04	4,484	2,247	8,947

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Rebecca Tributary 4	1.15	4,746	2,379	9,470
Rebecca Tributary 6	1.00	4,102	2,056	8,184
Rebecca Tributary 6	1.60	5,658	2,836	11,290
Rebecca Tributary 9	0.58	2,746	1,376	5,480
Rebecca Tributary 9	0.85	3,654	1,831	7,290
REEH CREEK	0.25	1,204	603	2,402
REEH CREEK	0.73	2,659	1,333	5,306
REEH CREEK	1.00	3,387	1,698	6,759
REEH CREEK	1.57	4,727	2,369	9,432
REEH CREEK	2.20	6,139	3,077	12,250
REEH CREEK	3.74	9,592	4,807	19,138
REEH CREEK	3.97	9,922	4,973	19,798
REEH CREEK	5.38	12,784	6,407	25,508
REEH CREEK	6.18	13,373	6,703	26,683
REEH CREEK	6.59	13,245	6,638	26,427
ROCK CREEK	0.60	2,730	1,368	5,447
ROCK CREEK	1.12	4,755	2,383	9,487
Rough Creek	1.05	3,870	1,940	7,722
Rough Creek	2.04	6,221	3,118	12,413
Rough Creek	2.11	6,168	3,091	12,307
Rough Creek	3.03	8,016	4,018	15,995
Rough Creek	3.52	8,762	4,392	17,483
Rough Creek	4.03	9,995	5,009	19,942
Rough Hollow	1.54	5,172	2,592	10,320
Rough Hollow	2.50	7,185	3,601	14,337
Rough Hollow	8.94	17,398	8,720	34,714
Rough Hollow	9.90	18,879	9,462	37,668
Rough Hollow	11.97	21,459	10,755	42,817
Rough Hollow	12.55	22,366	11,210	44,626
Rough Hollow	12.96	22,723	11,388	45,338
Rough Hollow	13.60	23,467	11,761	46,823
Rough Hollow	14.06	24,335	12,196	48,554
SABINAS CREEK	0.22	1,441	722	2,875
SABINAS CREEK	0.47	2,548	1,277	5,083
SABINAS CREEK	1.85	7,486	3,752	14,936
SABINAS CREEK	2.15	8,373	4,196	16,706
SABINAS CREEK	2.50	9,332	4,677	18,621
SABINAS CREEK	4.72	15,178	7,607	30,285

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
SABINAS CREEK	6.16	17,850	8,946	35,615
SABINAS CREEK	7.30	20,150	10,099	40,205
SABINAS CREEK	9.65	23,926	11,991	47,738
SABINAS CREEK	10.39	24,581	12,320	49,045
SABINAS CREEK	11.35	25,149	12,604	50,178
SABINAS CREEK	11.47	25,182	12,621	50,245
SABINAS CREEK	13.56	27,700	13,883	55,268
SABINAS CREEK	14.38	28,504	14,286	56,873
Schultz Creek	0.85	3,673	1,841	7,329
Schultz Creek	1.49	5,737	2,875	11,447
Schultz Creek	1.78	5,917	2,966	11,806
Second Creek	0.95	4,967	2,489	9,910
Second Creek	2.46	10,179	5,102	20,310
Second Creek	2.80	11,001	5,513	21,949
Second Creek	4.84	15,639	7,838	31,204
Second Creek	5.34	16,528	8,284	32,978
SHEPS CREEK	0.26	1,460	732	2,912
SHEPS CREEK	1.10	4,683	2,347	9,344
SHEPS CREEK	2.19	7,077	3,547	14,120
SHEPS CREEK	2.94	8,757	4,389	17,472
SHEPS CREEK	3.26	9,504	4,763	18,962
SHEPS CREEK	3.83	10,121	5,072	20,193
SHEPS CREEK	4.56	10,734	5,380	21,417
SHEPS CREEK	5.14	13,753	6,893	27,442
SHEPS CREEK	6.12	15,775	7,906	31,475
SHEPS CREEK	7.12	16,899	8,469	33,718
SHEPS CREEK	8.17	17,807	8,925	35,530
Silver Creek	1.00	6,116	3,065	12,204
Silver Creek	1.12	6,158	3,086	12,286
Silver Creek	2.65	11,082	5,554	22,112
Silver Creek	3.89	14,599	7,317	29,129
Silver Creek	4.86	17,347	8,694	34,613
Silver Creek	5.38	18,167	9,105	36,247
SIMMONS CREEK	0.27	1,675	840	3,343
SIMMONS CREEK	1.00	4,872	2,442	9,721
SIMMONS CREEK	1.80	7,193	3,605	14,351
SIMMONS CREEK	3.08	10,998	5,512	21,944
SIMMONS CREEK	4.91	14,699	7,367	29,328

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
SIMMONS CREEK	6.72	17,704	8,873	35,324
SIMMONS CREEK	15.17	33,106	16,593	66,056
SIMMONS CREEK	15.64	32,793	16,436	65,432
SIMMONS CREEK	17.32	34,540	17,311	68,916
SIMMONS CREEK	19.75	37,054	18,571	73,933
SIMMONS CREEK	19.99	37,117	18,603	74,058
SISTER CREEK	64.27	79,628	39,908	158,878
SOELL CREEK	0.32	1,925	965	3,841
SOELL CREEK	0.93	4,257	2,133	8,493
SOELL CREEK	1.88	6,349	3,182	12,669
Sorrel Creek	0.88	3,877	1,943	7,737
Sorrel Creek	2.32	7,169	3,593	14,305
Sorrel Creek	5.04	11,112	5,569	22,171
Sorrel Creek	5.76	10,862	5,444	21,673
Sorrel Creek	9.75	17,003	8,522	33,926
Sorrel Tributary 1	0.37	1,885	945	3,760
South Creek	0.66	3,654	1,831	7,290
South Fork Guadalupe River	0.14	494	247	985
South Fork Guadalupe River	1.35	4,409	2,210	8,797
South Fork Guadalupe River	1.54	4,612	2,312	9,202
South Fork Guadalupe River	3.74	9,155	4,588	18,267
South Fork Guadalupe River	6.08	13,250	6,641	26,437
South Fork Guadalupe River	6.95	14,331	7,183	28,595
South Fork Guadalupe River	7.77	15,374	7,705	30,675
South Fork Guadalupe River	8.29	15,871	7,954	31,667
South Fork Guadalupe River	9.90	17,777	8,910	35,470
South Fork Guadalupe River	11.80	19,569	9,808	39,045
South Fork Guadalupe River	12.73	20,158	10,103	40,220
South Fork Guadalupe River	13.17	19,847	9,947	39,599
South Fork Guadalupe River	17.27	24,090	12,074	48,067
South Fork Guadalupe River	19.99	26,906	13,485	53,684
South Fork Guadalupe River	20.98	27,180	13,622	54,231
South Fork Guadalupe River	21.48	27,574	13,820	55,018
South Fork Guadalupe River	24.69	29,671	14,871	59,202
South Fork Guadalupe River	29.98	32,458	16,267	64,761
South Fork Guadalupe River	30.66	32,460	16,269	64,767
South Fork Guadalupe River	33.10	34,242	17,162	68,323
South Fork Guadalupe River	33.45	34,382	17,232	68,602

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
South Fork Guadalupe River	33.97	34,913	17,498	69,660
South Fork Guadalupe River	34.77	35,026	17,555	69,886
South Fork Guadalupe River	40.07	38,578	19,335	76,974
South Fork Guadalupe River	41.47	41,301	20,700	82,407
South Fork Guadalupe River	41.79	39,798	19,946	79,408
South Fork Guadalupe River	49.32	46,537	23,324	92,853
South Fork Guadalupe River	50.55	47,290	23,701	94,357
South Fork Guadalupe River	51.23	47,588	23,850	94,950
South Fork Guadalupe River	52.11	47,827	23,970	95,428
South Fork Guadalupe River	60.00	52,789	26,457	105,327
South Fork Guadalupe River	64.27	57,221	28,678	114,171
South Fork Guadalupe River	65.52	57,993	29,065	115,711
South Fork Guadalupe River	67.01	58,308	29,223	116,339
South Fork Guadalupe River	73.51	62,394	31,271	124,492
South Fork Guadalupe River	75.50	62,931	31,540	125,564
South Fork Guadalupe River	87.79	70,082	35,124	139,832
South Fork Guadalupe River	88.35	69,979	35,073	139,626
South Fork Guadalupe River	91.32	71,566	35,868	142,793
South Fork Guadalupe River	95.21	73,195	36,685	146,044
South Fork Guadalupe River	95.98	75,901	38,041	151,443
South Fork Guadalupe River	96.84	75,771	37,976	151,183
South Fork Guadalupe River	97.21	75,567	37,873	150,775
South Fork Guadalupe River	97.54	76,111	38,146	151,862
Spring Branch	0.82	4,419	2,215	8,818
Spring Branch	1.90	7,000	3,508	13,968
Spring Branch	4.51	13,858	6,945	27,649
Spring Branch	6.16	16,445	8,242	32,812
Spring Branch	6.99	17,845	8,944	35,605
Spring Branch	9.22	20,537	10,293	40,977
Spring Branch	10.19	21,927	10,989	43,749
Spring Branch	10.76	22,066	11,059	44,028
Spring Branch 2	1.28	5,941	2,978	11,854
Spring Branch 2	1.89	7,457	3,737	14,879
SPRING CREEK	1.02	5,217	2,615	10,409
SPRING CREEK	1.28	5,629	2,821	11,232
SPRING CREEK	4.42	13,815	6,924	27,565
SPRING CREEK	4.99	14,014	7,024	27,962
SPRING CREEK	5.77	15,105	7,570	30,137

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
SPRING CREEK	6.43	16,102	8,070	32,127
SPRING CREEK	10.43	23,404	11,730	46,698
SPRING CREEK	11.43	24,529	12,294	48,941
SPRING CREEK	11.53	24,620	12,339	49,122
SPRING CREEK	16.22	31,557	15,816	62,964
SPRING CREEK	17.00	32,709	16,393	65,262
SPRING CREEK	19.03	33,511	16,795	66,863
SPRING CREEK	20.02	34,106	17,094	68,051
SPRING CREEK	21.39	34,692	17,387	69,220
Spring Creek_US	0.20	995	499	1,985
Spring Creek_US	1.02	3,925	1,967	7,831
Spring Creek_US	1.12	4,145	2,078	8,271
Spring Creek_US	1.42	5,001	2,506	9,978
Spring Creek_US	2.40	7,922	3,971	15,807
Spring Creek_US	3.40	9,864	4,943	19,680
Spring Creek_US	3.72	10,512	5,268	20,974
Spring Creek 2	0.39	2,861	1,434	5,708
Spring Creek 2	1.00	6,262	3,138	12,494
Spring Creek 2	1.88	9,245	4,634	18,447
Spring Creek 2	3.40	15,193	7,615	30,314
Spring Creek 2	4.89	18,304	9,174	36,520
Spring Creek 2	5.07	18,553	9,299	37,018
Spring Tributary 3	0.24	826	414	1,647
Spring Tributary 3	1.26	3,534	1,771	7,052
Spur Branch	0.39	1,990	997	3,970
Spur Branch	1.03	4,058	2,034	8,097
Spur Branch	1.92	6,057	3,035	12,084
Spur Branch	2.90	7,918	3,969	15,799
Spur Branch	3.63	9,339	4,681	18,634
Spur Branch	7.02	16,132	8,085	32,188
Steel Creek	1.30	7,927	3,973	15,817
Steel Creek	1.72	8,889	4,455	17,736
Steel Creek	4.47	15,132	7,584	30,193
Steel Creek	4.65	15,291	7,664	30,510
Steel Creek	6.83	19,821	9,934	39,548
Stone Creek	0.33	2,314	1,160	4,617
Stone Creek	1.00	4,950	2,481	9,876
Stone Creek	1.71	7,270	3,644	14,506

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream QC-1	0.34	2,113	1,059	4,215
Stream QC-2	0.52	3,154	1,581	6,293
Stream QC-2	0.59	3,420	1,714	6,823
Stream TC-1	1.00	5,228	2,620	10,431
Stream TC-1	1.81	7,761	3,890	15,485
Stream0001	0.18	1,115	559	2,225
Stream0001	0.37	2,123	1,064	4,235
Stream0001_DS	0.25	1,077	540	2,150
Stream0001_DS	0.74	2,782	1,394	5,550
Stream0002	0.05	404	203	807
Stream0002	0.15	1,187	595	2,369
Stream0002	0.64	4,097	2,054	8,175
Stream0002	1.09	5,902	2,958	11,776
Stream0002	1.45	7,084	3,551	14,135
Stream0002	1.81	8,220	4,120	16,401
Stream0002_DS	0.33	2,133	1,069	4,256
Stream0003_DS	0.19	996	499	1,987
Stream0003_DS	0.30	1,454	729	2,901
Stream0004	0.81	4,433	2,222	8,844
Stream0004	1.12	5,286	2,649	10,547
Stream0004_DS	0.17	1,236	619	2,466
Stream0004_DS	0.36	2,017	1,011	4,024
Stream0005_DS	0.50	2,320	1,163	4,630
Stream0005_DS	0.77	3,208	1,608	6,401
Stream0006	0.18	1,410	707	2,813
Stream0006_DS	0.12	625	313	1,248
Stream0006_DS	0.92	3,631	1,820	7,245
Stream0007	1.00	5,213	2,613	10,401
Stream0007	1.18	5,802	2,908	11,576
Stream0007_DS	0.07	453	227	904
Stream0008	0.19	1,676	840	3,344
Stream0008_DS	0.24	1,461	732	2,916
Stream0008_DS	0.66	3,223	1,615	6,431
Stream0009	0.12	792	397	1,580
Stream0009	0.37	2,181	1,093	4,352
Stream0009	0.60	3,191	1,599	6,367
Stream0009	1.59	6,832	3,424	13,631
Stream0009	2.29	9,149	4,585	18,255

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0009	3.08	11,225	5,626	22,397
Stream0009	4.30	14,022	7,028	27,978
Stream0009	4.64	14,636	7,335	29,202
Stream0009	5.05	15,581	7,809	31,088
Stream0009_DS	0.14	599	300	1,195
Stream0010_DS	0.51	2,691	1,349	5,369
Stream0010_DS	0.85	3,741	1,875	7,465
Stream0011_DS	0.19	933	468	1,861
Stream0011_DS	0.30	1,508	756	3,008
Stream0012	0.02	131	66	261
Stream0012	0.05	339	170	677
Stream0012_DS	0.36	1,480	742	2,954
Stream0012_DS	0.82	2,857	1,432	5,700
Stream0013	0.14	984	493	1,963
Stream0013_DS	0.33	1,929	967	3,850
Stream0013_DS	0.44	2,266	1,135	4,520
Stream0014	0.22	1,626	815	3,244
Stream0014	0.44	2,805	1,406	5,597
Stream0014_DS	0.16	909	456	1,815
Stream0015	0.20	1,377	690	2,747
Stream0015_DS	0.14	804	403	1,603
Stream0015_DS	0.25	1,282	643	2,558
Stream0016	0.56	3,383	1,696	6,750
Stream0016_DS	0.24	1,472	738	2,938
Stream0016_DS	0.72	4,425	2,218	8,830
Stream0016_DS	0.96	4,995	2,503	9,966
Stream0017	0.21	1,610	807	3,213
Stream0017_DS	0.77	2,668	1,337	5,323
Stream0018	0.21	1,716	860	3,423
Stream0018_DS	0.32	1,212	608	2,419
Stream0018_DS	0.74	2,408	1,207	4,804
Stream0019_DS	0.71	2,498	1,252	4,983
Stream0019_DS	0.97	3,528	1,768	7,039
Stream0020	0.25	2,120	1,062	4,230
Stream0020_DS	0.12	739	371	1,475
Stream0020_DS	0.22	1,158	580	2,310
Stream0021	0.09	505	253	1,007
Stream0021_DS	0.41	1,822	913	3,636

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0022_DS	0.34	2,119	1,062	4,227
Stream0023	0.08	607	304	1,211
Stream0023	0.28	1,841	923	3,673
Stream0023_DS	0.21	1,443	723	2,879
Stream0023_DS	0.86	4,113	2,061	8,206
Stream0024	0.09	726	364	1,449
Stream0024	0.15	1,082	542	2,159
Stream0024_DS	0.13	865	434	1,726
Stream0025	0.17	701	351	1,398
Stream0025	0.31	1,192	597	2,379
Stream0025_DS	0.51	2,358	1,182	4,704
Stream0025_DS	0.91	3,755	1,882	7,493
Stream0026	0.35	1,461	732	2,915
Stream0026_DS	0.52	2,145	1,075	4,280
Stream0026_DS	0.65	2,386	1,196	4,762
Stream0027	0.21	991	497	1,977
Stream0028	0.06	461	231	919
Stream0028	0.40	2,262	1,134	4,513
Stream0028_DS	0.30	1,685	844	3,362
Stream0028_DS	0.42	2,048	1,026	4,086
Stream0029	1.03	3,276	1,642	6,536
Stream0029	1.66	4,781	2,396	9,540
Stream0029_DS	0.42	1,915	960	3,820
Stream0029_DS	0.94	3,670	1,839	7,323
Stream0030	0.13	927	465	1,849
Stream0030	0.28	1,913	959	3,817
Stream0030	0.71	3,926	1,968	7,834
Stream0030	1.03	5,203	2,608	10,381
Stream0030	1.69	7,156	3,587	14,279
Stream0030	1.94	7,973	3,996	15,907
Stream0030	2.72	10,303	5,164	20,558
Stream0030	2.92	10,800	5,413	21,549
Stream0030	3.27	11,647	5,837	23,238
Stream0030_DS	0.12	955	479	1,906
Stream0030_DS	0.34	2,010	1,007	4,010
Stream0031	0.13	828	415	1,652
Stream0031	0.19	1,224	614	2,443
Stream0031_DS	0.11	558	280	1,114

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0031_DS	0.53	2,069	1,037	4,128
Stream0032	0.23	1,764	884	3,519
Stream0032_DS	0.32	1,711	858	3,414
Stream0033	0.50	3,392	1,700	6,768
Stream0033_DS	0.17	948	475	1,891
Stream0033_DS	0.27	1,274	638	2,542
Stream0034	0.14	1,444	724	2,882
Stream0034_DS	0.16	958	480	1,911
Stream0035	0.17	1,354	679	2,702
Stream0035_DS	0.79	3,417	1,712	6,817
Stream0035_DS	0.91	3,619	1,814	7,220
Stream0036	0.43	1,753	879	3,499
Stream0036_DS	0.30	1,276	639	2,545
Stream0036_DS	0.62	2,081	1,043	4,153
Stream0037	0.27	1,337	670	2,667
Stream0037_DS	0.21	1,319	661	2,631
Stream0038	1.05	3,336	1,672	6,657
Stream0038_DS	0.14	1,044	523	2,083
Stream0038_DS	0.25	1,514	759	3,021
Stream0039	0.30	1,233	618	2,461
Stream0039_DS	0.24	1,429	716	2,852
Stream0039_DS	0.58	2,698	1,352	5,382
Stream0039_DS	0.95	3,728	1,868	7,438
Stream0040	0.16	1,268	636	2,531
Stream0040	0.41	2,673	1,340	5,334
Stream0040	1.17	6,060	3,037	12,091
Stream0040	2.17	10,030	5,027	20,012
Stream0040	2.30	10,142	5,083	20,235
Stream0040	2.57	10,668	5,346	21,285
Stream0040	3.40	13,065	6,548	26,068
Stream0040	4.42	15,854	7,946	31,633
Stream0040	4.79	16,216	8,127	32,356
Stream0040	6.35	19,939	9,993	39,783
Stream0040	7.19	21,213	10,631	42,325
Stream0040	7.53	21,517	10,784	42,931
Stream0040	8.59	13,815	6,924	27,565
Stream0040	9.19	13,946	6,990	27,826
Stream0040_DS	0.16	1,007	505	2,010

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0040_DS	0.44	2,131	1,068	4,251
Stream0041	0.09	793	398	1,583
Stream0041	0.28	1,937	971	3,864
Stream0041_DS	0.19	917	460	1,830
Stream0041_DS	0.66	2,859	1,433	5,705
Stream0042_DS	0.32	1,412	708	2,818
Stream0042_DS	0.58	3,123	1,565	6,232
Stream0043_DS	0.50	2,522	1,264	5,033
Stream0044	0.09	704	353	1,405
Stream0044_DS	0.21	1,516	760	3,024
Stream0044_DS	0.46	2,728	1,367	5,443
Stream0045	0.72	3,782	1,896	7,547
Stream0045DS	0.08	591	296	1,180
Stream0045DS	0.30	1,815	910	3,621
Stream0045DS	0.44	2,281	1,143	4,552
Stream0046_DS	0.44	1,880	942	3,752
Stream0046_DS	0.64	2,350	1,178	4,689
Stream0047_DS	0.75	2,765	1,386	5,517
Stream0048	0.03	454	228	906
Stream0048	0.26	2,105	1,055	4,201
Stream0048_DS	0.49	3,041	1,524	6,067
Stream0048_DS	0.92	4,798	2,405	9,573
Stream0049	1.15	6,043	3,029	12,057
Stream0049	1.48	6,920	3,468	13,808
Stream0049_DS	0.19	1,053	528	2,100
Stream0049_DS	0.37	1,713	858	3,418
Stream0049_DS	0.61	2,797	1,402	5,581
Stream0050	0.23	2,001	1,003	3,993
Stream0050_DS	0.14	906	454	1,808
Stream0050_DS	0.32	1,841	923	3,674
Stream0051_DS	0.45	1,839	922	3,670
Stream0051_DS	0.59	2,250	1,128	4,490
Stream0052	0.18	1,345	674	2,683
Stream0052_DS	0.22	1,396	700	2,786
Stream0053	0.72	4,567	2,289	9,113
Stream0053_DS	0.20	1,011	507	2,017
Stream0053_DS	0.29	1,349	676	2,691
Stream0054	0.18	654	328	1,305

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0054	0.33	1,109	556	2,213
Stream0054_DS	0.43	1,836	920	3,664
Stream0054_DS	0.63	2,363	1,185	4,716
Stream0055	0.12	444	222	886
Stream0055_DS	0.16	1,036	519	2,067
Stream0056	1.02	4,560	2,286	9,099
Stream0056	1.07	4,474	2,242	8,926
Stream0056	1.75	5,121	2,566	10,217
Stream0056	2.58	6,483	3,249	12,935
Stream0056	3.08	7,047	3,532	14,061
Stream0056	3.55	7,882	3,950	15,726
Stream0056_DS	0.26	1,181	592	2,357
Stream0056_DS	0.37	1,845	925	3,682
Stream0057	0.13	870	436	1,736
Stream0057_DS	0.15	900	451	1,797
Stream0058_DS	0.28	1,552	778	3,097
Stream0059	0.07	568	284	1,133
Stream0059	0.55	3,141	1,574	6,268
Stream0059_DS	0.26	1,501	752	2,995
Stream0059_DS	0.49	2,177	1,091	4,343
Stream0060	0.44	1,644	824	3,280
Stream0060_DS	0.38	1,988	996	3,967
Stream0060_DS	0.81	3,613	1,811	7,210
Stream0061	0.18	1,074	538	2,143
Stream0061_DS	0.48	2,009	1,007	4,009
Stream0061_DS	0.93	3,532	1,770	7,047
Stream0062	1.00	3,459	1,733	6,901
Stream0062	1.26	3,997	2,003	7,975
Stream0062_DS	0.23	1,003	503	2,001
Stream0062_DS	0.34	1,334	669	2,662
Stream0063	0.11	746	374	1,488
Stream0063_DS	0.27	1,498	751	2,989
Stream0063_DS	0.57	2,692	1,349	5,371
Stream0064_DS	0.24	1,117	560	2,228
Stream0064_DS	0.35	1,595	799	3,183
Stream0065	0.59	2,192	1,098	4,373
Stream0065_DS	0.50	2,655	1,330	5,297
Stream0066	1.13	4,261	2,135	8,501

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0066	1.36	4,452	2,232	8,884
Stream0066_DS	0.30	1,614	809	3,219
Stream0066_DS	0.50	2,359	1,183	4,708
Stream0067	0.50	2,140	1,072	4,270
Stream0067_DS	0.10	645	323	1,288
Stream0068	0.45	1,712	858	3,416
Stream0068_DS	0.67	2,677	1,342	5,342
Stream0068_DS	0.88	3,124	1,566	6,234
Stream0069	0.16	926	464	1,847
Stream0069_DS	0.49	2,169	1,087	4,327
Stream0069_DS	0.68	2,655	1,331	5,297
Stream0070	1.11	4,310	2,160	8,599
Stream0070	1.48	5,211	2,612	10,397
Stream0070	1.91	6,034	3,024	12,040
Stream0070	2.32	6,943	3,480	13,854
Stream0070	2.63	7,592	3,805	15,148
Stream0070	3.45	9,138	4,580	18,233
Stream0070	3.81	9,584	4,803	19,123
Stream0070	4.33	12,448	6,239	24,837
Stream0070_DS	0.23	927	465	1,850
Stream0071	0.63	2,246	1,126	4,481
Stream0071_DS	0.79	3,076	1,541	6,137
Stream0072	0.04	178	89	356
Stream0072_DS	0.13	448	224	894
Stream0073	0.04	332	166	662
Stream0073	0.16	1,044	523	2,083
Stream0073_DS	0.23	1,086	544	2,166
Stream0073_DS	0.69	2,458	1,232	4,904
Stream0074	1.06	3,491	1,750	6,966
Stream0074	1.32	3,922	1,966	7,825
Stream0074_DS	0.25	1,322	662	2,637
Stream0074_DS	0.59	2,471	1,238	4,930
Stream0075	1.01	3,448	1,728	6,880
Stream0075_DS	0.34	1,948	976	3,887
Stream0075_DS	0.44	2,355	1,180	4,699
Stream0076	0.96	3,277	1,642	6,538
Stream0076	1.59	4,637	2,324	9,252
Stream0076_DS	0.33	1,350	676	2,693

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0077	0.27	1,299	651	2,592
Stream0077_DS	0.12	951	477	1,898
Stream0077_DS	0.56	3,188	1,598	6,361
Stream0078	0.27	1,611	807	3,213
Stream0078_DS	0.85	3,401	1,705	6,787
Stream0079	1.02	3,889	1,949	7,760
Stream0079	1.19	4,111	2,060	8,202
Stream0079_DS	0.39	2,044	1,024	4,078
Stream0080	0.47	2,270	1,137	4,528
Stream0080_DS	0.34	1,824	914	3,638
Stream0080_DS	0.44	2,067	1,036	4,125
Stream0081	0.19	1,153	578	2,301
Stream0081	0.45	2,274	1,140	4,537
Stream0081_DS	0.14	895	448	1,785
Stream0081_DS	0.53	2,523	1,264	5,034
Stream0082	0.12	657	329	1,310
Stream0082_DS	0.09	606	304	1,208
Stream0082_DS	0.21	1,270	637	2,535
Stream0083	0.58	2,573	1,290	5,134
Stream0083	0.87	3,475	1,741	6,933
Stream0083_DS	0.14	856	429	1,708
Stream0084	0.19	909	456	1,814
Stream0084_DS	0.49	2,119	1,062	4,227
Stream0084_DS	0.80	3,025	1,516	6,036
Stream0085	0.59	1,525	764	3,043
Stream0085_DS	0.24	849	426	1,694
Stream0086	0.36	1,297	650	2,588
Stream0086_DS	0.16	868	435	1,732
Stream0087	0.03	252	126	503
Stream0087	0.28	1,850	927	3,692
Stream0087_DS	0.12	563	282	1,124
Stream0087_DS	0.53	2,105	1,055	4,201
Stream0088	1.03	3,395	1,701	6,773
Stream0088	2.03	5,194	2,603	10,364
Stream0088	2.04	5,198	2,605	10,371
Stream0088_DS	0.54	2,316	1,161	4,621
Stream0088_DS	0.71	2,791	1,399	5,568
Stream0089	1.02	3,212	1,610	6,409

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0089	1.29	3,817	1,913	7,615
Stream0089_DS	0.20	1,244	624	2,483
Stream0090	1.00	3,279	1,643	6,542
Stream0090	1.91	5,484	2,748	10,941
Stream0090	3.61	8,341	4,180	16,642
Stream0090	5.39	11,363	5,695	22,672
Stream0090_DS	0.19	1,311	657	2,617
Stream0090_DS	0.69	3,235	1,621	6,455
Stream0091	1.00	2,932	1,470	5,851
Stream0091	1.23	3,625	1,817	7,233
Stream0091_DS	0.20	961	482	1,917
Stream0091_DS	0.34	1,690	847	3,373
Stream0092	1.05	3,354	1,681	6,693
Stream0092	1.49	4,436	2,223	8,851
Stream0092_DS	0.52	2,758	1,382	5,502
Stream0092_DS	0.69	3,253	1,631	6,491
Stream0093	1.04	3,750	1,880	7,483
Stream0093	1.26	4,153	2,081	8,287
Stream0093_DS	0.17	768	385	1,533
Stream0093_DS	0.67	2,681	1,344	5,349
Stream0094	1.05	3,531	1,769	7,044
Stream0094	1.62	4,795	2,403	9,567
Stream0094_DS	0.19	922	462	1,840
Stream0095	1.36	3,817	1,913	7,616
Stream0095	2.36	5,862	2,938	11,696
Stream0095	2.59	6,126	3,070	12,223
Stream0095	3.60	8,119	4,069	16,200
Stream0095	3.85	8,371	4,195	16,701
Stream0095	7.44	13,924	6,979	27,783
Stream0095	9.94	16,916	8,478	33,751
Stream0095	10.68	16,129	8,084	32,182
Stream0095	13.10	18,716	9,380	37,342
Stream0095	14.10	19,378	9,712	38,664
Stream0095	14.21	19,216	9,631	38,341
Stream0095	14.93	19,895	9,971	39,697
Stream0095_DS	0.14	985	494	1,966
Stream0096	0.17	1,164	583	2,322
Stream0096	0.46	2,469	1,237	4,926

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0096	0.84	3,968	1,989	7,917
Stream0096	1.12	4,990	2,501	9,957
Stream0096	1.41	5,795	2,904	11,562
Stream0096	1.82	7,123	3,570	14,212
Stream0096	2.44	8,551	4,286	17,062
Stream0096	2.74	9,054	4,538	18,065
Stream0096_DS	0.13	662	332	1,320
Stream0097	1.01	3,018	1,513	6,022
Stream0097	1.77	4,640	2,326	9,259
Stream0097	2.89	7,392	3,705	14,748
Stream0097_DS	0.72	2,385	1,195	4,758
Stream0097_DS	0.90	3,081	1,544	6,147
Stream0098	1.05	3,104	1,556	6,193
Stream0098_DS	0.29	1,447	725	2,887
Stream0098_DS	0.42	1,911	958	3,814
Stream0099	1.10	3,546	1,777	7,075
Stream0099	1.50	4,233	2,122	8,447
Stream0099_DS	0.14	829	416	1,655
Stream0099_DS	0.30	1,561	783	3,115
Stream0100	0.23	1,130	566	2,255
Stream0100	1.01	3,542	1,775	7,067
Stream0100	1.42	4,483	2,247	8,944
Stream0100_DS	0.33	1,550	777	3,093
Stream0100_DS	0.61	2,575	1,291	5,138
Stream0101	0.59	2,248	1,127	4,485
Stream0101_DS	0.12	661	332	1,320
Stream0101_DS	0.24	1,264	634	2,523
Stream0102	0.26	1,311	657	2,615
Stream0102	0.41	2,037	1,021	4,065
Stream0102_DS	0.11	478	239	953
Stream0102_DS	0.32	1,379	691	2,751
Stream0103	0.15	834	418	1,665
Stream0103_DS	0.37	1,635	820	3,263
Stream0103_DS	0.47	1,918	961	3,826
Stream0103_DS	0.78	2,798	1,402	5,582
Stream0104	1.00	3,776	1,892	7,533
Stream0104	1.23	4,331	2,171	8,642
Stream0104	2.06	6,755	3,385	13,477

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0104	2.88	8,394	4,207	16,749
Stream0104_DS	0.39	1,740	872	3,471
Stream0105	0.69	3,327	1,667	6,637
Stream0105_DS	0.24	1,240	621	2,474
Stream0105_DS	0.35	1,622	813	3,236
Stream0106	0.76	3,415	1,712	6,814
Stream0106_DS	0.15	976	489	1,948
Stream0107_DS	0.16	862	432	1,720
Stream0108	0.40	2,099	1,052	4,187
Stream0108_DS	0.39	1,691	847	3,374
Stream0108_DS	1.03	3,360	1,684	6,704
Stream0108_DS	1.89	5,695	2,854	11,363
Stream0109	0.60	2,658	1,332	5,304
Stream0109_DS	0.14	842	422	1,680
Stream0109_DS	0.33	1,793	899	3,578
Stream0109_DS	0.56	2,626	1,316	5,240
Stream0109_DS	1.00	4,132	2,071	8,245
Stream0110_DS	0.48	2,657	1,332	5,302
Stream0110_DS	1.02	5,149	2,580	10,273
Stream0110_DS	1.73	6,779	3,398	13,526
Stream0111	0.17	977	489	1,949
Stream0111_DS	1.03	4,071	2,040	8,122
Stream0112	1.00	2,696	1,351	5,379
Stream0112	1.75	4,393	2,202	8,765
Stream0112	2.31	5,342	2,677	10,659
Stream0112	4.30	8,363	4,192	16,687
Stream0112	5.15	9,641	4,832	19,235
Stream0112	6.00	10,721	5,373	21,391
Stream0112	6.27	11,069	5,547	22,085
Stream0112	9.45	15,626	7,832	31,179
Stream0112_DS	0.93	2,626	1,316	5,240
Stream0112_DS	1.09	2,977	1,492	5,940
Stream0113	1.02	3,194	1,601	6,372
Stream0113	1.37	3,800	1,904	7,581
Stream0113_DS	0.17	859	431	1,714
Stream0113_DS	0.89	3,153	1,580	6,291
Stream0113_DS	1.49	4,930	2,471	9,837
Stream0113_DS	1.69	5,263	2,638	10,502

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0114	0.17	715	358	1,427
Stream0114	1.27	4,074	2,042	8,129
Stream0114	2.01	5,052	2,532	10,080
Stream0114	2.74	6,585	3,300	13,139
Stream0114_DS	1.08	3,543	1,776	7,069
Stream0115	0.06	408	205	814
Stream0115_DS	1.03	3,586	1,797	7,155
Stream0115_DS	1.50	4,426	2,218	8,830
Stream0115_DS	2.54	6,204	3,109	12,378
Stream0116	1.14	3,778	1,894	7,539
Stream0116	1.64	4,928	2,470	9,832
Stream0116_DS	0.39	1,740	872	3,471
Stream0116_DS	2.29	6,379	3,197	12,728
Stream0117	1.26	4,067	2,038	8,114
Stream0117	1.32	4,144	2,077	8,269
Stream0117	2.26	6,593	3,304	13,154
Stream0117	3.15	7,789	3,904	15,542
Stream0117_DS	0.74	2,765	1,386	5,518
Stream0117_DS	1.81	5,683	2,848	11,339
Stream0118	1.01	3,355	1,682	6,694
Stream0118	1.82	5,098	2,555	10,172
Stream0118_DS	0.45	1,775	890	3,542
Stream0118_DS	1.03	3,354	1,681	6,692
Stream0118_DS	1.60	4,722	2,366	9,421
Stream0118_DS	2.00	5,456	2,735	10,887
Stream0118_DS	2.89	7,308	3,663	14,582
Stream0118_DS	4.81	10,969	5,497	21,885
Stream0118_DS	5.84	12,021	6,025	23,985
Stream0119	0.41	1,994	1,000	3,979
Stream0119_DS	0.39	1,479	741	2,951
Stream0119_DS	1.00	3,131	1,569	6,248
Stream0119_DS	1.73	4,800	2,406	9,578
Stream0120	0.98	3,529	1,768	7,040
Stream0120_DS	0.35	1,617	811	3,227
Stream0120_DS	1.11	4,062	2,036	8,105
Stream0120_DS	1.61	5,048	2,530	10,071
Stream0120_DS	3.57	9,045	4,533	18,047
Stream0121	0.29	1,377	690	2,748

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0121_DS	0.62	2,822	1,414	5,630
Stream0121_DS	1.08	4,215	2,112	8,410
Stream0121_DS	1.33	4,642	2,326	9,262
Stream0122_DS	1.01	4,007	2,008	7,996
Stream0122_DS	1.28	4,609	2,310	9,197
Stream0123	1.34	4,410	2,210	8,800
Stream0123	2.27	6,736	3,376	13,441
Stream0123	2.85	7,762	3,890	15,488
Stream0123	3.73	9,315	4,668	18,586
Stream0123	4.24	10,276	5,150	20,503
Stream0123	4.80	11,072	5,549	22,092
Stream0123_DS	1.00	4,261	2,136	8,502
Stream0123_DS	1.62	5,486	2,750	10,946
Stream0124	0.21	1,197	600	2,389
Stream0124_DS	0.76	3,202	1,605	6,389
Stream0124_DS	1.17	4,459	2,235	8,896
Stream0124_DS	1.28	4,427	2,219	8,833
Stream0124_DS	3.22	8,940	4,481	17,838
Stream0124_DS	3.72	9,409	4,715	18,773
Stream0125_DS	0.76	3,072	1,540	6,129
Stream0125_DS	1.06	3,778	1,894	7,539
Stream0126	0.23	1,195	599	2,385
Stream0126_DS	1.02	4,219	2,114	8,417
Stream0126_DS	1.14	4,373	2,192	8,726
Stream0127	0.15	905	453	1,805
Stream0127_DS	1.00	4,387	2,199	8,754
Stream0127_DS	1.46	6,098	3,056	12,166
Stream0128	1.08	3,140	1,574	6,265
Stream0128	2.11	5,376	2,695	10,727
Stream0128	2.93	7,159	3,588	14,284
Stream0128	3.88	9,070	4,546	18,097
Stream0128_DS	0.12	988	495	1,971
Stream0128_DS	0.65	3,643	1,826	7,269
Stream0128_DS	1.02	4,782	2,397	9,542
Stream0128_DS	1.56	5,745	2,879	11,463
Stream0129	0.10	609	305	1,215
Stream0129	0.19	1,116	559	2,226
Stream0129_DS	0.23	1,638	821	3,267

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0129_DS	0.71	3,675	1,842	7,333
Stream0129_DS	1.52	6,376	3,196	12,723
Stream0130	1.00	4,019	2,014	8,019
Stream0130	1.30	4,662	2,336	9,301
Stream0130_DS	0.34	1,861	933	3,714
Stream0130_DS	1.05	4,631	2,321	9,241
Stream0130_DS	1.97	7,068	3,542	14,102
Stream0130_DS	2.99	8,668	4,345	17,296
Stream0131_DS	0.33	1,722	863	3,436
Stream0131_DS	1.22	5,984	2,999	11,940
Stream0131_DS	1.81	7,495	3,756	14,955
Stream0131_DS	3.76	12,417	6,223	24,776
Stream0132	0.97	3,735	1,872	7,453
Stream0132_DS	0.46	2,416	1,211	4,820
Stream0133_DS	0.31	2,018	1,011	4,026
Stream0133_DS	0.92	4,551	2,281	9,080
Stream0133_DS	1.31	5,754	2,884	11,480
Stream0134_DS	0.26	1,147	575	2,289
Stream0134_DS	0.55	2,219	1,112	4,427
Stream0134_DS	0.87	3,148	1,578	6,280
Stream0134_DS	0.99	3,489	1,749	6,962
Stream0134_DS	1.16	3,931	1,970	7,843
Stream0134_DS	1.43	4,696	2,353	9,369
Stream0134_DS	1.67	5,226	2,619	10,426
Stream0135_DS	0.14	906	454	1,808
Stream0136_DS	0.16	870	436	1,736
Stream0137	1.16	3,619	1,814	7,220
Stream0137	1.72	4,471	2,241	8,921
Stream0137	2.51	6,225	3,120	12,420
Stream0137	2.71	6,791	3,404	13,550
Stream0137	3.30	7,664	3,841	15,292
Stream0137_DS	1.00	4,316	2,163	8,611
Stream0137_DS	1.21	4,948	2,480	9,872
Stream0138	0.19	987	495	1,970
Stream0138_DS	0.32	1,917	961	3,826
Stream0138_DS	0.74	3,645	1,827	7,273
Stream0139_DS	0.14	950	476	1,895
Stream0139_DS	0.58	3,330	1,669	6,645

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0139_DS	1.04	5,203	2,608	10,381
Stream0139_DS	1.56	6,592	3,304	13,153
Stream0139_DS	2.33	8,233	4,126	16,428
Stream0140	1.30	2,515	1,261	5,018
Stream0140	1.55	2,749	1,378	5,484
Stream0140_DS	1.02	3,927	1,968	7,836
Stream0140_DS	1.13	4,115	2,062	8,210
Stream0141_DS	0.70	2,856	1,431	5,698
Stream0141_DS	1.25	4,338	2,174	8,656
Stream0142	1.12	4,078	2,044	8,136
Stream0142	1.78	5,474	2,743	10,921
Stream0142	2.15	6,416	3,216	12,802
Stream0142_DS	0.30	1,373	688	2,739
Stream0142_DS	0.68	2,572	1,289	5,132
Stream0142_DS	1.28	4,228	2,119	8,436
Stream0142_DS	1.39	4,429	2,220	8,837
Stream0143	0.32	1,681	842	3,354
Stream0143_DS	1.01	3,836	1,923	7,654
Stream0143_DS	2.05	6,328	3,172	12,626
Stream0144_DS	0.39	1,770	887	3,531
Stream0144_DS	1.17	4,051	2,030	8,082
Stream0145	0.41	1,959	982	3,908
Stream0145_DS	0.40	1,725	864	3,441
Stream0145_DS	0.78	3,151	1,579	6,286
Stream0145_DS	1.14	3,998	2,004	7,977
Stream0146	1.16	3,585	1,797	7,153
Stream0146	1.35	4,010	2,010	8,000
Stream0146	3.42	7,817	3,918	15,597
Stream0146	4.41	9,216	4,619	18,389
Stream0146	5.08	10,149	5,086	20,249
Stream0146	5.82	11,385	5,706	22,715
Stream0146_DS	0.36	1,523	763	3,038
Stream0147	1.06	3,429	1,719	6,842
Stream0147_DS	1.03	4,405	2,208	8,790
Stream0147_DS	1.52	5,226	2,619	10,428
Stream0148_DS	0.83	3,501	1,755	6,985
Stream0148_DS	1.04	4,119	2,064	8,218
Stream0148_DS	1.26	4,623	2,317	9,224

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0149_DS	0.23	1,502	753	2,997
Stream0149_DS	0.41	2,103	1,054	4,196
Stream0149_DS	1.28	5,118	2,565	10,212
Stream0149_DS	2.06	6,920	3,468	13,807
Stream0149_DS	2.95	8,554	4,287	17,067
Stream0149_DS	3.42	9,422	4,722	18,800
Stream0150_DS	1.39	5,599	2,806	11,171
Stream0150_DS	1.59	5,818	2,916	11,608
Stream0151_DS	1.00	4,050	2,030	8,081
Stream0151_DS	1.73	5,611	2,812	11,196
Stream0152	0.21	1,037	520	2,069
Stream0152_DS	1.03	3,372	1,690	6,727
Stream0152_DS	1.75	4,970	2,491	9,917
Stream0153_DS	1.01	3,921	1,965	7,824
Stream0153_DS	1.29	4,703	2,357	9,385
Stream0153_DS	1.96	6,357	3,186	12,683
Stream0153_DS	2.96	8,502	4,261	16,963
Stream0153_DS	3.23	8,825	4,423	17,608
Stream0154_DS	0.80	2,922	1,464	5,830
Stream0154_DS	1.03	3,526	1,767	7,036
Stream0154_DS	1.35	4,581	2,296	9,141
Stream0155	0.23	1,321	662	2,636
Stream0155_DS	0.10	635	318	1,267
Stream0155_DS	0.47	2,315	1,160	4,619
Stream0155_DS	1.30	5,185	2,599	10,346
Stream0155_DS	1.46	5,609	2,811	11,191
Stream0156	0.18	1,019	511	2,033
Stream0156_DS	0.81	2,865	1,436	5,716
Stream0156_DS	2.08	6,391	3,203	12,751
Stream0157	0.19	893	448	1,782
Stream0157_DS	0.56	2,218	1,112	4,426
Stream0157_DS	1.00	3,304	1,656	6,593
Stream0158	0.24	1,376	690	2,745
Stream0158_DS	0.36	1,806	905	3,604
Stream0158_DS	1.13	4,431	2,221	8,841
Stream0159	0.65	3,302	1,655	6,588
Stream0159_DS	0.13	654	328	1,305
Stream0159_DS	0.54	2,030	1,017	4,050

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0159_DS	1.15	3,797	1,903	7,576
Stream0159_DS	1.33	4,024	2,017	8,030
Stream0160_DS	1.00	4,816	2,414	9,610
Stream0160_DS	1.71	7,250	3,634	14,466
Stream0161	1.00	3,974	1,992	7,928
Stream0161	1.91	6,340	3,177	12,649
Stream0161	2.53	7,919	3,969	15,801
Stream0161_DS	0.33	2,504	1,255	4,996
Stream0161_DS	1.04	6,231	3,123	12,432
Stream0162_DS	0.41	2,067	1,036	4,124
Stream0162_DS	1.19	4,721	2,366	9,420
Stream0162_DS	1.53	5,276	2,644	10,526
Stream0163	0.42	2,264	1,135	4,518
Stream0163_DS	0.29	1,642	823	3,277
Stream0163_DS	1.19	5,863	2,939	11,699
Stream0163_DS	1.41	6,060	3,037	12,092
Stream0164_DS	1.04	4,349	2,180	8,678
Stream0164_DS	1.37	4,899	2,456	9,776
Stream0165	1.11	4,468	2,239	8,915
Stream0165	1.78	5,976	2,995	11,923
Stream0165	4.09	11,219	5,623	22,385
Stream0165	4.70	11,830	5,929	23,605
Stream0165	5.40	13,000	6,515	25,938
Stream0165_DS	0.26	1,019	511	2,034
Stream0165_DS	1.11	4,015	2,012	8,012
Stream0165_DS	1.34	4,552	2,281	9,082
Stream0166	1.05	4,505	2,258	8,988
Stream0166	1.30	5,152	2,582	10,280
Stream0166_DS	1.00	4,670	2,341	9,318
Stream0166_DS	1.46	5,736	2,875	11,444
Stream0166_DS	1.84	6,690	3,353	13,349
Stream0166_DS	3.18	10,594	5,310	21,139
Stream0167	0.22	1,655	829	3,302
Stream0167_DS	0.53	2,726	1,366	5,440
Stream0167_DS	1.23	5,415	2,714	10,805
Stream0168	0.17	960	481	1,915
Stream0168_DS	0.45	2,218	1,112	4,426
Stream0168_DS	0.79	3,549	1,779	7,081

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0168_DS	1.51	5,835	2,924	11,642
Stream0168_DS_Tributary 1	0.30	1,707	855	3,405
Stream0169	0.50	2,580	1,293	5,147
Stream0169	0.93	4,520	2,265	9,019
Stream0169	1.16	5,360	2,686	10,694
Stream0169_DS	0.55	2,751	1,379	5,488
Stream0170	0.42	2,343	1,174	4,676
Stream0170_DS	0.72	3,408	1,708	6,799
Stream0170_DS	1.00	4,429	2,220	8,836
Stream0170_DS	1.28	4,956	2,484	9,889
Stream0171	0.21	1,483	743	2,958
Stream0171_DS	1.06	5,135	2,574	10,245
Stream0171_DS	2.01	7,921	3,970	15,804
Stream0171_DS	2.16	8,102	4,061	16,166
Stream0172	0.19	1,492	748	2,977
Stream0172_DS	1.01	3,945	1,977	7,871
Stream0172_DS	1.46	5,113	2,563	10,202
Stream0172_DS	2.30	7,430	3,724	14,825
Stream0172_DS	3.04	8,991	4,506	17,939
Stream0173	0.63	1,972	988	3,934
Stream0173_DS	1.02	3,849	1,929	7,680
Stream0174	1.05	4,478	2,244	8,934
Stream0174	1.25	4,916	2,464	9,808
Stream0174_DS	1.03	4,329	2,169	8,637
Stream0174_DS	1.27	4,959	2,485	9,894
Stream0175	0.32	1,965	985	3,921
Stream0175_DS	0.82	3,756	1,883	7,495
Stream0175_DS	1.05	4,602	2,307	9,183
Stream0175_DS	1.71	6,295	3,155	12,559
Stream0175_DS	3.11	10,069	5,046	20,090
Stream0176	0.41	2,251	1,128	4,491
Stream0176_DS	0.85	3,887	1,948	7,755
Stream0176_DS	0.99	4,026	2,018	8,034
Stream0177	0.19	1,238	620	2,469
Stream0177_DS	1.05	3,755	1,882	7,491
Stream0178	0.12	949	476	1,894
Stream0178_DS	1.01	3,723	1,866	7,428
Stream0178_DS	1.38	4,458	2,234	8,895

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0178_DS	1.60	5,111	2,562	10,199
Stream0179	0.09	532	267	1,062
Stream0179_DS	0.11	588	295	1,174
Stream0179_DS	0.46	2,327	1,166	4,643
Stream0179_DS	1.51	6,024	3,019	12,020
Stream0179_DS	2.49	8,198	4,109	16,358
Stream0180	1.08	3,665	1,837	7,313
Stream0180	1.27	3,970	1,990	7,921
Stream0180_DS	1.01	3,410	1,709	6,803
Stream0181	1.33	3,931	1,970	7,844
Stream0181	2.28	5,860	2,937	11,693
Stream0181	2.33	6,000	3,007	11,971
Stream0181_DS	1.11	3,241	1,624	6,467
Stream0182	1.11	3,512	1,760	7,007
Stream0182	2.06	5,596	2,805	11,166
Stream0182_DS	0.26	1,712	858	3,416
Stream0182_DS	1.20	5,445	2,729	10,864
Stream0182_DS	1.30	5,489	2,751	10,951
Stream0183	1.00	3,320	1,664	6,625
Stream0183	1.99	5,815	2,915	11,603
Stream0183	2.57	6,682	3,349	13,333
Stream0183_DS	1.06	4,485	2,248	8,948
Stream0183_DS	1.94	7,481	3,749	14,927
Stream0184	1.04	3,432	1,720	6,847
Stream0184	1.17	3,679	1,844	7,341
Stream0184_DS	0.96	4,343	2,177	8,666
Stream0184_DS	2.00	7,636	3,827	15,235
Stream0185_DS	0.71	3,127	1,567	6,239
Stream0185_DS	1.14	4,421	2,216	8,820
Stream0185_DS	1.80	6,260	3,138	12,491
Stream0186	1.57	4,735	2,373	9,447
Stream0186_DS	0.32	1,162	582	2,318
Stream0186_DS	1.00	3,415	1,712	6,815
Stream0186_DS	1.11	3,678	1,843	7,338
Stream0187_DS	0.22	890	446	1,775
Stream0187_DS	1.24	3,861	1,935	7,703
Stream0187_DS	1.53	4,186	2,098	8,353
Stream0188_DS	0.48	1,806	905	3,603

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0188_DS	1.01	3,273	1,640	6,530
Stream0188_DS	1.58	4,188	2,099	8,357
Stream0189_DS	0.40	1,876	940	3,743
Stream0189_DS	0.77	2,720	1,363	5,427
Stream0189_DS	1.07	3,224	1,616	6,432
Stream0190	1.02	3,165	1,586	6,315
Stream0190	1.90	5,252	2,632	10,480
Stream0190	2.88	7,052	3,535	14,071
Stream0190	3.63	8,489	4,254	16,937
Stream0190	4.58	10,107	5,065	20,166
Stream0190	5.03	10,888	5,457	21,725
Stream0190	6.94	14,064	7,049	28,062
Stream0190_DS	1.12	3,670	1,839	7,322
Stream0190_DS	1.42	4,110	2,060	8,200
Stream0190_DS	1.91	5,549	2,781	11,072
Stream0191	1.14	4,995	2,503	9,966
Stream0191	1.38	5,480	2,746	10,933
Stream0191_DS	0.37	2,496	1,251	4,981
Stream0191_DS	0.78	4,005	2,007	7,991
Stream0192	1.00	4,802	2,407	9,581
Stream0192_DS	0.19	895	448	1,785
Stream0192_DS	1.20	4,554	2,282	9,086
Stream0192_DS	1.79	5,763	2,888	11,499
Stream0193_DS	0.09	743	373	1,483
Stream0193_DS	0.33	1,969	987	3,929
Stream0193_DS	1.17	5,121	2,566	10,217
Stream0194	1.27	6,404	3,210	12,778
Stream0194	1.70	7,287	3,652	14,540
Stream0194_DS	1.04	4,105	2,058	8,191
Stream0195_DS	1.06	2,761	1,384	5,509
Stream0195_DS	1.51	4,435	2,223	8,849
Stream0196	0.24	1,806	905	3,604
Stream0196_DS	1.03	3,627	1,818	7,236
Stream0196_DS	1.61	4,848	2,430	9,674
Stream0197	1.50	6,826	3,421	13,619
Stream0197	1.75	7,289	3,653	14,544
Stream0197_DS	1.06	3,307	1,658	6,599
Stream0198	1.16	5,674	2,844	11,322

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0198	1.42	6,281	3,148	12,532
Stream0198	2.38	9,161	4,591	18,278
Stream0198	2.55	9,591	4,807	19,137
Stream0198	2.79	10,215	5,120	20,382
Stream0198	3.14	10,440	5,232	20,830
Stream0198_DS	0.38	1,949	977	3,889
Stream0198_DS	1.12	3,462	1,735	6,908
Stream0199	0.15	1,294	649	2,582
Stream0199_DS	1.03	3,460	1,734	6,904
Stream0199_DS	1.67	4,422	2,216	8,823
Stream0199_DS	3.44	7,500	3,759	14,964
Stream0200	0.22	1,738	871	3,468
Stream0200_DS	0.60	2,865	1,436	5,716
Stream0201	0.06	476	239	950
Stream0201_DS	0.12	905	453	1,805
Stream0202	0.11	972	487	1,939
Stream0202_DS	0.13	844	423	1,684
Stream0203	0.14	1,018	510	2,031
Stream0203_DS	0.94	4,150	2,080	8,280
Stream0204	1.10	5,429	2,721	10,831
Stream0204_DS	0.39	1,856	930	3,704
Stream0205	1.17	5,683	2,848	11,340
Stream0205_DS	0.09	489	245	977
Stream0206	1.06	5,394	2,703	10,762
Stream0206	1.58	6,580	3,298	13,128
Stream0206_DS	0.12	771	387	1,539
Stream0207	0.40	2,330	1,168	4,648
Stream0207_DS	0.30	1,740	872	3,472
Stream0207_DS	0.43	2,144	1,075	4,279
Stream0208	0.28	1,812	908	3,616
Stream0208_DS	0.18	795	398	1,586
Stream0209_DS	0.19	979	491	1,954
Stream0210_DS	0.33	1,673	838	3,338
Stream0211	1.19	4,635	2,323	9,247
Stream0211	1.29	4,868	2,440	9,712
Stream0211_DS	0.17	688	345	1,373
Stream0212	1.09	5,336	2,674	10,646
Stream0212	1.61	7,032	3,524	14,030

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0212_DS	0.37	1,653	828	3,298
Stream0212_DS	0.54	2,319	1,162	4,628
Stream0213	0.35	2,213	1,109	4,416
Stream0213	0.71	3,769	1,889	7,519
Stream0213	0.93	4,666	2,338	9,310
Stream0213	1.80	8,001	4,010	15,964
Stream0213_DS	0.42	1,405	704	2,804
Stream0214	0.31	1,828	916	3,648
Stream0214_DS	0.44	1,985	995	3,960
Stream0215	0.20	1,389	696	2,772
Stream0215_DS	0.15	1,052	527	2,099
Stream0216	0.54	3,101	1,554	6,188
Stream0216_DS	0.14	658	330	1,313
Stream0216_DS	0.33	1,452	727	2,896
Stream0217	0.27	1,826	915	3,643
Stream0217_DS	0.29	1,593	798	3,178
Stream0217_DS	0.41	2,086	1,045	4,162
Stream0218	0.63	4,071	2,041	8,124
Stream0218_DS	0.16	1,213	608	2,419
Stream0219	1.53	4,920	2,466	9,816
Stream0219	1.97	5,328	2,670	10,631
Stream0219_DS	0.42	2,035	1,020	4,061
Stream0220	0.08	629	315	1,255
Stream0220	0.43	2,404	1,205	4,796
Stream0220	0.79	3,538	1,773	7,059
Stream0220	1.30	5,302	2,657	10,579
Stream0220_DS	0.15	883	443	1,762
Stream0220_DS	0.33	1,813	909	3,617
Stream0221	1.39	4,509	2,260	8,996
Stream0221	2.10	5,464	2,739	10,903
Stream0221_DS	0.32	1,503	754	3,000
Stream0222_DS	0.38	1,694	849	3,380
Stream0222_DS	0.57	2,177	1,091	4,344
Stream0223	0.77	2,775	1,391	5,536
Stream0223_DS	0.80	3,761	1,885	7,503
Stream0224	0.77	2,361	1,183	4,711
Stream0224_DS	0.15	841	422	1,678
Stream0224_DS	0.51	2,577	1,291	5,141

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0225	0.48	1,768	886	3,528
Stream0225_DS	0.67	2,939	1,473	5,864
Stream0226	1.03	4,181	2,095	8,341
Stream0226	1.34	4,588	2,300	9,155
Stream0226_DS	0.27	1,572	788	3,137
Stream0226_DS	0.64	2,768	1,387	5,523
Stream0227	0.40	1,641	823	3,275
Stream0227	1.00	3,346	1,677	6,675
Stream0227	1.37	4,196	2,103	8,372
Stream0227_DS	0.17	727	365	1,452
Stream0227_DS	0.31	1,267	635	2,529
Stream0228	0.56	2,140	1,073	4,270
Stream0228_DS	0.46	2,031	1,018	4,052
Stream0229	0.25	1,050	526	2,096
Stream0229	1.00	3,105	1,556	6,195
Stream0229	1.81	4,989	2,500	9,954
Stream0229	3.43	8,180	4,100	16,321
Stream0229	3.98	8,918	4,470	17,794
Stream0229_DS	0.42	1,891	948	3,773
Stream0230_DS	0.14	855	429	1,707
Stream0231	0.33	1,157	580	2,308
Stream0231	1.00	2,909	1,458	5,805
Stream0231	1.54	4,098	2,054	8,177
Stream0231_DS	0.43	1,739	872	3,470
Stream0232_DS	0.54	2,159	1,082	4,308
Stream0233	1.09	3,380	1,694	6,744
Stream0233	2.09	5,461	2,737	10,896
Stream0233	2.72	6,299	3,157	12,568
Stream0233_DS	0.44	2,137	1,071	4,263
Stream0234	0.63	2,535	1,270	5,058
Stream0234_DS	0.28	1,402	702	2,796
Stream0235	0.38	1,841	923	3,673
Stream0235_DS	0.40	1,977	991	3,944
Stream0236	0.78	2,886	1,446	5,758
Stream0236	1.37	4,582	2,296	9,143
Stream0236	1.71	5,540	2,777	11,053
Stream0236	2.49	6,990	3,503	13,947
Stream0236_DS	0.73	2,485	1,246	4,959

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0237	0.51	2,088	1,047	4,167
Stream0237_DS	0.09	415	208	828
Stream0237_DS	0.29	1,181	592	2,357
Stream0238	0.15	821	411	1,637
Stream0238_DS	0.10	762	382	1,520
Stream0238_DS	0.20	1,253	628	2,501
Stream0239_DS	0.30	1,555	779	3,103
Stream0240_DS	0.13	608	305	1,214
Stream0241	1.24	4,381	2,196	8,742
Stream0241	1.78	5,254	2,633	10,483
Stream0241	2.67	6,894	3,455	13,756
Stream0241	3.63	8,798	4,409	17,553
Stream0241	4.37	10,217	5,121	20,386
Stream0241_DS	0.43	1,843	924	3,677
Stream0241_DS	0.72	2,784	1,395	5,554
Stream0242_DS	0.46	2,223	1,114	4,435
Stream0243	0.82	3,056	1,532	6,098
Stream0243_DS	0.12	495	248	987
Stream0243_DS	0.23	1,032	517	2,059
Stream0244	0.88	3,248	1,628	6,481
Stream0244_DS	0.10	703	353	1,404
Stream0245	0.70	2,666	1,336	5,320
Stream0245_DS	0.79	3,563	1,786	7,109
Stream0246_DS	0.26	1,363	683	2,719
Stream0247_DS	0.19	1,102	552	2,198
Stream0248_DS	0.26	1,322	663	2,639
Stream0249	1.03	4,122	2,066	8,224
Stream0249	1.94	6,428	3,222	12,825
Stream0249	2.30	7,290	3,654	14,545
Stream0249_DS	0.62	3,217	1,612	6,418
Stream0249_DS	0.83	3,701	1,855	7,385
Stream0250	0.32	1,735	869	3,461
Stream0250_DS	0.33	1,432	718	2,858
Stream0251	0.33	1,485	744	2,963
Stream0251_DS	0.34	1,832	918	3,656
Stream0252	0.33	1,853	929	3,698
Stream0252_DS	0.32	1,462	733	2,917
Stream0253	0.09	606	304	1,209

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0253_DS	0.94	3,153	1,580	6,292
Stream0254	1.01	3,674	1,841	7,330
Stream0254_DS	0.16	794	398	1,584
Stream0255	1.01	4,440	2,225	8,860
Stream0255	1.16	4,697	2,354	9,373
Stream0255_DS	0.29	1,726	865	3,444
Stream0256	0.13	953	478	1,902
Stream0256_DS	0.22	1,284	644	2,563
Stream0257	0.21	1,331	667	2,655
Stream0257_DS	0.47	2,223	1,114	4,436
Stream0258	0.39	2,121	1,063	4,233
Stream0258_DS	0.30	1,631	817	3,254
Stream0259_DS	0.25	1,186	595	2,367
Stream0260_DS	0.17	943	473	1,882
Stream0260_DS	0.27	1,279	641	2,552
Stream0261_DS	0.10	596	299	1,190
Stream0262	0.36	1,397	700	2,787
Stream0262	1.00	3,385	1,697	6,754
Stream0262	1.43	4,347	2,179	8,674
Stream0262	2.25	6,107	3,061	12,186
Stream0262	2.65	6,800	3,408	13,568
Stream0262	3.86	9,472	4,747	18,899
Stream0262	4.29	10,162	5,093	20,276
Stream0262	6.69	14,506	7,270	28,943
Stream0262	7.28	15,187	7,612	30,302
Stream0262_DS	0.45	2,383	1,194	4,755
Stream0263	0.40	1,920	962	3,831
Stream0263_DS	0.13	666	334	1,328
Stream0264	0.24	1,195	599	2,385
Stream0264_DS	0.12	581	291	1,160
Stream0264_DS	0.60	2,521	1,263	5,029
Stream0265	0.25	1,314	658	2,621
Stream0265_DS	0.13	660	331	1,317
Stream0265_DS	0.24	1,065	534	2,126
Stream0266_DS	0.32	1,225	614	2,443
Stream0267_DS	0.14	812	407	1,619
Stream0268_DS	0.13	781	391	1,558
Stream0268_DS	0.25	1,316	660	2,626

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0269	1.24	5,517	2,765	11,007
Stream0269	1.57	6,163	3,089	12,297
Stream0269_DS	0.19	1,086	544	2,167
Stream0270_DS	0.30	1,545	774	3,083
Stream0271	0.52	2,935	1,471	5,856
Stream0271_DS	0.70	2,759	1,383	5,504
Stream0272	1.00	4,215	2,112	8,410
Stream0272	1.19	4,893	2,452	9,763
Stream0272_DS	0.33	1,423	713	2,840
Stream0273	0.57	3,023	1,515	6,032
Stream0273_DS	0.19	1,184	594	2,363
Stream0273_DS	0.34	1,918	961	3,826
Stream0274	0.22	1,531	767	3,055
Stream0274_DS	0.11	636	319	1,269
Stream0274_DS	0.19	982	492	1,960
Stream0275_DS	0.65	3,035	1,521	6,055
Stream0276	0.30	1,828	916	3,647
Stream0276_DS	0.22	1,150	576	2,294
Stream0276_DS	0.40	1,885	945	3,762
Stream0277	0.21	1,338	671	2,669
Stream0277_DS	0.43	1,979	992	3,949
Stream0278	0.42	2,447	1,227	4,883
Stream0278	0.74	4,071	2,040	8,123
Stream0278	1.15	5,394	2,703	10,762
Stream0278	1.39	5,928	2,971	11,828
Stream0278	2.72	9,631	4,827	19,216
Stream0278_DS	0.34	1,883	944	3,757
Stream0278_DS	0.44	2,145	1,075	4,281
Stream0279	0.38	1,979	992	3,950
Stream0279_DS	0.32	2,008	1,006	4,006
Stream0280	0.04	373	187	743
Stream0280	0.28	1,679	841	3,349
Stream0280_DS	0.53	3,066	1,537	6,118
Stream0281_DS	0.32	2,417	1,211	4,823
Stream0282	0.15	942	472	1,879
Stream0282_DS	0.11	696	349	1,389
Stream0282_DS	0.21	1,139	571	2,273
Stream0283	0.73	3,422	1,715	6,829

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0284	1.01	4,414	2,212	8,807
Stream0284	1.70	6,294	3,155	12,559
Stream0285	0.04	331	166	661
Stream0285	0.18	1,070	536	2,134
Stream0285	0.37	1,961	983	3,913
Stream0286	0.81	3,710	1,860	7,403
Stream0287	0.28	1,942	973	3,874
Stream0288	0.18	1,400	702	2,793
Stream0289	1.01	4,923	2,467	9,823
Stream0289	1.11	5,198	2,605	10,372
Stream0290	1.86	6,989	3,503	13,946
Stream0290	2.03	7,064	3,540	14,095
Stream0291	1.00	4,112	2,061	8,205
Stream0291	1.29	4,832	2,422	9,641
Stream0291	1.76	6,200	3,107	12,370
Stream0293	0.12	796	399	1,589
Stream0293	0.27	1,508	756	3,009
Stream0294	0.71	3,960	1,985	7,901
Stream0296	0.28	1,863	934	3,716
Stream0298	0.19	1,444	724	2,881
Stream0301	0.23	1,586	795	3,163
Stream0302	0.08	590	296	1,177
Stream0303	0.35	2,182	1,094	4,354
Stream0303	1.54	7,163	3,590	14,292
Stream0303	1.79	7,365	3,691	14,695
Stream0304	0.10	823	412	1,642
Stream0305	1.02	4,870	2,441	9,717
Stream0305	2.01	7,884	3,951	15,731
Stream0305	2.15	8,117	4,068	16,195
Stream0305	2.43	8,840	4,431	17,639
Stream0305	2.76	9,691	4,857	19,336
Stream0305	3.13	10,683	5,354	21,316
Stream0306	0.22	1,578	791	3,149
Stream0307	0.26	1,881	943	3,753
Stream0308	0.14	1,111	557	2,217
Stream0309	0.30	2,179	1,092	4,349
Stream0310	0.38	2,369	1,187	4,727
Stream0311	0.24	1,890	947	3,772

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0312	0.10	723	362	1,443
Stream0313	0.08	594	298	1,186
Stream0314	0.12	974	488	1,944
Stream0315	0.54	2,838	1,423	5,663
Stream0315	1.29	5,454	2,733	10,882
Stream0315	1.49	6,080	3,047	12,130
Stream0316	0.16	1,014	508	2,023
Stream0319	0.16	1,041	522	2,078
Stream0320	0.09	793	398	1,583
Stream0321	0.40	2,498	1,252	4,983
Stream0322	0.26	1,817	911	3,625
Stream0323	0.50	3,359	1,684	6,702
Stream0323	0.75	4,559	2,285	9,097
Stream0323	1.81	7,779	3,899	15,521
Stream0324	0.14	966	484	1,927
Stream0325	0.17	1,259	631	2,512
Stream0326	0.47	2,837	1,422	5,660
Stream0326	1.11	5,652	2,833	11,277
Stream0326	1.62	7,195	3,606	14,356
Stream0326	1.91	7,912	3,965	15,786
Stream0326	2.56	9,711	4,867	19,375
Stream0327	0.38	2,514	1,260	5,017
Stream0328	0.36	2,312	1,159	4,613
Stream0329	0.20	1,377	690	2,747
Stream0330	0.49	2,975	1,491	5,936
Stream0331	0.70	3,296	1,652	6,576
Stream0332	0.27	1,623	814	3,239
Stream0335	1.02	5,899	2,956	11,769
Stream0335	1.19	6,018	3,016	12,007
Stream0337	0.74	2,474	1,240	4,935
Stream0337	1.02	3,118	1,563	6,221
Stream0338	1.20	3,826	1,918	7,635
Stream0340	0.37	1,641	822	3,274
Stream0341	0.63	1,939	972	3,869
Stream0341	1.36	3,909	1,959	7,800
Stream0341	2.20	5,604	2,808	11,181
Stream0342	0.74	2,633	1,320	5,253
Stream0342	1.02	3,481	1,745	6,946

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0342	1.48	4,577	2,294	9,133
Stream0343	0.20	925	464	1,847
Stream0344	0.40	1,663	834	3,319
Stream0345	0.14	756	379	1,509
Stream0346	1.01	3,173	1,590	6,332
Stream0346	1.51	4,350	2,180	8,679
Stream0346	2.47	6,516	3,265	13,000
Stream0346	3.40	8,302	4,161	16,566
Stream0346	3.61	8,465	4,243	16,890
Stream0347	0.92	3,002	1,504	5,989
Stream0348	0.17	783	392	1,562
Stream0351	1.04	3,542	1,775	7,068
Stream0351	1.52	4,674	2,343	9,326
Stream0351	2.47	7,055	3,536	14,077
Stream0352	0.51	2,028	1,016	4,046
Stream0353	1.01	3,227	1,617	6,439
Stream0353	1.89	5,505	2,759	10,983
Stream0353	2.82	7,332	3,674	14,628
Stream0353	3.82	9,051	4,536	18,060
Stream0353	4.02	9,382	4,702	18,719
Stream0353	7.93	15,876	7,957	31,677
Stream0358	0.80	2,569	1,287	5,125
Stream0358	1.30	3,974	1,992	7,929
Stream0358	2.15	6,110	3,062	12,192
Stream0358	3.19	7,852	3,935	15,667
Stream0359	0.36	1,399	701	2,791
Stream0360	0.71	2,637	1,322	5,262
Stream0364	0.60	2,509	1,257	5,006
Stream0365	0.26	1,409	706	2,810
Stream0366	0.05	469	235	936
Stream0366	0.42	2,287	1,146	4,563
Stream0366	0.67	3,111	1,559	6,207
Stream0368	0.26	1,129	566	2,252
Stream0370	0.34	1,702	853	3,396
Stream0371	1.34	4,418	2,214	8,815
Stream0371	2.22	6,352	3,183	12,674
Stream0371	3.22	8,135	4,077	16,232
Stream0371	5.48	12,280	6,155	24,502

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0372	1.11	4,032	2,021	8,045
Stream0372	1.86	5,662	2,838	11,297
Stream0373	0.33	1,957	981	3,904
Stream0378	0.96	3,384	1,696	6,753
Stream0379	1.07	3,654	1,831	7,290
Stream0380	0.34	1,538	771	3,069
Stream0382	0.85	2,304	1,155	4,598
Stream0382	0.97	2,598	1,302	5,183
Stream0383	0.79	3,213	1,611	6,412
Stream0384	0.28	1,471	737	2,935
Stream0385	1.04	4,153	2,081	8,286
Stream0385	1.32	4,770	2,391	9,518
Stream0385	2.53	7,768	3,893	15,498
Stream0386	0.28	1,201	602	2,396
Stream0386	0.90	3,243	1,626	6,471
Stream0387	0.69	2,832	1,419	5,650
Stream0388	0.18	991	497	1,978
Stream0391	1.00	4,067	2,038	8,114
Stream0391	1.76	6,263	3,139	12,496
Stream0392	0.43	1,503	753	2,999
Stream0393	0.19	1,101	552	2,197
Stream0394	0.89	3,645	1,827	7,273
Stream0396	0.04	335	168	668
Stream0396	0.24	1,146	574	2,287
Stream0396	0.47	1,937	971	3,864
Stream0397	0.50	1,932	968	3,855
Stream0398	0.37	1,627	816	3,247
Stream0399	0.18	935	469	1,866
Stream0400	1.00	3,746	1,877	7,474
Stream0400	1.11	4,029	2,019	8,040
Stream0401	0.21	1,035	518	2,064
Stream0402	0.40	2,074	1,039	4,138
Stream0403	0.71	3,072	1,539	6,129
Stream0404	0.05	441	221	881
Stream0404	0.24	1,480	742	2,953
Stream0405	0.61	2,992	1,499	5,969
Stream0406	0.25	1,499	751	2,992
Stream0408	0.20	1,228	616	2,451

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0409	0.16	1,186	595	2,367
Stream0410	0.59	2,706	1,356	5,398
Stream0410	0.97	4,090	2,050	8,161
Stream0411	0.27	1,675	840	3,342
Stream0412	0.14	828	415	1,652
Stream0412	0.29	1,473	738	2,939
Stream0412	0.73	3,405	1,706	6,793
Stream0412	1.34	5,315	2,664	10,605
Stream0412	2.27	7,353	3,685	14,671
Stream0413	0.32	1,715	859	3,421
Stream0416	0.30	1,815	909	3,620
Stream0418	0.23	1,279	641	2,553
Stream0419	1.06	4,714	2,363	9,406
Stream0420	1.11	4,164	2,087	8,308
Stream0421	0.14	826	414	1,647
Stream0422	0.27	1,621	813	3,235
Stream0423	0.37	2,163	1,084	4,316
Stream0424	0.23	1,576	790	3,144
Stream0425	1.04	5,330	2,672	10,635
Stream0425	2.04	8,557	4,289	17,073
Stream0425	2.18	8,636	4,328	17,230
Stream0426	0.19	1,313	658	2,619
Stream0427	1.20	6,175	3,095	12,321
Stream0427	1.96	7,975	3,997	15,912
Stream0427	2.32	9,278	4,650	18,512
Stream0429	0.23	1,571	787	3,134
Stream0429	0.41	2,252	1,129	4,494
Stream0430	0.05	424	213	847
Stream0430	0.26	1,478	741	2,948
Stream0431	1.62	5,844	2,929	11,660
Stream0431	2.50	8,092	4,056	16,146
Stream0431	3.39	10,239	5,131	20,429
Stream0431	3.68	10,953	5,490	21,855
Stream0432	1.03	4,909	2,460	9,794
Stream0432	1.14	5,121	2,567	10,218
Stream0436	1.29	6,395	3,205	12,760
Stream0438	0.25	1,682	843	3,357
Stream0441	0.32	1,956	980	3,903

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0442	0.30	2,198	1,102	4,386
Stream0443	0.25	1,645	824	3,282
Stream0444	0.78	4,118	2,064	8,217
Stream0444	1.13	5,510	2,762	10,994
Stream0444	1.86	7,479	3,748	14,922
Stream0445	0.27	1,749	877	3,490
Stream0446	0.21	1,482	743	2,958
Stream0447	1.03	6,063	3,039	12,098
Stream0447	1.84	6,483	3,249	12,936
Stream0447	2.34	7,727	3,873	15,418
Stream0448	0.51	3,380	1,694	6,744
Stream0449	0.19	1,564	784	3,121
Stream0450	0.14	1,191	597	2,376
Stream0451	0.39	2,571	1,289	5,130
Stream0451	0.68	3,907	1,958	7,795
Stream0451	1.01	4,940	2,476	9,856
Stream0452	0.16	1,097	550	2,189
Stream0453	0.13	993	497	1,981
Stream0454	0.31	2,051	1,028	4,092
Stream0455	1.16	5,597	2,805	11,168
Stream0455	2.07	8,191	4,105	16,343
Stream0455	2.44	8,740	4,381	17,439
Stream0456	0.35	2,222	1,114	4,434
Stream0459	0.15	1,128	565	2,250
Stream0460	0.19	1,442	723	2,878
Stream0461	0.37	1,875	939	3,740
Stream0462	0.31	1,864	934	3,718
Stream0468	0.13	911	457	1,818
Stream0469	0.13	1,113	558	2,220
Stream0470	0.22	1,393	698	2,780
Stream0470	0.46	2,588	1,297	5,163
Stream0470	1.80	7,930	3,975	15,823
Stream0470	2.03	8,311	4,165	16,582
Stream0470	2.37	9,187	4,604	18,330
Stream0471	0.19	1,219	611	2,433
Stream0472	0.24	1,600	802	3,192
Stream0474	0.23	1,619	811	3,230
Stream0476	0.77	3,983	1,996	7,948

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0476	1.39	6,150	3,082	12,270
Stream0478	0.16	1,108	555	2,211
Stream0479	0.41	2,664	1,335	5,316
Stream0480	0.45	2,465	1,235	4,917
Stream0480	1.09	4,709	2,360	9,396
Stream0481	0.17	1,025	514	2,046
Stream0482	0.22	1,429	716	2,852
Stream0482	0.50	2,694	1,350	5,376
Stream0482	0.93	4,308	2,159	8,595
Stream0483	0.26	1,761	882	3,513
Stream0484	0.36	2,489	1,247	4,966
Stream0485	0.24	1,600	802	3,193
Stream0486	0.34	2,296	1,151	4,581
Stream0487	0.19	1,538	771	3,068
Stream0488	1.08	6,466	3,240	12,901
Stream0488	1.29	6,590	3,303	13,149
Stream0489	0.51	2,920	1,463	5,825
Stream0489	0.87	4,629	2,320	9,236
Stream0489	1.20	6,083	3,049	12,137
Stream0489	2.13	8,549	4,285	17,058
Stream0489	2.89	10,987	5,507	21,922
Stream0490	0.31	1,873	939	3,737
Stream0491	0.33	2,079	1,042	4,149
Stream0492	0.16	1,242	622	2,477
Stream0493	0.72	3,833	1,921	7,647
Stream0495	0.30	2,345	1,175	4,678
Stream0495	0.63	4,127	2,068	8,235
Stream0495	0.83	4,882	2,447	9,741
Stream0496	0.16	1,405	704	2,803
Stream0497	0.14	1,267	635	2,529
Stream0500	0.20	1,394	699	2,781
Stream0501	0.10	743	372	1,483
Stream0502	1.12	5,342	2,677	10,659
Stream0502	2.20	8,259	4,139	16,478
Stream0503	0.05	429	215	857
Stream0504	1.00	4,934	2,473	9,844
Stream0504	1.90	8,182	4,101	16,326
Stream0505	0.22	1,577	790	3,146

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0506	0.84	4,261	2,136	8,502
Stream0508	0.40	2,681	1,343	5,348
Stream0509	0.15	1,116	559	2,226
Stream0510	0.30	1,701	853	3,395
Stream0513	0.50	2,996	1,502	5,978
Stream0514	0.67	3,686	1,847	7,355
Stream0515	0.47	2,907	1,457	5,800
Stream0517	0.18	1,048	525	2,091
Stream0518	0.13	860	431	1,715
Stream0518	1.44	5,660	2,837	11,294
Stream0518	1.53	5,486	2,750	10,947
Stream0518	1.72	6,075	3,045	12,122
Stream0518	2.40	7,691	3,854	15,345
Stream0518	3.26	8,962	4,491	17,881
Stream0518	4.18	10,741	5,383	21,432
Stream0518	5.17	12,132	6,081	24,207
Stream0519	0.19	1,335	669	2,664
Stream0521	0.16	1,149	576	2,292
Stream0522	0.14	1,035	519	2,066
Stream0523	0.05	419	210	836
Stream0523	0.37	2,323	1,164	4,636
Stream0523	0.50	2,840	1,423	5,667
Stream0523	1.10	5,560	2,786	11,093
Stream0523	1.45	6,292	3,153	12,554
Stream0524	0.39	2,564	1,285	5,116
Stream0525	1.00	4,195	2,102	8,370
Stream0525	1.11	4,449	2,230	8,878
Stream0526	0.29	1,938	971	3,866
Stream0527	0.18	1,406	705	2,805
Stream0528	0.42	2,628	1,317	5,244
Stream0531	0.09	677	339	1,351
Stream0532	0.03	301	151	601
Stream0532	0.22	1,502	753	2,996
Stream0533	0.17	1,383	693	2,760
Stream0533	0.56	3,441	1,725	6,866
Stream0534	0.32	2,033	1,019	4,057
Stream0535	0.22	1,783	893	3,557
Stream0536	0.41	2,210	1,107	4,409

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0537	0.48	2,788	1,397	5,563
Stream0538	1.05	5,287	2,650	10,550
Stream0538	1.30	5,812	2,913	11,597
Stream0538	2.01	8,115	4,067	16,191
Stream0538	2.97	10,421	5,223	20,794
Stream0540	0.33	2,141	1,073	4,272
Stream0540	0.52	3,305	1,657	6,595
Stream0541	0.18	1,358	680	2,709
Stream0545	0.37	2,501	1,253	4,990
Stream0545	0.48	2,984	1,495	5,953
Stream0546	1.01	4,716	2,363	9,409
Stream0546	2.00	7,575	3,796	15,113
Stream0546	2.38	8,567	4,294	17,094
Stream0547	1.96	8,164	4,092	16,289
Stream0547	2.25	8,281	4,150	16,522
Stream0549	0.62	3,442	1,725	6,867
Stream0552	0.05	412	207	823
Stream0552	0.41	2,314	1,160	4,617
Stream0553	0.16	899	451	1,794
Stream0554	0.35	1,922	963	3,834
Stream0555	0.10	720	361	1,436
Stream0556	0.43	2,109	1,057	4,209
Stream0557	0.17	1,050	526	2,095
Stream0557	1.05	3,985	1,997	7,951
Stream0557	1.50	5,127	2,569	10,229
Stream0558	0.12	1,144	573	2,282
Stream0558	0.35	2,583	1,295	5,155
Stream0558	0.58	4,204	2,107	8,388
Stream0559	0.21	1,641	822	3,274
Stream0562	0.17	1,347	675	2,688
Stream0562	1.12	6,630	3,323	13,228
Stream0562	1.25	6,525	3,270	13,019
Stream0567	0.54	3,465	1,736	6,913
Stream0567	0.76	4,437	2,224	8,853
Stream0568	0.19	1,362	683	2,717
Stream0569	1.08	5,709	2,861	11,392
Stream0569	2.08	7,881	3,950	15,725
Stream0569	2.81	9,853	4,938	19,659

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0569	3.62	11,742	5,885	23,429
Stream0569	3.91	12,439	6,234	24,819
Stream0570	0.67	3,584	1,796	7,151
Stream0571	0.27	1,740	872	3,472
Stream0572	0.80	3,870	1,940	7,722
Stream0573	0.70	3,837	1,923	7,655
Stream0574	1.00	5,112	2,562	10,200
Stream0574	1.11	5,144	2,578	10,264
Stream0575	0.43	2,107	1,056	4,204
Stream0576	1.00	4,745	2,378	9,468
Stream0576	1.21	5,408	2,710	10,790
Stream0578	0.22	1,544	774	3,080
Stream0579	0.07	440	221	878
Stream0579	0.22	1,281	642	2,557
Stream0580	0.85	4,155	2,082	8,290
Stream0581	0.70	3,622	1,815	7,226
Stream0583	0.44	2,907	1,457	5,800
Stream0584	1.00	5,338	2,675	10,651
Stream0584	2.00	8,377	4,198	16,713
Stream0584	2.38	9,442	4,732	18,840
Stream0586	0.71	4,422	2,216	8,824
Stream0587	0.10	849	425	1,693
Stream0587	0.40	2,584	1,295	5,155
Stream0588	0.08	673	337	1,342
Stream0588	0.27	1,878	941	3,747
Stream0589	0.24	1,747	876	3,486
Stream0591	0.33	2,195	1,100	4,379
Stream0592	0.35	2,470	1,238	4,928
Stream0594	0.10	1,203	603	2,400
Stream0594	0.27	2,321	1,163	4,630
Stream0595	0.19	1,517	760	3,026
Stream0597	0.18	1,436	720	2,865
Stream0599	1.07	5,828	2,921	11,628
Stream0599	2.11	9,404	4,713	18,763
Stream0600	0.38	2,624	1,315	5,236
Stream0601	0.13	1,443	723	2,879
Stream0601	0.18	1,602	803	3,197
Stream0602	0.17	1,518	761	3,028

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0603	0.07	929	465	1,853
Stream0603	0.25	2,132	1,069	4,255
Stream0604	0.35	2,392	1,199	4,773
Stream0605	0.05	572	287	1,141
Stream0605	0.15	1,319	661	2,632
Stream0606	0.28	2,026	1,015	4,043
Stream0607	0.47	3,448	1,728	6,880
Stream0608	0.89	4,527	2,269	9,033
Stream0609	0.53	2,902	1,454	5,789
Stream0610	0.60	3,740	1,875	7,463
Stream0612	0.75	4,241	2,126	8,462
Stream0614	0.69	4,056	2,033	8,093
Stream0616	0.28	1,757	881	3,506
Stream0617	0.80	4,476	2,244	8,932
Stream0620	0.44	2,440	1,223	4,867
Stream0621	0.04	396	199	790
Stream0621	0.26	1,907	956	3,805
Stream0623	0.94	4,475	2,243	8,929
Stream0627	0.43	2,809	1,408	5,604
Stream0628	0.73	4,435	2,223	8,849
Stream0629	0.49	3,198	1,603	6,381
Stream0630	0.26	1,684	844	3,361
Stream0631	0.62	4,127	2,069	8,235
Stream0632	0.30	2,170	1,088	4,330
Stream0634	0.46	2,905	1,456	5,797
Stream0635	0.11	652	327	1,302
Stream0636	0.14	1,046	524	2,087
Stream0637	0.55	3,738	1,873	7,458
Stream0638	0.10	792	397	1,579
Stream0639	0.11	816	409	1,628
Stream0640	0.89	3,847	1,928	7,676
Stream0641	0.09	682	342	1,361
Stream0642	1.06	5,899	2,956	11,770
Stream0643	0.31	2,165	1,085	4,319
Stream0644	0.38	2,482	1,244	4,952
Stream0647	0.31	2,119	1,062	4,229
Stream0649	1.08	5,902	2,958	11,776
Stream0649	1.75	7,682	3,850	15,327

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0650	0.40	2,439	1,222	4,866
Stream0650	0.66	3,798	1,903	7,578
Stream0651	0.23	1,950	978	3,892
Stream0652	0.31	2,263	1,134	4,514
Stream0652	0.49	3,302	1,655	6,589
Stream0652	0.79	5,027	2,519	10,029
Stream0652	1.85	8,534	4,277	17,027
Stream0652	2.57	9,166	4,594	18,289
Stream0653	0.12	1,023	513	2,042
Stream0654	0.29	1,982	993	3,954
Stream0655	0.14	1,201	602	2,395
Stream0658	0.25	1,759	882	3,510
Stream0659	1.02	5,498	2,755	10,969
Stream0659	1.81	7,672	3,845	15,308
Stream0660	0.22	1,860	932	3,712
Stream0660	0.36	2,547	1,277	5,082
Stream0663	1.13	6,182	3,098	12,334
Stream0666	1.03	4,849	2,430	9,676
Stream0666	1.30	5,542	2,778	11,059
Stream0667	0.12	1,173	588	2,340
Stream0669	0.29	2,409	1,207	4,807
Stream0669	0.58	3,935	1,972	7,851
Stream0669	1.47	7,485	3,751	14,934
Stream0673	0.19	1,526	765	3,045
Stream0674	1.04	5,720	2,867	11,412
Stream0674	1.99	8,506	4,263	16,971
Stream0674	2.18	9,070	4,546	18,097
Stream0675	1.16	6,328	3,172	12,627
Stream0675	1.97	8,301	4,160	16,563
Stream0675	2.45	9,635	4,829	19,224
Stream0676	1.08	5,505	2,759	10,984
Stream0676	1.31	5,918	2,966	11,809
Stream0679	0.21	1,853	928	3,696
Stream0679	0.60	3,973	1,991	7,927
Stream0680	1.15	5,743	2,879	11,460
Stream0680	1.55	6,832	3,424	13,631
Stream0681	0.28	1,951	978	3,892
Stream0682	0.21	1,560	782	3,113

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Stream0685	0.15	1,042	522	2,079
Stream0691	0.19	1,362	682	2,717
Stream0692	0.09	722	362	1,440
Stream0693	0.24	1,781	892	3,553
Stream1000	0.47	1,833	918	3,657
Stream1002	0.53	2,047	1,026	4,085
Stream1003	0.03	370	185	738
Stream1004	0.27	1,308	656	2,611
Stream1005	0.92	3,036	1,522	6,058
Stream1006	0.30	1,446	725	2,886
Stream1007	0.12	943	473	1,881
Stream1009	0.83	2,719	1,362	5,424
Stream1010	0.83	3,206	1,607	6,397
Stream1011	0.21	1,801	903	3,594
Stream1012	0.33	1,578	791	3,149
Stream1013	0.40	1,303	653	2,600
Stream1014	0.78	4,803	2,407	9,582
Stream1015	0.63	2,474	1,240	4,936
Stream1164	1.42	3,846	1,928	7,675
Stream1232	0.32	1,507	755	3,007
Stream1332	1.23	4,328	2,169	8,635
Stream9235	1.00	4,732	2,372	9,442
Stream9235	1.02	4,840	2,426	9,657
SWEDE CREEK	0.51	2,772	1,390	5,532
SWEDE CREEK	0.79	3,729	1,869	7,440
SWEDE CREEK	2.72	8,862	4,441	17,682
SWEDE CREEK	3.07	9,418	4,720	18,792
SWEDE CREEK	7.05	17,396	8,719	34,710
SWEDE CREEK	8.13	19,232	9,639	38,373
Swine Creek	0.38	1,657	830	3,306
Swine Creek	0.49	2,134	1,070	4,259
Swine Creek	0.67	2,565	1,286	5,118
Swine Creek	1.69	5,635	2,824	11,244
Swine Creek	5.13	11,698	5,863	23,340
Swine Creek	7.50	14,724	7,379	29,377
Swine Creek	10.67	19,427	9,736	38,762
Swine Tributary 2	0.10	458	230	914
Swine Tributary 2	0.59	2,149	1,077	4,288

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Swine Tributary 2	1.33	4,136	2,073	8,253
Swine Tributary 2	1.52	4,362	2,186	8,703
Swine Tributary 4	0.10	534	268	1,066
Swine Tributary 4	0.47	2,076	1,041	4,143
Swine Tributary 4	1.36	4,839	2,425	9,656
Swine Tributary 4	2.24	6,770	3,393	13,508
Swine Tributary 4	2.58	7,345	3,681	14,654
Swine Tributary 6	0.06	320	160	639
Tegener Creek	0.64	3,061	1,534	6,107
Tegener Creek	1.59	5,816	2,915	11,605
Tegener Creek	1.75	6,334	3,175	12,638
Tegener Creek	4.19	12,231	6,130	24,403
Tegener Creek	4.77	12,702	6,366	25,344
Tegener Creek	5.19	13,490	6,761	26,916
Tegener Creek	5.47	13,819	6,926	27,572
Tegener Creek	6.29	15,192	7,614	30,312
Third Creek	1.00	5,091	2,552	10,158
Third Creek	2.00	8,194	4,107	16,350
Third Creek	5.46	16,279	8,159	32,480
Third Creek	6.96	18,555	9,299	37,021
Third Creek	7.37	18,610	9,327	37,132
Third Creek	7.82	19,511	9,778	38,929
Third Creek	13.50	28,870	14,469	57,603
Tom Creek	0.53	2,382	1,194	4,754
Tom Creek	1.00	3,751	1,880	7,484
Tom Creek	2.00	6,328	3,171	12,626
Tom Creek	2.60	7,555	3,786	15,074
Tom Creek	3.91	10,484	5,254	20,918
Tom Creek	5.83	13,722	6,877	27,378
Tom Creek	7.61	16,150	8,094	32,223
Tom Creek	8.60	17,423	8,732	34,764
Tom Creek	9.52	17,671	8,857	35,259
Tom Creek	10.48	17,789	8,915	35,493
Tom Creek	11.37	18,053	9,048	36,020
Tom Creek	12.20	19,050	9,548	38,010
Tom Tributary 11	0.69	4,009	2,009	7,999
Tom Tributary 11	0.85	4,368	2,189	8,715
Tom Tributary 12	0.86	3,458	1,733	6,899

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Tom Tributary 12	1.00	3,785	1,897	7,552
Tom Tributary 12	1.23	4,402	2,206	8,783
Tom Tributary 9	0.40	1,919	962	3,828
Tom Tributary 9	0.79	3,284	1,646	6,552
Tomas Creek	0.39	2,601	1,304	5,190
Tomas Creek	1.49	6,942	3,479	13,852
Town Creek	1.21	5,848	2,931	11,669
Town Creek	2.02	8,247	4,133	16,454
Town Creek	2.31	8,823	4,422	17,605
Town Creek	4.03	13,892	6,963	27,718
Town Creek	4.24	14,222	7,128	28,376
Town Creek	4.59	14,700	7,368	29,331
Town Creek	6.93	20,599	10,324	41,101
Town Creek	7.54	21,300	10,675	42,499
Town Creek	9.49	25,120	12,590	50,121
Town Creek	9.84	25,429	12,745	50,737
Town Creek	10.76	27,019	13,542	53,910
Town Creek	11.13	27,058	13,561	53,988
Town Creek	11.72	27,423	13,744	54,716
Town Creek	11.88	27,508	13,787	54,886
Town Creek	18.47	38,303	19,197	76,426
Town Creek	18.77	38,392	19,242	76,602
Town Creek	19.19	38,352	19,222	76,523
Town Creek	22.00	41,456	20,777	82,715
Town Creek	22.69	41,011	20,554	81,828
Town Creek	23.53	41,743	20,921	83,287
Turkey Bottom Creek	0.08	571	286	1,140
Turkey Bottom Creek	0.34	2,121	1,063	4,232
Turkey Bottom Creek	0.80	2,437	1,221	4,863
Turkey Bottom Creek	1.14	3,403	1,705	6,790
Turkey Bottom Creek	1.85	4,807	2,409	9,591
Turkey Bottom Creek	2.10	5,233	2,623	10,441
Turtle Creek	0.08	434	217	866
Turtle Creek	1.03	4,039	2,024	8,058
Turtle Creek	1.76	5,951	2,983	11,875
Turtle Creek	2.75	7,860	3,939	15,683
Turtle Creek	2.95	8,228	4,124	16,417
Turtle Creek	5.18	12,098	6,063	24,138

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Turtle Creek	5.82	13,067	6,549	26,072
Turtle Creek	6.87	15,006	7,521	29,940
Turtle Creek	7.54	15,693	7,865	31,312
Turtle Creek	8.54	16,937	8,489	33,794
Turtle Creek	9.59	18,433	9,238	36,778
Turtle Creek	10.70	19,903	9,975	39,712
Turtle Creek	11.39	20,760	10,405	41,422
Turtle Creek	12.39	21,646	10,849	43,190
Turtle Creek	12.69	21,693	10,872	43,283
Turtle Creek	16.07	25,780	12,920	51,437
Turtle Creek	25.42	36,738	18,413	73,303
Turtle Creek	25.81	36,854	18,471	73,533
Turtle Creek	26.65	38,988	19,540	77,791
Turtle Creek	32.99	45,581	22,845	90,947
Turtle Creek	33.33	45,603	22,855	90,989
Turtle Creek	36.38	48,366	24,240	96,502
Turtle Creek	37.27	49,205	24,661	98,177
Turtle Creek	37.84	49,454	24,786	98,673
Turtle Creek	38.58	49,976	25,047	99,715
Turtle Creek	38.89	49,857	24,988	99,477
Turtle Creek	40.29	50,358	25,239	100,477
Turtle Creek	48.55	57,232	28,684	114,192
Turtle Creek	55.96	63,606	31,878	126,910
Turtle Creek	56.96	64,239	32,196	128,174
Turtle Creek	57.28	64,032	32,092	127,761
Turtle Creek	57.76	64,043	32,098	127,783
Turtle Creek	59.88	65,013	32,584	129,718
Turtle Creek	63.62	67,906	34,034	135,490
Turtle Creek	63.73	67,812	33,986	135,302
Turtle Creek	65.03	68,279	34,220	136,234
Turtle Creek	65.37	68,388	34,275	136,451
Turtle Creek	66.23	68,134	34,148	135,946
Turtle Creek	70.51	71,094	35,632	141,852
UNNAMED TRIBUTARY NO. 2	0.74	3,341	1,674	6,666
UNNAMED TRIBUTARY NO. 2	1.00	4,027	2,018	8,035
UNNAMED TRIBUTARY NO. 2	1.24	4,725	2,368	9,427
Verde Creek	1.54	7,625	3,822	15,214
Verde Creek	2.61	11,092	5,559	22,131

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Verde Creek	3.53	12,896	6,463	25,732
Verde Creek	4.43	15,434	7,735	30,795
Verde Creek	5.31	16,381	8,210	32,684
Verde Creek	8.06	21,798	10,925	43,493
Verde Creek	19.24	37,888	18,989	75,596
Verde Creek	21.70	41,512	20,805	82,828
Verde Creek	24.46	44,072	22,088	87,936
Verde Creek	25.07	44,577	22,341	88,942
Verde Creek	29.54	49,996	25,057	99,755
Verde Creek	30.25	50,474	25,297	100,708
Verde Creek	31.20	50,904	25,512	101,567
Verde Creek	31.80	49,802	24,960	99,369
Verde Creek	35.86	53,533	26,830	106,813
Verde Creek	37.68	54,948	27,539	109,636
Verde Creek	37.90	55,074	27,602	109,887
Verde Creek	38.01	55,062	27,597	109,864
Verde Creek	38.27	55,132	27,631	110,003
Verde Creek	38.52	54,918	27,524	109,575
Verde Creek	43.62	60,121	30,132	119,957
Verde Creek	44.26	60,690	30,417	121,093
Verde Creek	45.23	60,494	30,319	120,702
Verde Creek	46.18	60,959	30,552	121,629
Verde Creek	46.77	60,818	30,481	121,349
Verde Creek	47.76	61,346	30,746	122,402
Verde Creek	48.73	61,597	30,872	122,903
Verde Creek	49.05	61,660	30,903	123,028
Verde Creek	56.36	68,063	34,112	135,803
VIOLET CREEK	0.64	2,534	1,270	5,057
VIOLET CREEK	1.00	3,488	1,748	6,959
VIOLET CREEK	1.92	6,015	3,014	12,001
VIOLET CREEK	2.88	8,095	4,057	16,152
VIOLET CREEK	3.29	8,695	4,358	17,350
VIOLET CREEK	3.63	9,421	4,722	18,798
VIOLET CREEK	4.00	10,105	5,064	20,162
WALTER CREEK	0.63	2,167	1,086	4,324
WALTER CREEK	1.30	4,067	2,038	8,115
WALTER CREEK	2.11	5,432	2,722	10,837
WALTER CREEK	3.09	6,955	3,486	13,877

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
WALTER CREEK	4.31	10,011	5,017	19,974
WALTER CREEK	5.63	12,236	6,132	24,413
WALTER CREEK	6.23	12,738	6,384	25,416
WALTER CREEK	6.51	12,871	6,451	25,680
WASP CREEK	0.35	2,527	1,266	5,042
WASP CREEK	0.51	3,152	1,580	6,289
WASP CREEK	1.05	5,006	2,509	9,988
WASP CREEK	2.00	8,377	4,199	16,715
WASP CREEK	2.58	9,571	4,797	19,096
WASP CREEK	3.46	12,049	6,039	24,041
WASP CREEK	5.92	17,591	8,816	35,098
WASP CREEK	6.29	17,389	8,715	34,697
WASP CREEK	8.76	21,772	10,912	43,440
WASP CREEK	10.43	23,661	11,858	47,209
WASP CREEK	12.61	25,802	12,931	51,481
WASP CREEK	13.54	26,691	13,377	53,255
WASP CREEK	14.54	27,325	13,695	54,522
WASP CREEK	15.08	27,935	14,001	55,738
WENZEL CREEK	1.08	3,756	1,882	7,493
WENZEL CREEK	1.98	6,233	3,124	12,436
WENZEL CREEK	3.01	8,129	4,074	16,220
WENZEL CREEK	5.82	13,386	6,709	26,709
WERNER CREEK	0.46	2,788	1,397	5,563
WERNER CREEK	1.19	5,674	2,844	11,322
WERNER CREEK	1.53	7,694	3,856	15,352
WERNER CREEK	1.96	8,839	4,430	17,637
WERNER CREEK	2.90	11,351	5,689	22,649
WERNER CREEK	4.38	14,119	7,076	28,172
WERNER CREEK	7.81	21,783	10,917	43,462
West Creek	0.36	2,189	1,097	4,367
West Creek	1.20	5,729	2,871	11,431
West Creek	1.79	7,531	3,774	15,025
West Creek	2.94	10,764	5,395	21,478
West Creek	3.85	12,460	6,245	24,861
West Creek	5.15	15,817	7,927	31,559
West Creek	5.88	16,993	8,517	33,905
West Creek	7.28	20,398	10,223	40,698
West Dry Branch	0.35	1,557	780	3,107

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
West Dry Branch	1.17	4,040	2,025	8,061
West Dry Branch	3.25	8,899	4,460	17,755
West Dry Branch	4.10	10,551	5,288	21,052
West Dry Branch	4.74	11,722	5,875	23,389
West Goat Creek	1.00	5,028	2,520	10,033
West Goat Creek	1.84	7,313	3,665	14,592
West Goat Creek	2.77	9,974	4,999	19,901
West Goat Creek	3.56	12,071	6,050	24,085
West Goat Creek	4.27	13,454	6,743	26,844
West Goat Creek	5.04	14,645	7,340	29,221
WEST SISTER CREEK	0.15	833	417	1,661
WEST SISTER CREEK	0.73	3,020	1,514	6,027
WEST SISTER CREEK	1.05	3,921	1,965	7,824
WEST SISTER CREEK	1.68	5,065	2,538	10,106
WEST SISTER CREEK	7.98	16,041	8,040	32,007
WEST SISTER CREEK	13.68	24,713	12,386	49,309
WEST SISTER CREEK	16.03	27,083	13,574	54,038
WEST SISTER CREEK	16.81	28,773	14,421	57,410
WEST SISTER CREEK	17.81	28,829	14,449	57,522
WEST SISTER CREEK	18.08	28,415	14,241	56,695
WEST SISTER CREEK	19.61	29,510	14,790	58,880
WEST SISTER CREEK	26.96	38,206	19,148	76,230
WEST SISTER CREEK	31.30	49,252	24,685	98,271
WEST SISTER CREEK	36.88	55,239	27,685	110,216
WEST SISTER CREEK	38.36	54,951	27,541	109,641
WEST SISTER CREEK	39.20	55,596	27,864	110,928
White Oak Creek	1.00	4,817	2,414	9,610
White Oak Creek	1.12	5,023	2,518	10,023
WILLIE CREEK	0.41	1,938	971	3,867
WILLIE CREEK	1.07	4,220	2,115	8,419
WILLIE CREEK	2.77	9,129	4,575	18,215
WILLIE CREEK	3.52	10,263	5,144	20,477
Wilson Creek	0.15	1,032	517	2,058
Wilson Creek	1.01	4,469	2,240	8,918
Wilson Creek	1.99	7,157	3,587	14,280
Wilson Creek	2.35	7,639	3,828	15,241
Wilson Creek	3.34	10,130	5,077	20,213
Wilson Creek	4.01	10,847	5,436	21,642

Stream Name	Drainage Area (sq. mi)	1% Peak Q (cfs)	1%- Peak Q (cfs)	1%+ Peak Q (cfs)
Wilson Creek	5.85	14,601	7,318	29,134
Wolf Creek	0.94	5,205	2,608	10,384
ZINKE CREEK	0.22	1,745	874	3,481
ZINKE CREEK	0.67	4,008	2,009	7,998
ZINKE CREEK	0.93	4,608	2,310	9,195
ZINKE CREEK	2.42	9,155	4,588	18,266
ZINKE CREEK	3.28	10,528	5,276	21,006
ZINKE CREEK	5.86	16,575	8,307	33,072

Appendix B BLE Maps