

URBAN FLOOD ANALYSIS IN OKLAHOMA CITY, OKLAHOMA

By Robert L. Tortorelli, Thomas L. Huntzinger,
DeRoy L. Bergman, and Alphonse L. Patneaude, Jr.

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JAMES G. WATT, Secretary

GEOLOGICAL SURVEY
Dallas L. Peck, Director

For additional information write to:

James H. Irwin, District Chief
U.S. Geological Survey
Water Resources Division
Rm. 621, Old Post Office Bldg.
215 Dean A. McGee Avenue
Oklahoma City, Ok 73102
Telephone: 405-231-4256

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CONVERSION FACTORS

Inch-pound units used in this report may be converted to International System of Units (SI) by the following conversion factors:

<u>Multiply inch-pound units</u>	<u>By</u>	<u>To obtain SI units</u>
inch (in.)	2.540	centimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
square mile (mi ²)	2.590	square kilometer
foot per mile (ft/mi)	0.189	meter per kilometer
cubic foot per second (ft ³ /s)	0.0283	cubic meter per second

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ABSTRACT

Flood insurance study information from the Federal Emergency Management Agency is utilized to estimate future flood hazard in Oklahoma City, Oklahoma. Techniques are described for estimating future urban runoff estimates. A method of developing stream cross section rating curves is explained. Future runoff estimates are used in conjunction with the rating curves to develop an estimate of 50- and 100- year flood profiles that would result from future urban development.

INTRODUCTION

Rapid urban development of drainage basins in Oklahoma City, Oklahoma, has increased the need for information on flood hazard potential in the area. The U.S. Geological Survey, under contract by the Federal Emergency Management Agency (FEMA), has developed flood information for 435 miles of stream channel in the Oklahoma City metropolitan area (FEMA, 1982). Current rates of development in the drainage basins within Oklahoma City are so rapid that analysis based on present conditions becomes outdated in a short time. In an attempt to keep results of flood analysis current, the existing flood insurance study information was re-analyzed based on an estimated future development the City considers to be reasonable.

PURPOSE AND SCOPE

The results of this study will provide the City of Oklahoma City, Oklahoma, with flood hazard information based on analysis which assumes urban development as planned in the future. The stream reaches included in the analysis are those streams in the City of Oklahoma City, Oklahoma, Flood Insurance Study (FEMA,1982). The North Canadian River and the Canadian River main channels are excluded. Five major drainage basins are included in the study:

North Canadian River basin,

Canadian River basin,

Deep Fork basin,

Deer Creek basin,

Hog Creek basin,

Flood hazard information that was developed in this study include:

1. Stage-discharge relations for cross sections (flood plain shape) at selected locations along the study reaches based on flood insurance study results,
2. Estimates of flood discharge based on planned development ($R_L=4.1$) for the 1 and 2 percent probability floods (100- and 50- year recurrence intervals), and
3. Flood profiles based on planned development ($R_L=4.1$) for the 1 and 2 percent probability floods (100- and 50- year recurrence intervals).

METHOD OF STUDY

The techniques of hydrology and hydraulics used in this study are summarized by Huntzinger (1978). Basin characteristics were used to compute expected flood discharges for future conditions. Channel stage-discharge relations for each cross section were developed from four plotted stage-discharge points in the Flood Insurance Study. The future flood profiles were then determined by finding the elevations corresponding to the future flood discharge at each cross section.

Runoff estimates

Flood discharges at any given point on a stream depend on the physical and climatological characteristics of the area drained by the stream. Those characteristics that are the most significant in determining flood discharges in rural Oklahoma streams are drainage area, main-channel slope, and mean annual precipitation. Equations developed by Thomas and Corley (1977) relate the peak discharge of floods in rural basins having recurrence intervals of 2-, 5-, 10-, 25-, 50-, 100-, and 500-years to these stream basin characteristics.

Urban-basin peak flood discharges are normally larger than rural-basin peak flood discharges for any given frequency. Any increases in peak discharge generally depend on the amount and type of urban development in the basin.

Although urban runoff information for Oklahoma City is limited, Sauer (1974) has developed an approach for estimating flood discharge for urban basins in Oklahoma. The technique is based upon the assumption that the urban

flood frequency curve can be estimated by interpolating between the rural flood frequency curve (lower limiting discharges) and the flood frequency curve for a completely developed basin (upper limiting discharges). This interpolation for intermediate stages of development is based on an urban adjustment factor, R_L , defined by Leopold (1968) as the ratio of the urban 2-year peak discharge to the rural 2-year peak discharge. Figure 1 illustrates the relationship between the urban adjustment factor, R_L , and the percentage of the basin which is impervious and area served by storm sewers adapted from Leopold (1968) by Sauer (1974).

The rural or undeveloped flood frequency curve ($R_L=1$) can be estimated from Thomas and Corley (1977) as noted above. The completely developed flood frequency curve ($R_L=7$) is approximated by the rainfall intensity frequency curve assuming 100 percent runoff. Interpolation of Q_{NU} , the urban peak discharge for frequency N , can be determined for the general equation (Sauer, 1974),

$$\frac{Q_{NU}}{Q_2} = \frac{7 R_X (R_L - 1)}{6} + \frac{(7 - R_L)}{6} \frac{Q_N}{Q_2}$$

where Q_N is the peak discharge for rural conditions for frequency N ; R_X is the ratio of the 2-year, 24-hour rainfall to the N -year, 24-hour rainfall; and the other terms are as previously defined. Sauer (1974) provides information on the assumptions made and the equations used in developing the method.

The City of Oklahoma City has used an R_L of 4.1 as representative of full urban development on the basins in this study. Therefore, estimated future urban discharges used in this report were computed using an R_L of 4.1 in the above general equation for $N=50$ and 100 years.

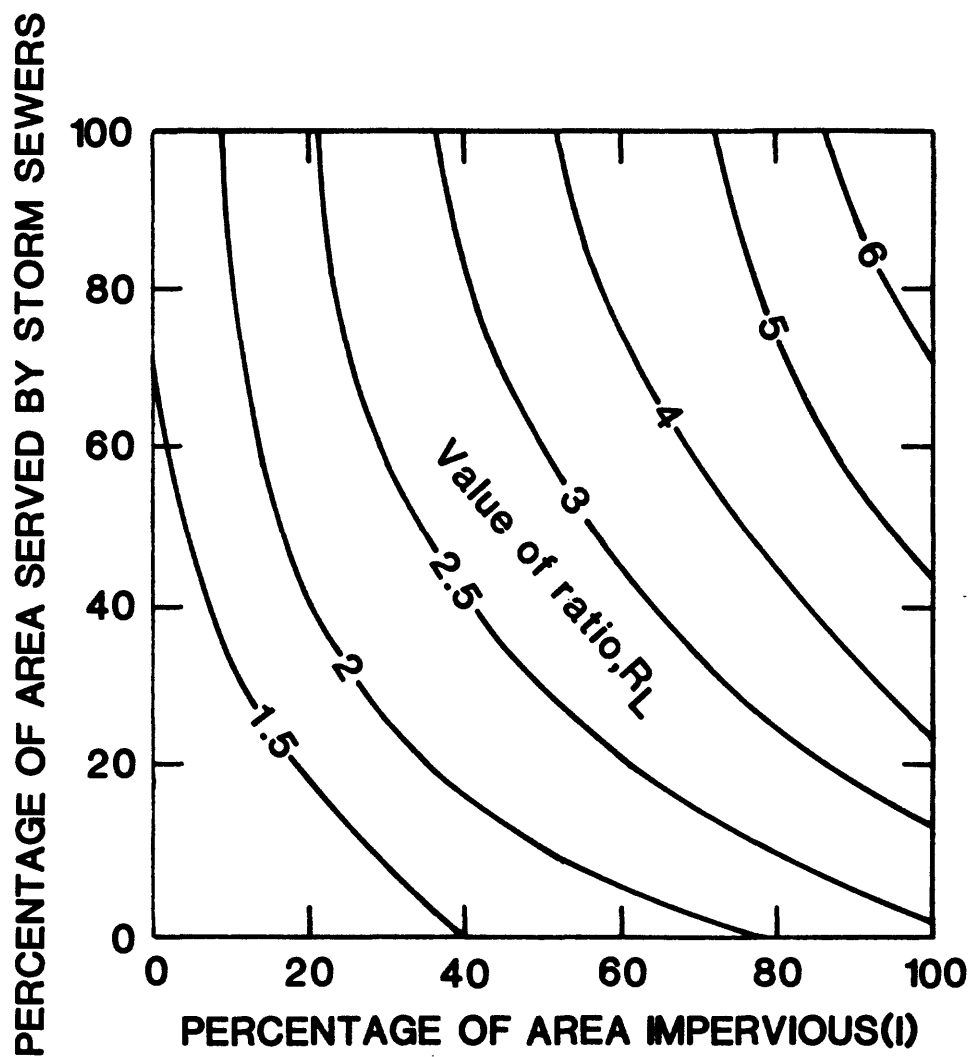


Figure 1.--The relationship of the urban adjustment factor, R_L , to the percentage of the area impervious and served by storm sewer. (Adapted from Leopold, 1968, by Sauer, 1974).

Rating curves

A cross-section rating curve, or stage-discharge relation, is determined by plotting the discharge against the water-surface elevation (stage) corresponding to that discharge for a range of discharges. Flood discharges were determined under present conditions (1980) for the 10-, 50-, 100-, and 500-year floods for all stream reaches included in the Oklahoma City Flood Insurance Study. Discharges were computed at points along stream channels where significant drainage area changes took place such as at the confluence of major tributaries. Water-surface elevations at each cross section for the four flood discharges were computed using a step-backwater computer program to route the selected discharges upstream.

The four stage-discharge points for selected cross sections in the Oklahoma City Flood Insurance Study were plotted on logarithmic plotting paper. The plots were graphically extended as needed to cover the range of future urban discharges used in the study.

Profile development

The cross-section rating curves and estimated future urban flood discharge relations may be used to define flood profiles for any urban development plan. To define these profiles, urban discharges of each desired frequency are computed for the planned urbanized basin above each cross section. Next, the elevation corresponding to each discharge is determined from the rating curve at each cross section. The elevations are then plotted against cross section location along the channel to obtain flood profiles for the planned urbanization.

Water-surface elevations for the 50- and 100-year flood discharges for an $R_L=4.1$ at selected cross sections in Oklahoma City were determined in this manner.

Limitations

Techniques described in this report are designed to make optimum use of information previously generated from a flood insurance study. In using this information for an urban study, approximations must be made where available data do not exactly meet the user's requirements; therefore, the application of these techniques have limitations.

Any alteration of the hydraulic characteristics of the stream channel such as a change in shape, slope, or vegetative cover may change the shape of the rating curves. Most streams in Oklahoma City have mild slopes that result in a subcritical state of flow. Subcritical flows at a cross section are downstream dependent. Therefore, channel changes at a particular point along a stream will not affect the rating curve downstream but may cause changes in rating curves immediately upstream; in fact, all rating curves upstream may be changed. The techniques described in this report assume there will be no change in the hydraulic characteristics of the stream channel with urban development.

RESULTS

The results of this study are presented in table 2.

Table 1 is included to assist in determining the stream cross section locations on appropriate Flood Insurance Study Map Panels and as a

cross-reference in finding the applicable flood data on Table 2.

Table 2 lists the flood data for both existing conditions and full urban development in downstream basin order. First, flooding source showing the stream cross section designation and location are given. Next, the discharge and water-surface elevation for the 10-, 50-, 100-, and 500-year floods are tabulated for existing conditions from the Oklahoma City Flood Insurance Study. Then, the discharge and water-surface elevation data for the 50-, and 100-year floods for an urban factor, R_L , of 4.1 is presented.

Note elevations and discharges based on existing conditions on upper Bluff Creek and Crooked Oak Creek were computed by the Corps of Engineers in which a 90 percent urbanization was assumed. Therefore, the flood elevations listed under urban factor $R_L=4.1$ are sometimes lower than the existing conditions from the flood insurance study because of the difference in computation methods and urbanization assumptions.

Table 1. Page number of Table 2 and Map Panel numbers for flooding sources of Oklahoma City, Oklahoma in downstream order by basin.

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY MAP PANEL NUMBER	FIS FIRM MAP PANEL NUMBER
North Canadian River Basin			
North Canadian River Tributary 8	16, 17	NCT8 5D	70, 75
North Canadian River Tributary 9	17	NCT9 8A	75
Crutch Creek	17, 18	N21SE, N22NE, N22SE, N23NE, N23NW	110, 140
Crutch Creek Tributary E	18, 19	N22NE, O22SW	110
Crutch Creek Tributary C	19	N22NE, N22SE, N22SW	110, 140
Crutch Creek Tributary C-1	19	N22SE	110
Crutch Creek Tributary F	19	N22SE	110
Crutch Creek Tributary G	20	N23NE	110
Cherry Creek	20	N22NW, M22NE, M22SE	140
Crooked Oak Creek	20-22	12B, M21NE, M21SE, M22NE, M22SE, M23NE	135, 140
Crooked Oak Creek Tributary A	22, 23	M22SE, M23NE	140
Lightning Creek	23, 24	LC13D, LC13E	165, 170, 175
Lightning Creek Tributary 1	24, 25	LC13D, LC13E	170
Lightning Creek Tributary 3	25	LC13E	170
Lightning Creek Tributary 6	25	LC13E, BLC15E	170
Twin Creek	25, 26	TBC15D, BLC15E	165, 200, 205
Brock Creek	26, 27	TBC15D	165, 170
North Canadian River Tributary 10	27	17C	200, 205
North Canadian River Tributary 12	27	17C	200, 205
North Canadian River Tributary 13	28	17C	200, 205
Camel Creek	28	CC18D	235, 240
Camel Creek East Branch	29	CC18D	240
Camel Creek Middle Branch	29	CC18D	240

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY MAP PANEL NUMBER	FIS FIRM MAP PANEL NUMBER
North Canadian River Basin (cont.)			
North Canadian Tributary 14	29, 30	NCT14 18	235
Mustang Creek	30	MC19D, MC23A	235, 265, 270, 300
Mustang Creek Tributary 1	31	MC19D, MC19E	240, 270
Mustang Creek Tributary 2	31	MC19E	270
Mustang Creek Tributary 3	31	MC19D, MC23A, MC23B	265, 270
Mustang Creek Tributary 4	32	MC23B	270
Mustang Creek Tributary 5	32	MC23A	265
Mustang Creek Tributary 6	32	MC23A	265
Mustang Creek Tributary 7	33	MC23A	265
Mustang Creek Tributary 8	33	MC23A	270, 300
Shell Creek	33, 34	SC24A, SC24B, SC25B	290, 295, 300, 315, 320
Shell Creek Tributary 1	34	SC24B	295, 315
Shell Creek Tributary 2	35	SC24B	295
Shell Creek Tributary 3	35	SC24B	295
Shell Creek Tributary 4	35, 36	SC24B, SC25A	295, 315
Shell Creek Tributary 5	36	SC24B, SC25A	295, 315
Shell Creek Tributary 6	36, 37	SC24B	295, 300
Shell Creek Tributary 7	37	SC24B, SC24C	295, 300
Canadian River Basin			
Canadian River Tributary 1	38	CRT1C1	175, 180
Tributary 1 of Canadian River	38	CRT1C1	175
Tributary 2 of Canadian River	38	CRT1C1	175
Tributary 3 of Canadian River	39	CRT1C1	175
Tributary 4 of Canadian River	39	CRT1C1	175
Tributary 5 of Canadian River	39	CRT1C1	175

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY MAP PANEL NUMBER	FIS FIRM MAP PANEL NUMBER
Canadian River Basin (cont.)			
Canadian River Tributary 2	39, 40	CRT2C2	210
Cow Creek	40	CCC5, CCC3, CCC4	205, 210
Cow Creek Tributary 1	41	CCC3	210
Cow Creek Tributary 2	41 42	CCC3, CCC5	210, 245
North Branch of Cow Creek Tributary 2	42	CCC5	245
West Branch of Cow Creek Tributary 2	42	CCC5	245
Cow Creek Tributary 3	43	CCC3, CCC4	205, 210
Deep Fork Basin			
Deep Fork	44-48	DF1, DF2, DF3, DF4, DF6, DF7, DF8, DF10, DF11	20, 45, 95, 125, 130, 160, 195, 200
Deep Fork Tributary 4	49	DF4	95
Deep Fork Tributary 5	49	DF4	95
Deep Fork Tributary 6	49, 50	DF4, DF6	95, 125
Deep Fork Tributary 7	50	DF4, DF5	95, 100
Harrison Creek	50-52	DF6, DC3	95, 125, 155
Harrison Creek Tributary 1	52	DF6	125
Harrison Creek Tributary 2	52, 53	DF6	125
West Branch Harrison Creek Tributary 2	53	DF6	125
Harrison Creek Tributary 3	53	DF6	125
Deep Fork Tributary 9	53	DF5, DF7	100, 130
Deep Fork Tributary 10	54	DF7	130
Deep Fork Tributary 11	54	DF7	130

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY MAP PANEL NUMBER	FIS FIRM MAP PANEL NUMBER
Deep Fork Basin (cont.)			
Deep Fork Tributary 12	55	DF7	130
Deep Fork Tributary 13	55	DF7	130
Deep Fork Tributary 13A	56	DF7	130
Deep Fork Tributary 13B	56	DF7	130
Deep Fork Tributary 16	56, 57	DF7	130
Deep Fork Tributary 16 West Branch	57, 58	DF7, DF8	130, 160
Deep Fork Tributary 17	58	DF7, DF8	130, 160
Deep Fork Tributary 18	59	DF8	160
Deep Fork Tributary 18 West Branch	59, 60	DF8	160
Deep Fork 20	60	DF8	160
Golf Course Creek	60, 61	DF9, DF10	160, 195
Golf Course Creek West Branch	61	DF9	160
Cloverleaf Creek	61	DF10	160, 195
Deep Fork Tributary 22	62	DF10	160, 195
Deer Creek Basin			
Chisholm Creek	62, 63	DC1, DC2, DC3	150, 155
Chisholm Creek Tributary 3	64	DC2	150
Chisholm Creek Tributary 4	64	DC2	150
Chisholm Creek Tributary 6	64	DC2	150
Chisholm Creek Tributary 8	64	DC3	155
Chisholm Creek Tributary 9	65	DC3	155

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY MAP PANEL NUMBER	FIS FIRM MAP PANEL NUMBER
Deer Creek Basin (cont.)			
Deer Creek	65, 66	DC7, DC9, DC10, DC11, DC12	220, 250, 255, 280, 285
Deer Creek Tributary 2	66	DC5	185
Walnut Creek	66-68	DC7, DC8	220, 225
Deer Creek Tributary 3	68	DC7, DC8	220, 225
Deer Creek Tributary 3 West Branch	69	DC8	225
Deer Creek Tributary 4	69	DC10	255
Deer Creek Tributary 5	69	DC9, DC10	250, 255
Deer Creek Tributary 6	69, 70	DC10	255
Deer Creek Tributary 7	70	DC10	255
Spring Creek of Deer Creek	70, 71	DC10	255
Deer Creek Tributary 8	71	DC10, DC12	255, 280
Deer Creek Tributary 11	72	DC11	280
Deer Creek Tributary 12	72	DC11, DC12	280
Deer Creek Tributary 13	72	DC12	285
Deer Creek Tributary 14	73	DC12	285

FLOODING SOURCE	TABLE 2 PAGE NO.	FIS FLOODWAY PANEL MAP NUMBER	FIS FIRM MAP PANEL NUMBER
Deer Creek Basin (cont.) Bluff Creek Bluff Creek Tributary A Bluff Creek Tributary A-1 Dry Creek of Bluff Creek Brush Creek of Dry Creek Spring Creek of Bluff Creek Spring Creek West Branch Silver Creek of Spring Creek Bluff Creek above Lake Hefner	74, 75 75 75, 76 76, 77 77, 78 78-80 80, 81 82 83	1, K15SW, K16NW, K16SW, K17NW K15SW, K16NW, K16NE 1, K15SW, K15SE K16NW, N16SW, K16SE, K17NE, K17SE K16SE K16SW, K17NW, J17NE, J17SE, J18NE, J18SE K16SW, J16SE, J17NE, J17NW, J17SW J17SE K18	185, 190 185 185 190 190 190, 195, 225, 230 190, 225 225 195
Hog Creek Basin Hog Creek Hog Creek Tributary 1 Hog Creek Tributary 2 Hog Creek East Branch Hog Creek West Branch Hog Creek West Branch Tributary 1 Hog Creek West Branch Tributary 2 Hog Creek West Branch Tributary 3 Hog Creek Tributary 3 Hog Creek Tributary 5 Hog Creek Tributary 6	83-85 85 85 85, 86 86, 87 87 87 87 88 88 88	H1, H2, H5, H6 H2 H1, H2 H2, H4, H5 H2, H3, H5, H6 H2 H2, H5 H6 H5 H5 H5	35, 60, 65, 80 65 35 30, 60 60, 65, 80, 85 65 60, 65 80 60 60 60

Table 2. Flood data for Oklahoma City, Oklahoma, flood sources under existing conditions and with urban factor, $R_L=4.1$.

The following are brief descriptions of the headings:

10-YEAR.--The flood event of a magnitude which is expected to be equalled or exceeded once on the average during any 10-year period (recurrence interval equals 10 years). This event has a 10 percent chance of being equalled or exceeded during any year.

50-YEAR.--The flood event of a magnitude which is expected to be equalled or exceeded once on the average during any 50-year period (recurrence interval equals 50 years). This event has a 2 percent chance of being equalled or exceeded during any year.

100-YEAR.--The flood event of a magnitude which is expected to be equalled or exceeded once on the average during any 100-year period (recurrence interval equals 100 years). This event has a 1 percent chance of being equalled or exceeded during any year.

500-YEAR.--The flood event of a magnitude which is expected to be equalled or exceeded once on the average during any 500-year period (recurrence interval equals 500 years). This event has a 0.2 percent chance of being equalled or exceeded during any year.

Although the recurrence interval represents the long term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year.

FT.--Foot.

MI.--Mile.

PEAKQ.--Peak discharge.

CFS.--Cubic foot per second.

WSELEV.--Water surface elevation.

NGVD.--National Geodetic Vertical Datum of 1929 (formerly called the Sea Level Datum of 1929) expressed in feet.

When peak discharge (PEAKQ) is constant, it is indicated only at the first and last applicable cross sections. The spaces in the intervening cross sections are left blank and the PEAKQ is not repeated in order to make the table more readable.

Table 2. Flood Data for Oklahoma City, Oklahoma.
Flood Sources under Existing Conditions and with Urban Factor, $R_L=4.1$.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
		10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
CROSS SECTION	DISTANCE (FT)*	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
North Canadian River Tributary 8															
C802	4,400	1,782	1118.63	3,213	1119.15	4,012	1119.40	5,998	1119.10	6,275	1120.03	7,160	1120.20		
C803	5,680		1126.57		1128.15		1128.76		1130.08		1130.22		1130.63		
C804	7,260		1130.24		1131.33		1131.76		1132.67		1132.78		1133.10		
C806	7,300		1130.25		1131.34		1131.77		1132.68		1132.79		1133.10		
C807	8,225		1133.22		1134.00		1134.31		1134.90		1134.98		1135.18		
C808	9,020		1134.61		1135.55		1135.84		1136.44		1136.50		1136.71		
C809	9,915	1,782	1136.19	3,213	1136.98	4,012	1137.34	5,998	1138.03	6,275	1138.14	7,160	1138.33		
C810	10,850	1,380	1139.48	2,491	1139.87	3,101	1140.08	4,623	1140.58	4,864	1140.66	5,546	1140.92		
C811	11,590		1142.19		1142.74		1142.96		1143.35		1143.41		1143.57		
C812	12,955		1146.82		1147.25		1147.44		1147.85		1147.88		1148.01		
C813	12,985		1150.54		1150.85		1150.97		1151.21		1151.26		1151.34		
C814	13,015		1150.91		1151.35		1151.47		1151.78		1151.79		1151.87		
C815	13,850	1,380	1152.57	2,491	1152.77	3,101	1152.98	4,623	1153.70	4,864	1153.87	5,546	1154.31		
C816	15,060	1,191	1157.33	2,146	1158.13	2,667	1158.31	3,969	1158.61	4,202	1158.64	4,789	1158.72		
C817	16,200		1161.14		1161.56		1161.78		1162.30		1162.38		1162.57		
C819	17,095		1161.97		1162.86		1163.28		1164.05		1164.10		1164.35		
C822	17,185		1162.03		1162.97		1163.42		1164.29		1164.48		1164.80		
C823	18,070		1164.73		1165.69		1166.04		1166.86		1166.99		1167.23		
C824	18,700		1168.43		1169.15		1169.53		1170.15		1170.23		1170.34		
C826	18,725		1169.01		1169.65		1172.82		1173.41		1173.51		1173.62		
C827	19,450		1170.57		1172.80		1173.05		1173.59		1173.62		1173.79		
C828	20,130		1173.29		1173.61		1173.80		1174.29		1174.38		1174.58		
C829	20,960	1,191	1176.74	2,146	1177.28	2,667	1177.43	3,969	1177.64	4,202	1177.65	4,789	1177.67		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS								URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
North Canadian River Tributary 8 (cont.)													
C830	21,590	1,191	1179.25	2,146	1179.72	2,667	1179.93	3,969	1180.41	4,202	1180.48	4,789	1180.64
C831	22,790	599	1181.82	1,083	1182.28	1,337	1182.47	1,976	1182.88	2,114	1182.99	2,405	1183.15
C832	24,060		1184.49		1185.03		1185.20		1185.55		1185.62		1185.71
C833	24,140		1191.50		1192.21		1192.35		1192.56		1192.59		1192.63
C835	25,160	599	1191.60	1,083	1192.30	1,337	1192.44	1,976	1192.65	2,144	1192.67	2,405	1192.68
North Canadian River Tributary 9													
CT906	2,386	1,420	1152.07	2,517	1152.71	3,114	1152.92	4,597	1153.40	4,632	1153.44	5,285	1153.60
CT908	2,435	1,420	1158.40	2,517	1159.12	3,114	1159.43	4,597	1160.06	4,632	1160.08	5,285	1160.18
CT909	3,060	1,303	1158.40	2,292	1159.12	2,826	1159.49	4,145	1160.13	4,155	1160.14	4,470	1160.33
CT910	3,925		1159.20		1159.86		1160.19		1160.83		1160.84		1161.04
CT911	4,810		1164.79		1165.23		1165.37		1165.70		1165.71		1165.82
CT912	5,775		1168.75		1169.36		1169.66		1170.18		1170.19		1170.34
CT913	6,825	1,303	1174.69	2,292	1175.28	2,826	1175.49	4,145	1175.85	4,155	1175.86	4,470	1175.98
CT914	8,660	1,023	1183.13	1,812	1183.84	2,232	1184.12	3,273	1184.66	3,249	1184.67	3,706	1184.82
CT916	8,775		1184.89		1184.95		1184.97		1185.00		1185.00		1185.01
CT917	9,450		1187.92		1188.85		1189.24		1189.99		1189.98		1190.23
CT918	10,160	1,023	1193.56	1,812	1193.97	2,232	1194.14	3,273	1194.43	3,249	1194.42	3,706	1194.52
Crutcho Creek													
CC16	50,060	6,840	1197.99	9,430	1200.51	11,100	1201.23	14,000	1201.82	7,983	1199.46	9,113	1200.33
CC18	52,610	6,840	1202.58	9,430	1203.67	11,100	1204.04	14,000	1204.65		1203.18		1203.54
CC19	54,270	7,340	1204.45	10,130	1205.85	11,690	1206.45	14,800	1207.65	7,983	1204.79	9,113	1205.38
CC20	57,070	3,850	1208.37	5,360	1208.94	6,230	1209.34	8,000	1210.10	5,150	1208.82	5,869	1209.19

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Crutcho Creek (cont.)															
CC22	58,100	3,850	1208.67	5,360	1209.59	6,230	1210.02	8,000	1201.81	5,150	1209.48	5,869	1209.89		
CC23	59,180		1210.61		1211.37		1211.72		1212.35		1211.28		1211.58		
CC24	60,700		1214.42		1215.38		1215.75		1216.32		1215.28		1215.60		
CC25	62,020		1216.43		1217.18		1217.53		1218.15		1217.07		1217.40		
CC26	64,825		1220.64		1221.45		1221.83		1222.49		1221.34		1221.65		
CC28	65,870	3,850	1225.37	5,360	1226.40	6,230	1226.85	8,000	1227.59	5,150	1226.30	5,869	1226.68		
CC29	66,590	3,090	1225.74	4,220	1226.71	4,720	1227.14	5,900	1227.84	4,095	1226.67	4,664	1227.08		
CC30	69,190	3,090	1231.77	4,220	1232.32	4,720	1232.45	5,900	1232.91	4,095	1232.29	4,664	1232.45		
CC32	70,200	2,340	1234.21	2,790	1234.91	3,140	1235.20	3,950	1235.74	3,249	1235.28	3,697	1235.57		
CC33	71,850		1237.72		1238.55		1238.86		1239.40		1238.97		1239.29		
CC34	73,040		1239.87		1240.62		1240.88		1241.41		1240.98		1241.28		
CC36	73,470		1240.80		1241.80		1242.10		1242.99		1242.26		1242.72		
CC39	74,720	2,340	1246.57	2,790	1247.67	3,140	1248.82	3,950	1250.72	3,249	1249.14	3,697	1250.12		
CC40	75,850	1,500	1248.46	2,060	1249.04	2,340	1249.70	2,900	1251.19	2,673	1250.57	3,039	1251.40		
CC41	76,850		1252.10		1252.82		1253.00		1253.36		1253.30		1253.41		
CC42	78,440	1,500	1255.44	2,060	1256.07	2,340	1256.37	2,900	1256.90	2,673	1256.69	3,039	1257.05		
CC43	79,750	980	1258.89	1,340	1259.48	1,490	1259.71	1,860	1260.17	1,499	1259.76	1,700	1259.99		
CC44	80,710		1265.33		1265.72		1265.87		1266.18		1265.90		1266.04		
CC45	82,670	980	1271.40	1,340	1271.79	1,490	1271.92	1,860	1272.21	1,499	1271.94	1,700	1272.08		
Crutcho Creek Tributary E															
CC55	2,980	2,360	1213.39	3,140	1213.70	3,460	1213.80	4,210	1214.01	3,534	1213.84	4,025	1213.96		
CC56	3,690		1216.02		1216.49		1216.67		1217.04		1216.69		1216.91		
CC59	4,360	2,360	1221.14	3,140	1221.61	3,460	1221.75	4,210	1222.09	3,534	1221.78	4,025	1222.00		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Crutcho Creek Tributary E (cont.)															
CC60	5,720	1,745	1222.55	2,340	1223.28	2,580	1223.53	3,160	1224.04	3,126	1224.00	3,562	1224.18		
CC64	8,910	1,130	1240.36	1,540	1240.85	1,700	1240.93	2,110	1241.10	1,950	1241.05	2,219	1241.15		
CC65	10,775	1,130	1245.69	1,540	1246.04	1,700	1246.20	2,110	1246.49	1,950	1246.37	2,219	1246.52		
Crutcho Creek Tributary C															
CC68	2,660	2,150	1209.14	3,070	1209.94	3,480	1210.26	4,500	1210.92	3,565	1210.37	4,061	1210.72		
CC71	4,060	2,150	1216.44	3,070	1216.95	3,480	1217.15	4,500	1217.55	3,565	1217.19	4,061	1217.43		
CC73	5,000	2,310	1220.49	3,220	1221.19	3,620	1221.37	4,630	1221.68	3,279	1221.23	3,735	1221.43		
CC74	6,580	2,310	1225.14	3,220	1225.82	3,620	1226.09	4,630	1226.69	3,279	1225.91	3,735	1226.17		
CC75	7,800	1,390	1226.64	1,970	1227.63	2,240	1228.00	2,900	1228.72	2,444	1228.25	2,782	1228.57		
CC77	9,570	1,390	1233.02	1,970	1234.15	2,240	1234.59	2,900	1235.47	2,444	1234.86	2,782	1235.25		
CC78	10,775	1,155	1238.32	1,610	1239.31	1,810	1239.69	2,300	1240.41	1,994	1239.95	2,269	1240.30		
CC79	12,190	1,155	1246.55	1,610	1247.36	1,810	1247.63	2,300	1248.18	1,994	1247.84	2,269	1248.16		
CC81	13,500	920	1252.84	1,250	1253.32	1,380	1253.49	1,700	1253.87	1,553	1253.70	1,766	1253.92		
CC82	15,020	920	1257.68	1,250	1258.34	1,380	1258.57	1,700	1259.09	1,553	1258.87	1,766	1259.19		
Crutcho Creek Tributary C-1															
CC84	3,090	920	1231.55	1,260	1232.21	1,400	1232.45	1,740	1232.94	1,772	1232.98	2,015	1233.26		
Crutcho Creek Tributary F															
CC86	2,480	1,410	1231.88	1,920	1232.34	2,130	1232.48	2,680	1232.78	2,173	1232.50	2,472	1232.67		
CC87	4,150		1238.81		1239.36		1239.57		1240.05		1239.60		1239.86		
CC88	5,470	1,410	1244.90	1,920	1245.47	2,130	1245.65	2,680	1246.05	2,173	1245.67	2,472	1245.91		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Crutcho Creek Tributary G															
CC111	2,120	1,210	1236.16	1,650	1236.71	1,840	1236.87	2,300	1237.35	2,015	1237.03	2,292	1237.32		
CC112	3,150	1,210	1239.92	1,650	1240.50	1,840	1240.74	2,300	1241.17	2,015	1240.91	2,292	1241.15		
Cherry Creek															
LC43	26,850	1,930	1234.39	2,650	1234.68	2,970	1234.77	3,740	1234.96	2,786	1234.73	3,171	1234.83		
LC44	27,775	1,930	1237.38	2,650	1237.88	2,970	1238.19	3,740	1238.40	2,786	1238.06	3,171	1238.28		
LC46	29,300	1,660	1243.97	2,250	1244.47	2,520	1244.61	3,150	1244.92	2,069	1244.32	2,354	1244.52		
LC48	31,500	1,140	1257.12	1,550	1257.59	1,730	1257.73	2,160	1258.01	1,736	1257.74	1,976	1257.89		
LC49	32,850	1,140	1264.23	1,550	1264.52	1,730	1264.64	2,160	1264.89	1,736	1264.65	1,976	1264.76		
Crooked Oak Creek															
CO 6	1,300	5,400	1168.37	7,600	1171.10	8,440	1172.31	10,500	1175.67	7,785	1171.30	8,899	1172.80		
CO 7	1,525		1168.40		1171.10		1172.31		1175.67		1171.30		1172.80		
CO 8	2,200		1171.27		1173.47		1174.37		1176.92		1173.60		1174.80		
CO 9	2,364		1171.58		1173.76		1174.68		1177.18		1174.00		1175.10		
CO10	2,775		1174.04		1178.80		1180.62		1183.56		1179.60		1180.90		
CO11	3,930		1175.82		1179.42		1181.18		1183.92		1179.80		1182.00		
CO12	4,750		1178.98		1181.50		1182.64		1184.70		1181.70		1183.10		
CO13	5,950		1181.92		1183.59		1184.26		1185.75		1183.70		1184.60		
CO14	6,600		1184.54		1185.72		1186.11		1187.04		1185.80		1186.30		
CO15	7,250		1185.91		1186.93		1187.25		1188.00		1187.00		1187.40		
CO16	7,315		1186.02		1187.02		1187.34		1188.08		1187.10		1187.50		
CO17	7,390		1186.20		1187.19		1187.51		1188.25		1188.30		1187.70		
CO18	7,490	5,400	1186.32	7,600	1187.33	8,440	1187.65	10,500	1188.38	7,785	1187.40	8,899	1187.90		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Crooked Oak Creek (cont.)															
C019	7,530	5,400	1186.46	7,600	1187.48	8,440	1187.79	10,500	1188.51	7,785	1187.60	8,899	1187.90		
C020	7,920		1187.90		1188.62		1188.85		1189.39		1188.70		1188.95		
C021	8,825		1189.56		1190.44		1190.71		1191.26		1190.60		1190.80		
C022	9,475		1190.34		1191.34		1191.66		1192.33		1191.40		1191.80		
C023	9,840	5,400	1190.97	7,600	1192.02	8,440	1192.35	10,500	1193.04	7,785	1192.10	8,899	1192.50		
C024	10,580	4,940	1192.30	6,980	1193.54	8,040	1193.92	10,200	1194.69	7,127	1193.60	8,143	1193.95		
C025	11,055	4,120	1192.65	5,880	1193.96	6,720	1194.39	8,650	1195.23	6,256	1194.10	7,143	1194.50		
C026	11,270		1193.20		1194.44		1194.85		1195.67		1194.70		1195.00		
C027	12,850	4,120	1195.38	5,880	1196.95	6,720	1197.49	8,650	1198.52	6,256	1197.20	7,143	1197.70		
C028	14,400	3,820	1197.70	5,540	1199.50	6,200	1200.15	8,000	1201.37	5,474	1199.52	6,246	1200.20		
C029	15,400		1200.19		1201.91		1202.56		1203.88		1202.00		1202.60		
C030	15,800		1202.44		1204.42		1205.19		1206.77		1204.50		1205.30		
C031	16,200		1204.88		1208.45		1209.16		1210.33		1208.55		1209.20		
C032	17,000		1205.49		1208.86		1209.59		1210.83		1208.80		1209.60		
C033	17,750		1205.97		1209.15		1210.63		1211.39		1209.20		1210.70		
C034	18,100		1210.31		1212.43		1212.60		1213.59		1212.50		1212.70		
C035	18,570		1210.76		1212.80		1213.04		1214.07		1212.80		1213.10		
C036	19,625		1213.77		1214.97		1215.30		1216.12		1215.00		1215.30		
C037	20,675		1214.74		1215.99		1216.41		1217.32		1216.00		1216.45		
C038	21,825	3,820	1216.80	5,450	1218.20	6,200	1218.70	8,000	1219.70	5,474	1218.30	6,246	1218.75		
C039	22,555	4,040	1218.43	5,690	1219.99	6,400	1220.46	8,200	1221.27	5,062	1219.30	5,773	1220.00		
C040	22,750		1220.79		1222.53		1222.70		1223.06		1221.70		1222.55		
C041	24,225		1222.09		1223.58		1223.90		1224.61		1222.80		1223.60		
C042	25,625	4,040	1225.44	5,690	1226.80	6,400	1227.29	8,200	1228.30	5,062	1226.20	5,773	1226.80		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Crooked Oak Creek (cont.)															
C043	26,950	4,040	1230.28	5,690	1231.58	6,400	1232.01	8,200	1232.91	5,062	1231.00	5,773	1231.60		
C044	28,025		1232.37		1233.71		1234.15		1235.07		1233.10		1233.75		
C045	29,075	4,040	1234.15	5,690	1235.46	6,400	1235.91	8,200	1236.89	5,062	1234.80	5,773	1235.50		
C046	29,305	3,540	1234.54	4,950	1235.82	5,560	1236.28	7,100	1237.27	4,182	1235.10	4,765	1235.65		
C047	30,250	2,480	1235.96	3,450	1237.10	3,810	1237.53	4,900	1238.53	3,287	1236.80	3,741	1237.50		
C048	31,450		1237.80		1238.83		1239.18		1240.10		1238.60		1239.10		
C049	32,400		1240.02		1240.89		1241.18		1241.95		1240.70		1241.10		
C050	33,385		1241.56		1242.44		1242.87		1244.28		1242.30		1242.80		
C051	33,510		1243.42		1245.78		1246.89		1249.61		1245.20		1246.80		
C052	33,950	2,480	1244.41	3,450	1246.54	3,810	1247.52	4,900	1250.08	3,287	1246.10	3,741	1247.40		
C053	35,125	2,240	1247.41	3,100	1248.23	3,440	1248.75	4,380	1250.66	2,683	1247.70	3,050	1248.20		
C054	35,470		1248.03		1248.87		1249.26		1250.66		1248.40		1248.80		
C055	35,825		1251.86		1253.09		1253.54		1254.73		1252.40		1253.00		
C056	36,360		1256.53		1261.38		1264.70		1265.72		1258.60		1261.20		
C057	36,450	2,240	1257.59	3,100	1262.24	3,440	1264.85	4,380	1265.84	2,683	1259.40	3,050	1261.80		
C058	37,750	1,990	1259.20	2,740	1262.28	3,070	1264.89	3,850	1265.87	2,312	1260.30	2,627	1261.80		
C059	38,225		1263.45		1264.04		1265.30		1266.20		1263.70		1263.95		
C060	40,000	1,990	1267.12	2,740	1267.95	3,070	1268.04	3,850	1268.68	2,312	1267.40	2,627	1267.80		
Crooked Oak Creek Tributary A															
C061	50	1,220	1235.20	1,660	1236.46	1,850	1236.95	2,280	1237.64	2,039	1237.20	2,317	1237.70		
C062	425		1237.60		1238.38		1238.60		1239.04		1238.80		1239.10		
C063	1,825		1242.80		1243.48		1243.83		1244.52		1244.10		1244.60		
C064	3,350	1,220	1248.91	1,660	1249.88	1,850	1250.22	2,280	1250.93	2,039	1250.50	2,317	1251.00		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Crooked Oak Creek Tributary A (cont.)															
C065	4,350	1,220	1253.14	1,660	1253.99	1,850	1254.32	2,280	1255.00	2,039	1254.60	2,317	1255.10		
Lightning Creek															
LG2A	3,860	4,980	1181.60	7,451	1184.21	8,019	1184.73	11,194	1187.25	9,298	1185.85	10,619	1186.90		
LG2D	5,150		1182.25		1184.94		1185.48		1188.08		1186.50		1187.55		
LG5	6,000		1184.94		1187.08		1187.50		1189.55		1188.35		1189.10		
LG5A	6,830		1188.33		1190.77		1191.29		1193.54		1192.17		1193.05		
LG5B	6,880		1188.53		1191.07		1191.59		1193.91		1192.60		1193.55		
LG5C	6,930		1188.53		1191.12		1191.64		1194.00		1192.60		1193.70		
LG6	6,960		1188.63		1191.28		1191.84		1194.24		1192.88		1193.90		
LG6A	7,860		1188.78		1191.42		1191.98		1194.34		1193.07		1193.98		
LG7A	8,460		1188.93		1191.56		1192.12		1194.48		1193.15		1194.15		
LG7B	9,260		1189.13		1191.72		1192.28		1194.64		1193.20		1194.20		
LG8	9,610		1189.13		1191.72		1192.28		1194.64		1193.25		1194.25		
LG9	10,600		1189.83		1192.29		1192.78		1195.07		1193.70		1194.65		
LG9A	10,950		1190.18		1192.64		1193.14		1195.57		1194.23		1195.19		
LG9B	11,200		1192.32		1194.61		1195.07		1200.00		1196.47		1198.60		
LG10	11,950		1195.02		1197.41		1197.87		1200.44		1198.97		1199.98		
LG10E	12,706		1196.21		1198.60		1199.06		1201.59		1199.98		1200.97		
LG12	12,760		1196.36		1198.64		1199.11		1201.59		1200.19		1201.25		
LG12A	13,100	4,980	1196.55	7,451	1198.89	8,019	1199.36	11,194	1202.09	9,298	1200.40	10,619	1201.58		
LG12B	13,500	3,244	1196.76	4,357	1199.14	5,416	1199.61	7,053	1202.09	6,802	1201.38	7,760	1203.45		
LG13	15,180		1198.51		1201.59		1201.96		1206.19		1204.40		1207.86		
LG14	16,350	3,244	1199.51	4,357	1202.09	5,416	1202.67	7,053	1206.41	6,802	1204.40	7,760	1207.92		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Lightning Creek (cont.)															
LG14A	17,420	3,244	1201.80	4,357	1203.41	5,416	1204.29	7,053	1207.41	6,802	1206.60	7,760	1208.80		
LG14B	18,400	3,244	1206.39	4,357	1207.75	5,416	1208.88	7,053	1210.39	6,802	1210.45	7,760	1211.45		
LG15	19,400	2,840	1209.46	3,731	1211.00	4,726	1212.24	6,114	1214.09	6,232	1214.21	7,110	1215.29		
LG17	19,500	2,840	1210.27	3,731	1211.91	4,726	1213.31	6,114	1214.96	6,232	1215.10	7,110	1215.91		
LG19	22,170	2,051	1213.33	2,356	1214.61	3,189	1216.18	3,912	1217.71	4,676	1218.97	5,328	1219.89		
LG20	24,000	979	1214.89	1,243	1215.96	1,867	1217.75	2,445	1219.16	4,220	1222.70	4,806	1223.40		
LG21	25,380		1222.10		1222.61		1223.61		1224.21		1225.52		1225.73		
LG23	25,800		1223.58		1224.13		1225.18		1225.96		1227.68		1228.00		
LG23A	26,400		1228.01		1228.71		1229.98		1230.91		1232.43		1232.70		
LG23B	26,800	979	1228.51	1,243	1229.27	1,867	1230.63	2,445	1231.63	4,220	1223.59	4,806	1233.71		
LG24	27,625	2,123	1228.85	2,300	1229.57	3,665	1230.96	5,010	1231.97	4,242	1231.44	4,832	1231.83		
LG26	27,760	2,123	1228.88	2,300	1229.60	3,665	1231.00	5,010	1232.02	4,242	1231.52	4,832	1231.96		
LG27	30,020	1,360	1239.29	2,041	1240.12	2,378	1241.08	3,199	1242.54	2,633	1241.73	2,994	1242.38		
LG29	31,040		1245.49		1247.40		1247.54		1248.17		1247.73		1248.05		
LG30	32,510		1249.36		1250.31		1250.76		1251.47		1250.33		1251.37		
LG31	32,600		1252.62		1253.32		1253.56		1254.27		1253.79		1254.08		
LG32	32,670		1253.32		1254.07		1254.36		1254.97		1254.58		1254.83		
LG33	34,100		1255.00		1255.67		1256.03		1256.74		1256.18		1256.58		
LG34	36,000		1259.01		1259.99		1260.44		1261.35		1260.73		1261.13		
LG35	36,050		1264.13		1264.35		1264.45		1264.65		1264.52		1264.60		
LG36	36,100	1,360	1264.58	2,041	1264.85	2,378	1264.98	3,199	1265.22	2,633	1265.08	2,994	1265.14		
Lightning Creek Tributary 1															
13	1,660	1,448	1210.18	2,173	1210.73	2,532	1211.00	3,404	1211.68	2,726	1211.11	3,104	1211.40		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Lightning Creek Tributary 1 (cont.)															
14	3,460	1,448	1215.93	2,173	1217.60	2,532	1217.78	3,404	1218.07	2,726	1217.91	3,104	1218.01		
15	5,380		1222.56		1223.89		1224.06		1224.47		1224.22		1224.40		
17T	5,500		1228.04		1228.31		1228.49		1228.69		1228.52		1228.63		
101	6,940		1229.40		1230.14		1230.44		1231.06		1230.57		1230.83		
103	7,023		1236.74		1237.10		1237.26		1237.61		1237.32		1237.48		
104	9,440	1,448	1240.81	2,173	1241.27	2,532	1241.46	3,404	1241.83	2,726	1241.52	3,104	1241.69		
Lightning Creek Tributary 3															
301	2,340	1,222	1224.13	1,909	1224.56	2,257	1224.73	3,112	1225.07	2,724	1224.92	3,101	1225.05		
303	2,600		1230.82		1231.73		1231.92		1232.18		1232.11		1232.16		
304	5,375	1,222	1242.54	1,909	1242.76	2,257	1242.87	3,112	1243.77	2,724	1243.15	3,101	1243.63		
Lightning Creek Tributary 6															
601	1,220	1,320	1240.33	1,982	1240.96	2,309	1241.44	3,103	1243.17	2,491	1241.73	2,836	1242.46		
602	2,740		1248.29		1249.88		1250.46		1251.19		1250.65		1250.97		
603	3,800		1252.94		1254.03		1254.87		1256.12		1255.60		1255.68		
604	5,820		1263.78		1265.62		1266.19		1266.87		1266.35		1266.68		
606	6,030	1,320	1267.40	1,982	1267.97	2,309	1268.21	3,103	1268.72	2,491	1268.34	2,836	1268.56		
Twin Creek															
TN01B	4,500	4,490	1188.28	6,773	1188.75	7,961	1188.92	10,826	1189.80	8,676	1189.10	9,912	1189.49		
TN01	6,320	4,490	1190.98	6,773	1193.28	7,961	1194.50	10,826	1194.50	8,676	1194.50	9,912	1194.50		
TN01A	7,090	2,373	1192.23	3,635	1194.91	4,285	1196.22	5,869	1196.22	4,986	1196.22	5,681	1196.22		
CUL1	8,450	2,373	1194.10	3,635	1195.41	4,285	1196.72	5,869	1196.72	4,986	1196.72	5,681	1196.72		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Twin Creek (cont.)																	
CUL2R	10,100	2,373	1197.95	3,635	1198.59	4,285	1198.85	5,869	1198.85	4,986	1198.85	5,681	1198.85				
CUL3E	10,400		1200.80		1201.29		1201.46		1201.52		1201.46		1201.46				1201.46
TN04	12,400		1205.64		1206.00		1206.14		1206.20		1206.16		1206.16				1206.18
TN05	13,710		1207.95		1208.00		1208.14		1208.20		1207.97		1207.97				1207.98
TN06	13,764		1208.18		1209.39		1209.76		1210.70		1208.50		1208.50				1208.91
TN1	15,090	2,373	1209.58	3,635	1214.49	4,285	1214.79	5,869	1215.01	4,986	1214.95	5,681	1215.00				1215.00
TN2	15,920	1,614	1212.98	2,552	1216.36	3,038	1216.92	4,223	1217.73	3,840	1217.59	4,371	1217.82				1217.82
TN3	16,690		1215.70		1220.49		1220.94		1221.61		1221.44		1221.66				1221.66
TN5	17,185		1217.61		1221.53		1221.54		1222.03		1221.86		1222.24				1222.24
TN6	19,090		1221.39		1222.20		1222.51		1224.33		1223.27		1224.63				1224.63
TN7	19,940		1224.55		1226.51		1227.36		1228.83		1227.80		1227.85				1227.85
TN8	22,430	1,614	1230.59	2,552	1232.11	3,038	1232.77	4,223	1234.07	3,840	1233.38	4,371	1234.30				1234.30
TN10	22,580	902	1235.00	1,547	1235.38	1,886	1235.54	2,733	1235.90	2,783	1235.93	3,167	1236.05				1236.05
TN11	24,440	902	1242.03	1,547	1242.74	1,886	1242.97	2,733	1243.43	2,783	1243.48	3,167	1243.66				1243.66
Brock Creek																	
1	2,620	3,005	1194.96	4,469	1196.37	5,210	1196.96	6,999	1198.26	5,515	1197.23	6,288	1197.78				1197.78
3	2,720		1196.39		1200.17		1200.44		1200.78		1200.51		1200.68				1200.68
4	4,300		1201.30		1201.33		1201.70		1202.38		1201.85		1202.18				1202.18
6	4,440	3,005	1202.56	4,469	1204.64	5,210	1204.96	6,999	1205.27	5,515	1205.00	6,288	1205.19				1205.19
7	7,125	2,296	1207.84	3,454	1210.71	4,041	1212.37	5,462	1212.66	4,440	1212.48	5,058	1212.59				1212.59
9	7,195		1208.44		1211.94		1212.91		1214.76		1213.40		1214.19				1214.19
10	9,355		1215.19		1217.03		1218.67		1221.36		1219.63		1220.86				1220.86
11	9,945	2,296	1221.55	3,454	1222.04	4,041	1222.22	5,462	1223.95	4,440	1222.48	5,058	1223.11				1223.11

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Brock Creek (cont.)																	
12	10,020	2,296	1221.80	3,454	1222.08	4,041	1222.22	5,462	1223.95	4,440	1222.48	5,058	1223.14				
13	12,760	2,296	1229.46	3,454	1232.33	4,041	1232.86	5,462	1234.16	4,440	1233.24	5,058	1233.80				
14	15,940	1,305	1235.65	2,067	1238.08	2,458	1238.36	3,421	1239.30	3,104	1238.85	3,532	1239.32				
16	16,020		1237.29		1238.88		1239.33		1242.88		1241.58		1243.30				
17	18,510		1247.71		1249.30		1249.50		1249.95		1249.81		1249.98				
18	21,630	1,305	1257.53	2,067	1258.81	2,458	1259.16	3,421	1259.95	3,104	1259.66	3,532	1260.00				
North Canadian Tributary 10																	
NC1001	5,360	814	1206.86	1,456	1208.37	1,799	1209.04	2,660	1210.52	2,900	1210.80	3,298	1211.18				
NC1003	5,400		1207.51		1209.19		1209.95		1211.67		1212.16		1212.85				
NC1004	7,580		1218.41		1220.72		1221.22		1221.42		1221.47		1221.52				
NC1005A	7,660		1222.99		1224.17		1224.50		1224.81		1224.89		1224.96				
NC1005	8,220		1223.13		1224.34		1224.70		1225.16		1225.30		1225.39				
NC1006	8,734		1225.65		1226.47		1226.77		1227.37		1227.50		1227.61				
NC1007	10,600	814	1232.39	1,456	1233.46	1,799	1233.60	2,660	1233.90	2,900	1134.00	3,298	1134.09				
NC1008	11,490	534	1237.07	951	1237.53	1,168	1237.77	1,718	1238.26	1,914	1238.38	2,172	1238.58				
NC1010	12,060	534	1239.25	951	1240.39	1,168	1240.88	1,718	1242.97	1,914	1243.85	2,172	1244.72				
North Canadian Tributary 12																	
1200	1,708	570	1206.69	1,020	1208.65	1,254	1209.39	1,848	1210.75	2,032	1210.96	2,308	1211.28				
1201T	2,610		1215.90		1220.39		1220.55		1220.86		1220.90		1221.00				
1202	4,130	570	1225.54	1,020	1226.34	1,254	1226.51	1,848	1227.06	2,032	1227.19	2,308	1227.48				
1203	6,440	294	1233.47	521	1234.15	635	1239.41	926	1234.71	1,064	1234.80	1,204	1234.90				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_f=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
North Canadian River Tributary 13															
1301	2,320	1,190	1210.13	2,124	1212.59	2,633	1213.34	3,909	1214.58	4,244	1214.90	4,830	1215.18		
1302	4,420		1218.70		1220.43		1220.98		1221.92		1222.07		1222.33		
1303	6,830		1222.96		1224.09		1224.54		1225.34		1225.46		1225.63		
1305	6,880		1222.98		1225.35		1225.66		1226.13		1226.39		1226.57		
1306	9,780	1,190	1228.25	2,124	1229.18	2,633	1229.64	3,909	1231.06	4,244	1231.30	4,830	1231.83		
1307	11,620	725	1233.24	1,298	1234.49	1,600	1234.85	2,364	1235.15	2,585	1235.56	2,939	1236.22		
Camel Creek															
CL1	2,780	1,740	1207.00	3,243	1209.99	4,047	1211.90	6,048	1215.65	6,376	1216.20	7,273	1217.60		
CL2	8,400		1226.47		1228.77		1228.90		1230.53		1230.87		1232.18		
CL4	8,500		1227.64		1231.05		1233.51		1238.59		1239.20		1241.20		
CL5	12,250		1238.24		1239.69		1239.90		1241.02		1241.20		1241.93		
CL6	16,630	1,740	1243.96	3,243	1245.18	4,047	1247.40	6,048	1248.90	6,376	1248.97	7,273	1249.47		
CL7	18,370	1,388	1244.96	2,513	1246.06	3,131	1247.90	4,672	1249.40	4,878	1249.56	5,564	1249.90		
CL9MC	18,410		1244.99		1247.19		1248.30		1253.02		1253.95		1256.20		
CL10	22,485	1,388	1257.45	2,513	1259.09	3,131	1259.70	4,672	1260.90	4,878	1261.04	5,564	1261.43		
CL10A	23,280	1,024	1258.70	1,848	1260.51	2,294	1261.24	3,408	1262.65	3,614	1262.93	4,117	1263.82		
CL12M	23,335		1261.29		1263.43		1263.78		1265.80		1266.52		1270.21		
CL13	26,920	1,024	1272.81	1,848	1274.70	2,294	1276.68	3,408	1277.36	3,614	1277.40	4,117	1277.61		
CL14	31,480	789	1290.79	1,434	1291.50	1,777	1291.89	2,638	1292.33	2,768	1292.46	3,153	1292.71		
CL16	31,579		1292.78		1293.29		1293.45		1293.91		1293.95		1294.21		
CL17	35,160	789	1311.26	1,434	1311.80	1,777	1311.84	2,638	1312.20	2,768	1312.28	3,153	1312.60		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Camel Creek East Branch															
7EB	1,230	560	1247.72	995	1248.99	1,221	1249.67	1,795	1250.84	2,015	1251.26	2,286	1251.61		
9EB	1,265		1248.31		1249.69		1250.88		1251.81		1252.01		1252.37		
1EB	5,650	560	1262.14	995	1262.74	1,221	1263.40	1,795	1264.38	2,015	1264.57	2,286	1264.72		
Camel Creek Middle Branch															
10A	1,170	551	1259.23	982	1260.78	1,206	1261.39	1,774	1262.73	1,975	1263.19	2,242	1264.23		
12T	1,195		1260.78		1262.87		1263.41		1265.69		1266.60		1268.10		
1MB	2,780		1269.54		1270.14		1270.36		1270.75		1270.88		1270.97		
2MB	5,140		1276.50		1279.24		1279.41		1279.77		1279.86		1279.98		
4MB	5,255	551	1279.83	982	1280.02	1,206	1280.06	1,774	1280.23	1,975	1280.32	2,242	1280.48		
North Canadian River Tributary 14															
14C	9,120	1,674	1214.27	2,477	1217.89	2,874	1218.21	3,832	1218.87	2,998	1218.38	3,413	1218.65		
14D	10,000		1224.51		1225.19		1226.85		1227.15		1226.90		1227.03		
14E	10,926		1230.70		1231.71		1231.85		1232.57		1231.92		1232.17		
1401	12,038		1235.75		1237.27		1237.65		1237.96		1237.76		1237.91		
1402	13,420		1242.56		1243.71		1243.84		1244.77		1243.91		1244.23		
1404	13,519		1254.40		1254.90		1255.09		1255.44		1255.19		1255.34		
1405	14,490		1255.60		1256.47		1257.00		1257.09		1257.01		1257.04		
1406	15,162		1268.56		1268.80		1268.91		1269.14		1268.95		1269.06		
1407	15,264		1268.93		1269.26		1269.41		1269.68		1269.42		1269.56		
1408	16,200		1269.02		1269.38		1269.55		1269.87		1269.60		1269.73		
1410	16,250	1,674	1276.53	2,477	1276.96	2,874	1277.14	3,832	1277.53	2,998	1277.20	3,413	1277.38		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
North Canadian River Tributary 14 (cont.)															
1411	17,530	1,674	1281.57	2,477	1282.09	2,874	1282.31	3,832	1282.77	2,998	1282.37	3,413	1282.57		
1413	17,574	1,674	1284.59	2,477	1285.04	2,874	1285.25	3,832	1285.72	2,998	1285.32	3,413	1285.52		
Mustang Creek															
MG 1	10,000	4,360	1231.00	8,640	1236.36	10,820	1237.73	16,465	1239.85	15,708	1239.50	17,991	1240.20		
MG 2	13,870	4,360	1233.25	8,640	1238.70	10,820	1240.12	16,465	1241.85	15,708	1241.80	17,991	1242.40		
MG 4	16,540	3,830	1234.14	7,590	1239.00	9,515	1240.44	14,460	1242.09	13,784	1241.50	15,782	1242.40		
OMG5	20,830	920	1238.86	1,270	1242.25	1,275	1243.28	1,625	1245.09	1,549	1244.50	1,744	1245.80		
OMG6	22,670	920	1241.92	1,270	1243.50	1,275	1244.15	1,625	1245.84	1,549	1245.50	1,744	1246.50		
MG 7	22,850	2,760	1243.28	5,470	1245.06	6,875	1245.75	10,415	1247.26	9,889	1245.70	11,314	1246.50		
MG 8	26,240	2,760	1248.80	5,470	1252.00	6,875	1253.10	10,415	1254.40	9,889	1254.10	11,314	1254.60		
MG 9	29,300	1,815	1259.92	3,585	1264.21	4,515	1264.87	6,795	1265.78	6,540	1265.70	7,469	1266.30		
MG10	33,100		1268.17		1272.00		1272.63		1273.83		1273.50		1274.25		
MG11	35,140		1274.80		1279.29		1280.13		1281.53		1281.50		1282.00		
MG12	38,320		1281.35		1284.75		1285.43		1286.50		1286.40		1286.70		
MG14	38,460		1288.03		1288.82		1289.13		1289.75		1289.60		1289.90		
MG15	39,500	1,815	1290.75	3,585	1292.25	4,515	1292.84	6,795	1294.10	6,540	1293.80	7,469	1294.50		
MG16	41,150	920	1297.83	1,810	1299.10	2,290	1299.67	3,425	1300.85	3,311	1300.60	3,774	1301.25		
MG17	42,650		1302.10		1303.71		1304.35		1305.50		1305.20		1305.70		
MG19	45,700	920	1325.13	1,810	1325.64	2,290	1325.83	3,425	1326.17	3,311	1326.10	3,774	1326.25		
Mustang Creek New Channel															
NMG5	17,850	3,980	1234.62	8,345	1239.50	10,795	1240.94	16,625	1242.34	15,848	1242.00	18,145	1242.40		
NMG6	18,850	3,980	1238.12	8,345	1241.91	10,795	1243.44	16,625	1245.95	15,848	1245.50	18,145	1246.70		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Mustang Creek Tributary 1															
1T1	2,220	1,495	1234.33	2,947	1239.82	3,715	1241.22	5,584	1242.71	5,371	1242.50	6,131	1243.60		
2T1	6,760		1243.94		1246.39		1247.37		1249.13		1248.50		1249.40		
3T1	10,445		1258.50		1260.18		1260.85		1262.32		1262.00		1262.60		
3T1R	10,840		1259.50		1262.93		1263.13		1263.53		1263.50		1263.90		
4T1R	11,030		1261.43		1264.02		1264.54		1266.72		1266.20		1267.00		
4T1	13,460	1,495	1271.20	2,947	1271.83	3,715	1272.54	5,584	1276.21	5,371	1275.50	6,131	1277.50		
5T1	16,880	751	1288.34	1,476	1289.21	1,870	1289.35	2,790	1290.18	2,687	1290.10	3,061	1290.30		
6T1	17,250	751	1289.57	1,476	1290.25	1,870	1290.57	2,790	1291.06	2,687	1291.00	3,061	1291.20		
7T1	20,200	457	1308.35	894	1308.50	1,134	1309.04	1,681	1309.65	1,642	1309.60	1,867	1309.80		
8T1	22,200	457	1326.14	894	1327.69	1,134	1327.86	1,681	1328.66	1,642	1328.60	1,867	1328.80		
Mustang Creek Tributary 1 West Branch															
2T1WB	4,850	492	1300.33	1,107	1301.21	1,341	1301.59	1,946	1301.86	2,467	1302.00	2,810	1302.20		
Mustang Creek Tributary 2															
2T2	3,320	2,110	1253.41	4,145	1254.70	5,195	1255.15	7,825	1256.13	7,689	1256.00	8,776	1256.45		
3T2	6,380		1263.45		1264.36		1264.53		1264.81		1264.80		1265.00		
4T2	9,880		1268.89		1270.36		1270.88		1271.96		1271.80		1272.30		
5T2	12,160	2,110	1273.80	4,145	1275.55	5,195	1276.13	7,825	1277.21	7,689	1276.90	8,776	1277.35		
6T2	13,340	1,460	1275.89	2,880	1278.05	3,625	1278.88	5,445	1280.60	5,268	1280.20	6,011	1280.90		
8T2	13,460		1276.53		1278.06		1278.89		1280.61		1280.20		1280.90		
9T2	16,280	1,460	1283.28	2,880	1285.31	3,625	1285.93	5,445	1287.11	5,268	1286.90	6,011	1287.35		
10T2	20,100	955	1293.75	1,875	1296.00	2,365	1296.93	3,595	1298.66	3,446	1298.00	3,926	1298.80		
12T2	20,200		1293.93		1296.20		1297.28		1299.86		1299.20		1300.30		
13T2	21,920	955	1301.39	1,875	1302.90	2,365	1303.50	3,595	1304.61	3,446	1304.40	3,926	1304.80		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Mustang Creek Tributary 2 South Branch															
1T2SB	970	1,070	1278.30	2,110	1280.45	2,665	1281.09	3,990	1282.31	3,849	1282.20	4,389	1282.60		
2T2SB	2,700		1283.25		1284.75		1285.09		1285.90		1285.80		1286.30		
Pond 1	3,600		1285.80		1287.25		1287.75		1289.42		1289.20		1290.00		
Pond 3	3,800		1286.05		1287.50		1288.00		1289.58		1289.40		1290.40		
4T2SB	4,950		1288.76		1290.25		1290.87		1292.08		1291.90		1292.40		
5T2SB	6,160		1298.68		1299.75		1300.32		1301.45		1301.30		1301.70		
6T2SB	7,860		1306.23		1307.75		1308.33		1309.52		1309.40		1309.90		
7T2SB	9,220	1,070	1316.41	2,110	1318.40	2,665	1318.92	3,990	1319.80	3,849	1319.70	4,389	1320.10		
Mustang Creek Tributary 3															
1T3	2,770	1,520	1260.50	2,995	1263.27	3,775	1264.49	5,675	1266.09	5,463	1265.70	6,236	1266.50		
2T3	4,150		1262.34		1264.90		1265.89		1267.34		1267.10		1267.70		
3T3	5,030		1264.59		1266.78		1267.48		1268.70		1268.50		1269.00		
4T3	6,450	1,520	1268.09	2,995	1270.43	3,775	1270.83	5,675	1271.45	5,463	1271.40	6,236	1271.60		
5T3	10,470	1,110	1281.13	2,180	1283.19	2,755	1284.13	4,130	1285.97	3,968	1285.70	4,526	1286.40		
6T3	11,800		1286.31		1288.25		1288.88		1289.97		1289.80		1290.30		
7T3	13,940	1,110	1294.70	2,180	1296.43	2,755	1297.21	4,130	1298.97	3,968	1298.60	4,526	1300.20		
8T3	16,770	785	1309.28	1,540	1309.97	1,955	1310.15	2,920	1312.13	2,797	1311.60	3,187	1312.50		
9T3	18,220	785	1316.63	1,540	1318.85	1,955	1320.16	2,920	1320.21	2,797	1320.20	3,187	1320.30		
Mustang Creek Tributary 3 East Branch															
2T3EB	2,100	875	1272.00	1,720	1273.06	2,175	1273.55	3,250	1274.77	3,138	1274.70	3,576	1275.20		
3T3EB	4,420		1278.75		1279.96		1280.32		1281.67		1281.40		1282.00		
5T3EB	4,510	875	1279.44	1,720	1280.86	2,175	1281.32	3,250	1281.92	3,138	1281.90	3,576	1282.10		
6T3EB	6,870	490	1287.19	960	1288.06	1,220	1288.37	1,815	1288.99	1,737	1288.90	1,977	1289.20		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Mustang Creek Tributary 3 West Branch															
1T3WB	2,080	480	1291.85	940	1293.00	1,195	1293.43	1,775	1294.34	1,711	1294.20	1,947	1294.40		
2T3WB	4,030		1307.65		1308.62		1309.01		1309.54		1309.40		1309.60		
3T3WB	4,860	480	1316.44	940	1317.54	1,195	1317.97	1,775	1318.86	1,711	1318.70	1,947	1319.10		
Mustang Creek Tributary 4															
1T4	1,300	895	1297.07	1,765	1299.09	2,240	1299.93	3,350	1301.55	3,186	1301.20	3,633	1301.80		
2T4	4,200	465	1302.02	900	1304.42	1,140	1305.43	1,690	1307.22	1,684	1307.20	1,913	1308.20		
4T4	4,540		1303.09		1308.36		1311.83		1316.42		1316.10		1318.50		
5T4	6,760	465	1307.59	900	1310.11	1,140	1312.69	1,690	1316.92	1,684	1316.90	1,913	1319.50		
Shell Creek															
2	3,090	3,121	1272.10	5,546	1274.00	6,945	1274.88	10,415	1276.86	11,124	1277.09	12,694	1277.80		
4	3,240		1272.23		1274.31		1275.37		1276.97		1277.10		1277.80		
5	4,030		1272.66		1274.31		1275.37		1276.97		1277.14		1277.80		
6	4,680		1274.25		1276.15		1276.92		1278.71		1279.06		1280.00		
8	4,930		1274.44		1276.44		1277.26		1279.22		1279.43		1280.38		
9	5,480		1275.02		1277.01		1277.87		1279.72		1280.12		1280.60		
10	8,150		1275.85		1277.70		1278.57		1280.22		1280.50		1280.88		
12	8,530		1275.88		1277.83		1278.82		1280.83		1281.22		1281.88		
13	9,330		1275.98		1277.91		1278.82		1280.83		1281.23		1281.91		
14	14,310	3,121	1284.43	5,546	1287.10	6,945	1288.05	10,415	1289.46	11,214	1289.57	12,694	1289.98		
15	17,320	2,717	1288.27	4,865	1290.69	6,092	1291.57	9,138	1293.12	9,619	1293.38	10,981	1293.90		
16	20,530		1292.44		1294.94		1295.84		1297.49		1297.71		1298.25		
19	20,960	2,717	1293.04	4,865	1295.46	6,092	1296.37	9,138	1297.98	9,619	1298.00	10,981	1298.54		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Shell Creek (cont.)															
20	22,060	2,336	1294.24	4,191	1296.76	5,243	1297.66	7,854	1299.31	8,260	1299.62	9,427	1300.28		
21	26,270		1298.80		1300.87		1301.67		1303.01		1303.38		1303.85		
22	28,180		1301.67		1303.56		1304.41		1305.98		1306.28		1306.79		
24	28,340		1301.96		1303.92		1304.77		1306.35		1306.61		1307.18		
25	30,690	2,336	1305.03	4,191	1306.87	5,243	1307.56	7,854	1309.28	8,260	1309.46	9,427	1310.10		
26	33,900	1,664	1310.02	2,982	1311.71	3,714	1312.40	5,541	1313.78	5,898	1314.02	6,724	1314.48		
27	35,450		1313.25		1314.74		1315.29		1316.55		1316.84		1317.26		
28	36,260		1315.38		1316.82		1317.29		1318.42		1318.58		1318.88		
30	36,860	1,664	1316.65	2,982	1318.49	3,714	1319.14	5,541	1320.31	5,898	1320.60	6,724	1320.93		
31	38,430	1,238	1319.19	2,222	1320.04	2,760	1320.64	4,105	1321.63	4,387	1321.76	4,997	1321.93		
32	42,110		1325.49		1327.15		1327.71		1328.71		1328.89		1329.21		
33	43,400		1328.42		1329.85		1330.33		1331.16		1331.27		1331.48		
35	44,250		1329.88		1331.22		1331.70		1332.55		1332.76		1333.07		
36	44,760		1330.36		1331.72		1332.20		1333.10		1333.25		1333.56		
38	45,800	1,238	1330.36	2,222	1331.75	2,760	1332.23	4,105	1333.14	4,387	1333.30	4,997	1333.61		
39	47,140	819	1333.70	1,479	1334.00	1,831	1334.14	2,714	1334.82	2,891	1334.99	3,291	1335.42		
Shell Creek Tributary 1															
101	1,240	518	1282.14	929	1283.46	1,143	1284.10	1,683	1285.38	1,840	1285.70	2,090	1286.05		
102	2,020		1283.09		1284.11		1284.64		1285.81		1286.22		1286.84		
103	2,980		1292.96		1293.72		1293.97		1294.46		1294.51		1294.62		
104	4,570		1297.70		1298.52		1298.89		1299.63		1299.83		1300.03		
105	5,630		1304.73		1305.32		1305.55		1306.03		1306.20		1306.39		
107	5,760	518	1306.78	929	1307.32	1,143	1307.55	1,683	1308.03	1,840	1308.15	2,090	1308.30		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Shell Creek Tributary 2															
201	1,240	644	1286.53	1,169	1288.75	1,445	1289.65	2,139	1291.06	2,265	1291.14	2,578	1291.73		
202	2,020		1287.70		1289.25		1290.08		1291.46		1291.66		1292.07		
204	2,150		1289.10		1290.48		1291.08		1292.29		1292.60		1292.98		
205	3,700		1295.89		1297.27		1297.76		1298.74		1298.80		1299.08		
206	5,470	644	1307.28	1,169	1307.84	1,445	1308.08	2,139	1308.58	2,265	1308.69	2,578	1308.86		
Shell Creek Tributary 3															
301	800	961	1286.27	1,730	1288.44	2,144	1289.29	3,181	1290.70	3,402	1291.00	3,874	1291.68		
302	2,530		1289.04		1290.13		1290.68		1291.85		1292.09		1292.60		
303	3,180		1294.18		1294.97		1295.23		1295.86		1295.99		1296.22		
305	3,320		1294.35		1295.17		1295.48		1296.21		1296.35		1296.60		
306	4,320		1295.45		1296.72		1297.28		1298.24		1298.44		1298.72		
307	6,060		1300.12		1301.77		1302.40		1303.44		1303.63		1303.92		
309	6,180		1300.97		1302.87		1303.60		1304.83		1305.06		1305.39		
310	7,500	961	1304.97	1,730	1305.81	2,144	1306.16	3,181	1306.97	3,402	1307.12	3,874	1307.40		
311	9,660	785	1314.33	1,422	1315.16	1,761	1315.46	2,610	1315.91	2,764	1315.99	3,148	1316.08		
312	11,300	785	1318.10	1,422	1319.85	1,761	1320.45	2,610	1321.65	2,764	1321.80	3,148	1322.17		
313	13,420	482	1328.73	872	1330.02	1,074	1330.49	1,583	1331.34	1,700	1331.51	1,933	1331.77		
315	13,740		1329.72		1330.92		1331.36		1332.24		1332.39		1332.70		
316	15,860	482	1341.42	872	1342.59	1,074	1343.07	1,583	1344.04	1,700	1344.27	1,933	1344.52		
Shell Creek Tributary 4															
401	920	1,053	1294.14	1,881	1296.59	2,329	1297.57	3,454	1299.28	3,788	1300.00	4,314	1300.00		
402	1,400	813	1294.24	1,457	1296.69	1,800	1297.67	2,664	1299.38	3,788	1300.52	4,314	1300.95		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_u=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Shell Creek Tributary 4 (cont.)															
403	1,540	813	1299.86	1,457	1300.13	1,800	1300.25	2,664	1300.52	3,788	1300.87	4,314	1301.02		
404	1,650		1300.22		1300.63		1300.80		1301.18		1301.58		1301.75		
405	2,310		1300.25		1300.70		1300.88		1301.31		1301.78		1302.01		
406	3,660		1300.78		1302.40		1303.27		1303.74		1304.65		1305.45		
407	5,280		1304.07		1305.30		1305.55		1306.58		1308.60		1309.80		
409	5,510		1304.15		1305.39		1305.66		1306.67		1309.05		1311.00		
410	7,780		1310.95		1311.72		1312.13		1312.68		1312.92		1312.98		
412	7,900	813	1311.20	1,457	1311.97	1,800	1312.38	2,664	1312.99	3,788	1313.59	4,314	1313.82		
413	10,280	614	1316.52	1,115	1317.57	1,377	1317.98	2,038	1318.94	2,156	1319.09	2,454	1319.45		
414	11,560		1320.53		1320.99		1321.22		1321.75		1321.82		1321.98		
415	13,490		1324.96		1325.50		1325.69		1326.05		1326.12		1326.24		
417	13,600		1327.20		1327.36		1327.82		1328.16		1328.18		1328.27		
418	14,190	614	1330.21	1,115	1331.15	1,377	1331.26	2,038	1331.78	2,156	1331.87	2,454	1332.11		
Shell Creek Tributary 4 West Branch															
401	1,220	595	1296.37	1,071	1298.06	1,320	1298.81	1,948	1300.28	2,110	1300.67	2,398	1301.28		
403	1,560		1297.40		1298.66		1299.21		1300.58		1300.93		1301.59		
404	3,020	595	1303.52	1,071	1304.12	1,320	1304.32	1,948	1304.90	1,948	1305.12	2,398	1305.43		
Shell Creek Tributary 5															
501	2,590	1,244	1310.55	2,230	1312.17	2,769	1312.69	4,119	1313.66	4,412	1313.79	5,025	1314.02		
503	2,635		1310.72		1312.23		1312.70		1313.67		1313.83		1314.20		
504	3,460	1,244	1313.23	2,230	1314.59	2,769	1315.19	4,119	1316.27	4,412	1316.48	5,025	1316.79		
505	4,720	837	1313.45	1,492	1316.63	1,842	1317.16	2,723	1318.20	2,993	1318.42	3,402	1318.63		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Shell Creek Tributary 5 (cont.)															
506	6,250	837	1320.60	1,492	1321.77	1,842	1322.14	2,723	1322.24	2,993	1322.27	3,402	1322.32		
508	6,295		1323.91		1324.22		1324.38		1324.81		1324.92		1325.10		
509	7,780	837	1324.81	1,492	1325.74	1,842	1326.16	2,723	1327.10	2,993	1327.29	3,402	1327.69		
510	9,120	665	1329.41	1,183	1330.54	1,456	1330.99	2,145	1331.73	2,383	1331.91	2,706	1332.10		
511	9,200		1330.63		1331.15		1331.36		1332.15		1332.44		1333.00		
512	9,290		1331.41		1331.99		1332.22		1332.70		1332.83		1333.00		
513	9,870	665	1332.63	1,183	1333.13	1,456	1333.36	2,145	1333.88	2,383	1334.03	2,706	1334.26		
514	12,340	554	1339.23	990	1339.83	1,217	1340.05	1,791	1340.51	1,980	1340.63	2,248	1340.82		
516	12,500	554	1339.60	990	1340.33	1,217	1340.59	1,719	1341.14	1,980	1341.30	2,248	1341.57		
Shell Creek Tributary 5 East Branch															
501	1,530	687	1318.00	1,227	1318.85	1,512	1319.25	2,231	1320.21	2,455	1320.36	2,790	1320.62		
502	4,130		1325.53		1326.51		1326.89		1327.54		1327.70		1327.92		
503	5,910		1331.12		1331.98		1332.34		1332.95		1333.18		1333.44		
505	6,780	687	1334.70	1,227	1335.30	1,512	1335.57	2,231	1336.08	2,455	1336.24	2,790	1336.49		
Shell Creek Tributary 6															
601	1,340	795	1319.70	1,422	1321.16	1,759	1321.62	2,596	1322.47	2,834	1322.71	3,223	1323.07		
602	2,530	795	1324.14	1,422	1325.21	1,759	1325.57	2,596	1326.32		1326.55		1326.89		
603	5,080	661	1331.80	1,184	1332.77	1,460	1333.13	2,156	1333.72		1334.08		1334.22		
605	5,240		1332.16		1333.12		1333.49		1334.12		1334.60		1334.80		
606	7,300		1337.79		1338.69		1339.09		1340.00		1340.96		1341.57		
608	7,440		1339.46		1339.97		1340.10		1340.60		1341.38		1341.95		
609	9,180		1344.41		1345.05		1345.56		1346.25		1346.76		1346.99		
611	9,400	661	1344.66	1,184	1345.37	1,460	1345.81	2,156	1346.60	2,834	1347.40	3,223	1347.78		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Canadian River Tributary 1															
BC 0	4,200	2,634	1149.10	4,758	1153.00	5,969	1153.40	8,968	1154.20	9,248	1054.30	10,569	1155.60		
BC 1	7,585	2,634	1162.57	4,758	1166.79	5,969	1167.31	8,968	1168.03	9,248	1168.10	10,569	1169.30		
BC 2	9,740	2,085	1169.05	3,780	1171.52	4,733	1171.71	7,098	1172.21	7,301	1172.25	8,341	1172.40		
BC 3	12,830	2,085	1176.98	3,780	1177.66	4,733	1178.01	7,098	1179.16	7,301	1179.25	8,341	1179.75		
BC 4	15,400	1,645	1179.61	2,984	1180.76	3,727	1181.19	5,575	1182.24	5,763	1182.40	6,580	1182.80		
BC 5	17,590	1,645	1182.61	2,984	1183.37	3,727	1183.69	5,575	1184.35	5,763	1184.42	6,580	1184.70		
BC 6	19,130	1,094	1185.95	1,984	1186.62	2,467	1186.90	3,672	1187.40	3,842	1187.52	4,380	1187.70		
BC 7	21,680		1193.19		1194.07		1194.39		1195.13		1195.35		1195.50		
BC 8	22,770	1,094	1195.81	1,984	1197.17	2,467	1197.70	3,672	1198.74	3,842	1198.92	4,380	1199.35		
BC 9	23,785	548	1203.35	987	1203.72	1,215	1203.88	1,792	1204.21	1,940	1204.34	2,206	1204.46		
BC10	26,350		1214.35		1215.05		1215.34		1215.97		1216.18		1216.40		
BC11	30,110	548	1232.18	987	1232.79	1,215	1233.13	1,792	1233.71	1,940	1233.85	2,206	1234.10		
Tributary 1 of Canadian River Tributary 1															
BC100	3,875	807	1171.84	1,446	1172.88	1,786	1173.70	2,643	1174.66	2,868	1174.80	3,262	1175.10		
BC101	5,190	807	1174.44	1,446	1175.38	1,786	1175.62	2,643	1176.41	2,868	1177.00	3,262	1177.60		
BC102	9,140	693	1185.38	1,226	1186.46	1,569	1187.03	2,327	1187.93	2,416	1188.00	2,754	1188.30		
Tributary 2 of Canadian River Tributary 1															
BC201	2,070	890	1170.90	1,581	1172.32	1,952	1172.68	2,887	1173.30	3,187	1173.35	3,623	1173.50		
BC202	4,525		1179.20		1179.37		1179.57		1180.06		1180.20		1180.55		
BC203	7,373	890	1189.85	1,581	1190.50	1,952	1190.72	2,887	1191.10	3,187	1191.15	3,623	1191.27		
BC204	9,570	499	1194.84	898	1195.20	1,105	1195.46	1,628	1196.05	1,772	1196.15	2,014	1196.32		
BC205	12,170	499	1208.77	898	1210.11	1,105	1210.59	1,628	1210.97	1,772	1211.03	2,014	1211.12		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Tributary 0 of Canadian River Tributary 1															
BC001	2,725	939	1184.37	1,692	1185.03	2,097	1185.37	3,111	1186.25	3,320	1186.43	3,781	1186.70		
BC002	4,940		1188.62		1189.98		1190.26		1190.77		1190.81		1190.97		
BC004	5,050		1190.01		1190.43		1190.59		1191.02		1191.06		1191.20		
BC005	7,730		1198.43		1199.23		1199.49		1200.41		1200.60		1201.30		
BC007	7,895		1201.41		1202.13		1202.38		1202.94		1203.06		1203.25		
BC008	10,020	939	1209.98	1,692	1210.45	2,097	1210.65	3,111	1211.20	3,320	1211.40	3,781	1211.60		
BC009	10,530	559	1211.34	1,005	1212.16	1,238	1212.51	1,825	1213.15	1,984	1213.40	2,254	1213.70		
Tributary 3 of Canadian River Tributary 1															
BC301	1,200	758	1185.38	1,368	1186.21	1,692	1186.44	2,507	1186.96	2,674	1187.05	3,044	1187.20		
BC302	3,190		1193.70		1194.58		1194.74		1195.00		1195.08		1195.30		
BC303	4,560		1200.77		1200.94		1201.16		1201.67		1201.80		1202.10		
BC304	5,600	758	1205.49	1,368	1206.21	1,692	1206.36	2,507	1206.65	2,674	1206.70	3,044	1206.80		
BC305	6,260	377	1207.20	681	1207.65	836	1207.90	1,228	1208.40	1,335	1208.50	1,517	1208.75		
Tributary 4 of Canadian River Tributary 1															
BC400	1,050	655	1199.75	1,189	1200.49	1,471	1200.79	2,178	1201.43	2,298	1201.40	2,616	1201.65		
BC401	3,330		1209.93		1210.90		1211.21		1211.71		1211.70		1211.85		
BC402	5,540	655	1225.68	1,189	1226.42	1,471	1226.73	2,178	1227.35	2,298	1227.40	2,616	1227.60		
Canadian River Tributary 2															
CC1	8,020	1,016	1171.50	1,813	1172.47	2,244	1172.81	3,326	1173.54	3,623	1173.70	4,122	1174.00		
CC2	10,255		1176.04		1177.46		1177.96		1178.73		1178.95		1179.30		
CC4	12,355	1,016	1184.36	1,813	1184.93	2,244	1185.22	3,326	1185.81	3,623	1185.95	4,122	1186.20		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Canadian River Tributary 2 (cont.)															
CC6	15,350	1,016	1193.87	1,813	1194.89	2,244	1195.22	3,326	1195.82	3,623	1195.82	4,122	1195.90		
CC7	17,940	1,016	1207.74	1,813	1209.40	2,244	1209.60	3,326	1209.96	3,623	1210.10	4,122	1210.20		
CC8	19,560	721	1212.47	1,286	1212.82	1,585	1213.22	2,339	1214.05	2,578	1214.35	2,929	1214.70		
CC9	24,870	721	1238.87	1,286	1239.19	1,585	1239.36	2,339	1239.73	2,578	1240.16	2,929	1240.40		
Cow Creek															
2	8,150	3,712	1178.42	6,763	1180.71	8,534	1181.59	12,897	1182.63	12,904	1182.64	14,779	1182.82		
3	9,810		1182.90		1185.15		1185.31		1185.94		1186.00		1186.59		
4	11,910	3,712	1186.20	6,763	1187.52	8,534	1188.08	12,897	1188.89	12,904	1188.91	14,779	1189.12		
5	16,010	1,590	1192.74	2,870	1195.69	3,579	1196.08	5,345	1196.76	5,595	1196.83	6,383	1197.07		
7	16,140		1193.37		1196.09		1196.47		1197.09		1197.19		1197.38		
8	19,300	1,590	1199.16	2,870	1202.20	3,579	1202.74	5,345	1203.51	5,595	1203.59	6,383	1203.80		
9	22,300	996	1206.63	1,795	1208.47	2,226	1209.05	3,305	1210.38	3,517	1210.57	4,005	1211.08		
11	22,430		1206.99		1209.75		1210.43		1211.43		1211.60		1211.98		
12	24,460		1215.24		1216.52		1217.03		1218.10		1218.32		1218.81		
13	25,690	996	1219.12	1,795	1220.46	2,226	1220.95	3,305	1221.79	3,517	1221.88	4,005	1222.21		
14	27,000	795	1224.16	1,439	1225.14	1,782	1225.50	2,641	1226.19	2,802	1226.29	3,191	1226.49		
15	28,510		1229.89		1230.98		1231.34		1232.11		1232.22		1232.45		
17	29,410		1231.48		1233.58		1234.66		1235.76		1235.85		1236.00		
18	32,920		1242.42		1243.55		1244.38		1245.58		1245.69		1245.88		
19	33,020		1248.43		1250.39		1250.72		1251.33		1251.45		1251.62		
20	33,180		1249.82		1251.26		1251.66		1252.39		1252.45		1252.65		
21	34,190	795	1250.00	1,439	1251.35	1,782	1251.74	2,641	1252.47	2,802	1252.55	3,191	1252.71		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR			50-YEAR			100-YEAR			500-YEAR			50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)		PEAKQ (CFS)	WSELEV (NGVD)		PEAKQ (CFS)	WSELEV (NGVD)		PEAKQ (CFS)	WSELEV (NGVD)		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Cow Creek Tributary 1																	
5	3,870	862	1200.72		1,560	1201.51		1,934	1201.77		2,870	1202.33		3,033	1202.44	3,454	1202.69
101	3,970		1201.15			1201.91			1202.20			1202.73			1202.80		1202.91
102	6,800		1201.07			1210.97			1211.32			1212.03			1212.10		1212.30
103	10,810	862	1225.15		1,560	1226.14		1,934	1226.60		2,870	1227.53		3,033	1227.70	3,454	1227.95
104	11,850	565	1231.91		1,028	1232.10		1,270	1232.47		1,877	1233.20		1,984	1233.30	2,258	1233.49
106	11,920		1235.51			1236.01			1236.27			1236.68			1236.70		1236.78
107	12,200		1235.71			1236.37			1236.67			1237.27			1237.35		1237.49
108	12,270		1239.02			1241.07			1241.27			1241.58			1241.61		1241.71
109	12,380		1240.86			1241.71			1241.90			1242.43			1242.34		1242.63
110	13,660		1240.86			1241.75			1241.96			1242.44			1242.51		1242.68
111	17,360	565	1263.14		1,028	1263.68		1,270	1263.91		1,877	1264.37		1,984	1264.43	2,258	1264.58
Cow Creek Tributary 2																	
200	2,200	2,679	1189.94		4,885	1192.99		6,143	1193.59		9,251	1194.65		9,316	1194.68	10,660	1195.10
201	2,490	2,679	1194.58		4,885	1195.28		6,143	1195.51		9,251	1196.07		9,316	1196.10	10,660	1196.23
203	5,590	1,749	1204.33		3,169	1206.37		3,960	1207.26		5,925	1208.07		6,132	1208.10	7,001	1208.22
204	7,500		1208.93			1210.48			1211.02			1212.02			1212.10		1212.43
205	9,900	1,749	1215.12		3,169	1217.73		3,960	1218.50		5,925	1219.72		6,132	1219.75	7,001	1219.97
206	13,460	1,546	1229.31		2,817	1231.27		3,520	1231.78		5,266	1232.61		5,393	1232.70	6,159	1232.94
207	14,300		1233.08			1235.07			1235.71			1236.79			1236.83		1237.00
209	14,490		1235.68			1236.88			1237.26			1237.99			1238.01		1239.23
210	16,880		1240.01			1242.29			1243.26			1244.96			1244.99		1245.42
211	18,530	1,546	1250.38		2,817	1252.77		3,520	1253.63		5,266	1255.31		5,393	1255.37	6,159	1255.82

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Cow Creek Tributary 2 (cont.)															
212	20,010	1,363	1254.95	2,505	1257.40	3,131	1258.31	4,688	1260.10	4,722	1260.11	5,396	1260.51		
214	20,260		1255.49		1257.97		1258.90		1260.73		1260.76		1261.29		
215	22,160		1261.01		1263.29		1264.15		1265.81		1265.84		1266.28		
216	23,480		1268.34		1270.53		1271.74		1273.23		1273.24		1273.42		
218	23,770	1,363	1276.31	2,505	1277.80	3,131	1278.26	4,688	1279.33	4,722	1279.36	5,396	1279.70		
219	25,280	845	1276.87	1,559	1278.73	1,940	1279.44	2,890	1281.00	2,924	1281.10	3,338	1281.65		
220	26,880	845	1283.24	1,559	1284.76	1,940	1285.45	2,890	1286.85	2,924	1286.87	3,338	1287.15		
North Branch of Cow Creek Tributary 2															
202	1,960	1,561	1200.25	2,856	1201.92	3,572	1202.68	5,350	1204.10	5,428	1204.21	6,202	1204.60		
203	4,020	1,432	1203.10	2,628	1204.84	3,286	1205.46	4,921	1206.50	4,963	1206.55	5,671	1206.77		
204	6,510		1208.86		1211.59		1212.51		1214.07		1214.10		1214.38		
206	6,860		1210.05		1212.69		1213.56		1215.07		1215.10		1215.45		
207	8,380		1217.10		1218.64		1219.12		1220.09		1220.15		1220.45		
208	9,980	1,432	1221.25	2,628	1223.04	3,286	1223.77	4,921	1224.93	4,963	1225.00	5,671	1225.20		
209	11,870	679	1226.67	1,242	1229.29	1,539	1230.34	2,284	1232.28	2,365	1232.42	2,696	1232.96		
210	13,820		1239.09		1241.07		1241.97		1243.84		1244.10		1244.75		
211	15,600	679	1255.64	1,242	1257.23	1,539	1257.90	2,284	1259.40	2,365	1259.58	2,696	1260.08		
West Branch of Cow Creek Tributary 2															
201	3,300	712	1235.95	1,304	1237.60	1,618	1238.17	2,402	1239.20	2,478	1239.31	2,825	1239.60		
203	3,470		1237.06		1238.67		1239.29		1240.45		1240.50		1240.62		
204	4,780	712	1245.27	1,304	1246.83	1,618	1247.47	2,402	1248.75	2,478	1248.84	2,825	1249.20		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Cow Creek Tributary 3															
301	1,670	1,063	1204.13	1,926	1205.99	2,393	1206.55	3,561	1207.58	3,735	1207.65	4,258	1207.84		
302	3,660		1211.14		1212.03		1212.44		1213.17		1213.22		1213.68		
303	3,970		1211.74		1212.56		1212.94		1213.67		1213.72		1213.83		
304	6,360	1,063	1223.71	1,926	1224.42	2,393	1224.73	3,561	1225.36	3,735	1225.39	4,258	1225.58		
305	9,610	803	1237.32	1,455	1238.76	1,802	1239.35	2,673	1240.20	2,824	1240.27	3,216	1240.40		
306	10,790	803	1241.54	1,455	1242.09	1,802	1242.37	2,673	1242.87	2,824	1242.97	3,216	1243.18		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L = 4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Deep Fork																	
43	81,200	12,100	1003.05	20,300	1005.65	24,700	1006.50	34,800	1007.95	23,315	1006.25	26,700	1006.88				
45	81,300		1009.17		1010.09		1010.43		1011.15		1010.35		1010.60				
46	84,500		1009.42		1010.47		1010.93		1011.90		1010.79		1011.65				
48	84,600		1009.87		1012.13		1013.29		1015.78		1012.98		1013.80				
49	86,900		1011.43		1013.47		1014.46		1016.70		1014.40		1015.30				
50	89,130		1014.09		1015.87		1016.71		1018.57		1016.50		1017.20				
52	89,230		1014.51		1016.02		1016.84		1020.11		1016.62		1017.44				
53	91,300		1017.49		1019.18		1019.91		1021.26		1019.72		1020.23				
54	92,530		1018.24		1020.10		1020.85		1022.26		1020.65		1021.15				
56	92,650		1018.42		1023.12		1024.26		1025.54		1024.00		1024.70				
56A	94,800		1021.67		1024.37		1025.26		1026.54		1024.99		1025.64				
57	96,500		1023.99		1027.03		1028.12		1030.17		1027.85		1028.50				
59	96,610		1024.13		1028.97		1030.10		1031.62		1029.80		1030.55				
61	102,400		1031.26		1033.25		1033.72		1034.99		1033.65		1034.03				
63	102,520		1033.77		1035.09		1035.46		1036.17		1035.35		1035.64				
64	104,270		1034.52		1038.00		1038.75		1038.95		1038.64		1038.87				
65A	105,040		1037.39		1039.70		1040.25		1041.34		1040.10		1040.52				
66	105,120		1037.52		1041.59		1043.12		1044.24		1041.88		1043.58				
67	108,300		1041.77		1044.84		1045.76		1047.24		1045.55		1046.17				
68	111,700		1045.21		1049.41		1050.51		1052.19		1050.30		1050.98				
70	113,670		1049.60		1053.89		1054.94		1056.47		1054.68		1055.39				
72	113,760		1051.54		1056.48		1058.00		1059.41		1057.65		1058.44				
73	115,620		1053.09		1057.11		1058.50		1060.03		1058.20		1058.95				
74	119,100	12,100	1058.20	20,300	1061.41	24,700	1062.31	34,800	1063.78	23,315	1062.08	26,700	1062.68				

*Feet above NE 206th St.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork (Cont.)															
76	119,270	12,100	1058.32	20,300	1061.62	24,700	1064.44	34,800	1065.87	23,315	1064.05	26,700	1065.15		
77	120,370		1058.69		1062.12		1064.57		1065.87		1064.21		1065.22		
79	120,470		1061.62		1066.88		1069.03		1070.98		1068.65		1069.90		
82	122,600		1063.45		1068.27		1070.17		1072.42		1069.61		1070.75		
83	126,200	12,100	1067.70	20,300	1072.02	24,700	1073.82	34,800	1076.74	23,315	1073.40	26,700	1074.50		
84	127,100	10,800	1069.57	16,000	1074.37	18,500	1076.39	24,400	1080.12	15,867	1074.10	18,192	1076.17		
86	127,300		1070.14		1074.89		1077.02		1081.42		1074.80		1076.91		
87	129,400		1071.89		1076.05		1077.88		1081.76		1075.80		1077.70		
89	129,470		1074.07		1078.94		1080.48		1082.76		1078.80		1080.40		
90	131,400		1074.82		1079.69		1081.33		1083.51		1079.40		1081.21		
91	133,400		1081.49		1085.44		1086.83		1088.56		1085.11		1086.70		
93	133,520		1081.73		1086.71		1088.51		1090.23		1086.52		1088.34		
94	136,100		1083.16		1087.46		1089.20		1091.05		1086.72		1089.08		
95	138,250		1086.73		1090.11		1091.52		1093.61		1089.91		1091.42		
97	138,350		1089.12		1093.36		1095.16		1098.60		1092.68		1094.87		
98	140,790	10,800	1090.25	16,000	1094.11	18,500	1095.78	24,400	1099.10	15,867	1093.90	18,192	1095.70		
99	142,450	8,820	1095.59	12,770	1098.22	14,780	1099.37	19,550	1101.96	13,821	1098.79	15,844	1099.91		
101	142,580		1096.22		1098.88		1100.20		1102.79		1099.52		1100.74		
102	143,300		1098.97		1101.48		1102.45		1104.79		1102.00		1103.08		
103	144,250		1100.91		1103.48		1104.58		1106.96		1104.00		1105.20		
105	144,350		1101.02		1103.71		1104.92		1107.94		1104.50		1105.75		
106	146,200		1103.52		1106.21		1107.42		1110.08		1106.80		1107.97		
107	147,440		1106.02		1108.21		1109.33		1111.83		1108.87		1110.00		
109	147,640	8,820	1107.19	12,770	1109.65	14,780	1110.86	19,550	1113.55	13,821	1110.36	15,844	1111.57		

*Feet above NE 206th St.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork (Cont.)															
110	148,200	8,820	1111.42	12,770	1113.92	14,780	1115.16	19,550	1117.82	13,821	1114.67	15,844	1115.81		
112	148,300		1113.92		1116.89		1118.36		1121.34		1117.68		1119.10		
114	149,530		1117.20		1120.35		1121.83		1124.55		1121.22		1122.60		
115	149,760	8,820	1118.39	12,770	1121.60	14,780	1123.08	19,550	1125.98	13,821	1122.21	15,844	1123.69		
117	153,470	5,700	1134.10	8,130	1136.00	9,330	1137.20	12,170	1138.70	8,391	1136.31	9,596	1137.42		
119	153,630		1134.15		1136.07		1137.28		1138.77		1136.31		1137.52		
E121	154,480		1134.65		1136.57		1137.72		1139.22		1136.86		1137.97		
A121	154,580		1134.70		1136.64		1137.79		1139.36		1136.88		1137.99		
122	156,580		1135.95		1137.88		1138.92		1140.59		1138.15		1139.25		
123	156,880		1136.05		1137.88		1139.02		1141.79		1138.17		1139.50		
124	157,130		1144.00		1144.20		1145.90		1149.10		1144.54		1146.52		
125	157,580		1144.14		1144.50		1146.05		1149.20		1144.82		1146.26		
127	157,640		1144.31		1144.86		1146.28		1149.21		1145.07		1146.67		
128	158,440		1144.31		1149.73		1150.36		1155.53		1149.85		1150.78		
129	159,255		1147.73		1151.30		1151.93		1155.73		1151.39		1152.25		
131	159,335		1147.90		1151.31		1151.94		1155.74		1151.39		1152.26		
132	159,710		1148.84		1151.39		1152.05		1155.83		1151.40		1152.37		
134	160,750	5,700	1153.82	8,130	1154.76	9,330	1155.35	12,170	1157.29	8,391	1154.87	9,596	1155.50		
135	161,568	4,280	1155.49	6,110	1156.76	7,010	1157.35	9,130	1158.79	6,304	1156.87	7,204	1157.56		
137	161,801		1156.92		1158.46		1159.43		1164.40		1158.59		1159.59		
138	162,315		1157.10		1158.96		1159.83		1165.40		1159.08		1160.14		
139	162,905		1158.29		1160.49		1161.63		1165.58		1160.67		1161.89		
140	163,800		1160.46		1163.64		1164.64		1168.33		1163.83		1164.87		
142	163,848	4,280	1163.38	6,110	1165.15	7,010	1168.39	9,130	1168.63	6,304	1166.15	7,204	1168.43		

*Feet above NE 206th St.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Deep Fork (Cont.)																	
EV	164,345	4,280	1164.73	6,110	1167.15	7,010	1169.50	9,130	1170.38	6,304	1167.70	7,204	1168.86				
AV	164,385		1165.08		1167.16		1169.51		1170.39		1167.89		1169.68				
143	164,760		1170.35		1171.04		1171.38		1172.00		1171.12		1171.48				
144	165,630		1173.44		1179.13		1179.53		1180.73		1179.18		1179.60				
146	165,709		1173.87		1180.13		1180.71		1181.87		1180.22		1180.95				
147	166,630	4,280	1177.50	6,110	1180.27	7,010	1180.71	9,130	1181.97	6,304	1180.36	7,204	1180.96				
148	167,290	3,100	1179.29	4,500	1181.63	5,200	1182.21	6,800	1183.07	5,024	1182.09	5,737	1182.58				
150	167,350		1179.32		1181.64		1182.22		1183.08		1182.15		1182.63				
151	167,940		1179.32		1184.85		1185.12		1185.67		1184.99		1185.27				
152	168,540		1179.68		1185.30		1185.56		1186.01		1185.50		1185.76				
153	168,800		1193.35		1194.70		1194.98		1195.54		1194.89		1195.18				
154	169,530	3,100	1194.75	4,500	1196.53	5,200	1196.92	6,800	1197.71	5,024	1196.83	5,737	1197.18				
E155	170,000	2,710	1195.74	3,930	1197.46	4,530	1202.81	5,970	1203.96	4,333	1202.22	4,944	1203.21				
A155	170,060		1196.69		1198.54		1203.81		1204.30		1203.30		1204.18				
156	170,580		1199.10		1201.30		1203.86		1204.55		1203.40		1204.18				
158	171,600		1205.70		1206.76		1207.23		1208.66		1207.08		1207.66				
159	171,950		1205.77		1206.83		1207.29		1208.66		1207.13		1207.70				
161	172,020		1212.62		1213.43		1213.77		1214.46		1213.64		1213.98				
E162	172,700		1212.62		1213.43		1213.77		1214.46		1213.66		1213.98				
A162	172,770		1213.66		1214.75		1214.99		1215.67		1214.89		1215.17				
163	173,350		1214.02		1214.83		1215.08		1215.81		1214.98		1215.27				
164	173,845		1214.02		1214.83		1215.08		1215.90		1214.99		1215.32				
166	173,920		1214.03		1214.95		1215.33		1216.65		1215.19		1215.69				
167	174,290	2,710	1217.06	3,930	1217.60	4,530	1217.81	5,970	1218.28	4,333	1217.74	4,944	1217.97				

*Feet above NE 206th St.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS								URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Deep Fork (Cont.)													
168	175,050	2,710	1222.53	3,930	1223.20	4,530	1223.64	5,970	1224.30	4,333	1223.52	4,944	1223.89
169	175,560		1226.75		1227.36		1227.64		1228.37		1227.57		1227.89
170	175,950		1227.85		1228.46		1228.64		1229.50		1228.58		1228.84
172	176,020		1228.25		1229.06		1229.44		1230.56		1229.35		1229.80
173	176,765		1228.35		1229.11		1231.15		1231.73		1230.75		1231.40
175	176,835		1233.81		1234.75		1235.20		1235.82		1235.00		1235.35
176	177,430		1233.81		1235.75		1235.95		1237.15		1235.85		1236.18
177	177,850		1236.93		1237.58		1237.85		1238.32		1237.73		1237.99
179	177,920		1237.71		1237.81		1237.93		1238.71		1237.73		1238.03
180	178,410	2,710	1238.71	3,930	1240.06	4,530	1240.87	5,970	1242.40	4,333	1240.57	4,944	1241.31
181	178,990	1,780	1239.57	2,570	1240.67	2,960	1241.62	3,880	1243.11	2,838	1241.32	3,321	1242.17
183	179,070	1,780	1244.75	2,570	1246.08	2,960	1246.29	3,880	1246.70	2,838	1246.21	3,321	1246.41

*Feet above NE 206th St.

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 4															
2	3,400	982	1018.58	1,770	1019.19	2,190	1019.27	3,240	1019.72	3,260	1019.70	3,720	1020.40		
3	4,550		1026.59		1026.90		1027.14		1027.35		1027.38		1027.75		
4	5,250		1032.90		1033.66		1033.95		1034.51		1034.54		1034.70		
5	6,110	982	1038.17	1,770	1038.68	2,190	1038.90	3,240	1039.36	3,260	1039.38	3,720	1039.90		
Deep Fork Tributary 5															
1	1,245	980	1009.63	1,792	1010.65	2,229	1011.06	3,321	1011.94	3,420	1012.00	3,900	1012.35		
2	1,575		1009.69		1010.71		1011.12		1011.99		1012.05		1012.35		
4	1,595		1009.72		1010.75		1011.17		1012.06		1012.10		1012.45		
5	2,155		1013.73		1014.74		1015.17		1016.12		1016.20		1016.60		
6	2,990		1021.60		1022.65		1022.78		1023.17		1023.20		1023.30		
7	3,510		1026.56		1026.84		1027.80		1028.04		1028.12		1028.40		
8	4,170	980	1034.89	1,792	1035.29	2,229	1035.46	3,321	1035.85	3,420	1035.90	3,900	1036.05		
9	5,070	664	1043.30	1,218	1043.97	1,510	1044.24	2,241	1044.78	2,308	1044.82	2,630	1045.05		
9A	5,460		1047.86		1048.42		1048.64		1049.11		1049.20		1049.40		
11	5,480	664	1052.46	1,218	1053.11	1,510	1053.37	2,241	1053.92	2,308	1053.97	2,630	1054.10		
Deep Fork Tributary 6															
1	2,200	1,051	1014.62	1,909	1015.18	2,373	1015.44	3,533	1016.06	3,680	1016.09	4,200	1016.30		
2	2,840		1017.01		1017.38		1017.56		1017.91		1017.96		1018.05		
3	3,800		1020.90		1021.60		1021.89		1022.40		1022.43		1022.60		
4	4,740		1028.19		1028.53		1028.69		1029.03		1029.05		1029.12		
5	5,465		1032.67		1033.38		1033.58		1033.99		1034.05		1034.15		
6	5,500	1,051	1037.61	1,909	1039.78	2,373	1043.39	3,533	1045.21	3,680	1045.50	4,200	1045.75		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 6 (cont.)															
6B	5,565	1,051	1039.81	1,909	1043.07	2,373	1045.09	3,533	1046.11	3,680	1046.20	4,200	1046.50		
6A	5,735		1040.43		1045.13		1046.30		1047.46		1047.70		1047.80		
8	6,490	1,051	1042.13	1,909	1045.13	2,373	1046.30	3,533	1047.46	3,680	1047.70	4,200	1048.00		
9	7,545	800	1050.76	1,447	1051.38	1,791	1051.70	2,654	1052.34	2,820	1052.52	3,200	1052.70		
10	8,415		1057.30		1057.80		1057.98		1058.39		1058.48		1058.58		
11	9,390		1062.62		1063.20		1063.40		1063.69		1063.88		1063.97		
12	10,300		1068.17		1069.24		1069.80		1070.56		1070.75		1070.80		
13	11,120		1073.62		1074.23		1074.48		1075.88		1076.10		1076.40		
14	11,695	800	1078.78	1,447	1079.34	1,791	1079.58	2,654	1079.62	2,820	1079.66	3,200	1079.70		
Deep Fork Tributary 7															
1	690	1,402	1027.26	2,583	1029.77	3,231	1030.72	4,841	1032.24	4,850	1032.30	5,540	1032.80		
3A	786		1027.34		1029.87		1030.81		1032.24		1032.38		1032.80		
4	1,990		1034.83		1036.48		1036.92		1037.69		1037.70		1037.80		
5	2,740		1039.98		1041.27		1042.08		1043.37		1043.40		1043.85		
6	3,530	1,402	1048.85	2,583	1049.42	3,321	1049.53	4,841	1049.64	4,850	1049.65	5,540	1049.70		
7	4,490	938	1057.51	1,726	1057.85	2,152	1058.13	3,215	1058.87	3,300	1058.90	3,880	1059.04		
8	5,690		1065.06		1065.88		1066.07		1066.35		1066.40		1066.40		
10	5,710		1069.03		1069.71		1070.04		1070.56		1070.62		1070.80		
11	6,540		1074.66		1075.04		1075.21		1075.51		1075.54		1075.58		
12	7,650	938	1082.12	1,726	1082.73	2,152	1082.98	3,215	1083.56	3,300	1083.60	3,880	1083.75		
Harrison Creek															
2	5,490	3,022	1036.93	5,379	1039.24	6,722	1040.00	10,037	1041.07	10,100	1041.10	11,530	1041.25		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Harrison Creek (cont.)																	
4	5,620	3,022	1037.12	5,379	1039.49	6,722	1042.20	10,037	1045.11	10,100	1045.14	11,530	1045.40				
5	7,065	3,022	1042.07	5,379	1044.34	6,722	1044.84	10,037	1045.55	10,100	1045.58	11,530	1045.80				
6	8,830	2,767	1045.27	4,862	1047.44	6,040	1048.23	8,946	1049.38	8,810	1049.34	10,080	1049.80				
7	10,190		1046.86		1049.03		1049.83		1050.98		1050.95		1051.40				
8	12,170		1048.86		1051.47		1052.43		1054.27		1054.25		1054.80				
10	12,370		1049.67		1052.53		1053.64		1055.87		1055.80		1056.55				
11	13,900	2,767	1051.77	4,862	1054.43	6,040	1055.34	8,946	1057.17	8,810	1057.00	10,080	1057.80				
12	14,990	1,958	1053.50	3,496	1056.08	4,350	1056.87	6,469	1058.83	6,530	1058.88	7,450	1059.85				
13	16,560		1056.70		1059.01		1059.71		1061.72		1061.58		1062.20				
14	17,860		1061.09		1063.14		1063.93		1065.22		1065.28		1065.70				
15	18,660	1,958	1062.69	3,496	1064.64	4,350	1065.43	6,469	1066.92	6,530	1067.00	7,450	1067.70				
16	20,665	1,846	1068.58	3,232	1070.73	3,995	1071.66	5,886	1073.27	5,900	1073.30	6,740	1073.70				
18	20,735		1069.80		1072.43		1073.48		1077.54		1077.60		1078.60				
19	21,765		1073.49		1075.47		1076.22		1079.14		1079.20		1080.60				
20	22,895	1,846	1078.79	3,232	1081.50	3,995	1082.44	5,886	1083.53	5,900	1083.56	6,740	1083.70				
21	23,690	1,554	1080.23	2,722	1082.70	3,358	1083.48	4,938	1084.47	4,970	1084.55	5,670	1084.70				
22	24,740		1082.52		1085.05		1085.94		1087.63		1087.75		1088.50				
23	25,925		1084.89		1087.55		1088.53		1090.32		1090.38		1091.50				
24	27,410	1,554	1088.56	2,722	1090.54	3,358	1091.30	4,938	1092.60	4,970	1092.64	5,670	1093.05				
25	28,165	1,368	1093.15	2,400	1095.24	2,959	1096.15	4,347	1098.02	4,370	1098.06	4,990	1098.70				
26	30,730		1101.83		1103.75		1104.57		1106.72		1106.78		1107.60				
28	30,910		1111.52		1112.08		1112.21		1112.37		1112.39		1112.40				
29	32,135	1,368	1112.52	2,400	1113.84	2,959	1114.41	4,347	1115.66	4,370	1115.70	4,990	1116.10				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Harrison Creek (cont.)																	
30	34,070	819	1124.11	1,432	1124.84	1,754	1125.11	2,561	1125.67	2,630	1125.70	2,990	1125.85				
32	34,165		1126.57		1127.01		1127.18		1127.53		1127.58		1127.70				
33	35,575		1130.42		1131.31		1131.68		1132.93		1133.00		1133.50				
34	36,900		1136.96		1137.71		1138.05		1138.35		1138.38		1138.40				
34X	37,400	819	1139.78	1,432	1140.27	1,754	1140.49	2,561	1141.00	2,630	1141.10	2,990	1141.30				
35	38,460	500	1147.40	860	1147.82	1,042	1147.95	1,501	1148.32	1,550	1148.35	1,760	1148.50				
37	38,740	500	1151.79	860	1153.52	1,042	1155.75	1,501	1160.20	1,550	1160.30	1,760	1160.90				
Harrison Creek Tributary 1																	
1	980	1,087	1047.44	1,994	1049.46	2,486	1050.29	3,710	1051.91	3,770	1051.96	4,310	1052.40				
2	1,710	1,087	1049.68	1,994	1051.48	2,486	1052.20	3,710	1053.68	3,770	1053.70	4,310	1054.35				
3	2,430	673	1050.84	1,218	1052.40	1,500	1053.20	2,209	1054.64	2,250	1054.70	2,570	1055.10				
5	3,630		1062.02		1063.53		1064.14		1065.46		1065.50		1065.90				
6	4,210	673	1064.90	1,218	1066.33	1,500	1066.83	2,209	1067.92	2,250	1067.95	2,570	1068.30				
Harrison Creek Tributary 2																	
1	950	1,553	1055.13	2,756	1057.48	3,412	1058.24	5,035	1060.29	4,920	1059.95	5,620	1060.90				
2	1,570		1057.87		1059.96		1060.79		1062.45		1062.20		1062.90				
4	2,450		1058.21		1060.09		1061.85		1065.67		1065.10		1066.70				
5	3,540		1064.09		1066.43		1066.81		1068.41		1068.20		1069.00				
6	4,420		1066.48		1069.15		1070.21		1072.43		1072.30		1073.10				
7	5,630		1068.45		1070.85		1071.90		1074.10		1073.95		1074.70				
8	6,740		1075.01		1076.33		1076.96		1078.64		1078.48		1079.10				
10	7,000	1,553	1080.83	2,756	1085.41	3,412	1088.92	5,035	1097.78	4,920	1096.10	5,620	1098.30				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Harrison Creek Tributary 2 (cont.)															
11	7,570	875	1082.13	1,506	1085.79	1,835	1089.05	2,657	1097.78	2,560	1096.80	2,920	1098.30		
12	8,260		1084.86		1087.32		1089.67		1097.78		1097.00		1098.83		
13	9,530	875	1095.12	1,506	1096.83	1,835	1098.38	2,657	1098.85	2,560	1098.80	2,920	1098.90		
West Branch Harrison Creek Tributary 2															
1	910	738	1082.93	1,299	1086.07	1,593	1089.16	2,327	1097.72	2,360	1097.80	2,680	1098.60		
2	1,580		1090.03		1090.28		1090.70		1097.86		1097.90		1098.60		
3	2,210	738	1094.94	1,299	1095.85	1,593	1096.21	2,327	1098.12	2,360	1098.16	2,680	1098.80		
Harrison Creek Tributary 3															
1	1,370	672	1083.00	1,171	1085.01	1,431	1086.02	2,082	1087.88	2,160	1088.20	2,460	1088.90		
3	3,830	450	1109.61	781	1110.71	949	1111.12	1,374	1111.88	1,450	1112.00	1,640	1112.20		
5	3,930	450	1110.01	781	1116.16	949	1119.20	1,374	1119.79	1,450	1119.85	1,640	1120.00		
Deep Fork Tributary 9															
2	1,620	940	1045.64	1,850	1048.27	2,340	1049.73	3,500	1051.42	3,344	1051.24	3,813	1051.71		
3	3,050		1053.18		1054.27		1054.69		1055.51		1055.45		1055.77		
4	4,700		1065.32		1066.38		1066.74		1067.37		1067.29		1067.50		
6	4,760		1071.44		1074.02		1074.40		1075.09		1074.95		1075.23		
7	6,130		1074.03		1074.52		1074.93		1075.67		1075.58		1075.80		
8	7,020		1080.92		1081.70		1081.85		1082.23		1082.15		1082.40		
9	8,000		1089.56		1089.99		1090.29		1090.86		1090.76		1090.94		
10	9,150	940	1097.47	1,850	1098.24	2,340	1098.41	3,500	1098.81	3,344	1098.76	3,813	1098.92		
11	10,300	303	1104.96	594	1105.37	758	1105.62	1,120	1106.06	1,076	1105.99	1,223	1106.12		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Deep Fork Tributary 10																	
1	350	1,770	1046.07	3,170	1050.35	3,950	1051.42	5,870	1053.06	5,892	1053.16	6,731	1053.42				
2	700		1046.31		1051.16		1052.69		1054.87		1054.90		1055.57				
A3	1,760		1046.40		1051.16		1052.69		1054.87		1054.90		1055.57				
5	2,790		1048.25		1052.24		1053.22		1055.12		1055.19		1055.81				
6	4,165		1053.75		1055.39		1056.22		1057.88		1057.90		1058.40				
7	5,630		1060.13		1061.67		1062.25		1063.69		1063.71		1064.48				
8	6,640		1064.33		1065.57		1066.12		1067.35		1067.37		1067.86				
9	7,915		1065.97		1067.73		1068.48		1070.16		1070.18		1070.61				
11	7,950		1066.01		1068.63		1073.17		1074.98		1074.99		1075.15				
12	8,730		1069.95		1071.48		1073.55		1075.31		1075.33		1075.43				
13	9,865		1077.10		1078.95		1081.10		1082.25		1082.27		1082.40				
15	11,455		1087.27		1087.00		1088.00		1089.90		1089.92		1090.69				
16	12,590		1088.27		1090.75		1091.75		1093.90		1093.92		1095.78				
A17	12,630	1,770	1089.89	3,170	1096.70	3,950	1097.33	5,870	1098.10	5,892	1098.12	6,731	1098.38				
X18	14,560	705	1095.00	1,210	1097.83	1,480	1098.61	2,140	1099.93	2,169	1099.95	2,468	1100.42				
19	15,200	705	1097.50	1,210	1098.58	1,480	1099.21	2,140	1100.43	2,169	1100.45	2,468	1101.00				
Deep Fork Tributary 11																	
5	2,560	817	1075.93	1,490	1078.26	1,850	1079.16	2,750	1079.24	3,089	1079.33	3,525	1079.39				
6	3,840		1086.26		1087.07		1087.39		1087.96		1088.14		1088.38				
7	4,730	817	1090.06	1,490	1090.90	1,850	1091.20	2,750	1091.86	3,089	1092.01	3,525	1092.26				
8	5,470	500	1091.06	1,350	1092.39	1,680	1092.79	2,500	1093.80	2,802	1094.01	3,140	1094.38				
10	5,600	500	1102.46	1,350	1103.36	1,680	1103.63	2,500	1104.08	2,802	1104.16	3,140	1104.27				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Deep Fork Tributary 12																	
1	1,850	896	1074.83	1,630	1075.93	2,023	1076.52	3,007	1077.88	3,579	1078.43	4,086	1079.11				
2	3,115		1078.54		1079.35		1079.61		1080.12		1080.31		1080.43				
3	4,200		1081.60		1083.06		1083.85		1085.77		1086.58		1087.54				
5	4,225		1084.29		1092.46		1096.67		1097.90		1098.02		1098.31				
6	5,270		1085.91		1092.46		1096.67		1097.90		1098.04		1098.48				
7	5,960		1089.97		1092.68		1096.72		1097.97		1098.18		1098.48				
8	7,330	896	1103.08	1,630	1104.31	2,023	1104.85	3,007	1105.87	3,579	1106.21	4,086	1106.55				
Deep Fork Tributary 13																	
1	1,090	1,370	1067.14	2,710	1071.42	3,440	1073.20	5,170	1076.03	4,825	1075.45	5,514	1076.33				
2	2,150		1067.57		1071.83		1073.59		1076.47		1076.00		1076.80				
3	3,730		1069.16		1073.11		1074.78		1077.52		1076.99		1078.00				
4	3,780		1103.58		1105.59		1106.40		1107.28		1107.18		1107.38				
12	8,910		1107.62		1108.90		1109.30		1110.09		1109.88		1110.19				
13	9,440	1,370	1108.06	2,710	1109.34	3,440	1109.80	5,170	1110.72	4,825	1110.45	5,514	1110.79				
15	9,550	894	1114.56	1,770	1115.10	2,260	1115.31	3,390	1115.67	3,143	1115.57	3,588	1115.69				
16	10,360		1114.70		1115.47		1115.81		1116.55		1116.45		1116.68				
17	10,780		1114.89		1116.20		1117.60		1120.20		1119.85		1120.65				
18	11,500		1121.79		1123.76		1123.93		1124.22		1124.21		1124.27				
19	12,110		1125.48		1126.70		1127.35		1128.57		1128.41		1128.70				
21	12,220		1134.61		1135.15		1135.24		1135.30		1135.29		1135.32				
22	12,780		1134.66		1135.35		1135.66		1136.55		1136.30		1136.76				
24	14,010		1137.70		1141.11		1142.09		1143.76		1143.50		1143.99				
26	14,120	894	1139.15	1,770	1146.99	2,260	1147.79	3,390	1148.91	3,143	1148.70	3,588	1149.18				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Deep Fork Tributary 13A															
2	580	455	1114.55	900	1115.09	1,150	1115.30	1,710	1115.72	1,604	1115.65	1,826	1115.79		
4	1,300		1114.55		1115.09		1115.34		1115.84		1115.72		1115.91		
5	1,500		1122.39		1133.33		1133.70		1134.45		1134.30		1134.55		
6	1,840		1123.68		1133.33		1133.70		1134.45		1134.30		1134.55		
7	2,320		1124.24		1133.33		1133.70		1134.45		1134.30		1134.55		
8	2,720		1127.14		1133.33		1133.70		1134.45		1134.30		1134.57		
9	3,600	455	1133.33	900	1134.47	1,150	1134.97	1,710	1135.87	1,604	1135.70	1,826	1136.00		
Deep Fork Tributary 13B															
0	210	471	1107.69	927	1109.01	1,180	1109.42	1,755	1110.19	1,671	1110.05	1,902	1110.26		
1	790		1109.43		1110.53		1110.92		1111.59		1111.45		1111.65		
2	1,250		1111.10		1112.36		1112.91		1113.94		1113.75		1114.06		
3	2,200		1115.03		1115.93		1117.62		1119.62		1119.30		1120.00		
4	2,450		1121.43		1125.65		1127.60		1135.00		1133.30		1137.70		
6	3,500		1133.64		1135.37		1136.10		1137.34		1137.10		1137.71		
7	4,000	471	1138.85	927	1140.25	1,180	1140.77	1,755	1141.77	1,671	1141.63	1,902	1141.90		
Deep Fork Tributary 16															
2	1,020	2,260	1079.68	3,440	1081.75	4,040	1082.66	5,500	1084.61	4,371	1083.16	4,992	1083.90		
3	1,690		1083.28		1085.22		1086.25		1088.55		1086.68		1087.69		
4	2,220		1084.13		1086.62		1087.30		1088.58		1087.57		1088.11		
5	2,750	2,260	1087.80	3,440	1088.69	4,040	1089.19	5,500	1090.26	4,371	1089.36	4,992	1089.79		
6	3,210	1,360	1090.20	2,040	1091.58	2,380	1092.15	3,190	1093.50	2,507	1092.46	2,856	1092.98		
8	3,260	1,360	1097.92	2,040	1098.33	2,380	1098.50	3,190	1098.83	2,507	1098.57	2,856	1098.70		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 16 (cont.)															
9	3,620	1,360	1097.92	2,040	1100.20	2,380	1102.20	3,190	1104.43	2,507	1102.70	2,856	1103.70		
10	4,240		1101.01		1102.35		1103.03		1104.68		1103.52		1104.03		
11	4,860		1102.11		1103.35		1103.86		1105.18		1104.05		1104.61		
13	4,940		1115.65		1117.43		1118.80		1119.48		1119.00		1119.27		
14	5,600		1115.65		1117.43		1118.80		1119.48		1119.10		1119.40		
15	6,100		1115.73		1117.43		1118.80		1119.48		1119.10		1119.40		
17	7,030	1,360	1116.73	2,040	1118.12	2,380	1119.30	3,190	1119.98	2,507	1119.50	2,856	1119.86		
18	7,480	1,070	1118.73	1,620	1120.22	1,890	1120.97	2,540	1122.23	2,037	1121.26	2,320	1121.87		
20	7,530		1121.09		1131.30		1131.88		1132.02		1131.98		1132.00		
21	7,880		1121.17		1131.30		1131.88		1132.02		1131.98		1132.00		
22	7,940	1,070	1129.81	1,620	1137.69	1,890	1138.01	2,540	1138.44	2,037	1138.10	2,320	1138.30		
Deep Fork Tributary 16 West Branch															
1	430	1,960	1091.17	2,780	1092.78	3,180	1093.41	4,110	1095.25	2,826	1092.86	3,221	1093.58		
3	500		1097.92		1101.02		1101.10		1101.30		1101.03		1101.13		
4	1,320		1101.32		1102.77		1103.19		1104.14		1102.82		1103.26		
5	1,820		1102.57		1103.71		1104.14		1105.04		1103.75		1104.21		
6	2,700		1105.12		1106.21		1106.68		1107.58		1106.31		1106.73		
8	2,790		1111.19		1111.74		1111.94		1112.46		1111.78		1111.99		
9	3,290		1111.78		1112.57		1112.90		1113.62		1112.63		1112.95		
10	3,950		1112.30		1115.05		1115.58		1116.85		1115.13		1115.69		
11	4,560	1,960	1116.64	2,780	1117.72	3,180	1118.25	4,110	1119.35	2,826	1117.76	3,221	1118.36		
12	4,780	1,780	1126.73	2,500	1127.03	2,830	1127.21	3,630	1127.50	2,387	1126.60	2,719	1127.16		
15	5,860	1,780	1135.42	2,500	1135.90	2,830	1136.10	3,630	1136.53	2,387	1135.79	2,719	1136.04		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 16 West Branch (cont.)															
16	5,940	1,780	1135.62	2,500	1136.20	2,830	1136.47	3,630	1137.03	2,387	1136.07	2,719	1136.35		
17	6,250		1135.62		1136.20		1136.47		1137.03		1136.08		1136.36		
18	6,640	1,780	1135.75	2,500	1136.45	2,830	1136.77	3,630	1137.39	2,387	1136.34	2,719	1136.67		
Deep Fork Tributary 17															
3	830	1,900	1082.58	2,960	1088.33	3,510	1091.07	4,850	1095.97	4,096	1093.70	4,674	1095.40		
4	1,680		1082.98		1088.33		1091.07		1095.97		1093.70		1095.40		
5	2,340		1086.92		1089.42		1091.73		1096.17		1094.30		1096.06		
7	2,440		1088.40		1090.48		1094.08		1098.50		1096.58		1098.05		
8	3,620		1093.59		1095.13		1096.04		1099.46		1097.43		1098.98		
9	4,570		1096.81		1098.13		1098.65		1100.45		1099.50		1100.41		
10	5,770		1102.61		1103.92		1104.37		1104.91		1104.68		1104.90		
11	6,560		1114.71		1116.30		1116.80		1118.03		1117.37		1117.82		
12	7,430		1119.34		1120.65		1121.25		1122.32		1121.78		1122.15		
14	7,480	1,900	1122.84	2,960	1124.92	3,510	1125.69	4,850	1126.64	4,096	1126.10	4,674	1126.43		
15	8,000	1,520	1123.38	2,330	1125.17	2,730	1125.84	3,710	1126.69	3,018	1126.21	3,441	1126.59		
16	8,280		1125.13		1127.26		1128.22		1130.42		1128.82		1129.88		
17	8,560		1127.03		1129.16		1130.22		1132.59		1130.79		1131.78		
19	8,620		1132.67		1135.95		1135.98		1136.95		1136.12		1136.45		
20	9,400		1138.93		1139.65		1139.88		1140.31		1140.02		1140.18		
21	11,000		1144.97		1145.33		1145.51		1145.87		1145.59		1145.77		
22	11,540		1147.91		1148.33		1148.50		1148.84		1148.59		1148.72		
23	12,004		1152.48		1152.95		1153.13		1153.49		1153.24		1153.39		
24	12,780	1,520	1155.64	2,330	1156.32	2,730	1156.60	3,710	1157.18	3,018	1156.76	3,441	1157.02		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 18															
0	800	3,300	1102.51	4,780	1105.22	5,510	1106.40	7,250	1108.89	5,168	1105.77	5,908	1106.90		
1	1,720		1106.18		1106.60		1107.20		1109.59		1106.90		1107.50		
3	2,390		1115.10		1118.10		1120.85		1124.96		1119.35		1121.41		
5	3,490		1116.46		1118.71		1120.85		1124.96		1119.80		1121.80		
6	4,190		1119.44		1120.99		1122.07		1125.39		1121.53		1122.78		
7	4,640		1121.49		1123.13		1123.94		1126.39		1123.03		1124.60		
8	5,130		1124.14		1125.84		1126.57		1128.10		1126.27		1127.00		
9	5,470		1127.38		1129.29		1130.00		1131.59		1129.60		1130.41		
10	5,970		1129.33		1131.19		1131.90		1133.13		1131.56		1132.23		
11	6,380		1131.42		1133.06		1133.70		1136.00		1133.37		1134.05		
12	6,620		1134.67		1136.82		1137.76		1139.53		1137.23		1138.18		
14	6,680		1142.89		1143.77		1144.05		1144.49		1143.90		1144.17		
15	7,440		1143.09		1146.41		1146.82		1147.54		1146.68		1147.00		
17	7,510		1145.85		1147.55		1147.92		1148.47		1147.78		1148.10		
18	7,730		1146.05		1147.65		1148.04		1148.61		1147.85		1148.20		
20	7,780		1146.68		1147.75		1148.14		1148.78		1147.94		1148.33		
21	8,220		1146.68		1147.75		1148.14		1148.78		1147.94		1148.33		
23	8,280		1147.90		1148.86		1149.32		1149.56		1149.25		1149.43		
24	8,730		1148.13		1149.30		1149.85		1150.46		1149.65		1150.05		
25	9,190	3,300	1148.50	4,780	1149.70	5,510	1150.25	7,250	1150.96	5,168	1149.99	5,908	1150.45		
Deep Fork Tributary 18 West Branch															
1	710	1,410	1140.08	2,090	1141.59	2,430	1142.93	3,230	1144.23	2,474	1143.03	2,818	1143.75		
3	800	1,410	1143.54	2,090	1144.23	2,430	1144.51	3,230	1144.97	2,474	1144.55	2,818	1144.78		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 18 West Branch (cont.)															
4	1,295	1,410	1148.77	2,090	1149.29	2,430	1149.41	3,230	1149.65	2,474	1149.47	2,818	1149.58		
5	2,000		1153.92		1154.80		1155.85		1156.51		1155.95		1156.30		
7	2,300		1157.39		1157.99		1158.11		1158.88		1158.15		1158.31		
8	2,900	1,410	1160.71	2,090	1161.23	2,430	1161.55	3,230	1161.66	2,474	1161.56	2,818	1161.60		
Deep Fork Tributary 20															
1	1,600	1,030	1111.44	1,890	1113.54	2,360	1114.57	3,510	1116.67	3,592	1116.68	4,099	1116.88		
2	2,590		1119.53		1120.58		1121.10		1122.27		1122.29		1122.65		
4	2,690		1132.20		1134.81		1135.90		1136.90		1136.92		1136.55		
5	3,290		1132.20		1134.81		1135.90		1136.90		1136.92		1137.20		
7	3,370		1132.21		1134.82		1135.91		1136.91		1136.93		1137.20		
8	4,000		1132.21		1134.82		1135.91		1136.91		1136.93		1137.20		
9	4,300		1132.35		1134.96		1136.02		1137.08		1137.10		1137.21		
11	4,500		1132.37		1135.19		1136.10		1137.09		1137.10		1137.21		
12	5,040		1133.53		1135.19		1136.10		1137.09		1137.10		1137.22		
14	5,150	1,030	1136.84	1,890	1136.85	2,360	1137.19	3,510	1138.82	3,592	1138.90	4,099	1140.40		
Golf Course Creek															
1	315	2,720	1140.11	3,855	1141.23	4,400	1141.60	5,695	1143.53	3,850	1141.22	4,396	1141.51		
3	555		1141.81		1142.53		1142.76		1143.53		1142.52		1142.74		
4	1,050		1142.30		1143.30		1143.76		1144.96		1143.29		1143.72		
5	1,470		1144.11		1147.43		1147.87		1148.51		1147.42		1147.84		
7	1,590		1147.28		1147.44		1147.88		1150.59		1147.42		1147.85		
8	1,955		1147.28		1151.32		1151.61		1152.35		1151.31		1151.59		
10	2,090	2,720	1149.37	3,855	1152.12	4,400	1152.51	5,695	1153.35	3,850	1152.10	4,396	1152.50		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Golf Course Creek (cont.)															
11	2,480	2,075	1149.77	3,040	1152.52	3,510	1152.95	4,645	1153.90	3,395	1152.84	3,876	1153.28		
13	2,570	2,075	1149.78	3,040	1152.53	3,510	1152.96	4,645	1153.92	3,395	1152.85	3,876	1153.31		
14	3,880	1,335	1153.24	2,000	1154.88	2,325	1155.51	3,120	1156.89	2,453	1155.75	2,795	1156.39		
15	4,560		1154.61		1155.44		1155.93		1157.11		1156.08		1156.56		
16	5,940		1161.66		1162.43		1162.86		1163.86		1163.00		1163.45		
18	6,060	1,335	1164.58	2,000	1164.88	2,325	1164.99	3,120	1165.33	2,453	1165.07	2,795	1165.20		
Golf Course Creek West Branch															
1	560	1,325	1153.86	1,860	1155.10	2,115	1155.66	2,710	1156.92	1,850	1155.08	2,066	1155.50		
2	970		1162.04		1162.57		1162.83		1163.26		1162.55		1162.75		
4	1,110		1162.05		1162.58		1162.84		1164.02		1162.56		1162.80		
5	1,730	1,325	1170.57	1,860	1171.46	2,115	1171.72	2,710	1172.22	1,850	1171.44	2,066	1171.67		
Cloverleaf Creek															
4	3,795	1,820	1140.28	2,570	1141.69	2,925	1142.18	3,770	1143.25	2,553	1141.67	2,910	1142.16		
5	4,255		1141.15		1142.20		1142.80		1143.87		1142.17		1142.78		
6	4,670		1146.78		1148.04		1148.45		1149.38		1148.01		1148.43		
7	5,730		1151.71		1152.92		1153.42		1154.27		1152.90		1153.40		
9	5,850		1153.31		1154.29		1154.79		1156.12		1154.26		1154.77		
10	6,220		1155.12		1156.32		1156.77		1157.62		1156.30		1156.74		
11	7,170		1160.04		1161.32		1162.29		1163.55		1161.30		1162.26		
13	7,250		1164.21		1164.93		1165.05		1165.34		1164.90		1165.03		
14	7,790	1,820	1166.91	2,570	1168.16	2,925	1168.72	3,770	1169.92	2,533	1168.14	2,910	1168.69		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_f=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deep Fork Tributary 22															
1	860	1,500	1154.52	2,250	1155.56	2,610	1156.15	3,500	1157.79	2,701	1156.30	3,080	1157.00		
2	1,190	1,500	1160.91	2,250	1161.32	2,610	1161.49	3,500	1161.99	2,701	1161.53	3,080	1161.75		
Chisholm Creek															
26	26,965	4,690	1041.53	8,370	1044.71	10,500	1045.90	15,780	1049.40	15,800	1049.40	18,000	1050.60		
26A	27,700		1043.28		1047.11		1048.56		1051.65		1051.00		1052.05		
27	28,495	4,690	1043.78	8,370	1047.49	10,500	1048.81	15,780	1051.65	15,800	1051.65	18,000	1052.95		
28	29,330	4,230	1046.09	7,450	1050.33	9,300	1051.72	13,800	1054.65	13,440	1054.50	15,400	1055.10		
30	29,430		1046.58		1051.04		1052.65		1055.84		1055.50		1056.50		
30A	31,815		1047.58		1052.04		1053.78		1056.84		1056.75		1057.90		
31	32,700		1049.27		1053.67		1055.53		1058.75		1058.60		1059.10		
32	32,780		1049.29		1053.73		1056.86		1061.01		1060.60		1063.00		
33	34,180		1052.29		1056.08		1058.36		1061.92		1061.50		1063.00		
34	36,280		1059.75		1063.23		1064.36		1065.61		1065.55		1065.85		
34A	36,360		1060.47		1064.18		1065.46		1069.90		1069.80		1071.80		
35	37,000		1060.59		1064.34		1065.64		1070.09		1069.95		1071.00		
36	38,960		1064.23		1067.55		1069.98		1073.17		1072.85		1073.95		
37	41,320		1074.50		1078.67		1079.42		1081.42		1081.20		1082.10		
38	42,660		1077.02		1080.65		1080.97		1083.84		1083.70		1085.40		
39A	42,728		1077.58		1082.25		1082.69		1085.43		1085.20		1086.25		
39	44,440		1079.03		1083.19		1083.81		1086.93		1086.60		1087.60		
40	46,450		1086.75		1088.25		1088.82		1090.20		1090.10		1090.70		
42	49,765		1092.77		1094.82		1095.48		1096.81		1096.75		1097.40		
42A	49,845	4,230	1092.98	7,450	1095.44	9,300	1096.46	13,800	1099.12	13,440	1098.90	15,400	1100.00		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Chisholm Creek (cont.)																	
43	50,950	3,140	1093.98	5,520	1096.34	6,870	1097.30	10,200	1099.64	10,000	1099.30	11,500	1100.10				
45	51,000		1094.44		1097.13		1100.00		1100.42		1100.40		1100.60				
46	52,870		1097.36		1101.08		1102.81		1104.42		1104.55		1104.95				
47	55,440		1108.05		1111.10		1111.45		1112.72		1112.60		1113.00				
48	57,500	3,140	1112.96	5,520	1115.48	6,870	1116.61	10,200	1118.43	10,000	1118.35	11,500	1118.75				
49	59,250	3,860	1118.35	5,350	1120.36	6,060	1121.15	7,730	1122.77	4,970	1119.80	5,670	1120.80				
50	59,400		1118.55		1120.48		1121.31		1125.59		1119.85		1120.82				
51	60,000		1129.58		1130.64		1131.10		1132.15		1130.44		1130.90				
52	62,920		1137.47		1138.67		1139.09		1139.92		1138.40		1138.88				
53	65,900		1141.63		1142.38		1142.64		1143.19		1142.18		1142.50				
54	65,980		1141.91		1143.01		1143.14		1148.26		1142.80		1143.10				
55	67,300		1147.58		1148.51		1148.98		1149.64		1148.30		1148.75				
56	68,620		1153.21		1153.76		1153.84		1154.39		1153.67		1153.81				
57	68,660		1155.42		1157.42		1157.55		1157.65		1156.98		1157.50				
58	70,150	3,860	1158.04	5,350	1159.42	6,060	1159.77	7,730	1160.55	4,970	1159.18	5,670	1159.70				
59	71,100	2,250	1160.64	3,100	1163.78	3,500	1164.00	4,420	1164.28	2,820	1163.10	3,200	1163.80				
60	71,200		1164.26		1164.98		1165.12		1165.33		1164.84		1165.00				
61	71,300		1164.26		1164.98		1165.12		1165.33		1164.88		1165.05				
62	71,700		1165.39		1165.83		1166.01		1166.36		1165.69		1165.88				
63	71,740		1165.50		1165.84		1166.02		1166.37		1165.75		1165.90				
64	72,100	2,250	1165.67	3,100	1166.05	3,500	1166.22	4,420	1166.54	2,820	1165.91	3,200	1166.08				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Chisholm Creek Tributary 3															
1	3,630	1,010	1044.03	1,830	1045.88	2,270	1046.68	3,370	1048.37	3,570	1048.44	4,060	1050.00		
2	4,400		1047.02		1049.17		1050.02		1051.60		1051.70		1052.20		
2A	6,280		1055.99		1057.78		1058.58		1060.42		1060.80		1061.50		
3	7,580		1065.03		1066.33		1066.93		1068.02		1068.50		1069.00		
5	7,620	1,010	1069.97	1,830	1073.70	2,270	1074.20	3,370	1074.70	3,570	1074.75	4,060	1074.80		
Chisholm Creek Tributary 4															
1A	1,860	2,000	1056.48	3,530	1059.97	4,380	1061.65	6,460	1064.12	6,370	1064.04	7,280	1064.60		
Chisholm Creek Tributary 6															
1	2,000	970	1077.59	1,750	1081.04	2,160	1082.14	3,220	1084.49	3,410	1084.60	3,880	1085.10		
2	2,040		1083.75		1084.66		1084.89		1085.51		1085.60		1086.08		
X3	3,000		1083.89		1084.86		1085.14		1085.84		1085.85		1086.10		
3	3,700		1086.39		1088.49		1089.58		1092.04		1092.60		1093.40		
4	5,020		1095.18		1099.25		1099.69		1100.31		1100.50		1100.80		
5	7,280	970	1103.84	1,750	1103.92	2,160	1104.30	3,220	1105.12	3,410	1105.40	3,880	1105.60		
Chisholm Creek Tributary 8															
2	330	1,000	1093.56	1,620	1096.11	1,940	1098.28	2,720	1100.68	3,280	1100.80	3,740	1101.20		
3	2,250		1103.50		1104.47		1104.76		1105.37		1105.56		1105.75		
4	3,180		1106.62		1107.62		1108.03		1108.80		1109.30		1109.70		
5	3,220		1106.71		1108.31		1109.20		1111.25		1112.20		1113.00		
6	5,080		1114.94		1115.98		1116.18		1117.00		1117.52		1117.80		
7	6,300		1124.43		1125.15		1125.36		1125.54		1125.58		1125.66		
8	6,340	1,000	1125.12	1,620	1127.75	1,940	1128.44	2,720	1128.93	3,280	1129.20	3,740	1129.35		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Chisholm Creek Tributary 9															
1	1,000	1,640	1160.29	2,650	1161.03	3,030	1161.30	3,940	1161.91	2,780	1161.12	3,170	1161.35		
2	2,100	1,640	1167.00	2,650	1167.80	3,030	1168.55	3,940	1170.00	2,780	1167.95	3,170	1168.70		
Deer Creek															
DRE47	54,970	4,218	1072.70	8,047	1073.71	10,374	1074.11	16,145	1074.85	14,824	1074.73	17,106	1074.92		
DRA49	55,210		1073.66		1074.23		1074.52		1075.26		1075.00		1075.30		
DR50	57,320		1077.22		1079.00		1079.52		1080.21		1080.10		1080.31		
DR51	60,140		1083.33		1085.19		1085.77		1086.96		1086.83		1087.19		
DRE52	61,310		1084.33		1086.35		1087.05		1088.24		1087.98		1088.46		
DRA54	61,650		1084.58		1086.77		1087.49		1088.64		1088.40		1088.80		
DR55	64,800		1087.83		1091.32		1092.23		1093.20		1093.11		1093.31		
DR56	67,860		1091.73		1095.53		1096.23		1097.51		1097.20		1097.55		
DRE57	68,500		1092.86		1096.59		1097.48		1098.90		1098.60		1099.05		
DRA59	68,830		1093.28		1097.38		1098.52		1100.69		1100.10		1100.85		
DR60	70,200		1095.69		1099.73		1101.13		1103.75		1103.30		1104.00		
DR60X	72,300	4,218	1099.19	8,047	1102.88	10,374	1104.26	16,145	1106.62	14,824	1105.85	17,106	1106.98		
DR61	73,750	3,222	1102.44	6,335	1106.13	8,239	1107.48	12,983	1109.45	11,397	1108.85	13,200	1109.50		
DRE62	76,160		1105.91		1110.15		1111.63		1113.20		1112.90		1113.22		
DRA64	76,360		1106.08		1110.32		1111.79		1113.45		1113.20		1113.60		
DR65	78,550		1111.40		1115.64		1117.15		1119.62		1119.00		1119.70		
DR66	80,640	3,222	1118.20	6,335	1122.51	8,239	1123.90	12,983	1126.35	11,397	1125.60	13,200	1126.50		
DRE67	82,440	1,137	1120.95	2,769	1125.36	3,794	1127.03	6,400	1129.50	4,336	1127.80	5,149	1128.65		
DR69X	82,600		1121.01		1125.49		1127.18		1129.69		1127.81		1128.68		
DR69	83,300		1123.01		1127.14		1128.64		1131.24		1129.30		1130.10		
DR70	86,380		1132.33		1134.41		1134.79		1136.22		1135.40		1135.73		
DR70X	88,910	1,137	1142.95	2,769	1144.38	3,794	1145.92	6,400	1148.20	4,336	1146.55	5,149	1147.40		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deer Creek (cont.)															
DR72	89,790	2,574	1162.40	4,844	1163.13	6,118	1163.47	9,334	1164.12	8,998	1163.97	10,318	1164.79		
DR73	92,450	2,073	1162.75	3,966	1163.40	5,010	1163.90	7,676	1165.60	7,263	1165.30	8,333	1166.00		
DR74	94,860		1164.94		1166.40		1166.80		1167.72		1167.58		1167.85		
DR75E	97,380		1168.63		1170.69		1171.60		1173.50		1173.25		1173.90		
DR77	97,530		1174.89		1176.68		1176.88		1177.59		1177.47		1177.70		
DR78	98,500		1178.33		1180.98		1182.17		1184.13		1183.92		1184.43		
DR80	98,640		1178.77		1181.55		1184.97		1186.59		1186.42		1186.70		
DR81	99,680		1183.81		1186.69		1187.28		1188.54		1188.37		1188.77		
DR82	100,490		1187.27		1190.16		1191.22		1193.23		1192.98		1193.62		
DR84	100,550		1188.22		1190.57		1191.30		1193.23		1193.00		1193.70		
DR85	102,680		1201.16		1203.31		1204.31		1205.95		1205.82		1206.25		
DR86	104,540	2,073	1207.76	3,966	1210.69	5,010	1211.16	7,676	1213.90	7,263	1213.30	8,333	1214.45		
DR87	105,350	961	1214.09	1,767	1215.57	2,200	1216.84	3,280	1218.44	3,333	1218.50	3,805	1218.79		
DR89	105,420	961	1217.68	1,767	1217.72	2,200	1218.70	3,280	1219.33	3,333	1219.35	3,805	1219.43		
Deer Creek Tributary 2															
201X	7,580	673	1049.37	1,217	1049.69	1,503	1049.82	2,224	1050.08	2,379	1050.10	2,706	1050.17		
203X	7,820		1052.14		1052.65		1052.88		1053.30		1053.38		1053.50		
D204	8,630		1055.85		1056.60		1056.91		1057.54		1057.66		1057.86		
D205	9,520	673	1061.54	1,217	1062.07	1,503	1062.31	2,224	1062.82	2,379	1062.89	2,706	1063.05		
Walnut Creek															
WT2	15,100	1,894	1060.03	3,307	1060.47	4,172	1060.68	6,263	1061.12	6,559	1061.14	7,502	1061.54		
WT3	16,200		1063.72		1064.41		1064.72		1065.29		1065.36		1065.52		
WT4	17,290		1065.72		1066.87		1067.32		1068.18		1068.22		1068.40		
WT6	17,330	1,894	1065.84	3,307	1067.03	4,172	1067.47	6,263	1071.37	6,559	1071.61	7,502	1073.37		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Walnut Creek (cont.)															
WT7X	17,990	1,894	1067.03	3,307	1069.13	4,172	1070.06	6,263	1072.46	6,559	1072.80	7,502	1073.95		
WT7	18,790	1,894	1070.97	3,307	1073.02	4,172	1073.82	6,263	1074.96	6,559	1075.00	7,502	1075.34		
WT8	20,800	792	1075.57	1,204	1076.57	1,546	1076.92	2,309	1077.72	2,690	1078.32	3,079	1079.09		
WT9	22,500		1081.36		1082.38		1082.85		1083.47		1083.58		1083.66		
WT10	24,050		1089.36		1090.12		1090.35		1090.82		1091.18		1091.50		
WT12	24,085		1089.59		1090.78		1091.65		1092.18		1092.22		1092.30		
WT13	24,630	792	1091.84	1,204	1093.07	1,546	1093.84	2,309	1094.74	2,690	1094.92	3,079	1095.00		
WT13P	25,000	926	1097.38	1,675	1097.99	2,078	1098.37	3,127	1099.17	3,259	1099.27	3,712	1099.49		
WT14P	26,240		1098.62		1098.86		1099.00		1099.60		1099.66		1099.96		
WT15	28,400		1104.77		1106.07		1106.56		1107.26		1107.29		1107.46		
WT16	30,820		1115.29		1116.19		1116.58		1117.53		1117.60		1117.88		
WT18	30,910		1115.60		1116.93		1117.68		1121.13		1121.60		1123.90		
WT19	31,720	926	1116.40	1,675	1117.78	2,078	1118.48	3,127	1121.43	3,259	1121.75	3,712	1123.10		
WT21P	33,270	233	1130.50	414	1131.28	503	1131.50	732	1131.85	838	1131.94	949	1132.00		
WT22	34,110	233	1131.77	414	1132.48	503	1132.75	732	1133.35	838	1133.59	949	1133.78		
WT23P	36,080	855	1154.62	1,550	1156.09	1,922	1156.62	2,853	1157.69	3,007	1157.80	3,425	1158.08		
WT23E	37,250		1159.88		1160.41		1160.57		1160.90		1160.93		1161.01		
WT23A	37,325		1162.39		1162.89		1163.08		1163.61		1163.71		1163.89		
WT24	38,000		1162.86		1163.51		1163.78		1164.41		1164.48		1164.63		
WT26	38,100		1166.37		1166.83		1166.99		1167.39		1167.42		1167.52		
26-SY	38,860		1167.11		1167.90		1168.19		1168.81		1168.90		1169.11		
27-SE	39,480		1171.86		1173.19		1173.79		1175.86		1176.00		1176.22		
27-SA	39,540		1173.01		1175.61		1175.69		1176.68		1177.04		1178.05		
WT27	39,810		1174.45		1176.41		1176.78		1177.65		1177.71		1178.05		
28-E	40,440	855	1176.85	1,550	1178.07	1,922	1178.58	2,853	1179.55	3,007	1179.59	3,425	1179.84		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Walnut Creek (Cont.)															
28-A	40,520	855	1176.85	1,550	1178.07	1,922	1178.58	2,853	1179.55	3,007	1179.59	3,425	1179.84		
WT28	41,550	855	1185.68	1,550	1186.30	1,922	1186.55	2,853	1187.25	3,007	1187.35	3,425	1187.60		
WT29	44,250	666	1202.48	1,213	1203.26	1,501	1203.56	2,225	1204.06	2,330	1204.13	2,654	1204.31		
WT31	44,350		1203.86		1204.16		1204.26		1204.46		1204.47		1204.50		
32-SY	44,900		1205.26		1206.38		1206.71		1207.32		1207.38		1207.52		
WT32	45,850		1210.55		1211.54		1211.77		1212.16		1212.22		1212.36		
33-SY	46,650		1213.68		1214.81		1215.33		1216.50		1216.63		1217.02		
WT33	47,200		1218.47		1221.95		1222.38		1223.14		1223.18		1223.39		
WT34	48,350		1227.64		1227.72		1228.10		1228.78		1228.85		1229.04		
WT36	48,560	666	1231.07	1,213	1231.94	1,501	1232.19	2,225	1232.73	2,330	1232.78	2,654	1232.90		
Deer Creek Tributary 3															
301	3,210	435	1072.26	782	1074.11	980	1074.40	2,050	1075.71	1,544	1075.22	1,763	1075.46		
302	5,150		1080.28		1082.24		1082.75		1084.09		1083.69		1083.94		
303	6,750		1085.26		1086.57		1087.12		1088.72		1088.20		1088.46		
305	6,880		1091.44		1092.44		1092.85		1094.16		1093.67		1093.90		
306	7,600	435	1091.64	782	1092.64	980	1093.05	2,050	1094.53	1,544	1093.90	1,763	1094.20		
309	10,530	878	1114.36	1,530	1116.31	1,958	1117.09	3,384	1118.35	3,083	1117.40	3,538	1118.42		
310	13,360		1121.27		1121.99		1122.40		1124.16		1123.68		1124.30		
312	13,480		1125.44		1127.31		1128.38		1131.58		1130.90		1131.90		
313X	14,000	878	1128.16	1,530	1129.61	1,958	1130.37	3,384	1132.48	3,083	1132.10	3,538	1132.65		
315R	14,660	579	1145.77	1,044	1146.08	1,287	1146.21	1,899	1146.58	2,049	1146.73	2,330	1146.93		
315X	16,200	579	1146.68	1,044	1149.27	1,287	1149.40	1,899	1149.74	2,049	1149.77	2,330	1149.82		
317	18,170	897	1163.77	1,631	1165.28	2,025	1165.60	3,010	1165.93	3,142	1165.96	3,581	1166.00		
318	19,360		1166.37		1167.03		1167.32		1168.82		1169.03		1170.65		
320	19,460		1175.86		1176.65		1176.97		1177.51		1177.60		1177.69		
321	20,970	897	1180.59	1,631	1181.55	2,025	1181.97	3,010	1182.90	3,142	1182.99	3,581	1183.29		

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deer Creek Tributary 3 West Branch															
300W	14,550	583	1145.77	1,057	1146.08	1,304	1146.21	1,928	1146.58	2,051	1146.65	2,334	1146.84		
301W	15,600	583	1146.04	1,057	1146.52	1,304	1146.71	1,928	1147.23	2,051	1147.38	2,334	1147.63		
301XW	15,850		1146.23		1146.77		1147.01		1147.59		1147.65		1147.87		
303W	15,980		1149.52		1152.34		1152.68		1153.19		1153.21		1153.40		
304W	18,220		1166.24		1166.96		1167.22		1167.75		1167.81		1167.96		
305W	20,530	583	1184.42	1,057	1185.11	1,304	1185.35	1,928	1185.89	2,051	1185.92	2,334	1186.07		
Deer Creek Tributary 4															
401I	4,500	218	1108.48	389	1109.19	473	1109.47	690	1110.07	784	1110.30	888	1110.52		
402	5,280	218	1113.78	389	1114.52	473	1114.80	690	1115.35	784	1115.54	888	1115.67		
404	6,075	1,166	1127.12	2,136	1128.83	2,664	1129.66	3,978	1131.68	4,053	1131.83	4,628	1132.48		
405	7,390		1128.83		1128.92		1129.66		1131.68		1131.83		1132.49		
406	8,690		1136.49		1136.99		1137.51		1138.70		1138.77		1139.20		
407	11,270	1,166	1149.52	2,136	1151.39	2,664	1151.75	3,978	1152.07	4,053	1152.12	4,628	1152.18		
408	12,350	870	1155.31	1,605	1156.39	1,999	1156.90	2,980	1158.04	3,007	1158.10	3,433	1158.38		
409	14,310		1163.69		1165.88		1166.38		1167.21		1167.24		1167.43		
411	14,387		1165.96		1169.07		1169.34		1169.96		1169.99		1170.11		
412	15,790	870	1174.96	1,605	1176.67	1,999	1177.06	2,980	1178.31	3,007	1178.38	3,433	1179.09		
Deer Creek Tributary 5															
501	3,720	1,111	1108.80	2,010	1110.12	2,498	1110.87	3,717	1112.59	3,911	1112.63	4,458	1113.08		
502	5,480	1,111	1115.62	2,010	1117.31	2,498	1118.03	3,717	1119.30	3,911	1119.52	4,458	1119.88		
Deer Creek Tributary 6															
601	1,390	831	1110.20	1,513	1110.40	1,878	1111.87	2,790	1112.68	2,910	1112.78	3,316	1112.92		
602	3,590	831	1122.51	1,513	1123.44	1,878	1123.67	2,790	1124.27	2,910	1124.50	3,316	1124.88		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Deer Creek Tributary 6 (Cont.)															
603	5,150	831	1132.64	1,513	1132.98	1,878	1133.42	2,790	1134.13	2,910	1134.19	3,316	1134.38		
605	5,695		1134.87		1136.48		1136.93		1137.78		1137.90		1138.02		
606	6,735	831	1139.22	1,513	1140.17	1,878	1140.66	2,790	1141.61	2,910	1141.70	3,316	1141.97		
Deer Creek Tributary 7															
701	1,885	1,179	1111.95	2,157	1114.99	2,689	1116.24	4,015	1117.62	4,101	1117.68	4,682	1117.78		
702	3,860		1121.63		1123.35		1124.07		1125.71		1125.78		1126.20		
704	4,015		1123.09		1125.33		1126.15		1127.48		1127.58		1127.89		
705	5,435		1131.04		1133.87		1134.78		1136.44		1136.67		1137.08		
706	6,665		1136.50		1138.36		1139.11		1140.67		1140.75		1141.18		
707	7,975		1146.27		1148.03		1148.68		1149.87		1149.90		1150.23		
708	9,070		1152.57		1154.44		1155.04		1156.24		1156.35		1156.60		
708X	9,950		1157.35		1158.79		1159.29		1160.28		1160.30		1160.50		
709	10,195		1158.82		1160.29		1160.84		1161.90		1161.95		1162.21		
711	10,295		1160.75		1166.43		1166.90		1167.55		1167.57		1167.72		
711X	10,360		1161.75		1166.50		1166.97		1167.62		1167.64		1167.76		
711P	10,485		1167.68		1168.31		1168.62		1169.23		1169.27		1169.46		
712P	11,105	1,179	1170.82	2,157	1171.92	2,689	1172.29	4,015	1173.00	4,101	1173.08	4,682	1173.26		
713	11,345	799	1171.12	1,429	1172.37	1,775	1172.86	2,639	1173.89	2,710	1173.98	3,091	1174.29		
Spring Creek of Deer Creek															
SG0	1,930	1,593	1111.67	2,912	1113.98	3,643	1115.16	5,457	1117.44	5,537	1117.50	6,327	1118.00		
SG1	3,095		1118.82		1120.65		1121.42		1123.10		1123.18		1123.88		
SG2	4,885		1124.93		1127.57		1128.71		1130.83		1130.85		1131.38		
SG4	5,095	1,593	1128.38	2,912	1132.33	3,643	1132.76	5,457	1133.58	5,537	1133.65	6,327	1134.00		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Spring Creek of Deer Creek (Cont.)															
SG5	5,610	1,593	1129.03	2,912	1132.73	3,643	1133.26	5,457	1134.34	5,537	1134.40	6,327	1134.75		
SG6	7,335		1137.50		1140.16		1141.60		1142.00		1142.02		1142.12		
SG7	9,385		1149.34		1150.68		1151.64		1154.02		1154.05		1154.90		
SG9	9,475		1150.46		1152.03		1152.67		1154.13		1154.27		1154.95		
SG10	11,060		1157.73		1159.83		1159.91		1160.85		1160.90		1161.37		
SG11	11,795		1162.54		1163.65		1164.45		1165.39		1165.45		1165.73		
SG13	11,890		1163.74		1166.67		1166.99		1167.44		1167.53		1167.62		
SG14	12,975		1169.96		1171.22		1172.82		1175.52		1175.50		1176.19		
SG15	14,815	1,593	1178.26	2,912	1181.54	3,643	1182.04	5,457	1183.23	5,537	1183.24	6,327	1183.65		
SG16	17,050	1,030	1196.12	1,879	1196.77	2,337	1197.05	3,481	1197.96	3,599	1198.02	4,105	1198.30		
SG17	20,055		1208.26		1210.10		1210.74		1211.50		1211.58		1211.78		
SG19	20,180	1,030	1208.73	1,879	1214.15	2,337	1214.73	3,481	1215.46	3,599	1215.48	4,105	1215.63		
Deer Creek Tributary 8															
DR800	2,600	1,420	1125.08	2,677	1127.80	3,415	1129.09	5,263	1131.77	4,966	1131.30	5,712	1132.20		
DR801	4,020		1136.12		1138.36		1139.16		1140.60		1140.37		1140.82		
DR802	5,780		1146.10		1148.48		1149.09		1150.17		1150.00		1150.37		
DR804	5,940		1146.74		1149.19		1150.01		1153.06		1152.28		1154.40		
DR805	6,890		1149.93		1152.65		1153.68		1155.61		1155.21		1155.85		
DR806	9,805		1166.42		1168.55		1169.60		1171.57		1171.30		1171.95		
DR807	11,960		1182.42		1184.11		1184.81		1186.19		1185.97		1186.36		
DR809	12,200	1,420	1183.25	2,677	1185.31	3,415	1186.10	5,263	1187.28	4,966	1187.10	5,712	1187.45		
DR810	14,950	587	1195.70	1,186	1197.36	1,572	1198.12	2,513	1199.90	2,118	1199.21	2,468	1199.36		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Deer Creek Tributary 11																	
DR1001	1,335	850	1162.94	1,553	1163.68	1,929	1164.03	2,869	1164.69	2,964	1164.73	3,380	1164.98				
DR1101	3,188		1175.95		1177.31		1177.84		1179.12		1179.25		1179.58				
DR1103	3,305	850	1177.95	1,553	1178.92	1,929	1179.28	2,869	1179.94	2,964	1180.00	3,380	1180.19				
Deer Creek Tributary 12																	
DR75T	1,190	1,143	1167.19	2,085	1169.06	2,596	1169.75	3,872	1171.19	3,987	1171.30	4,549	1171.64				
DR77T	1,310		1168.02		1170.32		1171.25		1173.35		1173.41		1173.95				
D1201	2,935	1,143	1179.60	2,085	1181.47	2,596	1182.27	3,872	1183.88	3,987	1183.94	4,549	1184.38				
Deer Creek Tributary 13																	
DR1301X	480	347	1170.72	629	1171.76	839	1171.85	1,520	1172.86	1,223	1172.22	1,423	1172.62				
DR1303	520		1171.34		1172.30		1172.75		1173.90		1173.44		1173.73				
DR1304	1,340		1178.42		1179.15		1179.59		1180.53		1179.52		1179.61				
DR1306	1,410		1181.63		1182.84		1183.54		1185.27		1183.45		1183.65				
DR1306D	1,590		1196.69		1197.00		1197.18		1197.61		1197.43		1197.57				
DR1307	2,710		1200.82		1201.35		1201.64		1202.34		1202.08		1202.27				
DR1308	4,660		1216.57		1217.11		1217.34		1218.04		1217.73		1217.93				
DR1310	4,885		1219.89		1220.19		1220.40		1220.80		1220.63		1220.73				
DR1311	5,720		1223.42		1223.84		1224.08		1224.75		1224.47		1224.68				
DR1313	5,865		1228.37		1228.72		1228.92		1229.45		1229.25		1229.39				
DR1314E	6,490		1230.12		1230.39		1230.64		1231.31		1231.01		1231.23				
DR1314	6,535	347	1244.78	629	1245.06	839	1245.23	1,520	1245.70	1,223	1245.51	1,423	1245.63				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Deer Creek Tributary 14																	
D1401	1,060	683	1210.45	1,328	1211.22	1,627	1211.39	2,399	1211.83	2,443	1211.85	2,778	1212.00				
D1402	3,160		1216.65		1217.59		1217.92		1218.88		1218.90		1219.39				
D1404	3,290		1224.39		1225.12		1225.32		1225.85		1225.90		1226.17				
D1405	3,510		1224.33		1224.92		1225.04		1226.10		1226.15		1226.66				
D1406	3,855	683	1226.88	1,328	1227.33	1,627	1227.66	2,399	1228.03	2,443	1228.08	2,778	1228.17				
D1409	5,390	842	1232.50	1,540	1233.17	1,913	1233.36	2,845	1233.84	2,936	1233.90	3,347	1234.14				
D1410	6,495		1233.91		1234.74		1235.16		1236.09		1236.10		1236.40				
D1411	7,515		1239.79		1241.34		1241.98		1243.23		1243.38		1243.76				
D1412	8,900	842	1246.29	1,540	1248.11	1,913	1248.64	2,845	1249.69	2,936	1249.75	3,347	1250.00				

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Bluff Creek																	
1	0.750	13,380	1035.89	19,250	1036.58	22,940	1036.98	29,700	1037.60	16,000	1036.10	18,380	1036.46				
2	1.570		1040.43		1041.21		1041.63		1042.31		1040.69		1041.06				
3	1.931		1042.16		1042.89		1043.28		1043.92		1042.43		1042.78				
4	1.943		1042.43		1042.94		1043.33		1043.97		1042.60		1042.86				
5	2.050		1043.94		1044.44		1044.72		1045.21		1044.14		1044.36				
6	2.720		1047.44		1048.07		1048.39		1048.90		1047.65		1047.95				
7	3.201	13,380	1050.35	19,250	1051.17	22,940	1051.59	29,700	1052.26	16,000	1050.65	18,360	1051.40				
8	3.510	12,580	1054.46	18,140	1055.56	21,300	1056.05	28,000	1056.82	15,140	1054.95	17,380	1055.40				
9	3.691		1056.07		1057.16		1057.60		1058.34		1056.61		1056.87				
10	3.703	12,580	1056.12	18,140	1057.22	21,300	1057.66	28,000	1058.40	15,140	1056.69	17,380	1056.97				
11	3.940	11,130	1058.94	15,740	1059.63	18,470	1059.99	25,000	1060.68	13,090	1059.25	15,010	1059.55				
12	4.820		1066.47		1067.11		1067.44		1068.15		1066.74		1067.01				
13	5.131		1070.00		1070.73		1071.08		1071.72		1070.25		1070.63				
14	5.143		1070.04		1070.74		1071.14		1071.84		1070.30		1070.68				
15	5.570		1073.26		1074.08		1074.39		1075.20		1073.74		1074.02				
16	5.880	11,130	1074.84	15,740	1075.98	18,470	1076.64	25,000	1077.78	13,090	1075.32	15,010	1075.85				
17	6.250	6,750	1077.78	9,850	1079.52	11,590	1080.30	15,000	1081.29	10,790	1080.05	12,380	1080.55				
18	6.431		1078.11		1079.90		1080.69		1081.71		1080.30		1080.95				
19	6.442		1078.13		1079.92		1080.70		1081.73		1080.35		1081.00				
20	6.443		1078.77		1081.27		1082.08		1083.07		1081.32		1082.40				
21	6.501		1078.75		1081.20		1082.06		1083.05		1081.70		1082.40				
22	6.573	6,750	1078.81	9,850	1082.15	11,590	1082.74	15,000	1083.52	10,790	1082.50	12,380	1083.00				
23	6.870	6,960	1081.57	10,260	1083.47	12,040	1084.05	16,100	1084.97	10,600	1083.60	12,150	1084.10				
24	7.450	1,890	1088.65	2,640	1090.84	3,180	1091.77	4,120	1092.88	3,230	1091.80	3,680	1092.18				
25	8.080	1,890	1093.01	2,640	1095.02	3,180	1095.95	4,120	1096.48	3,230	1096.00	3,680	1096.20				

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_u=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Bluff Creek (Cont.)															
26	8.110	1,890	1093.09	2,640	1095.09	3,180	1096.03	4,120	1096.59	3,320	1096.05	3,680	1096.35		
27	8.130	1,530	1093.51	2,130	1095.53	2,400	1096.55	3,000	1097.36	2,500	1096.65	2,850	1097.15		
28	8.220		1098.58		1099.27		1099.54		1100.73		1099.65		1100.25		
29	8.404		1100.34		1101.40		1101.83		1102.55		1101.95		1102.40		
30	8.610		1101.49		1102.60		1103.04		1103.82		1103.17		1103.60		
31	8.642		1101.58		1102.71		1103.14		1103.92		1103.29		1103.79		
32	8.840	1,530	1102.79	2,130	1103.83	2,400	1104.22	3,000	1104.96	2,500	1104.40	2,850	1104.85		
Bluff Creek Tributary A															
5	1.500	2,580	2057.50	3,730	2058.20	4,270	2058.60	5,520	2059.30	3,550	2058.06	4,060	2058.41		
6	1.660		1058.30		1059.11		1059.44		1060.08		1058.98		1059.39		
7	1.790		1062.20		1063.19		1063.51		1064.05		1062.98		1063.40		
8	2.000		1065.40		1066.17		1066.44		1066.96		1065.99		1066.40		
9	2.280		1069.80		1070.71		1071.08		1071.78		1070.50		1070.96		
10	2.490		1074.78		1075.71		1076.04		1076.68		1075.55		1075.90		
11	2.600		1076.04		1076.94		1077.29		1077.98		1076.74		1077.18		
12	2.830		1078.64		1079.09		1079.26		1079.61		1079.00		1079.19		
13	2.931	2,580	1080.80	3,730	1081.33	4,270	1081.55	5,520	1081.99	3,550	1081.25	4,060	1081.48		
14	2.953	1,980	1084.00	2,770	1084.13	3,120	1084.29	4,000	1084.47	2,820	1084.14	3,220	1084.30		
15	3.160		1085.53		1085.74		1085.90		1086.52		1085.78		1085.96		
16	3.330	1,980	1088.68	2,770	1089.08	3,120	1089.23	4,000	1089.57	2,820	1089.05	3,220	1089.26		
Bluff Creek Tributary A-1															
2	0.425	2,300	1054.48	3,260	1055.07	3,710	1055.31	4,800	1055.85	5,550	1056.50	6,350	1057.10		
3	0.530	2,300	1057.73	3,260	1058.24	3,710	1058.42	4,800	1058.71	5,550	1058.92	6,350	1059.16		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Bluff Creek Tributary A-1 (Cont.)															
4	0.547	2,300	1059.59	3,260	1059.82	3,710	1060.85	4,800	1061.58	5,550	1062.10	6,350	1062.70		
5	0.745	1,260	1061.26	1,750	1061.91	1,980	1062.15	2,480	1062.69	2,340	1062.55	2,660	1062.94		
6	0.930		1062.00		1062.67		1062.90		1063.37		1063.22		1063.54		
7	0.980		1065.37		1065.63		1065.76		1066.01		1065.93		1066.10		
8	1.079		1068.18		1068.65		1068.84		1069.18		1069.09		1069.32		
9	1.200		1072.65		1073.13		1073.28		1073.55		1073.47		1073.65		
10	1.325	1,260	1076.11	1,750	1076.49	1,980	1076.63	2,480	1076.89	2,340	1076.68	2,660	1077.20		
Dry Creek of Bluff Creek															
2	0.550	3,630	1076.91	5,000	1078.56	5,660	1079.20	7,150	1080.23	5,340	1078.90	6,100	1079.50		
3	0.620		1078.90		1080.61		1081.08		1081.77		1080.90		1081.30		
4	0.750		1081.05		1082.88		1083.34		1083.99		1083.15		1083.55		
5	0.875		1083.31		1084.77		1085.11		1085.69		1085.00		1085.30		
6	1.100		1084.74		1085.65		1085.97		1086.56		1085.86		1086.14		
7	1.270		1084.90		1085.83		1086.16		1086.79		1086.04		1086.34		
8	1.325		1085.11		1086.12		1086.50		1087.23		1086.36		1086.70		
9	1.375		1087.11		1089.97		1090.91		1091.88		1090.55		1091.20		
10	1.460		1089.01		1092.68		1095.16		1095.60		1094.00		1095.30		
11	1.775		1093.00		1093.75		1095.16		1095.60		1094.60		1095.30		
12	1.890		1094.60		1096.88		1098.05		1098.91		1097.60		1098.35		
13	1.970		1095.37		1097.45		1098.46		1099.35		1098.10		1098.75		
14	2.025		1097.15		1098.55		1099.40		1100.40		1099.05		1099.70		
15	2.170	3,630	1101.31	5,000	1102.20	5,660	1102.48	7,150	1103.19	5,340	1102.36	6,100	1102.66		
16	2.435	2,180	1108.45	2,960	1109.38	3,360	1109.79	4,200	1110.43	3,040	1109.52	3,470	1109.90		
17	2.520	2,180	1109.69	2,960	1110.56	3,360	1110.90	4,200	1111.43	3,040	1110.66	3,470	1110.98		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Dry Creek of Bluff Creek (Cont.)															
18	2.540	2,180	1111.94	2,960	1112.74	3,360	1113.02	4,200	1113.46	3,040	1112.80	3,470	1113.10		
19	2.635		1112.52		1113.42		1113.77		1114.37		1113.50		1113.84		
20	2.800		1118.14		1119.61		1120.30		1121.12		1119.80		1120.45		
21	2.830		1121.25		1121.66		1122.41		1123.08		1121.72		1122.50		
22	2.910		1121.25		1122.02		1122.41		1123.08		1122.10		1122.50		
23	2.935		1126.17		1126.86		1127.13		1127.60		1126.96		1127.20		
24	3.060		1126.72		1127.15		1127.93		1128.20		1127.22		1127.98		
25	3.260		1130.54		1131.54		1131.97		1132.79		1131.80		1132.10		
26	3.280		1135.80		1136.31		1136.51		1136.90		1136.35		1136.56		
27	3.475		1136.09		1136.65		1136.89		1137.33		1136.74		1136.96		
28	3.680		1136.79		1137.47		1137.76		1138.29		1137.54		1137.82		
29	3.820		1139.46		1140.27		1140.62		1141.22		1140.34		1140.70		
30	3.875		1141.09		1141.56		1141.77		1142.17		1141.60		1141.82		
31	4.020		1141.33		1141.86		1142.09		1142.53		1141.94		1142.16		
32	4.160		1142.31		1142.88		1143.13		1143.58		1142.94		1143.20		
33	4.275		1145.96		1146.56		1146.81		1147.23		1146.60		1146.88		
34	4.525		1149.25		1149.83		1150.09		1150.57		1149.86		1150.14		
35	4.875		1157.04		1157.47		1157.64		1157.90		1157.50		1157.67		
36	5.050		1164.19		1164.62		1164.81		1165.20		1164.79		1164.85		
37	5.180		1169.05		1169.49		1169.65		1169.95		1169.58		1169.70		
38	5.425	2,180	1176.27	2,960	1176.91	3,360	1177.22	4,200	1177.78	3,040	1177.00	3,470	1177.32		
Brush Creek of Dry Creek															
1	0.085	1,680	1103.99	2,320	1104.87	2,640	1105.28	3,300	1105.95	2,489	1105.10	2,840	1105.50		
2	0.200	1,680	1105.49	2,320	1106.32	2,640	1106.70	3,300	1106.98	2,489	1106.58	2,840	1106.80		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_1=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Brush Creek of Dry Creek (cont.)															
3	0.280	1,680	1107.26	2,320	1107.82	2,640	1108.09	3,300	1108.61	2,489	1107.90	2,840	1108.22		
4	0.350		1110.21		1110.90		1111.19		1111.68		1111.00		1111.30		
5	0.430		1113.06		1114.04		1114.43		1115.09		1114.20		1114.70		
6	0.475		1114.29		1115.17		1115.48		1116.02		1115.20		1115.60		
7	0.515	1,680	1115.63	2,320	1116.75	2,640	1117.03	3,300	1117.59	2,489	1116.80	2,840	1117.20		
8	0.585	1,334	1120.30	1,842	1120.97	2,096	1121.31	2,620	1121.87	1,852	1121.00	2,110	1121.35		
9	0.675		1122.52		1123.45		1123.83		1124.50		1123.50		1123.85		
10	0.775		1126.15		1127.26		1127.73		1128.58		1127.30		1127.72		
11	0.845		1130.16		1131.21		1131.70		1132.67		1131.25		1131.71		
12	0.925		1132.82		1133.54		1133.85		1134.38		1133.60		1133.90		
13	0.980		1135.21		1136.19		1136.56		1137.16		1136.20		1136.50		
14	1.025	1,334	1137.14	1,842	1137.93	2,096	1138.23	2,620	1138.74	1,852	1137.98	2,110	1138.25		
Spring Creek of Bluff Creek															
1	0.270	5,990	1085.15	8,940	1086.55	10,520	1087.65	13,900	1088.90	10,267	1087.50	11,790	1088.65		
2	0.475	6,000	1091.93	8,410	1092.86	9,650	1092.92	12,400	1093.22	8,370	1092.60	9,600	1092.90		
3	0.570		1093.48		1094.62		1095.07		1095.93		1094.60		1095.05		
4	0.670		1094.20		1095.37		1095.81		1096.67		1095.30		1095.80		
5	0.925		1094.45		1095.70		1096.18		1097.11		1095.60		1096.15		
6	1.130		1095.05		1096.43		1096.95		1097.87		1096.50		1096.90		
7	1.330		1097.09		1098.78		1099.50		1100.85		1098.70		1099.45		
8	1.350		1099.08		1100.27		1100.64		1104.06		1100.20		1100.60		
9	1.430		1101.34		1102.83		1103.26		1104.91		1102.75		1103.25		
10	1.450		1106.40		1107.70		1108.20		1109.20		1107.65		1108.15		
11	1.475	6,000	1107.63	8,410	1108.65	9,650	1109.06	12,400	1109.80	8,370	1108.60	9,600	1109.05		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Spring Creek of Bluff Creek (Cont.)																	
12	1.730	6,000	1108.08	8,410	1109.08	9,650	1109.46	12,400	1110.07	8,370	1109.05	9,600	1109.45				
13	1.750		1111.32		1112.15		1112.41		1112.89		1112.10		1112.40				
14	1.765		1111.42		1112.26		1112.55		1113.06		1112.20		1112.50				
15	1.875		1112.11		1113.90		1114.29		1114.95		1113.85		1114.25				
16	1.990	6,000	1114.59	8,410	1116.44	9,650	1116.65	12,400	1117.33	8,370	1116.30	9,600	1116.60				
17	2.180	4,640	1115.04	6,490	1116.79	7,440	1117.07	9,500	1117.83	7,590	1117.10	8,700	1117.60				
18	2.225		1112.17		1123.31		1123.49		1123.83		1123.55		1123.70				
19	2.460		1123.65		1124.16		1124.38		1124.77		1124.45		1124.60				
20	2.615		1124.36		1125.30		1125.82		1126.50		1125.90		1126.20				
21	2.660		1125.72		1127.49		1128.12		1129.17		1128.20		1128.75				
22	2.675		1139.39		1139.98		1140.27		1140.85		1140.35		1140.62				
23	2.945	4,640	1140.71	6,490	1141.63	7,440	1142.07	9,500	1142.95	7,590	1142.10	8,700	1142.60				
24	3.220	3,110	1146.60	4,360	1147.33	5,020	1147.61	6,420	1148.24	6,620	1148.30	7,600	1148.75				
25	3.235		1149.93		1150.68		1151.02		1151.65		1151.70		1152.05				
26	3.380		1149.93		1150.68		1151.02		1151.65		1151.70		1152.05				
27	3.525		1149.93		1150.68		1151.02		1151.65		1151.70		1152.05				
28	3.640		1149.93		1150.68		1151.02		1151.65		1151.70		1152.05				
29	3.750		1150.60		1151.36		1151.86		1152.83		1153.00		1153.90				
30	3.760		1154.51		1156.46		1157.29		1160.22		1160.60		1162.80				
31	3.950	3,110	1155.72	4,360	1157.61	5,020	1158.48	6,420	1160.57	6,620	1160.80	7,600	1162.80				
32	4.180	2,360	1169.72	3,340	1170.86	3,840	1171.14	4,900	1171.51	4,235	1171.30	4,840	1171.50				
33	4.370		1171.88		1172.60		1172.91		1173.51		1173.05		1173.44				
34	4.550		1172.39		1173.37		1173.81		1174.64		1174.10		1174.58				
35	4.750		1176.97		1177.47		1177.57		1178.64		1178.10		1178.61				
36	4.775	2,360	1182.97	3,340	1183.39	3,840	1183.78	4,900	1184.10	4,235	1183.92	4,840	1184.08				

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Spring Creek of Bluff Creek (Cont.)															
37	5.075	2,360	1186.25	3,340	1187.46	3,840	1187.98	4,900	1188.95	4,235	1188.40	4,840	1188.80		
38	5.090	2,360	1187.90	3,340	1190.90	3,840	1192.60	4,900	1194.30	4,235	1193.10	4,840	1194.05		
39	5.170	2,310	1189.41	3,220	1191.97	3,650	1193.37	4,640	1194.77	3,414	1193.10	3,900	1194.05		
40	5.200		1199.40		1199.80		1200.00		1200.30		1199.90		1200.08		
41	5.425		1199.52		1199.98		1200.20		1200.57		1200.12		1200.28		
42	5.615		1212.14		1212.56		1212.72		1213.02		1212.64		1212.80		
43	5.780		1212.31		1212.78		1212.97		1213.33		1212.88		1213.06		
44	5.875		1227.36		1228.08		1228.36		1228.91		1228.20		1228.48		
45	6.000		1227.36		1228.08		1228.36		1228.91		1228.20		1228.48		
46	6.150		1244.15		1244.66		1244.81		1245.22		1244.76		1244.93		
47	6.305		1245.05		1245.55		1245.74		1246.10		1245.64		1245.82		
48	6.430		1246.06		1247.04		1247.48		1248.57		1247.25		1247.72		
49	6.450	2,310	1250.76	3,220	1251.26	3,650	1251.48	4,640	1251.96	3,414	1251.32	3,900	1251.58		
Spring Creek West Branch															
1	0.650	2,240	1092.10	3,110	1093.82	3,570	1094.41	4,580	1095.67	4,350	1095.40	4,970	1096.15		
2	0.800		1094.29		1095.17		1095.54		1096.17		1096.00		1096.41		
3	0.875		1095.90		1096.75		1097.11		1097.75		1097.60		1098.03		
4	1.000		1100.01		1100.76		1101.09		1101.75		1101.56		1102.00		
5	1.030		1103.00		1103.98		1104.23		1104.76		1104.60		1104.95		
6	1.080		1111.60		1112.45		1112.81		1113.44		1113.28		1113.75		
7	1.400		1115.35		1115.97		1116.21		1116.98		1116.90		1117.38		
8	1.525		1115.93		1116.68		1117.00		1117.62		1117.40		1117.90		
9	1.620		1116.66		1117.53		1117.91		1118.66		1118.50		1119.20		
10	1.815	2,240	1123.68	3,110	1124.36	3,570	1124.65	4,580	1125.21	4,350	1125.08	4,970	1125.45		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Spring Creek West Branch (Cont.)															
11	1.840	2,240	1130.37	3,110	1130.95	3,570	1131.22	4,580	1131.75	4,350	1131.68	4,970	1132.00		
12	2.080		1131.47		1132.29		1132.66		1133.36		1133.16		1133.70		
13	2.240		1135.08		1135.97		1136.34		1137.02		1136.82		1137.30		
14	2.400		1138.56		1139.65		1140.16		1141.09		1140.80		1141.45		
15	2.464		1145.96		1146.24		1146.40		1146.71		1146.64		1146.83		
16	2.571		1146.05		1146.40		1146.60		1147.00		1146.92		1147.19		
17	2.720		1147.89		1148.85		1149.26		1150.04		1149.80		1150.38		
18	2.925		1158.69		1159.50		1159.82		1160.34		1160.20		1160.55		
19	2.950		1160.30		1160.55		1160.61		1160.86		1160.80		1160.97		
20	3.225		1162.27		1163.00		1163.34		1163.97		1163.80		1164.21		
21	3.250		1169.12		1169.58		1169.80		1170.20		1170.08		1170.36		
22	3.480		1169.80		1170.44		1170.72		1171.27		1171.12		1171.50		
23	3.775		1172.40		1172.99		1173.21		1173.66		1173.56		1173.86		
24	3.820		1174.49		1174.93		1175.15		1175.57		1175.48		1175.78		
25	4.020		1180.40		1180.88		1181.10		1181.53		1181.40		1181.70		
26	4.110		1183.36		1183.87		1184.10		1184.55		1184.44		1184.70		
27	4.210		1190.97		1191.27		1191.42		1191.59		1191.53		1191.66		
28	4.430	2,240	1191.63	3,110	1192.01	3,570	1192.55	4,580	1192.90	4,350	1192.80	4,970	1193.05		
29	4.580	850	1193.95	1,180	1194.25	1,300	1194.37	1,700	1194.65	1,627	1194.60	1,850	1194.77		
30	4.600		1197.86		1198.05		1198.07		1198.27		1198.22		1198.36		
31	4.725		1200.61		1201.20		1201.34		1201.51		1201.48		1201.60		
32	4.930		1205.28		1205.62		1205.74		1206.07		1205.98		1206.30		
33	4.945		1207.84		1208.22		1208.33		1208.67		1208.60		1208.80		
34	5.320		1209.62		1209.83		1209.91		1210.15		1210.12		1210.25		
35	5.550	850	1210.18	1,180	1210.49	1,300	1210.58	1,700	1210.85	1,627	1210.78	1,850	1210.95		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (MI)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Silver Creek of Spring Creek															
1	.190	1,490	1149.93	2,080	1150.68	2,350	1151.02	3,050	1151.65	2,780	1151.44	3,170	1151.80		
2	.350		1149.93		1150.68		1151.02		1152.65		1151.44		1151.80		
3	.370		1153.87		1154.22		1154.39		1154.76		1154.60		1154.82		
4	.470		1154.58		1155.05		1155.23		1155.63		1155.48		1155.72		
5	.625		1154.62		1155.11		1155.30		1155.73		1155.56		1155.80		
6	.650		1165.06		1165.64		1165.92		1166.76		1166.40		1166.95		
7	.870		1166.28		1167.11		1167.45		1168.16		1167.64		1168.35		
8	.935		1166.29		1167.12		1167.46		1168.18		1167.82		1168.20		
9	1.050		1167.70		1168.41		1168.76		1169.53		1169.20		1169.65		
10	1.070		1173.00		1173.69		1173.94		1174.25		1174.15		1174.30		
11	1.150	1,490	1173.25	2,080	1174.00	2,350	1174.27	3,050	1174.71	2,780	1174.62	3,170	1174.80		

*Miles above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Bluff Creek above Lake Hefner															
72W	7,000	2,077	1207.85	3,010	1208.23	3,464	1208.37	4,551	1208.65	3,010	1208.23	3,464	1208.37		
73	7,480		1207.91		1208.33		1208.47		1208.80		1208.33		1208.47		
73X	7,930		1210.35		1212.37		1214.09		1215.91		1212.37		1214.09		
75	8,050		1212.04		1216.01		1216.42		1217.08		1216.01		1216.42		
75X	8,500		1216.08		1216.21		1216.62		1217.28		1216.21		1216.62		
75Y	8,810		1218.60		1220.48		1221.69		1222.54		1220.48		1221.69		
76	9,350		1221.42		1222.33		1222.89		1223.77		1222.33		1222.89		
77	9,660		1229.49		1230.04		1230.24		1230.67		1230.04		1230.24		
77X	10,000		1231.10		1231.80		1232.05		1232.54		1231.80		1232.05		
77Y	10,360		1231.80		1232.40		1232.70		1233.20		1232.40		1232.70		
79	11,100	2,077	1238.17	3,010	1239.22	3,464	1239.65	4,551	1240.35	3,010	1239.22	3,464	1239.65		
Hog Creek															
1	49	5,493	1055.75	9,978	1056.25	12,638	1056.50	19,171	1057.25	19,121	1057.25	21,920	1057.45		
3	101		1055.75		1056.25		1056.50		1057.25		1057.25		1057.45		
4	2,500	5,493	1055.85	9,978	1056.50	12,638	1056.75	19,171	1057.63	19,121	1057.63	21,920	1057.90		
5	3,765	5,249	1056.94	9,561	1057.95	12,112	1058.42	18,375	1059.38	18,362	1059.38	21,045	1059.70		
6	5,500		1059.19		1060.45		1061.03		1062.33		1062.33		1062.85		
7	6,400		1059.37		1060.65		1061.28		1062.58		1062.58		1063.10		
8	8,120	5,249	1062.67	9,561	1062.94	12,112	1063.37	18,375	1064.27	18,362	1064.27	21,045	1064.75		
9	9,720	5,064	1065.30	9,244	1066.30	11,712	1066.60	17,771	1067.17	17,784	1067.17	20,379	1067.45		
10	10,960		1066.48		1067.30		1067.71		1068.47		1068.47		1068.80		
12	10,984	5,064	1070.25	9,244	1071.17	11,712	1071.62	17,771	1072.50	17,784	1072.50	20,379	1072.80		
13	12,610	4,975	1070.50	9,093	1071.57	11,521	1072.12	17,482	1073.10	17,224	1073.05	19,754	1073.40		
14	13,645	4,975	1071.50	9,093	1072.57	11,521	1073.07	17,482	1074.10	17,224	1074.05	19,754	1074.35		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Hog Creek (Cont.)															
15	15,170	4,975	1073.75	9,093	1074.82	11,521	1075.37	17,482	1076.46	17,224	1076.43	19,754	1076.80		
16	16,335		1074.89		1076.07		1076.62		1077.80		1077.75		1078.20		
18	16,355	4,975	1074.94	9,093	1076.19	11,521	1076.76	17,482	1077.94	17,224	1077.90	19,754	1078.30		
19	18,350	3,685	1077.44	6,722	1078.52	8,487	1079.01	12,835	1080.09	12,868	1080.09	14,736	1080.45		
20	19,040	3,685	1078.53	6,722	1079.52	8,487	1080.01	12,835	1081.01	12,868	1081.01	14,736	1081.50		
21	20,010	3,387	1081.15	6,173	1081.79	7,786	1082.12	11,761	1082.89	11,855	1082.90	13,569	1083.15		
23	20,031	3,387	1085.12	6,173	1085.89	7,786	1086.24	11,761	1086.96	11,855	1086.98	13,569	1087.30		
24	23,230	2,936	1085.45	5,344	1086.33	6,725	1086.74	10,136	1087.57	10,210	1087.59	11,685	1087.85		
26	26,355		1093.42		1094.85		1095.51		1096.91		1096.93		1097.30		
27	27,930	2,936	1101.18	5,344	1102.04	6,725	1102.37	10,136	1102.89	10,210	1102.90	11,685	1103.00		
28	31,800	2,227	1114.06	4,059	1114.92	5,095	1115.30	7,659	1116.12	7,838	1116.20	8,958	1116.50		
30	32,175		1116.84		1117.76		1118.19		1118.91		1118.95		1119.15		
31	33,680	2,227	1123.71	4,059	1124.57	5,095	1125.00	7,659	1125.83	7,838	1125.90	8,958	1126.15		
32	34,635	2,080	1124.76	3,792	1125.57	4,756	1126.00	7,143	1126.78	7,338	1126.85	8,384	1127.15		
34	34,680		1127.10		1128.90		1129.15		1129.88		1129.95		1130.25		
35	36,380	2,080	1127.71	3,792	1129.25	4,756	1129.58	7,143	1130.30	7,338	1130.33	8,384	1130.50		
36	39,875	1,798	1140.95	3,281	1141.29	4,108	1141.53	6,159	1142.06	6,260	1142.08	7,155	1142.30		
37	41,440		1147.60		1148.35		1148.59		1149.08		1149.10		1149.25		
39	41,570	1,798	1148.60	3,281	1148.77	4,108	1148.98	6,159	1149.41	6,260	1149.43	7,155	1149.62		
40	44,180	1,259	1152.90	2,305	1160.03	2,879	1160.30	4,303	1160.89	4,464	1160.95	5,092	1161.20		
41	45,600		1168.70		1169.14		1169.37		1169.82		1169.85		1170.03		
43	46,495		1172.46		1175.42		1176.82		1179.56		1179.80		1180.60		
44	47,600		1173.74		1175.49		1176.82		1179.56		1179.80		1180.60		
46	47,700		1175.59		1178.33		1178.90		1179.69		1179.85		1180.60		
47	48,860	1,259	1178.21	2,305	1178.83	2,879	1179.40	4,303	1180.19	4,464	1180.35	5,092	1180.70		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Hog Creek (Cont.)															
48	51,200	887	1192.63	1,630	1192.95	2,030	1193.32	3,019	1193.91	3,080	1193.94	3,514	1194.15		
49	53,200	887	1206.37	1,630	1206.67	2,030	1206.78	3,019	1207.08	3,080	1207.09	3,514	1207.18		
Hog Creek Tributary 1															
101	1,575	925	1074.64	1,695	1075.51	2,108	1075.71	3,139	1076.07	3,216	1076.10	3,669	1076.20		
102	2,395	925	1079.45	1,695	1081.66	2,108	1082.26	3,139	1083.22	3,216	1083.24	3,669	1083.40		
103	3,835	588	1090.65	1,081	1090.92	1,338	1091.92	1,984	1092.80	2,045	1092.82	2,331	1092.95		
104	5,910		1109.68		1110.37		1110.43		1111.45		1111.50		1111.75		
105	8,085	588	1130.00	1,081	1130.18	1,338	1130.40	1,984	1130.60	2,045	1130.61	2,331	1130.65		
Hog Creek Tributary 2															
201	1,500	476	1075.92	1,449	1076.52	1,601	1076.66	1,980	1077.27	2,020	1077.32	2,390	1078.30		
202X	2,000	1,204	1097.92	2,203	1098.70	2,747	1099.25	4,104	1099.90	4,185	1099.92	4,780	1100.05		
202	3,720		1097.92		1098.70		1099.25		1099.90		1099.92		1100.05		
203	4,100	1,204	1097.92	2,203	1098.70	2,747	1099.25	4,104	1099.90	4,185	1099.92	4,780	1100.05		
204	6,040	970	1106.51	1,786	1107.01	2,225	1107.20	3,319	1107.75	3,355	1107.76	3,830	1107.90		
205	7,340		1115.29		1115.64		1115.78		1115.97		1115.97		1116.03		
206	7,800		1117.67		1118.14		1118.33		1118.83		1118.84		1119.00		
208	8,150	970	1122.72	1,786	1123.34	2,225	1123.59	3,319	1124.08	3,355	1124.09	3,830	1124.25		
209	9,600	504	1129.95	927	1130.31	1,146	1130.42	1,697	1130.68	1,752	1130.70	1,996	1130.76		
Hog Creek East Branch															
EB1	1,540	1,481	1086.08	2,690	1086.68	3,356	1086.93	5,016	1087.48	5,185	1087.51	5,920	1087.65		
EB2A	2,880		1090.91		1092.13		1092.59		1093.39		1093.43		1093.62		
EB4A	3,050	1,481	1096.35	2,690	1096.97	3,356	1097.22	5,016	1097.71	5,185	1097.75	5,920	1097.90		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		100-YEAR		50-YEAR		100-YEAR	
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)
Hog Creek East Branch (Cont.)															
EB5	5,702	1,481	1107.46	2,690	1108.09	3,356	1108.40	5,016	1109.23	5,185	1109.30	5,920	1109.60		
EB6E	7,090		1113.35		1114.05		1114.30		1114.68		1114.70		1114.78		
EB8A	7,620	1,481	1115.24	2,690	1120.37	3,356	1124.13	5,016	1138.17	5,185	1138.35	5,920	1139.10		
EB9	10,400	1,116	1125.57	2,031	1126.17	2,527	1126.41	3,767	1138.17	3,905	1138.35	4,450	1139.10		
EB10	12,840		1135.37		1135.90		1136.13		1138.17		1138.35		1139.10		
EB11E	14,230		1146.55		1147.08		1147.25		1147.66		1147.70		1147.85		
EB13A	14,560	1,116	1150.80	2,031	1151.60	2,527	1151.86	3,767	1152.32	3,905	1152.35	4,450	1152.50		
Hog Creek West Branch															
WB2	1,650	2,613	1085.22	4,764	1086.05	5,988	1086.44	9,014	1087.21	9,095	1087.22	10,400	1087.40		
WB3	4,820		1099.12		1099.71		1099.95		1100.44		1100.45		1100.60		
WB4	6,800		1107.04		1108.42		1109.01		1110.05		1110.07		1110.40		
WB5	8,200	2,613	1113.47	4,764	1114.16	5,988	1114.47	9,014	1115.18	9,095	1115.19	10,400	1115.40		
WB6	9,500	1,977	1117.09	3,596	1117.87	4,504	1118.25	6,755	1119.05	6,905	1119.10	7,890	1119.40		
WB7	10,240		1119.94		1120.44		1120.67		1121.18		1121.20		1121.35		
WB9	10,300		1122.91		1123.51		1124.00		1124.51		1124.53		1124.65		
WB10	11,440		1123.76		1124.81		1125.33		1126.27		1126.31		1126.60		
WB12	13,140	1,977	1127.92	3,596	1128.93	4,504	1129.36	6,755	1130.35	6,905	1130.40	7,890	1130.75		
WB14	16,320	1,437	1137.52	2,611	1137.99	3,257	1138.21	4,867	1138.66	5,030	1138.70	5,740	1138.85		
WB16	16,360		1141.06		1141.60		1141.82		1142.23		1142.26		1142.40		
WB17	17,080		1141.16		1141.70		1141.92		1142.43		1142.47		1142.65		
WB18	18,000		1146.90		1147.50		1147.73		1148.52		1148.60		1148.90		
WB19	18,960		1153.27		1153.74		1153.99		1154.19		1154.20		1154.24		
WB21	20,600		1160.29		1160.82		1161.01		1161.69		1161.75		1162.15		
WB22	21,880	1,437	1163.85	2,611	1164.37	3,257	1164.62	4,867	1164.97	5,030	1165.00	5,740	1165.08		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS										URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR			
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)		
Hog Creek West Branch (Cont.)															
WB24	21,920	1,437	1168.64	2,611	1169.28	3,257	1169.58	4,867	1170.12	5,030	1170.15	5,740	1170.30		
WB25	22,520	1,019	1170.53	1,858	1171.26	2,310	1171.43	3,441	1171.80	3,560	1171.85	4,060	1172.00		
WB26	24,140		1181.50		1181.91		1182.15		1182.60		1182.65		1182.86		
WB28	24,200		1183.99		1184.49		1184.72		1185.26		1185.24		1185.40		
WB29	25,360		1189.97		1190.89		1190.93		1191.23		1191.28		1191.50		
WB30	26,600		1196.77		1196.83		1197.09		1197.59		1197.63		1197.80		
WB31	28,140		1207.50		1208.01		1208.14		1208.42		1208.45		1208.55		
WB33	28,700		1210.47		1217.50		1221.87		1232.47		1232.57		1233.00		
WB35	30,860	1,019	1221.52	1,858	1221.92	2,310	1222.07	3,441	1232.47	3,560	1232.57	4,060	1233.00		
Hog Creek West Branch Tributary 1															
WB101	960	587	1096.33	1,074	1096.76	1,328	1096.90	1,966	1097.18	2,050	1097.22	2,340	1097.36		
Hog Creek West Branch Tributary 2															
WB201	1,740	737	1128.37	1,351	1128.98	1,676	1129.15	2,491	1129.55	2,565	1129.58	2,920	1129.70		
WB202	3,200		1142.59		1142.75		1142.92		1143.22		1143.24		1143.33		
WB203	4,660		1152.14		1152.90		1153.09		1153.56		1153.60		1153.80		
WB204	6,200	737	1168.30	1,351	1169.60	1,676	1169.95	2,491	1170.63	2,565	1170.67	2,920	1170.85		
Hog Creek West Branch Tributary 3															
WB301	1,950	663	1151.16	1,209	1151.39	1,496	1151.55	2,218	1151.75	2,320	1151.76	2,640	1151.79		
WB302	3,750		1168.69		1169.10		1169.27		1169.66		1169.70		1169.83		
WB303	5,000	663	1180.39	1,209	1181.57	1,496	1181.81	2,218	1182.31	2,320	1182.36	2,640	1182.50		

*Feet above mouth

FLOODING SOURCE		FLOODING UNDER EXISTING CONDITIONS												URBAN FACTOR $R_L=4.1$			
CROSS SECTION	DISTANCE (FT)*	10-YEAR		50-YEAR		100-YEAR		500-YEAR		50-YEAR		100-YEAR					
		PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)	PEAKQ (CFS)	WSELEV (NGVD)				
Hog Creek Tributary 3																	
301	2,690	615	1120.55	1,228	1126.21	1,614	1130.05	2,554	1132.80	2,865	1133.20	3,270	1133.40				
302	4,130		1133.64		1134.09		1134.27		1134.66		1134.76		1134.90				
303	5,570		1145.20		1145.51		1145.70		1146.12		1146.26		1146.45				
305	5,650	615	1145.61	1,228	1146.01	1,614	1151.51	2,554	1153.76	2,865	1153.90	3,270	1154.30				
307	8,040	49	1161.21	504	1161.71	787	1161.72	1,425	1161.91	1,775	1162.03	2,020	1162.11				
Hog Creek Tributary 5																	
501	1,440	745	1138.86	1,354	1139.26	1,676	1139.42	2,486	1139.78	2,615	1139.82	2,980	1139.95				
502	2,760	745	1154.86	1,354	1155.42	1,676	1155.65	2,486	1156.06	2,615	1156.11	2,980	1156.25				
503	5,970	604	1171.14	1,107	1171.46	1,370	1171.59	2,031	1171.89	2,100	1171.90	2,400	1172.00				
505	6,100	604	1175.83	1,107	1176.44	1,370	1176.69	2,031	1176.86	2,100	1176.87	2,400	1176.92				
Hog Creek Tributary 6																	
601	1,460	840	1132.89	1,542	1133.20	1,917	1133.44	2,853	1133.92	2,915	1133.96	3,325	1134.20				
602	2,600		1141.21		1141.75		1141.86		1142.14		1142.15		1142.25				
603	4,000	840	1154.96	1,542	1155.14	1,917	1155.28	2,853	1155.56	2,915	1155.58	3,325	1155.70				

*Feet above mouth

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