***FEMA Effective Model as of June 18, 2007***

***TC&R values for FEMA Effective Model***

***Clear Creek and Armand Bayou Watershed***

***HCFCD TC&R Excel Template***

| Subwatershed | Drainage Area (acres) | Drainage Area (sq.mi.) | Watershed Length (mi.) L | Length to Centroid(mi.) Lca | Channel Slope(ft./mi) S | Overland Slope(ft./mi.) So | D | Percent Urban Development 2002 DLU | Percent Channel Improvement DCI | Percent Channel Conveyance DCC | Percent Ponding DPP | DLU affected by Detention DET | Percent Impervious 2002 | (TC+R)" | TC" | R" | DLU Minimum | DLU *(Detention)* | Ponding Adjustments for Storage Values (R") | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | 20% (5-Yr) | 10% (100-Yr) | 4% (25-Yr) | 2% (50-Yr) | 1% (100-Yr) | 0.2% (500-Yr) |
| A100A | 2056.3 | 3.21 | 3.06 | 1.23 | 7.4 | 11.00 | 2.46 | 1.3 | 0.0 | 100 | 86 | 2.7 | 0.9 | 7.88 | 1.06 | 6.82 | 17.59 | 1.30 | 23.19 | 21.19 | 18.27 | 16.59 | 14.86 | 11.71 |
| A100B | 1416.3 | 2.21 | 3.35 | 1.74 | 1.4 | 5.00 | 2.46 | 13.6 | 100.0 | 60 | 59 | 6.8 | 9.2 | 15.10 | 2.00 | 13.10 | 36.04 | 13.60 | 41.06 | 37.74 | 32.88 | 30.07 | 27.15 | 21.76 |
| A100C | 1418.9 | 2.22 | 2.54 | 0.86 | 3.8 | 3.00 | 2.46 | 20.4 | 0.0 | 20 | 27 | 3.1 | 14.3 | 8.73 | 0.99 | 7.74 | 168.69 | 20.40 | 20.54 | 19.10 | 17.01 | 15.77 | 14.48 | 12.03 |
| A100D | 1060.5 | 1.66 | 2.07 | 0.90 | 4.4 | 8.00 | 2.46 | 11.9 | 0.0 | 100 | 70 | 21.1 | 4.5 | 7.19 | 0.98 | 6.21 | 17.59 | 11.90 | 20.20 | 18.52 | 16.06 | 14.64 | 13.17 | 10.48 |
| A100E | 2366.7 | 3.70 | 4.82 | 2.82 | 3.8 | 5.00 | 2.46 | 1.3 | 0.0 | 100 | 98 | 2.1 | 1.0 | 13.73 | 3.62 | 10.11 | 17.59 | 1.30 | 35.33 | 32.22 | 27.68 | 25.08 | 22.41 | 17.54 |
| A100F | 2149.1 | 3.36 | 2.77 | 0.95 | 2.8 | 6.00 | 2.46 | 17.4 | 0.0 | 10 | 23 | 0.4 | 15.5 | 10.34 | 1.30 | 9.04 | 446.65 | 17.40 | 23.16 | 21.59 | 19.31 | 17.96 | 16.54 | 13.84 |
| A100G | 2048.6 | 3.20 | 2.87 | 1.44 | 3 | 3.00 | 2.46 | 16.0 | 0.0 | 20 | 15 | 2.6 | 11.6 | 10.35 | 1.97 | 8.38 | 168.69 | 16.00 | 8.38 | 8.38 | 8.38 | 8.38 | 8.38 | 8.38 |
| A100H | 2474.2 | 3.87 | 3.32 | 1.66 | 1.9 | 4.00 | 2.46 | 3.6 | 0.0 | 100 | 94 | 3.0 | 3.2 | 13.48 | 2.97 | 10.51 | 17.59 | 3.60 | 36.41 | 33.23 | 28.58 | 25.91 | 23.17 | 18.18 |
| A100I | 1170.6 | 1.83 | 3.56 | 1.48 | 1.9 | 4.00 | 2.46 | 53.9 | 74.2 | 100 | 42 | 10.5 | 24.2 | 7.58 | 1.59 | 5.99 | 17.59 | 43.36 | 17.46 | 16.13 | 14.19 | 13.05 | 11.87 | 9.66 |
| A100J | 4339.8 | 6.78 | 4.71 | 1.42 | 2.9 | 8.00 | 2.46 | 17.5 | 0.0 | 20 | 8 | 3.1 | 12.6 | 14.87 | 1.96 | 12.92 | 168.69 | 17.50 | 12.92 | 12.92 | 12.92 | 12.92 | 12.92 | 12.92 |
| A100K | 4236.8 | 6.62 | 4.53 | 1.70 | 1.9 | 5.00 | 2.46 | 31.6 | 0.0 | 20 | 18 | 2.8 | 21.4 | 16.80 | 2.89 | 13.91 | 168.69 | 31.60 | 13.91 | 13.91 | 13.91 | 13.91 | 13.91 | 13.91 |
| A100L | 3868.2 | 6.04 | 3.42 | 0.95 | 1.4 | 6.00 | 2.46 | 27.8 | 63.2 | 30 | 46 | 10.2 | 16.6 | 15.33 | 1.31 | 14.02 | 95.43 | 27.80 | 41.68 | 38.46 | 33.74 | 30.99 | 28.13 | 22.81 |
| A100M | 3440.6 | 5.38 | 6.69 | 3.32 | 1.8 | 3.00 | 2.46 | 20.8 | 74.7 | 30 | 18 | 14.6 | 9.6 | 22.54 | 4.10 | 18.44 | 95.43 | 20.80 | 18.44 | 18.44 | 18.44 | 18.44 | 18.44 | 18.44 |
| A100N | 1360.0 | 2.13 | 4.98 | 2.05 | 1.9 | 16.00 | 2.46 | 24.1 | 25.1 | 20 | 1 | 14.5 | 12.3 | 17.96 | 3.17 | 14.79 | 168.69 | 24.10 | 14.79 | 14.79 | 14.79 | 14.79 | 14.79 | 14.79 |
| A100O | 576.0 | 0.90 | 2.89 | 1.36 | 0.9 | 6.00 | 2.46 | 52.0 | 0.0 | 40 | 0 | 3.9 | 26.9 | 15.91 | 3.27 | 12.64 | 63.71 | 52.00 | 12.64 | 12.64 | 12.64 | 12.64 | 12.64 | 12.64 |
| A100P | 2964.5 | 4.63 | 4.94 | 1.71 | 1 | 9.00 | 2.46 | 40.1 | 67.8 | 40 | 5 | 8.0 | 23.4 | 22.40 | 2.74 | 19.65 | 63.71 | 40.10 | 19.65 | 19.65 | 19.65 | 19.65 | 19.65 | 19.65 |
| A100Q | 1838.7 | 2.87 | 3.13 | 1.18 | 1 | 14.00 | 2.46 | 16.0 | 0.0 | 60 | 0 | 0.0 | 10.7 | 16.24 | 2.85 | 13.39 | 36.04 | 16.00 | 13.39 | 13.39 | 13.39 | 13.39 | 13.39 | 13.39 |
| A100R | 5166.1 | 8.07 | 5.49 | 2.56 | 3.9 | 7.00 | 2.46 | 30.8 | 0.0 | 70 | 1 | 0.1 | 24.1 | 14.25 | 3.06 | 11.20 | 29.03 | 30.71 | 11.20 | 11.20 | 11.20 | 11.20 | 11.20 | 11.20 |
| A100S | 781.4 | 1.22 | 2.23 | 1.30 | 4.9 | 13.00 | 2.46 | 52.7 | 0.0 | 70 | 4 | 0.0 | 45.6 | 4.82 | 1.26 | 3.57 | 29.03 | 52.70 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 |
| A100T | 1622.4 | 2.54 | 2.00 | 1.28 | 4.6 | 11.00 | 2.46 | 48.5 | 0.0 | 100 | 0 | 0.0 | 41.0 | 3.43 | 1.30 | 2.13 | 17.59 | 48.50 | 2.13 | 2.13 | 2.13 | 2.13 | 2.13 | 2.13 |
| A100U | 1076.5 | 1.68 | 1.35 | 0.28 | 3.6 | 18.00 | 2.46 | 44.9 | 22.6 | 90 | 0 | 0.0 | 33.7 | 3.29 | 0.26 | 3.03 | 20.39 | 44.90 | 3.03 | 3.03 | 3.03 | 3.03 | 3.03 | 3.03 |
| A10404A | 1781.8 | 2.78 | 3.14 | 0.94 | 10.7 | 5.00 | 2.46 | 16.3 | 34.0 | 90 | 0 | 1.6 | 16.1 | 7.04 | 0.54 | 6.50 | 20.39 | 16.30 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 |
| A10407A | 1815.0 | 2.84 | 5.19 | 2.47 | 3.5 | 2.00 | 2.46 | 25.5 | 72.5 | 100 | 0 | 1.4 | 20.8 | 11.89 | 2.11 | 9.77 | 17.59 | 24.09 | 9.77 | 9.77 | 9.77 | 9.77 | 9.77 | 9.77 |
| A10413A | 2036.5 | 3.18 | 3.86 | 2.11 | 1.7 | 2.00 | 2.46 | 67.3 | 100.0 | 100 | 0 | 1.9 | 53.4 | 6.33 | 1.82 | 4.50 | 17.59 | 65.36 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| A104A | 1998.7 | 3.12 | 4.38 | 2.32 | 1.8 | 7.00 | 2.46 | 32.9 | 72.2 | 100 | 0 | 0.1 | 24.1 | 10.83 | 2.75 | 8.07 | 17.59 | 32.76 | 8.07 | 8.07 | 8.07 | 8.07 | 8.07 | 8.07 |
| A104B | 318.7 | 0.50 | 1.90 | 0.98 | 1.2 | 8.00 | 2.46 | 24.1 | 0.0 | 100 | 0 | 1.4 | 43.0 | 8.88 | 2.09 | 6.79 | 17.59 | 22.75 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 |
| A104C | 672.0 | 1.05 | 1.45 | 0.44 | 2.5 | 8.00 | 2.46 | 11.4 | 0.0 | 100 | 0 | 0.0 | 28.0 | 6.81 | 0.62 | 6.19 | 17.59 | 11.40 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 |
| A104D | 1805.4 | 2.82 | 2.70 | 0.99 | 3.8 | 13.00 | 2.46 | 44.9 | 0.0 | 100 | 0 | 0.2 | 43.7 | 4.78 | 1.10 | 3.69 | 17.59 | 44.71 | 3.69 | 3.69 | 3.69 | 3.69 | 3.69 | 3.69 |
| A107A | 1312.0 | 2.05 | 2.06 | 0.80 | 1.4 | 9.00 | 2.46 | 71.1 | 67.8 | 100 | 0 | 0.0 | 52.8 | 4.10 | 0.93 | 3.17 | 17.59 | 71.10 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 |
| A107B | 1301.1 | 2.03 | 2.79 | 1.53 | 1.4 | 9.00 | 2.46 | 39.3 | 15.4 | 100 | 0 | 0.1 | 30.4 | 7.60 | 2.77 | 4.83 | 17.59 | 39.23 | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| A111A | 2572.2 | 4.02 | 5.23 | 2.78 | 6.2 | 10.00 | 2.46 | 23.5 | 62.8 | 100 | 15 | 3.8 | 20.5 | 11.20 | 1.91 | 9.29 | 17.59 | 19.67 | 9.29 | 9.29 | 9.29 | 9.29 | 9.29 | 9.29 |
| A118A | 782.1 | 1.22 | 2.11 | 0.98 | 8.3 | 7.00 | 2.46 | 57.9 | 85.0 | 100 | 17 | 10.7 | 33.3 | 2.95 | 0.43 | 2.52 | 17.59 | 47.17 | 2.52 | 2.52 | 2.52 | 2.52 | 2.52 | 2.52 |
| A11902A | 896.6 | 1.40 | 3.15 | 1.69 | 3.1 | 9.00 | 2.46 | 11.6 | 0.0 | 100 | 21 | 2.5 | 9.9 | 10.94 | 2.30 | 8.64 | 17.59 | 11.60 | 21.61 | 20.18 | 18.11 | 16.87 | 15.58 | 13.11 |
| A11905A | 599.0 | 0.94 | 1.35 | 0.49 | 4.8 | 7.00 | 2.46 | 31.4 | 100.0 | 80 | 0 | 0.0 | 24.0 | 4.25 | 0.26 | 3.99 | 24.06 | 31.40 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 |
| A11905B | 796.2 | 1.24 | 2.05 | 0.95 | 4.8 | 7.00 | 2.46 | 41.3 | 100.0 | 80 | 15 | 3.8 | 31.6 | 5.07 | 0.50 | 4.57 | 24.06 | 37.45 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 |
| A11906A | 627.8 | 0.98 | 2.05 | 0.94 | 3.29 | 6.00 | 2.46 | 60.3 | 100.0 | 60 | 0 | 2.8 | 46.4 | 5.72 | 0.56 | 5.15 | 36.04 | 57.49 | 5.15 | 5.15 | 5.15 | 5.15 | 5.15 | 5.15 |
| A11906B | 240.6 | 0.38 | 1.22 | 0.34 | 2.4 | 6.00 | 2.46 | 32.7 | 100.0 | 30 | 61 | 0.0 | 29.4 | 6.11 | 0.25 | 5.86 | 95.43 | 32.70 | 18.52 | 17.01 | 14.81 | 13.53 | 12.21 | 9.77 |
| A11906C | 146.6 | 0.23 | 1.18 | 0.68 | 3.02 | 6.00 | 2.46 | 67.3 | 100.0 | 80 | 2 | 0.1 | 59.4 | 2.72 | 0.40 | 2.32 | 24.06 | 67.23 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| A11907A | 348.2 | 0.54 | 1.29 | 0.75 | 4.8 | 6.00 | 2.46 | 82.1 | 100.0 | 100 | 0 | 6.3 | 64.8 | 1.83 | 0.33 | 1.49 | 17.59 | 75.84 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 |
| A119A | 923.5 | 1.44 | 3.04 | 1.35 | 3.6 | 6.00 | 2.46 | 79.4 | 100.0 | 80 | 0 | 8.1 | 52.1 | 4.79 | 0.74 | 4.05 | 24.06 | 71.34 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 |
| A119B | 462.1 | 0.72 | 1.30 | 0.78 | 3.7 | 9.00 | 2.46 | 74.6 | 100.0 | 100 | 0 | 8.1 | 48.2 | 2.20 | 0.42 | 1.79 | 17.59 | 66.52 | 1.79 | 1.79 | 1.79 | 1.79 | 1.79 | 1.79 |
| A119C | 1441.3 | 2.25 | 2.96 | 1.16 | 3.3 | 9.00 | 2.46 | 12.7 | 24.7 | 80 | 21 | 1.5 | 10.1 | 10.23 | 1.33 | 8.90 | 24.06 | 12.70 | 22.26 | 20.79 | 18.66 | 17.39 | 16.05 | 13.51 |
| A120A | 1945.6 | 3.04 | 3.35 | 1.39 | 1.3 | 8.00 | 2.46 | 39.4 | 78.4 | 90 | 0 | 11.9 | 25.1 | 12.53 | 1.84 | 10.68 | 20.39 | 27.50 | 10.68 | 10.68 | 10.68 | 10.68 | 10.68 | 10.68 |
| A120B | 1429.1 | 2.23 | 2.76 | 0.68 | 4.3 | 16.00 | 2.46 | 77.7 | 100.0 | 90 | 5 | 15.2 | 49.2 | 4.11 | 0.34 | 3.77 | 20.39 | 62.47 | 3.77 | 3.77 | 3.77 | 3.77 | 3.77 | 3.77 |
| A120C | 851.2 | 1.33 | 1.95 | 0.62 | 2.8 | 6.00 | 2.46 | 92.5 | 100.0 | 90 | 0 | 26.5 | 51.5 | 3.60 | 0.38 | 3.22 | 20.39 | 66.01 | 3.22 | 3.22 | 3.22 | 3.22 | 3.22 | 3.22 |
| A120D | 1784.3 | 2.79 | 3.08 | 1.23 | 3.6 | 6.00 | 2.46 | 39.3 | 100.0 | 100 | 6 | 5.1 | 24.1 | 6.41 | 0.78 | 5.63 | 17.59 | 34.22 | 5.63 | 5.63 | 5.63 | 5.63 | 5.63 | 5.63 |
| B100A | 917.1 | 1.43 | 2.84 | 1.26 | 7.9 | 9.00 | 2.46 | 55.1 | 58.4 | 40 | 0 | 2.4 | 38.5 | 7.31 | 0.67 | 6.63 | 63.71 | 55.10 | 6.63 | 6.63 | 6.63 | 6.63 | 6.63 | 6.63 |
| B100B | 873.0 | 1.36 | 2.34 | 1.12 | 5.1 | 12.00 | 2.46 | 59.6 | 40.2 | 80 | 0 | 13.2 | 35.0 | 4.72 | 0.86 | 3.85 | 24.06 | 46.45 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 |
| B100C | 186.9 | 0.29 | 1.13 | 0.48 | 3.6 | 14.66 | 2.46 | 12.1 | 0.0 | 80 | 0 | 0.8 | 5.7 | 5.01 | 0.55 | 4.46 | 24.06 | 12.10 | 4.46 | 4.46 | 4.46 | 4.46 | 4.46 | 4.46 |
| B100D | 1078.4 | 1.69 | 3.01 | 1.60 | 2.7 | 7.30 | 2.46 | 8.9 | 0.0 | 70 | 0 | 11.0 | 3.9 | 11.11 | 2.35 | 8.76 | 29.03 | 8.90 | 8.76 | 8.76 | 8.76 | 8.76 | 8.76 | 8.76 |
| B100E | 1091.2 | 1.71 | 2.38 | 1.16 | 4.5 | 10.00 | 2.46 | 24.1 | 57.8 | 90 | 0 | 0.7 | 12.7 | 7.08 | 0.92 | 6.16 | 20.39 | 23.36 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 |
| B100F | 569.6 | 0.89 | 1.65 | 1.04 | 0.49 | 9.00 | 2.46 | 51.2 | 37.8 | 100 | 0 | 0.0 | 30.4 | 6.34 | 2.77 | 3.57 | 17.59 | 51.20 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 |
| B100G | 673.3 | 1.05 | 2.58 | 1.66 | 1.61 | 12.00 | 2.46 | 14.0 | 0.0 | 100 | 0 | 0.3 | 18.0 | 11.95 | 3.18 | 8.77 | 17.59 | 14.00 | 8.77 | 8.77 | 8.77 | 8.77 | 8.77 | 8.77 |
| B100H | 2433.3 | 3.80 | 2.83 | 0.75 | 0.2 | 9.80 | 2.46 | 22.5 | 0.0 | 100 | 0 | 0.0 | 22.8 | 22.28 | 4.05 | 18.23 | 17.59 | 22.49 | 18.23 | 18.23 | 18.23 | 18.23 | 18.23 | 18.23 |
| B10401A | 356.5 | 0.56 | 1.05 | 0.83 | 3 | 10.40 | 2.46 | 44.4 | 0.0 | 100 | 0 | 0.0 | 29.2 | 2.68 | 1.03 | 1.65 | 17.59 | 44.40 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 |
| B10402A | 591.4 | 0.92 | 2.05 | 1.12 | 3 | 7.10 | 2.46 | 77.1 | 100.0 | 100 | 0 | 0.0 | 46.4 | 2.96 | 0.65 | 2.31 | 17.59 | 77.10 | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 |
| B10403A | 1777.3 | 2.78 | 3.84 | 2.01 | 2 | 10.60 | 2.46 | 78.7 | 100.0 | 100 | 0 | 0.0 | 46.9 | 5.24 | 1.50 | 3.74 | 17.59 | 78.70 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 |
| B10404A | 1472.0 | 2.30 | 3.61 | 1.75 | 3.9 | 5.50 | 2.46 | 33.7 | 100.0 | 66 | 19 | 13.8 | 32.3 | 11.01 | 1.10 | 9.92 | 31.53 | 31.53 | 9.92 | 9.92 | 9.92 | 9.92 | 9.92 | 9.92 |
| B10404B | 378.9 | 0.59 | 1.66 | 1.07 | 3.9 | 10.60 | 2.46 | 52.4 | 100.0 | 90 | 14 | 18.0 | 30.0 | 4.45 | 0.64 | 3.81 | 20.39 | 34.35 | 3.81 | 3.81 | 3.81 | 3.81 | 3.81 | 3.81 |
| B10404C | 643.2 | 1.01 | 1.76 | 0.70 | 3.9 | 15.10 | 2.46 | 17.4 | 100.0 | 90 | 18 | 37.5 | 10.4 | 6.69 | 0.44 | 6.25 | 20.39 | 17.40 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 |
| B10404D | 253.4 | 0.40 | 1.32 | 0.41 | 12.6 | 7.10 | 2.46 | 42.3 | 100.0 | 100 | 0 | 14.0 | 24.8 | 2.58 | 0.13 | 2.46 | 17.59 | 28.30 | 2.46 | 2.46 | 2.46 | 2.46 | 2.46 | 2.46 |
| B10405A | 1203.2 | 1.88 | 2.66 | 0.74 | 8.1 | 10.00 | 2.46 | 7.3 | 0.0 | 50 | 0 | 0.1 | 5.3 | 6.92 | 0.58 | 6.33 | 46.56 | 7.30 | 6.33 | 6.33 | 6.33 | 6.33 | 6.33 | 6.33 |
| B10405B | 526.7 | 0.82 | 1.92 | 1.00 | 8.1 | 4.80 | 2.46 | 61.2 | 100.0 | 100 | 0 | 2.7 | 35.5 | 2.40 | 0.37 | 2.03 | 17.59 | 58.51 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 |
| B10408A | 481.3 | 0.75 | 1.56 | 0.69 | 2 | 4.50 | 2.46 | 92.9 | 100.0 | 100 | 0 | 0.1 | 51.5 | 2.48 | 0.45 | 2.03 | 17.59 | 92.81 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 |
| B104A | 442.2 | 0.69 | 1.05 | 0.47 | 2 | 13.20 | 2.46 | 36.5 | 100.0 | 100 | 0 | 2.0 | 29.2 | 3.67 | 0.39 | 3.28 | 17.59 | 34.53 | 3.28 | 3.28 | 3.28 | 3.28 | 3.28 | 3.28 |
| B104B | 796.8 | 1.25 | 2.80 | 1.71 | 2.6 | 7.30 | 2.46 | 84.6 | 19.3 | 50 | 0 | 0.2 | 43.4 | 7.13 | 1.99 | 5.14 | 46.56 | 84.43 | 5.14 | 5.14 | 5.14 | 5.14 | 5.14 | 5.14 |
| B104C | 630.4 | 0.99 | 2.40 | 1.29 | 2.6 | 7.10 | 2.46 | 99.6 | 100.0 | 50 | 0 | 2.0 | 49.8 | 5.80 | 0.74 | 5.06 | 46.56 | 97.63 | 5.06 | 5.06 | 5.06 | 5.06 | 5.06 | 5.06 |
| B104D | 428.2 | 0.67 | 1.96 | 0.46 | 6 | 6.00 | 2.46 | 76.6 | 100.0 | 60 | 4 | 4.2 | 38.7 | 3.84 | 0.18 | 3.66 | 36.04 | 72.45 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 |
| B104E | 336.6 | 0.53 | 1.59 | 0.55 | 2.47 | 4.40 | 2.46 | 7.8 | 49.0 | 100 | 7 | 10.8 | 5.0 | 7.31 | 0.62 | 6.69 | 17.59 | 7.80 | 6.69 | 6.69 | 6.69 | 6.69 | 6.69 | 6.69 |
| B104F | 423.0 | 0.66 | 1.21 | 0.62 | 7.2 | 10.00 | 2.46 | 91.7 | 100.0 | 100 | 0 | 5.0 | 52.3 | 1.38 | 0.21 | 1.17 | 17.59 | 86.70 | 1.17 | 1.17 | 1.17 | 1.17 | 1.17 | 1.17 |
| B104G | 62.1 | 0.10 | 0.42 | 0.19 | 3.57 | 4.00 | 2.46 | 76.4 | 100.0 | 100 | 0 | 14.0 | 49.0 | 1.04 | 0.10 | 0.95 | 17.59 | 62.40 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| B104H | 168.3 | 0.26 | 0.77 | 0.31 | 3.57 | 4.80 | 2.46 | 49.5 | 100.0 | 100 | 0 | 7.8 | 28.5 | 2.12 | 0.18 | 1.94 | 17.59 | 41.70 | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 |

***FEMA Effective Model as of June 18, 2007***

***TC&R values for FEMA Effective Model***

***Clear Creek and Armand Bayou Watershed***

***HCFCD TC&R Excel Template***

| Subwatershed | Drainage Area (acres) | Drainage Area (sq.mi.) | Watershed Length (mi.) L | Length to Centroid(mi.) Lca | Channel Slope(ft./mi) S | Overland Slope(ft./mi.) So | D | Percent Urban Development 2002 DLU | Percent Channel Improvement DCI | Percent Channel Conveyance DCC | Percent Ponding DPP | DLU affected by Detention DET | Percent Impervious 2002 | (TC+R)" | TC" | R" | DLU Minimum | DLU *(Detention)* | Ponding Adjustments for Storage Values (R") | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | 20% (5-Yr) | 10% (100-Yr) | 4% (25-Yr) | 2% (50-Yr) | 1% (100-Yr) | 0.2% (500-Yr) |
| B104I | 199.7 | 0.31 | 1.08 | 0.45 | 3.6 | 4.80 | 2.46 | 36.0 | 100.0 | 100 | 0 | 0.2 | 22.3 | 2.97 | 0.27 | 2.71 | 17.59 | 35.80 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| B104J | 162.6 | 0.25 | 1.26 | 0.83 | 2.63 | 4.40 | 2.46 | 48.7 | 100.0 | 100 | 0 | 0.0 | 29.7 | 3.00 | 0.57 | 2.43 | 17.59 | 48.70 | 2.43 | 2.43 | 2.43 | 2.43 | 2.43 | 2.43 |
| B104K | 197.8 | 0.31 | 1.28 | 0.93 | 2.63 | 13.20 | 2.46 | 69.3 | 100.0 | 100 | 0 | 0.0 | 41.3 | 2.38 | 0.59 | 1.79 | 17.59 | 69.30 | 1.79 | 1.79 | 1.79 | 1.79 | 1.79 | 1.79 |
| B104L | 235.5 | 0.37 | 1.38 | 0.83 | 2.16 | 3.00 | 2.46 | 28.3 | 100.0 | 90 | 0 | 0.0 | 18.6 | 5.49 | 0.69 | 4.80 | 20.39 | 28.30 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| B104M | 245.1 | 0.38 | 1.29 | 0.92 | 2.16 | 3.00 | 2.46 | 57.5 | 100.0 | 90 | 0 | 0.0 | 45.5 | 3.24 | 0.69 | 2.55 | 20.39 | 57.50 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 |
| B104N | 436.5 | 0.68 | 1.57 | 0.57 | 2.16 | 10.00 | 2.46 | 11.4 | 0.0 | 70 | 0 | 0.0 | 9.4 | 7.60 | 0.88 | 6.72 | 29.03 | 11.40 | 6.72 | 6.72 | 6.72 | 6.72 | 6.72 | 6.72 |
| B106A | 1073.9 | 1.68 | 2.35 | 0.91 | 6.6 | 8.80 | 2.46 | 28.9 | 93.0 | 100 | 0 | 0.4 | 20.0 | 4.84 | 0.45 | 4.40 | 17.59 | 28.48 | 4.40 | 4.40 | 4.40 | 4.40 | 4.40 | 4.40 |
| B106B | 823.7 | 1.29 | 1.47 | 0.46 | 6.7 | 8.80 | 2.46 | 71.7 | 100.0 | 100 | 0 | 2.3 | 39.0 | 1.89 | 0.17 | 1.72 | 17.59 | 69.45 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 |
| B106C | 913.9 | 1.43 | 1.99 | 0.58 | 5.8 | 8.80 | 2.46 | 83.5 | 100.0 | 100 | 0 | 0.8 | 47.0 | 2.19 | 0.22 | 1.96 | 17.59 | 82.65 | 1.96 | 1.96 | 1.96 | 1.96 | 1.96 | 1.96 |
| B106D | 1714.6 | 2.68 | 2.92 | 1.15 | 1.9 | 8.80 | 2.46 | 35.8 | 100.0 | 100 | 0 | 10.4 | 26.2 | 9.49 | 1.05 | 8.44 | 17.59 | 25.37 | 8.44 | 8.44 | 8.44 | 8.44 | 8.44 | 8.44 |
| B106E | 579.8 | 0.91 | 2.91 | 1.27 | 1.9 | 3.00 | 2.46 | 29.0 | 35.0 | 100 | 0 | 5.1 | 18.8 | 9.86 | 1.82 | 8.04 | 17.59 | 23.90 | 8.04 | 8.04 | 8.04 | 8.04 | 8.04 | 8.04 |
| B109A | 1839.4 | 2.87 | 3.88 | 1.68 | 3.4 | 4.00 | 2.46 | 21.4 | 100.0 | 100 | 0 | 15.9 | 16.2 | 12.11 | 1.19 | 10.92 | 17.59 | 17.59 | 10.92 | 10.92 | 10.92 | 10.92 | 10.92 | 10.92 |
| B111A | 608.0 | 0.95 | 1.38 | 0.62 | 10.1 | 3.10 | 2.46 | 1.3 | 100.0 | 100 | 0 | 12.1 | 1.2 | 4.01 | 0.24 | 3.77 | 17.59 | 1.30 | 3.77 | 3.77 | 3.77 | 3.77 | 3.77 | 3.77 |
| B111B | 280.3 | 0.44 | 1.25 | 0.39 | 16.9 | 12.60 | 2.46 | 16.3 | 0.0 | 80 | 0 | 1.3 | 13.9 | 3.12 | 0.20 | 2.93 | 24.06 | 16.30 | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| B11202A | 1612.2 | 2.52 | 3.66 | 1.94 | 3.4 | 4.40 | 2.46 | 26.1 | 100.0 | 90 | 0 | 1.3 | 19.8 | 10.18 | 1.35 | 8.83 | 20.39 | 24.80 | 8.83 | 8.83 | 8.83 | 8.83 | 8.83 | 8.83 |
| B112A | 2021.1 | 3.16 | 3.31 | 1.75 | 3.8 | 7.30 | 2.46 | 62.3 | 100.0 | 90 | 0 | 1.0 | 38.9 | 4.94 | 0.99 | 3.95 | 20.39 | 61.34 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 |
| B112B | 1237.1 | 1.93 | 2.75 | 1.22 | 5 | 13.00 | 2.46 | 44.9 | 90.9 | 100 | 0 | 3.8 | 29.1 | 4.66 | 0.69 | 3.97 | 17.59 | 41.06 | 3.97 | 3.97 | 3.97 | 3.97 | 3.97 | 3.97 |
| B113A | 977.9 | 1.53 | 2.19 | 0.62 | 4.7 | 4.20 | 2.46 | 57.5 | 100.0 | 50 | 0 | 12.1 | 41.0 | 7.29 | 0.31 | 6.97 | 46.56 | 46.56 | 6.97 | 6.97 | 6.97 | 6.97 | 6.97 | 6.97 |
| B113B | 1376.0 | 2.15 | 3.50 | 1.86 | 4.7 | 4.20 | 2.46 | 41.7 | 74.3 | 50 | 0 | 35.4 | 25.7 | 10.17 | 1.25 | 8.92 | 46.56 | 41.70 | 8.92 | 8.92 | 8.92 | 8.92 | 8.92 | 8.92 |
| B114A | 785.9 | 1.23 | 2.25 | 0.59 | 6.99 | 17.60 | 2.46 | 63.6 | 100.0 | 60 | 0 | 1.9 | 42.7 | 4.47 | 0.23 | 4.25 | 36.04 | 61.67 | 4.25 | 4.25 | 4.25 | 4.25 | 4.25 | 4.25 |
| B115A | 720.0 | 1.13 | 1.97 | 1.10 | 7.6 | 6.80 | 2.46 | 67.9 | 100.0 | 80 | 0 | 1.0 | 48.5 | 2.83 | 0.41 | 2.42 | 24.06 | 66.90 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| B115B | 990.1 | 1.55 | 3.07 | 2.31 | 1.6 | 6.80 | 2.46 | 61.6 | 100.0 | 80 | 0 | 25.2 | 44.3 | 10.14 | 2.32 | 7.83 | 24.06 | 36.39 | 7.83 | 7.83 | 7.83 | 7.83 | 7.83 | 7.83 |
| CH100A | 2803.8 | 4.38 | 4.52 | 1.26 | 3.7 | 5.00 | 2.46 | 4.0 | 0.0 | 100 | 56 | 2.6 | 2.6 | 13.24 | 1.55 | 11.69 | 17.59 | 4.00 | 36.24 | 33.34 | 29.08 | 26.62 | 24.06 | 19.33 |
| CH100B | 2804.5 | 4.38 | 3.94 | 2.61 | 4 | 3.00 | 2.46 | 13.4 | 0.0 | 100 | 3 | 5.3 | 7.0 | 11.70 | 3.18 | 8.52 | 17.59 | 13.40 | 8.52 | 8.52 | 8.52 | 8.52 | 8.52 | 8.52 |
| CH100C | 1759.4 | 2.75 | 3.51 | 1.91 | 7 | 5.00 | 2.46 | 31.8 | 0.0 | 100 | 0 | 12.4 | 14.2 | 8.17 | 1.67 | 6.50 | 17.59 | 19.40 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 |
| CH100D | 798.7 | 1.25 | 2.13 | 0.94 | 7 | 5.00 | 2.46 | 31.0 | 0.0 | 100 | 39 | 22.4 | 14.3 | 6.14 | 0.80 | 5.34 | 17.59 | 17.59 | 15.32 | 14.17 | 12.49 | 11.50 | 10.48 | 8.56 |
| CH100E | 480.0 | 0.75 | 1.52 | 0.52 | 7 | 5.00 | 2.46 | 49.8 | 0.0 | 100 | 44 | 23.6 | 20.7 | 3.69 | 0.42 | 3.27 | 17.59 | 26.23 | 9.62 | 8.88 | 7.80 | 7.17 | 6.51 | 5.29 |
| CH100F | 1624.3 | 2.54 | 2.89 | 1.54 | 7 | 5.00 | 2.46 | 17.3 | 0.0 | 100 | 34 | 12.2 | 11.5 | 7.71 | 1.34 | 6.37 | 17.59 | 17.30 | 17.76 | 16.46 | 14.56 | 13.45 | 12.28 | 10.10 |
| CW100A | 1887.4 | 2.95 | 4.97 | 2.78 | 2.6 | 3.00 | 2.46 | 26.1 | 0.0 | 100 | 18 | 4.1 | 10.8 | 13.62 | 4.20 | 9.42 | 17.59 | 21.97 | 9.42 | 9.42 | 9.42 | 9.42 | 9.42 | 9.42 |
| CW100B | 1173.1 | 1.83 | 2.82 | 1.29 | 5.3 | 2.00 | 2.46 | 10.7 | 0.0 | 100 | 43 | 9.2 | 9.6 | 8.36 | 1.31 | 7.05 | 17.59 | 10.70 | 20.66 | 19.08 | 16.77 | 15.42 | 14.02 | 11.40 |
| CW100C | 787.8 | 1.23 | 1.99 | 0.90 | 4.9 | 7.00 | 2.46 | 39.5 | 0.0 | 100 | 0 | 0.2 | 20.8 | 3.84 | 0.88 | 2.96 | 17.59 | 39.31 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| CW100D | 2211.8 | 3.46 | 4.13 | 2.19 | 6.62 | 6.00 | 2.46 | 48.9 | 0.0 | 70 | 0 | 10.8 | 22.4 | 8.35 | 1.92 | 6.43 | 29.03 | 38.11 | 6.43 | 6.43 | 6.43 | 6.43 | 6.43 | 6.43 |
| CW102A | 1915.5 | 2.99 | 3.73 | 1.79 | 3.8 | 4.00 | 2.46 | 7.8 | 0.0 | 100 | 70 | 2.6 | 3.3 | 11.45 | 2.22 | 9.23 | 17.59 | 7.80 | 30.03 | 27.53 | 23.87 | 21.76 | 19.58 | 15.57 |
| CW102B | 1089.9 | 1.70 | 3.56 | 1.50 | 5.8 | 5.00 | 2.46 | 7.1 | 0.0 | 100 | 1 | 0.1 | 4.8 | 9.55 | 1.47 | 8.08 | 17.59 | 7.10 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 |
| CW103A | 864.6 | 1.35 | 3.44 | 2.00 | 3.3 | 4.00 | 2.46 | 19.2 | 0.0 | 100 | 0 | 1.7 | 8.4 | 11.23 | 2.63 | 8.60 | 17.59 | 17.59 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 |
| CW103B | 1235.2 | 1.93 | 3.72 | 1.60 | 3.7 | 5.00 | 2.46 | 10.1 | 0.0 | 100 | 65 | 0.6 | 4.3 | 11.56 | 1.98 | 9.58 | 17.59 | 10.10 | 30.66 | 28.14 | 24.44 | 22.31 | 20.11 | 16.05 |
| CW103C | 1047.7 | 1.64 | 2.69 | 1.16 | 3.6 | 6.00 | 2.46 | 4.2 | 0.0 | 100 | 20 | 0.2 | 3.1 | 9.27 | 1.45 | 7.82 | 17.59 | 4.20 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 |
| CW104A | 1032.3 | 1.61 | 2.71 | 1.12 | 2.6 | 3.00 | 2.46 | 22.4 | 0.0 | 100 | 58 | 15.9 | 9.1 | 10.32 | 1.62 | 8.70 | 17.59 | 17.59 | 27.17 | 24.98 | 21.77 | 19.92 | 17.99 | 14.43 |
| HI100A | 2306.6 | 3.60 | 3.60 | 1.31 | 2.5 | 2.00 | 2.46 | 11.5 | 0.0 | 100 | 60 | 17.1 | 9.5 | 12.96 | 1.97 | 10.98 | 17.59 | 11.50 | 34.56 | 31.76 | 27.65 | 25.28 | 22.82 | 18.28 |
| HI100B | 2629.1 | 4.11 | 5.73 | 2.58 | 3.8 | 5.00 | 2.46 | 26.8 | 0.0 | 100 | 21 | 4.6 | 14.6 | 13.09 | 3.17 | 9.92 | 17.59 | 22.18 | 24.94 | 23.28 | 20.88 | 19.45 | 17.95 | 15.09 |
| JB100A | 3068.2 | 4.79 | 3.98 | 1.68 | 3.1 | 5.00 | 2.46 | 54.2 | 49.3 | 100 | 0 | 0.0 | 30.1 | 5.94 | 1.60 | 4.33 | 17.59 | 54.20 | 4.33 | 4.33 | 4.33 | 4.33 | 4.33 | 4.33 |
| LD100A | 1459.2 | 2.28 | 2.78 | 1.53 | 7 | 7.00 | 2.46 | 50.6 | 100.0 | 100 | 8 | 0.0 | 22.6 | 3.62 | 0.65 | 2.97 | 17.59 | 50.60 | 2.97 | 2.97 | 2.97 | 2.97 | 2.97 | 2.97 |
| MA100A | 2526.1 | 3.95 | 3.91 | 2.37 | 4 | 5.00 | 2.46 | 44.4 | 53.5 | 100 | 35 | 46.9 | 20.5 | 11.48 | 2.17 | 9.31 | 17.59 | 17.59 | 26.11 | 24.19 | 21.38 | 19.74 | 18.02 | 14.79 |
| MA100B | 670.7 | 1.05 | 2.49 | 1.14 | 2.4 | 2.00 | 2.46 | 18.9 | 0.0 | 100 | 45 | 22.3 | 8.4 | 10.00 | 1.71 | 8.29 | 17.59 | 17.59 | 24.51 | 22.62 | 19.86 | 18.25 | 16.57 | 13.45 |
| MA100C | 3100.2 | 4.84 | 4.39 | 1.72 | 3.9 | 2.00 | 2.46 | 31.9 | 0.0 | 70 | 11 | 16.2 | 16.8 | 12.64 | 2.01 | 10.63 | 29.03 | 29.03 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 |
| MA100D | 1580.8 | 2.47 | 3.32 | 1.57 | 3.5 | 2.00 | 2.46 | 32.9 | 0.0 | 55 | 25 | 7.9 | 20.0 | 10.86 | 1.92 | 8.95 | 40.73 | 32.90 | 23.34 | 21.73 | 19.39 | 18.01 | 16.56 | 13.80 |
| MA100E | 2497.9 | 3.90 | 4.55 | 2.57 | 8.9 | 8.00 | 2.46 | 45.2 | 79.0 | 60 | 0 | 14.7 | 21.4 | 9.71 | 1.24 | 8.47 | 36.04 | 36.04 | 8.47 | 8.47 | 8.47 | 8.47 | 8.47 | 8.47 |
| MG100A | 880.0 | 1.38 | 2.21 | 1.06 | 2.64 | 10.00 | 2.46 | 0.0 | 0.0 | 100 | 96 | 0.4 | 1.6 | 9.00 | 1.57 | 7.43 | 17.59 | 0.00 | 25.86 | 23.59 | 20.28 | 18.38 | 16.43 | 12.88 |
| MG100B | 1214.1 | 1.90 | 2.16 | 1.17 | 2.64 | 10.00 | 2.46 | 0.5 | 100.0 | 100 | 58 | 0.0 | 0.5 | 8.88 | 0.98 | 7.89 | 17.59 | 0.50 | 24.65 | 22.66 | 19.75 | 18.07 | 16.32 | 13.09 |
| MG100C | 693.8 | 1.08 | 2.20 | 1.10 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 2.73 | 0.62 | 2.11 | 17.59 | 100.00 | 2.11 | 2.11 | 2.11 | 2.11 | 2.11 | 2.11 |
| MG100D | 150.4 | 0.24 | 0.47 | 0.51 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 0.92 | 0.27 | 0.64 | 17.59 | 100.00 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 |
| MG100E | 97.9 | 0.15 | 0.40 | 0.25 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 0.82 | 0.13 | 0.69 | 17.59 | 100.00 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| MG100F | 113.9 | 0.18 | 0.45 | 0.34 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 0.89 | 0.18 | 0.71 | 17.59 | 100.00 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| MG100G | 193.3 | 0.30 | 0.72 | 0.36 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 1.24 | 0.19 | 1.05 | 17.59 | 100.00 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 |
| MG100H | 196.5 | 0.31 | 0.74 | 0.40 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 1.26 | 0.21 | 1.05 | 17.59 | 100.00 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 |
| MG100I | 73.0 | 0.11 | 0.40 | 0.21 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 30.0 | 0.82 | 0.11 | 0.71 | 17.59 | 100.00 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| MG100J | 48.6 | 0.08 | 0.32 | 0.25 | 2.64 | 10.00 | 2.46 | 100.0 | 100.0 | 100 | 0 | 0.0 | 17.1 | 0.70 | 0.13 | 0.57 | 17.59 | 100.00 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| RB100A | 3479.0 | 5.44 | 4.89 | 2.12 | 5.5 | 9.00 | 2.46 | 23.0 | 31.9 | 80 | 0 | 0.0 | 14.1 | 12.19 | 1.81 | 10.37 | 24.06 | 23.00 | 10.37 | 10.37 | 10.37 | 10.37 | 10.37 | 10.37 |

Pink shaded areas contain values updated by HEC-RAS models given by hydraulic contractors.

Grey shaded areas contain values taken from the HBR (DEC). Will not be updated by hydraulics contractors.

Yellow shaded areas contain values taken Flood Hazard Study 1984. Will not be updated by hydraulic contractors.

Orange shaded areas contain values taken from *Magnolia Creek Development Master Drainage Plan* (LJA Engineering & Surveying, Inc., Jan. 2000)

Green shaded areas contain values determined from LIDAR contours only.

Blue shaded areas contain values taken from the Cowart Creek Hydraulic Model Update (DEC 1998)