# APPENDIX E   FLOODPLAIN MAPPING

Ocotillo Wash Floodplain Redelineation

- Summary Output Tables
- Workmaps

Galloway Wash Tributaries

- Summary Output Tables
- Workmaps

Willow Springs Tributaries

- Summary Output Tables
- Workmaps

Cave Creek Tributaries

- Summary Output Tables
- Workmaps

# OCOTILLO WASH

Table 5.9.1.1
HEC-RAS OUTPUT
FLOODWAY/FLOODPLAIN

HEC-RAS  Plan: OcotilloFPD    Profile: PF 1          OcotilloWashFPD.prj

| River | Reach | River Sta | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| Ocotillo1 | 1 | 299.7892 | 4409 | 2234.08 | 2237.53 | 2237.53 | 2238.72 | 0.029665 | 8.78 | 502 | 213.48 | 1.01 |
| Ocotillo1 | 1 | 439.8713 | 4409 | 2235.89 | 2241.26 | 2240.4 | 2241.82 | 0.016219 | 6.02 | 732.43 | 249.1 | 0.62 |
| Ocotillo1 | 1 | 527.6098 | 4409 | 2238.55 | 2242.93 | | 2243.72 | 0.027827 | 7.13 | 617.98 | 241.1 | 0.79 |
| Ocotillo1 | 1 | 595.2144 | 4409 | 2239.19 | 2244.42 | | 2244.99 | 0.013054 | 6.07 | 726.69 | 252.9 | 0.63 |
| Ocotillo1 | 1 | 668.3362 | 4409 | 2240.72 | 2245.52 | 2245.52 | 2246.72 | 0.026174 | 8.78 | 501.89 | 210.07 | 1 |
| Ocotillo1 | 1 | 749.2241 | 4409 | 2242.18 | 2247.85 | 2247.28 | 2248.77 | 0.02432 | 7.7 | 572.93 | 181.86 | 0.76 |
| Ocotillo1 | 1 | 875.1199 | 4409 | 2244.84 | 2250.58 | | 2251.62 | 0.020709 | 8.18 | 538.72 | 144.02 | 0.75 |
| Ocotillo1 | 1 | 970.566 | 4409 | 2247.18 | 2252.47 | 2252.47 | 2254.52 | 0.023295 | 11.47 | 384.5 | 94.22 | 1 |
| Ocotillo1 | 1 | 1047.364 | 4446 | 2248.51 | 2254.92 | | 2255.26 | 0.003612 | 4.64 | 958.51 | 246.78 | 0.41 |
| Ocotillo1 | 1 | 1112.638 | 4630 | 2249.49 | 2255.1 | | 2255.82 | 0.015656 | 6.82 | 678.74 | 332.79 | 0.84 |
| Ocotillo2 | 2 | 156.3713 | 2715 | 2254.19 | 2258.1 | 2258.03 | 2258.88 | 0.029989 | 7.1 | 382.32 | 221.88 | 0.95 |
| Ocotillo2 | 2 | 180.6079 | 2791 | 2254.62 | 2258.93 | 2258.51 | 2259.46 | 0.018137 | 5.87 | 475.7 | 233.1 | 0.72 |
| Ocotillo2 | 2 | 210.772 | 2742 | 2255.46 | 2259.57 | | 2259.95 | 0.013512 | 4.94 | 554.6 | 259.67 | 0.6 |
| Ocotillo2 | 2 | 238.5302 | 2693 | 2256.4 | 2259.92 | 2259.8 | 2260.57 | 0.030362 | 6.49 | 414.86 | 258.59 | 0.9 |
| Ocotillo2 | 2 | 276.6784 | 2576 | 2257.26 | 2262.1 | | 2262.39 | 0.008603 | 4.3 | 599.38 | 206.11 | 0.44 |
| Ocotillo2 | 2 | 414.5065 | 2576 | 2259.95 | 2263.7 | | 2264.45 | 0.025535 | 6.95 | 370.54 | 155.22 | 0.79 |
| Ocotillo2 | 2 | 494.3954 | 2576 | 2261.33 | 2265.54 | | 2265.95 | 0.014022 | 5.16 | 499.71 | 199.63 | 0.57 |
| Ocotillo2 | 2 | 569.693 | 2576 | 2263.91 | 2267.31 | 2267.31 | 2268.25 | 0.046128 | 7.78 | 330.99 | 181.52 | 1.02 |
| Ocotillo2 | 2 | 603 | Inl Struct | | | | | | | | | |
| Ocotillo2 | 2 | 636.8529 | 2576 | 2266.69 | 2273.92 | 2269.61 | 2274 | 0.00105 | 2.24 | 1151.46 | 213.34 | 0.17 |
| Ocotillo2 | 2 | 689.6463 | 2576 | 2267.55 | 2273.95 | | 2274.1 | 0.001892 | 3.07 | 838.89 | 180.93 | 0.25 |
| Ocotillo2 | 2 | 743.0997 | 2576 | 2268.66 | 2274.05 | | 2274.25 | 0.003535 | 3.57 | 721.65 | 178.9 | 0.31 |
| Ocotillo2 | 2 | 814.875 | 2576 | 2270.88 | 2274.34 | | 2274.72 | 0.011328 | 4.95 | 520.31 | 200.84 | 0.54 |
| Ocotillo2 | 2 | 905.6604 | 2576 | 2272.73 | 2275.96 | 2275.96 | 2276.85 | 0.035801 | 7.58 | 339.92 | 190.95 | 1 |
| Ocotillo2 | 2 | 1001.524 | 2576 | 2274.97 | 2278.53 | | 2279.04 | 0.015397 | 5.72 | 450.24 | 211.86 | 0.69 |
| Ocotillo2 | 2 | 1153.302 | 2576 | 2278.91 | 2282.13 | 2282.13 | 2283.11 | 0.050148 | 7.94 | 324.28 | 169.32 | 1.01 |
| Ocotillo2 | 2 | 1276.418 | 2576 | 2281.54 | 2285.52 | | 2285.93 | 0.01247 | 5.13 | 502.57 | 211.35 | 0.59 |
| Ocotillo2 | 2 | 1363.754 | 2576 | 2283.59 | 2286.82 | 2286.82 | 2287.69 | 0.028831 | 7.49 | 344.02 | 202.88 | 1.01 |
| Ocotillo2 | 2 | 1474.264 | 2576 | 2286.38 | 2290.07 | 2289.82 | 2290.89 | 0.028939 | 7.31 | 352.62 | 155.64 | 0.86 |
| Ocotillo2 | 2 | 1630.469 | 2576 | 2290.81 | 2294.41 | | 2294.95 | 0.02352 | 5.88 | 437.79 | 216.81 | 0.73 |
| Ocotillo2 | 2 | 1838.932 | 2576 | 2295.4 | 2299.92 | 2299.75 | 2300.76 | 0.032591 | 7.37 | 349.63 | 167.17 | 0.9 |
| Ocotillo2 | 2 | 1893.224 | 2576 | 2297.55 | 2301.83 | | 2302.43 | 0.028435 | 6.23 | 413.65 | 228.74 | 0.82 |
| Ocotillo2 | 2 | 1961.665 | 2576 | 2300.18 | 2303.84 | 2303.72 | 2304.62 | 0.034261 | 7.1 | 362.86 | 193.91 | 0.91 |
| Ocotillo2 | 2 | 2091.182 | 2576 | 2303.54 | 2307.48 | 2307.01 | 2307.97 | 0.020308 | 5.64 | 457.06 | 222.37 | 0.69 |
| Ocotillo2 | 2 | 2138.547 | 2576 | 2304.53 | 2308.62 | | 2309.08 | 0.026924 | 5.43 | 474.55 | 280.03 | 0.73 |
| Ocotillo2 | 2 | 2250.737 | 2576 | 2306.24 | 2310.72 | 2310.05 | 2311.02 | 0.011971 | 4.39 | 587.42 | 300.4 | 0.55 |
| Ocotillo2 | 2 | 2275 | Inl Struct | | | | | | | | | |
| Ocotillo2 | 2 | 2300.616 | 2576 | 2308.44 | 2311.98 | 2311.42 | 2312.34 | 0.016007 | 4.77 | 540.38 | 318.14 | 0.64 |
| Ocotillo3 | 3 | 114.4412 | 1934 | 2313.46 | 2316.97 | 2316.97 | 2317.66 | 0.038457 | 6.69 | 288.95 | 208.9 | 1 |
| Ocotillo3 | 3 | 215.1731 | 1764 | 2316.62 | 2320.57 | 2320.57 | 2321.27 | 0.030184 | 6.75 | 261.22 | 187.61 | 1.01 |
| Ocotillo3 | 3 | 321.5755 | 1906 | 2319.57 | 2322.57 | | 2323.1 | 0.011239 | 5.82 | 327.77 | 155.23 | 0.71 |
| Ocotillo3 | 3 | 384.3589 | 1964 | 2322.77 | 2325.62 | 2325.62 | 2326.46 | 0.032253 | 7.34 | 267.41 | 163.58 | 1.01 |
| Ocotillo3 | 3 | 462.3848 | 2286 | 2325.82 | 2328.62 | 2328.62 | 2329.51 | 0.042469 | 7.6 | 300.78 | 168.26 | 1 |
| Ocotillo3 | 3 | 671.1304 | 2277 | 2331.14 | 2335.31 | 2335 | 2335.83 | 0.022612 | 5.81 | 392.19 | 229.55 | 0.78 |
| Ocotillo3 | 3 | 741.5216 | 2286 | 2334.58 | 2338.15 | 2338.15 | 2338.89 | 0.052464 | 6.92 | 330.35 | 223.63 | 1 |
| Ocotillo3 | 3 | 826.0362 | 2283 | 2337.7 | 2341.46 | 2341.18 | 2342.11 | 0.028472 | 6.46 | 353.38 | 178.23 | 0.81 |
| Ocotillo3 | 3 | 987.6464 | 2219 | 2341.59 | 2345.46 | 2345 | 2345.89 | 0.019316 | 5.2 | 426.34 | 232.77 | 0.68 |
| Ocotillo3 | 3 | 1054.181 | 2209 | 2343.8 | 2347.27 | 2347.27 | 2348.01 | 0.047914 | 6.91 | 319.73 | 219.27 | 1.01 |
| Ocotillo3 | 3 | 1159.029 | 2238 | 2347.7 | 2351.16 | | 2351.56 | 0.024888 | 5.1 | 439.08 | 281.77 | 0.72 |
| Ocotillo3 | 3 | 1241.236 | 2248 | 2351.59 | 2353.81 | 2353.81 | 2354.5 | 0.036696 | 6.65 | 337.97 | 248.97 | 1.01 |
| Ocotillo3 | 3 | 1321.667 | 2274 | 2353.01 | 2356.6 | 2356.6 | 2357.44 | 0.025946 | 7.36 | 309.05 | 183.6 | 1 |
| Ocotillo3 | 3 | 1382.931 | 2313 | 2354.69 | 2358.57 | 2358.57 | 2359.59 | 0.024824 | 8.1 | 285.71 | 141.44 | 1 |
| Ocotillo3 | 3 | 1458.288 | 2304 | 2356.49 | 2360.79 | 2360.25 | 2361.37 | 0.021389 | 6.11 | 376.95 | 162.04 | 0.71 |
| Ocotillo3 | 3 | 1510.756 | 2326 | 2358.55 | 2362.11 | 2362.11 | 2362.98 | 0.030499 | 7.47 | 311.55 | 177.33 | 0.99 |
| Ocotillo3 | 3 | 1619.753 | 2532 | 2363.49 | 2366.67 | 2366.67 | 2367.31 | 0.050199 | 6.46 | 392.14 | 307.46 | 1.01 |
| Ocotillo4 | 4 | 37.42422 | 2490 | 2364.92 | 2370.22 | 2369.6 | 2370.54 | 0.012443 | 4.52 | 550.76 | 384.98 | 0.67 |
| Ocotillo4 | 4 | 168.9279 | 2490 | 2370.67 | 2374.3 | 2374.3 | 2374.99 | 0.02334 | 6.65 | 374.16 | 277.59 | 1.01 |
| Ocotillo5 | 5 | 146.6624 | 2290 | 2375.06 | 2379.11 | 2379.11 | 2379.62 | 0.032612 | 5.69 | 402.3 | 421 | 1.03 |
| Ocotillo5 | 5 | 210.8846 | 2290 | 2377.89 | 2381.65 | 2381.65 | 2382.3 | 0.04182 | 6.47 | 353.76 | 278.88 | 1.01 |
| Ocotillo5 | 5 | 348.4933 | 2290 | 2385.6 | | 2389 | 2389.56 | 0.03051 | 5.98 | 383.22 | 350.88 | 1.01 |
| Ocotillo5 | 5 | 539.3184 | 2290 | 2391.74 | 2395.59 | 2395.59 | 2396.41 | 0.023236 | 7.26 | 315.42 | 193.65 | 1 |
| Ocotillo5 | 5 | 714.3696 | 2290 | 2398.55 | 2402.27 | 2402.27 | 2403.21 | 0.041677 | 7.78 | 294.28 | 155 | 1 |
| Ocotillo5 | 5 | 844.1581 | 2290 | 2403.3 | 2406.84 | 2406.84 | 2407.66 | 0.024211 | 7.28 | 314.45 | 187.44 | 0.99 |
| Ocotillo5 | 5 | 952.1411 | 2274 | 2407.62 | 2410.41 | 2410.41 | 2411.08 | 0.029261 | 6.56 | 346.65 | 254.54 | 0.99 |
| Ocotillo5 | 5 | 1011.151 | 2320 | 2409.94 | 2413.42 | 2413.42 | 2414.16 | 0.029125 | 6.88 | 337.01 | 226.02 | 0.99 |
| Ocotillo5 | 5 | 1064.645 | 2342 | 2411.98 | 2416.19 | 2416.19 | 2416.94 | 0.008196 | 6.98 | 335.72 | 218.42 | 0.99 |
| Ocotillo5 | 5 | 1136.218 | 2342 | 2414.99 | 2418.53 | 2418.53 | 2419.23 | 0.020283 | 6.67 | 351.03 | 249.59 | 0.99 |
| Ocotillo5 | 5 | 1223.727 | 2397 | 2418.37 | 2421.4 | 2421.4 | 2422.32 | 0.028543 | 7.75 | 312.35 | 166.43 | 0.99 |
| Ocotillo5 | 5 | 1332.115 | 2441 | 2421.24 | 2425.2 | 2425.2 | 2426.3 | 0.025941 | 8.43 | 289.48 | 134.12 | 1.01 |
| Ocotillo5 | 5 | 1491.168 | 2441 | 2426.69 | 2430.94 | 2430.81 | 2431.64 | 0.043325 | 6.69 | 364.85 | 213.77 | 0.9 |
| Ocotillo5 | 5 | 1656.337 | 2441 | 2433.46 | 2436.53 | 2436.16 | 2436.87 | 0.02377 | 4.64 | 525.95 | 347.5 | 0.66 |
| Ocotillo5 | 5 | 1793.631 | 2441 | 2440.44 | 2443.19 | 2443.19 | 2443.8 | 0.054363 | 6.26 | 390.23 | 332.94 | 1.02 |
| OcotilloS1 | Split1 | 119.2931 | 1115 | 2282.83 | 2284.84 | 2284.73 | 2285.36 | 0.02643 | 5.74 | 194.41 | 148.2 | 0.88 |
| OcotilloS1 | Split1 | 149.6742 | 867 | 2284.06 | 2285.7 | 2285.6 | 2286.13 | 0.023496 | 5.21 | 166.39 | 148.24 | 0.87 |
| OcotilloS1 | Split1 | 178.9694 | 711 | 2284.83 | 2286.47 | | 2286.78 | 0.020079 | 4.43 | 160.49 | 154.41 | 0.77 |
| OcotilloS1 | Split1 | 199.1123 | 569 | 2285.57 | 2286.95 | 2286.95 | 2287.34 | 0.036124 | 5.01 | 113.61 | 147 | 1 |

Table 5.9.1.1
HEC-RAS OUTPUT
FLOODWAY/FLOODPLAIN

| River | Reach | River Sta | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OcotilloS1 | Split1 | 224.0794 | 488 | 2286.24 | 2287.78 | 2287.72 | 2288.14 | 0.028188 | 4.82 | 101.27 | 116.78 | 0.91 |
| OcotilloS1 | Split1 | 253.381 | 491 | 2286.85 | 2288.62 | 2288.54 | 2289 | 0.028079 | 4.98 | 98.62 | 104.77 | 0.9 |
| OcotilloS1 | Split1 | 282.8606 | 558 | 2287.96 | 2290.15 | 2290.15 | 2290.74 | 0.031947 | 6.16 | 90.55 | 78.1 | 1.01 |
| OcotilloS1 | Split1 | 300.32 | 558 | 2288.92 | 2290.87 | 2290.87 | 2291.54 | 0.028543 | 6.55 | 85.21 | 64.49 | 1 |
| OcotilloS1 | Split1 | 371.2329 | 558 | 2291.15 | 2294.33 | | 2294.41 | 0.003442 | 2.26 | 246.82 | 155.36 | 0.32 |
| OcotilloS1 | Split1 | 487.0553 | 558 | 2294.1 | 2295.97 | 2295.97 | 2296.42 | 0.048106 | 5.43 | 102.79 | 117.56 | 1.02 |
| OcotilloS1 | Split1 | 527.9043 | 487 | 2294.75 | 2297.68 | 2297.52 | 2298 | 0.031358 | 4.48 | 108.67 | 115.77 | 0.82 |
| OcotilloS1 | Split1 | 586.8272 | 487 | 2296.49 | 2299.45 | 2299.36 | 2299.9 | 0.031911 | 5.38 | 90.53 | 81.06 | 0.9 |
| OcotilloS1 | Split1 | 662.9047 | 487 | 2299.49 | 2301.45 | 2301.26 | 2301.86 | 0.021166 | 5.11 | 95.39 | 76.95 | 0.81 |
| OcotilloS1 | Split1 | 712.6492 | 487 | 2300.79 | 2302.66 | 2302.58 | 2303.2 | 0.032903 | 5.88 | 82.83 | 68.55 | 0.94 |
| OcotilloS1 | Split1 | 759.7467 | 487 | 2302.5 | 2304.61 | 2304.59 | 2305.09 | 0.049814 | 5.57 | 87.46 | 88.27 | 0.99 |
| OcotilloS1 | Split1 | 828.3519 | 487 | 2303.5 | 2306.38 | | 2306.54 | 0.011012 | 3.21 | 151.5 | 112.7 | 0.49 |
| OcotilloS1 | Split1 | 863.3463 | 487 | 2304.17 | 2306.89 | | 2307.17 | 0.0307 | 4.23 | 115.11 | 124.8 | 0.78 |
| OcotilloS1 | Split1 | 887 | Inl Struct | | | | | | | | | |
| OcotilloS1 | Split1 | 910.7199 | 487 | 2307.15 | 2309.19 | 2308.9 | 2309.37 | 0.021965 | 3.39 | 143.65 | 157.48 | 0.63 |
| OcotilloS1 | Split1 | 948.4852 | 487 | 2308.76 | 2310.53 | 2310.53 | 2310.89 | 0.06001 | 4.84 | 100.52 | 144.49 | 1.02 |
| OcotilloS1 | Split1 | 1038.222 | 487 | 2311.24 | 2313.26 | 2312.97 | 2313.5 | 0.016531 | 3.92 | 124.13 | 115.09 | 0.67 |
| OcotilloS1 | Split1 | 1099.415 | 487 | 2313.49 | 2315.73 | 2315.73 | 2316.22 | 0.056118 | 5.65 | 86.18 | 91.78 | 1.03 |
| OcotilloS1 | Split1 | 1168.193 | 487 | 2315.74 | 2318.22 | 2317.94 | 2318.39 | 0.019936 | 3.3 | 147.73 | 175.43 | 0.63 |
| OcotilloS1 | Split1 | 1255.985 | 487 | 2318.16 | 2320.17 | 2319.89 | 2320.34 | 0.023993 | 3.29 | 147.9 | 199.31 | 0.67 |
| OcotilloS1 | Split1 | 1457.32 | 487 | 2326 | 2327.84 | 2327.84 | 2328.08 | 0.031369 | 3.97 | 122.74 | 254.34 | 1.01 |
| OcotilloS1 | Split1 | 1523.987 | 487 | 2327.17 | 2329.69 | | 2329.87 | 0.023586 | 3.48 | 139.81 | 193.2 | 0.72 |
| OcotilloS1 | Split1 | 1700.375 | 487 | 2331.76 | 2334.45 | 2334.42 | 2334.8 | 0.033039 | 4.75 | 102.53 | 129.26 | 0.94 |
| OcotilloS1 | Split1 | 1812.715 | 487 | 2335.55 | 2338.28 | | 2338.47 | 0.031289 | 3.49 | 139.47 | 190.26 | 0.72 |
| OcotilloS1 | Split1 | 1886.663 | 487 | 2337.95 | 2340.81 | 2340.67 | 2341.09 | 0.038694 | 4.23 | 115.08 | 141.27 | 0.83 |
| OcotilloS1 | Split1 | 1969.317 | 490 | 2340.99 | 2344.03 | 2343.87 | 2344.29 | 0.037867 | 4.09 | 119.7 | 147.12 | 0.8 |
| OcotilloS1 | Split1 | 2040.078 | 554 | 2344.11 | 2346.62 | 2346.47 | 2346.86 | 0.034103 | 3.92 | 141.42 | 174.6 | 0.77 |
| OcotilloS1 | Split1 | 2079.058 | 564 | 2345.84 | 2348.1 | 2348.1 | 2348.65 | 0.050185 | 5.95 | 94.78 | 91.6 | 1.03 |
| OcotilloS1 | Split1 | 2140.933 | 535 | 2346.66 | 2350 | 2349.61 | 2350.17 | 0.01305 | 3.32 | 161.21 | 147.28 | 0.56 |
| OcotilloS1 | Split1 | 2236.837 | 525 | 2351.03 | 2353.02 | 2353.02 | 2353.56 | 0.028695 | 5.92 | 88.67 | 84.31 | 1.02 |
| OcotilloS1 | Split1 | 2299.916 | 499 | 2353.48 | 2355.91 | 2355.91 | 2356.53 | 0.034653 | 6.34 | 78.66 | 62.97 | 1 |
| OcotilloS1 | Split1 | 2366.44 | 460 | 2355.73 | 2358.52 | 2358.52 | | 0.032715 | 6.48 | 70.98 | 54.79 | 1 |
| OcotilloS1 | Split1 | 2426.608 | 469 | 2357.29 | 2360.41 | | 2360.97 | 0.02727 | 5.98 | 78.37 | 47.79 | 0.82 |
| OcotilloS1 | Split1 | 2480.137 | 447 | 2359.18 | 2361.88 | 2361.88 | 2362.59 | 0.03239 | 6.78 | 65.97 | 47.86 | 1.02 |
| OcotilloS1 | Split1 | 2603.212 | 241 | 2362.43 | 2365.3 | | 2365.48 | 0.014277 | 3.35 | 71.93 | 58.59 | 0.53 |
| OcotilloS2 | Split2 | 133.4816 | 1915 | 2252.85 | 2257.41 | | 2257.89 | 0.01444 | 5.54 | 345.65 | 209.31 | 0.76 |
| OcotilloS2 | Split2 | 232.5308 | 1839 | 2254.76 | 2259.41 | | 2259.8 | 0.027478 | 5.01 | 366.76 | 232.32 | 0.7 |
| OcotilloS2 | Split2 | 256.7089 | 1888 | 2255.39 | 2260.1 | | 2260.46 | 0.026205 | 4.82 | 391.72 | 259.04 | 0.69 |
| OcotilloS2 | Split2 | 279.6261 | 1914 | 2255.92 | 2260.66 | | 2260.94 | 0.016774 | 4.23 | 452.83 | 266.67 | 0.57 |
| OcotilloS2 | Split2 | 289.4215 | 1926 | 2256.03 | 2260.82 | | 2261.13 | 0.019752 | 4.4 | 437.6 | 274.6 | 0.61 |
| OcotilloS2 | Split2 | 298.4141 | 1937 | 2256.16 | 2261.04 | | 2261.28 | 0.015868 | 3.97 | 488.56 | 305.05 | 0.55 |
| OcotilloS2 | Split2 | 315.9728 | 1944 | 2256.39 | 2261.32 | 2260.99 | 2261.65 | 0.02473 | 4.65 | 417.75 | 289.79 | 0.68 |
| OcotilloS2 | Split2 | 360.0553 | 1944 | 2257.88 | 2262.05 | 2261.5 | 2262.29 | 0.009147 | 3.88 | 501.58 | 321.61 | 0.55 |
| OcotilloS2 | Split2 | 416.7438 | 2054 | 2258.75 | 2263.99 | 2262.96 | 2264.22 | 0.005402 | 3.87 | 530.75 | 273.37 | 0.49 |
| OcotilloS2 | Split2 | 509.5979 | 2054 | 2260.98 | 2264.66 | 2264.56 | 2265.41 | 0.034454 | 6.93 | 296.52 | 166.41 | 0.91 |
| OcotilloS2 | Split2 | 588.5838 | 2054 | 2262.08 | 2266.2 | 2266.23 | 2267.1 | 0.014169 | 5.89 | 348.66 | 185.51 | 0.76 |
| OcotilloS2 | Split2 | 678.3232 | 2054 | 2263.8 | 2268.64 | 2268.64 | 2269.32 | 0.018127 | 6.64 | 309.23 | 224.27 | 1 |
| OcotilloS2 | Split2 | 759.1032 | 2054 | 2264.97 | 2270.32 | | 2270.6 | 0.013171 | 4.19 | 489.69 | 264.06 | 0.54 |
| OcotilloS2 | Split2 | 821.0404 | 2054 | 2266.01 | 2271.13 | | 2271.42 | 0.013656 | 4.37 | 470.46 | 254.75 | 0.57 |
| OcotilloS2 | Split2 | 870.2011 | 2054 | 2267.74 | 2271.88 | | 2272.25 | 0.019204 | 4.89 | 420.33 | 258.66 | 0.68 |
| OcotilloS2 | Split2 | 924.8907 | 2005 | 2269.94 | 2273.06 | | 2273.58 | 0.028756 | 5.76 | 348.23 | 225.83 | 0.82 |
| OcotilloS2 | Split2 | 955 | Inl Struct | | | | | | | | | |
| OcotilloS2 | Split2 | 985.217 | 2005 | 2270.85 | 2274.63 | 2273.85 | 2274.93 | 0.015124 | 4.33 | 462.96 | 273.71 | 0.59 |
| OcotilloS2 | Split2 | 1087.704 | 2005 | 2274.77 | 2278.54 | 2278.54 | 2278.94 | 0.022258 | 5.08 | 394.45 | 385.77 | 0.89 |
| OcotilloS2 | Split2 | 1194.422 | 2005 | 2278.41 | 2281.02 | 2280.97 | 2281.53 | 0.026134 | 5.73 | 350.16 | 298.56 | 0.93 |
| OcotilloT1 | Trib1 | 137.927 | 840 | 2282.34 | 2285.82 | 2285.82 | 2286.43 | 0.016161 | 6.36 | 139.45 | 116.08 | 1.01 |
| OcotilloT1 | Trib1 | 164.5459 | 1088 | 2283 | 2286.58 | | 2286.94 | 0.019671 | 4.76 | 228.5 | 133.44 | 0.64 |
| OcotilloT1 | Trib1 | 189.6257 | 1245 | 2283.7 | 2287.03 | | 2287.52 | 0.023721 | 5.63 | 221.16 | 125.28 | 0.75 |
| OcotilloT1 | Trib1 | 226.2828 | 1386 | 2284.35 | 2287.63 | | 2288.16 | 0.013279 | 5.84 | 237.35 | 138.55 | 0.79 |
| OcotilloT1 | Trib1 | 252.3619 | 1467 | 2285.16 | 2288.04 | 2287.51 | 2288.52 | 0.013337 | 5.53 | 265.41 | 123.18 | 0.66 |
| OcotilloT1 | Trib1 | 275.9736 | 1464 | 2285.56 | 2288.35 | 2288.2 | 2288.98 | 0.023522 | 6.36 | 230.34 | 137.53 | 0.87 |
| OcotilloT1 | Trib1 | 296.3438 | 1397 | 2286.03 | 2288.97 | 2288.69 | 2289.43 | 0.019553 | 5.48 | 255.01 | 158.6 | 0.76 |
| OcotilloT1 | Trib1 | 324.6569 | 1397 | 2286.62 | 2289.53 | 2289.09 | 2289.93 | 0.015402 | 5.07 | 275.75 | 155.1 | 0.67 |
| OcotilloT1 | Trib1 | 354.0213 | 1397 | 2287.71 | 2290.41 | | 2290.46 | 0.020121 | 5.36 | 260.61 | 159.26 | 0.74 |
| OcotilloT1 | Trib1 | 381.6131 | 1397 | 2287.96 | 2290.71 | | 2290.96 | 0.015327 | 4.03 | 346.99 | 253.61 | 0.61 |
| OcotilloT1 | Trib1 | 462.4158 | 1397 | 2289.75 | 2292.42 | 2292.42 | 2293.04 | 0.034596 | 6.31 | 221.34 | 178.08 | 1 |
| OcotilloT1 | Trib1 | 524.3047 | 1397 | 2290.93 | 2294.06 | 2293.4 | 2294.44 | 0.015535 | 4.94 | 282.91 | 152.05 | 0.64 |
| OcotilloT5 | Trib5 | 115.0657 | 590 | 2313.37 | 2316.02 | 2316.02 | 2316.63 | 0.064411 | 6.25 | 94.46 | 78.58 | 1 |
| OcotilloT5 | Trib5 | 248.3488 | 760 | 2317.75 | 2321.08 | 2320.81 | 2321.46 | 0.025385 | 4.96 | 153.89 | 113.31 | 0.75 |
| OcotilloT5 | Trib5 | 290.8772 | 618 | 2320.19 | 2322.13 | 2322.1 | 2322.64 | 0.026907 | 5.74 | 107.59 | 94.52 | 0.95 |
| OcotilloT5 | Trib5 | 365.7275 | 559 | 2321.64 | 2324.33 | 2324.24 | 2324.67 | 0.027322 | 4.66 | 120.14 | 131.74 | 0.86 |
| OcotilloT5 | Trib5 | 442.2927 | 238 | 2324.45 | 2326.69 | 2326.45 | 2326.89 | 0.035341 | 3.59 | 66.23 | 86.15 | 0.72 |
| OcotilloT5 | Trib5 | 601.2568 | 247 | 2330.45 | 2332.47 | 2332.24 | | 0.03709 | 3.87 | 63.9 | 72.12 | 0.72 |
| OcotilloT5 | Trib5 | 716.7944 | 238 | 2334.08 | 2336.67 | | 2336.83 | 0.034018 | 3.27 | 72.8 | 99.04 | 0.67 |
| OcotilloT5 | Trib5 | 789.2246 | 238 | 2338.4 | 2339.88 | 2339.8 | 2340.11 | 0.061986 | 3.85 | 61.78 | 103.21 | 0.88 |
| OcotilloT5 | Trib5 | 970.8694 | 238 | 2343.75 | 2345.28 | 2344.99 | 2345.4 | 0.016781 | 2.79 | 85.19 | 107.89 | 0.55 |
| OcotilloT5 | Trib5 | 1031.889 | 238 | 2345.62 | 2347.58 | 2347.58 | 2347.94 | 0.030087 | 4.76 | 50.01 | 72.04 | 1.01 |

# Table 5.9.1.1
## HEC-RAS OUTPUT
### FLOODWAY/FLOODPLAIN

| River | Reach | River Sta | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| OcotilloT5 | Trib5 | 1091.057 | 238 | 2347.01 | 2349.46 | 2349.17 | 2349.71 | 0.028759 | 4.05 | 58.73 | 55.28 | 0.69 |
| OcotilloT5 | Trib5 | 1203.024 | 238 | 2350.24 | 2352.79 | 2352.46 | 2353.2 | 0.033575 | 5.11 | 46.55 | 39.83 | 0.83 |
| OcotilloT5 | Trib5 | 1280.26 | 238 | 2352.39 | 2354.9 | 2354.49 | 2355.3 | 0.023327 | 5.04 | 47.26 | 29.99 | 0.71 |
| OcotilloT5 | Trib5 | 1354.337 | 238 | 2354.14 | 2356.77 | | 2357.2 | 0.028567 | 5.25 | 45.3 | 32.14 | 0.78 |
| OcotilloT5 | Trib5 | 1379.424 | 238 | 2358.39 | 2359.36 | 2359.36 | 2359.58 | 0.05315 | 3.76 | 63.31 | 150.86 | 1.02 |
| OcotilloT5 | Trib5 | 1404.298 | 238 | 2357.17 | 2359.83 | | 2359.94 | 0.006427 | 2.73 | 87.2 | 52.73 | 0.37 |
| OcotilloT5 | Trib5 | 1517.323 | 238 | 2359.87 | 2361.47 | 2361.47 | 2361.99 | 0.049779 | 5.81 | 40.97 | 39.41 | 1 |
| OcotilloT5 | Trib5 | 1593.698 | 238 | 2361.53 | 2363.78 | 2363.35 | 2364.05 | 0.017143 | 4.21 | 56.57 | 39.86 | 0.62 |
| OcotilloT5 | Trib5 | 1701.022 | 238 | 2364.12 | 2366.3 | 2366.3 | 2366.97 | 0.04074 | 6.59 | 36.1 | 26.24 | 0.99 |
| OcotilloT5 | Trib5 | 1775.716 | 238 | 2366.76 | 2368.97 | | 2369.27 | 0.023166 | 4.4 | 54.07 | 42.61 | 0.69 |
| OcotilloT5 | Trib5 | 1883.052 | 238 | 2371.12 | 2373.36 | 2373.36 | 2373.66 | 0.068053 | 4.41 | 53.98 | 91.62 | 1.01 |
| OcotilloT5 | Trib5 | 1992.893 | 238 | 2374.26 | 2376.49 | 2376.3 | 2376.79 | 0.015761 | 4.4 | 54.04 | 54.73 | 0.78 |
| OcotilloT5 | Trib5 | 2078.39 | 238 | 2376.73 | 2378.77 | 2378.77 | 2379.21 | 0.058458 | 5.33 | 44.67 | 54.72 | 1.04 |
| OcotilloT5 | Trib5 | 2140.026 | 238 | 2378.54 | 2380.78 | 2380.62 | 2381.01 | 0.01765 | 3.84 | 62.04 | 75.13 | 0.74 |
| OcotilloT5 | Trib5 | 2213.957 | 238 | 2381.27 | 2382.72 | 2382.72 | 2383.15 | 0.043966 | 5.27 | 45.19 | 51.38 | 0.99 |
| OcotilloT5 | Trib5 | 2296.132 | 238 | 2383.49 | 2384.92 | | 2385.12 | 0.015229 | 3.53 | 67.43 | 74.47 | 0.65 |
| OcotilloT5 | Trib5 | 2433.259 | 238 | 2387.79 | 2389.93 | 2389.93 | 2390.35 | 0.040976 | 5.23 | 45.55 | 51.83 | 0.98 |
| OcotilloT5 | Trib5 | 2510.794 | 238 | 2390.31 | 2392.5 | | 2392.76 | 0.024808 | 4.12 | 57.79 | 49.98 | 0.67 |
| OcotilloT5 | Trib5 | 2624.559 | 238 | 2394.14 | 2396.28 | 2396.23 | 2396.65 | 0.049071 | 4.83 | 49.24 | 58.58 | 0.93 |
| OcotilloT5 | Trib5 | 2717.28 | 238 | 2398.21 | 2400.03 | 2399.85 | 2400.24 | 0.031748 | 3.68 | 64.62 | 82.78 | 0.73 |
| OcotilloT5 | Trib5 | 2800.556 | 238 | 2400.8 | 2403.41 | 2403.37 | 2403.84 | 0.060283 | 5.23 | 45.51 | 47.92 | 0.95 |
| OcotilloT5 | Trib5 | 2908.174 | 238 | 2404.57 | 2407.82 | 2407.37 | 2408.02 | 0.02743 | 3.66 | 65.05 | 64.37 | 0.64 |
| OcotilloT5 | Trib5 | 2978.538 | 208 | 2406.29 | 2409.53 | | 2409.72 | 0.021142 | 3.5 | 59.35 | 50.4 | 0.57 |
| OcotilloT5 | Trib5 | 3053.924 | 208 | 2409.89 | 2412.21 | 2412.21 | 2412.58 | 0.053759 | 4.89 | 42.54 | 57.35 | 1 |
| OcotilloT5 | Trib5 | 3125.354 | 186 | 2412.99 | 2414.71 | 2414.32 | 2414.86 | 0.01961 | 3.1 | 59.99 | 75.56 | 0.61 |
| OcotilloT5 | Trib5 | 3189.152 | 186 | 2416.72 | 2417.85 | 2417.85 | 2418.14 | 0.051041 | 4.33 | 42.98 | 75.98 | 1.01 |
| OcotilloT5 | Trib5 | 3258.669 | 131 | 2419.29 | 2420.41 | | 2420.49 | 0.021229 | 2.26 | 58.19 | 100.77 | 0.52 |
| OcotilloT5 | Trib5 | 3269.55 | 87 | 2419.49 | 2420.64 | | 2420.69 | 0.015413 | 1.83 | 47.78 | 88.17 | 0.43 |
| OcotilloT6 | Trib6 | 164.7201 | 163 | 2374.57 | 2378.14 | | 2378.19 | 0.00297 | 1.79 | 91.28 | 48.64 | 0.23 |
| OcotilloT6 | Trib6 | 231.6413 | 163 | 2375.81 | 2378.43 | | 2378.61 | 0.015236 | 3.42 | 47.61 | 32.82 | 0.5 |
| OcotilloT6 | Trib6 | 325.1506 | 163 | 2378.02 | 2380.28 | | 2380.54 | 0.028216 | 4.09 | 39.89 | 33.32 | 0.66 |
| OcotilloT6 | Trib6 | 405.3325 | 163 | 2378.54 | 2381.88 | | 2382.07 | 0.013078 | 3.44 | 47.4 | 28.16 | 0.47 |
| OcotilloT6 | Trib6 | 482.4307 | 163 | 2379.58 | 2382.84 | | 2383.03 | 0.011974 | 3.5 | 46.59 | 25.28 | 0.45 |
| OcotilloT6 | Trib6 | 582.8669 | 163 | 2381.53 | 2384.21 | | 2384.42 | 0.016628 | 3.66 | 44.53 | 29.39 | 0.52 |
| OcotilloT6 | Trib6 | 698.9221 | 163 | 2383.53 | 2386.04 | | 2386.3 | 0.015726 | 4.12 | 39.58 | 26.63 | 0.6 |

HEC-RAS  Plan: OcotilloFPD   Profile: PF 1          OcotilloWashFPD.prj

| River | Reach | River Sta | Q US (cfs) | Q Leaving Total (cfs) | Q DS (cfs) | Q Weir (cfs) | Q Gates (cfs) | Wr Top Wdth (ft) | Weir Max Depth (ft) | Weir Avg Depth (ft) | Min El Weir Flow (ft) | E.G. US. (ft) | W.S. US. (ft) | E.G. DS (ft) | W.S. DS (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ocotillo1 | 1 | 1047 | 4445.97 | 37.4 | 4408.58 | 37.4 | | 20.53 | 1.73 | 0.87 | 2253.19 | 2255.26 | 2254.92 | 2254.52 | 2252.48 |
| Ocotillo1 | 1 | 1112 | 4630 | 184.08 | 4445.97 | 184.08 | | 62.35 | 1.73 | 1.28 | 2253.19 | 2255.82 | 2255.1 | 2255.26 | 2254.92 |
| Ocotillo3 | 3 | 215 | 1764.03 | -169.61 | 1933.64 | -169.61 | | 91.52 | 2.22 | 0.83 | 2316.33 | 2321.27 | 2320.57 | 2317.66 | 2316.97 |
| Ocotillo3 | 3 | 321 | 1905.78 | 141.76 | 1764.03 | 141.76 | | 88.52 | 2.7 | 1.15 | 2319.82 | 2323.1 | 2322.57 | 2321.27 | 2320.57 |
| Ocotillo3 | 3 | 384 | 1964.42 | 58.66 | 1905.78 | 58.66 | | 69.63 | 2.88 | 0.97 | 2320.35 | 2326.46 | 2325.62 | 2323.1 | 2322.57 |
| Ocotillo3 | 3 | 462 | 2285.66 | 319.96 | 1964.42 | 319.96 | | 76.46 | 1.91 | 1.63 | 2324.15 | 2329.51 | 2328.6 | 2326.46 | 2325.62 |
| Ocotillo3 | 3 | 671 | 2276.9 | -9.14 | 2285.66 | -9.14 | | 176 | 2.33 | 0.68 | 2327.25 | 2335.84 | 2335.32 | 2329.51 | 2328.6 |
| Ocotillo3 | 3 | 741 | 2285.71 | 9.15 | 2276.9 | 9.15 | | 40.61 | 0.48 | 0.21 | 2334.91 | 2338.89 | 2338.15 | 2335.84 | 2335.32 |
| Ocotillo3 | 3 | 825 | 2283.44 | -2.26 | 2285.71 | -2.26 | | 11.21 | 0.36 | 0.2 | 2342.06 | 2342.11 | 2341.46 | 2338.89 | 2338.15 |
| Ocotillo3 | 3 | 826 | 2283.44 | 0 | 2285.71 | | | | | | 2341 | 2342.11 | 2341.46 | 2338.89 | 2338.15 |
| Ocotillo3 | 3 | 986 | 2219.05 | -64.91 | 2283.44 | -64.91 | | 89.05 | 0.98 | 0.47 | 2344.34 | 2345.89 | 2345.47 | 2342.11 | 2341.46 |
| Ocotillo3 | 3 | 987 | 2219.05 | 0 | 2283.44 | | | | | | 2344.03 | 2345.89 | 2345.47 | 2342.11 | 2341.46 |
| Ocotillo3 | 3 | 1053 | 2208.65 | -10.4 | 2219.05 | -10.4 | | 23.1 | 0.62 | 0.34 | 2346.74 | 2348.01 | 2347.26 | 2345.89 | 2345.47 |
| Ocotillo3 | 3 | 1054 | 2208.65 | 0 | 2219.05 | | | | | | 2348.51 | 2348.01 | 2347.26 | 2345.89 | 2345.47 |
| Ocotillo3 | 3 | 1158 | 2237.91 | 29.25 | 2208.65 | 29.25 | | 35.75 | 1.1 | 0.5 | 2348.92 | 2351.57 | 2351.17 | 2348.01 | 2347.26 |
| Ocotillo3 | 3 | 1159 | 2237.91 | 0 | 2208.65 | | | | | | 2352.44 | 2351.57 | 2351.17 | 2348.03 | 2347.27 |
| Ocotillo3 | 3 | 1241 | 2247.92 | 10.43 | 2237.91 | 10.43 | | 44.13 | 1.44 | 0.82 | 2350.07 | 2354.5 | 2353.81 | 2351.57 | 2351.17 |
| Ocotillo3 | 3 | 1321 | 2273.63 | 26.01 | 2247.92 | 26.01 | | 68.71 | 0.85 | 0.28 | 2354.33 | 2357.44 | 2356.6 | 2354.5 | 2353.81 |
| Ocotillo3 | 3 | 1382 | 2312.8 | 40.14 | 2273.63 | 40.14 | | 62.1 | 1.25 | 0.77 | 2355.96 | 2359.59 | 2358.59 | 2357.44 | 2356.6 |
| Ocotillo3 | 3 | 1458 | 2303.89 | -9.04 | 2312.8 | -9.04 | | 74.86 | 1.2 | 0.84 | 2358.27 | 2361.36 | 2360.77 | 2359.59 | 2358.59 |
| Ocotillo3 | 3 | 1510 | 2325.88 | 21.09 | 2303.89 | 21.09 | | 53.18 | 0.93 | 0.61 | 2360.22 | 2362.98 | 2362.1 | 2361.36 | 2360.77 |
| Ocotillo3 | 3 | 1619 | 2532.08 | 206 | 2325.88 | 206 | | 118.47 | 2.42 | 1.67 | 2361.17 | 2367.31 | 2366.67 | 2362.98 | 2362.1 |
| Ocotillo5 | 5 | 952 | 2274.36 | -15.18 | 2289.96 | -15.18 | | 50.31 | 0.43 | 0.27 | 2408.25 | 2411.08 | 2410.4 | 2407.66 | 2406.84 |
| Ocotillo5 | 5 | 1011 | 2319.82 | 44.61 | 2274.36 | 44.61 | | 41.3 | 1.14 | 0.61 | 2410.74 | 2414.16 | 2413.42 | 2411.08 | 2410.4 |
| Ocotillo5 | 5 | 1064 | 2342.28 | 22.24 | 2319.82 | 22.24 | | 20.94 | 1.14 | 0.62 | 2412.28 | 2416.94 | 2416.19 | 2414.16 | 2413.42 |
| Ocotillo5 | 5 | 1136 | 2342.28 | 0 | 2342.28 | | | | | | 2416.28 | 2419.23 | 2418.54 | 2416.94 | 2416.19 |
| Ocotillo5 | 5 | 1223 | 2396.57 | 54.63 | 2342.28 | 54.63 | | 78.44 | 1.16 | 0.48 | 2418.68 | 2422.32 | 2421.39 | 2419.23 | 2418.54 |
| Ocotillo5 | 5 | 1332 | 2441 | 44.43 | 2396.57 | 44.43 | | 33.61 | 1.19 | 0.72 | 2420.23 | 2426.3 | 2425.19 | 2422.32 | 2421.39 |
| OcotilloS2 | Split2 | 232 | 1838.69 | -76.17 | 1914.84 | -76.17 | | 94.3 | 1.94 | 1.33 | 2256.57 | 2259.8 | 2259.41 | 2257.89 | 2257.41 |
| OcotilloS2 | Split2 | 256 | 1887.78 | 49.08 | 1838.69 | 49.08 | | 23.03 | 1.21 | 1.04 | 2258.24 | 2260.46 | 2260.1 | 2259.8 | 2259.41 |
| OcotilloS2 | Split2 | 298 | 1936.86 | 49.08 | 1887.78 | 49.08 | | 39.22 | 1.13 | 0.71 | 2258.97 | 2261.28 | 2261.04 | 2260.46 | 2260.1 |
| OcotilloS2 | Split2 | 416 | 2054.24 | 117.32 | 1936.86 | 117.32 | | 170.03 | 0.93 | 0.46 | 2260.11 | 2264.22 | 2263.99 | 2261.28 | 2261.04 |
| OcotilloT1 | Trib1 | 164 | 1088.41 | 248.18 | 840.16 | 248.18 | | 27.28 | 3.02 | 2.74 | 2282.82 | 2286.94 | 2286.58 | 2286.43 | 2285.82 |
| OcotilloT1 | Trib1 | 189 | 1244.73 | 156.23 | 1088.41 | 156.23 | | 25.08 | 2.38 | 2.13 | 2284.2 | 2287.52 | 2287.03 | 2286.94 | 2286.58 |
| OcotilloT1 | Trib1 | 226 | 1386.02 | 141.25 | 1244.73 | 141.25 | | 35.96 | 1.74 | 1.57 | 2285.29 | 2288.16 | 2287.63 | 2287.52 | 2287.03 |
| OcotilloT1 | Trib1 | 252 | 1467.36 | 81.33 | 1386.02 | 81.33 | | 25.91 | 1.44 | 1.35 | 2286.19 | 2288.52 | 2288.04 | 2288.16 | 2287.63 |
| OcotilloT1 | Trib1 | 275 | 1463.97 | -3.3 | 1467.36 | -3.3 | | 25.7 | 1.79 | 1.56 | 2286.49 | 2288.98 | 2288.35 | 2288.52 | 2288.04 |
| OcotilloT1 | Trib1 | 296 | 1397 | -67 | 1463.97 | -67 | | 16.99 | 1.98 | 1.54 | 2287.4 | 2289.43 | 2288.97 | 2288.98 | 2288.35 |
| OcotilloT1 | Trib1 | 324 | 1397 | 0 | 1397 | | | | | | 2290.7 | 2289.93 | 2289.53 | 2289.43 | 2288.97 |

# CAVE CREEK DRAINAGE MASTER PLAN
# FCDMC CONTRACT NUMBER 2004C072
# OCOTILLO WASH FLOODPLAIN REDELINEATION
# CAVE CREEK, ARIZONA

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

## AUTHORITY FOR STUDY

THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY (FCDMC) HAS CONTRACTED HDR TO PREPARE THIS STUDY UNDER THE CONTRACT NUMBER 2004C072 AS PART OF THE CC DMP. PROJECT CONTROL NUMBER 690.02.20.

## PROJECT LOCATION

THE PROJECT SITE IS LOCATED WITHIN THE TOWN OF CAVE CREEK, ARIZONA WITHIN SECTIONS 14, 15 AND 22 OF TOWNSHIP 6 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN WITHIN THE COUNTY OF MARICOPA IN THE STATE OF ARIZONA.

## BENCHMARKS (NAVD 88)

BM #10 – ELEVATION 2275.856
LOCATED AT THE INTERSECTION OF FLEMING SPRINGS ROAD AND ROCKAWAY HILLS DRIVE (NE CORNER).

BM # 13 – ELEVATION 2306.736
LOCATED AT THE INTERSECTION OF ECHO CANYON DRIVE AND CONTINENTAL MOUNTAIN DRIVE (NE CORNER).

BM # 11 – ELEVATION 2320.194
LOCATED AT THE INTERSECTION OF FLEMING SPRINGS ROAD AND ECHO CANYON DRIVE (SE CORNER).

BM # 12 0 ELEVATION 2429.245
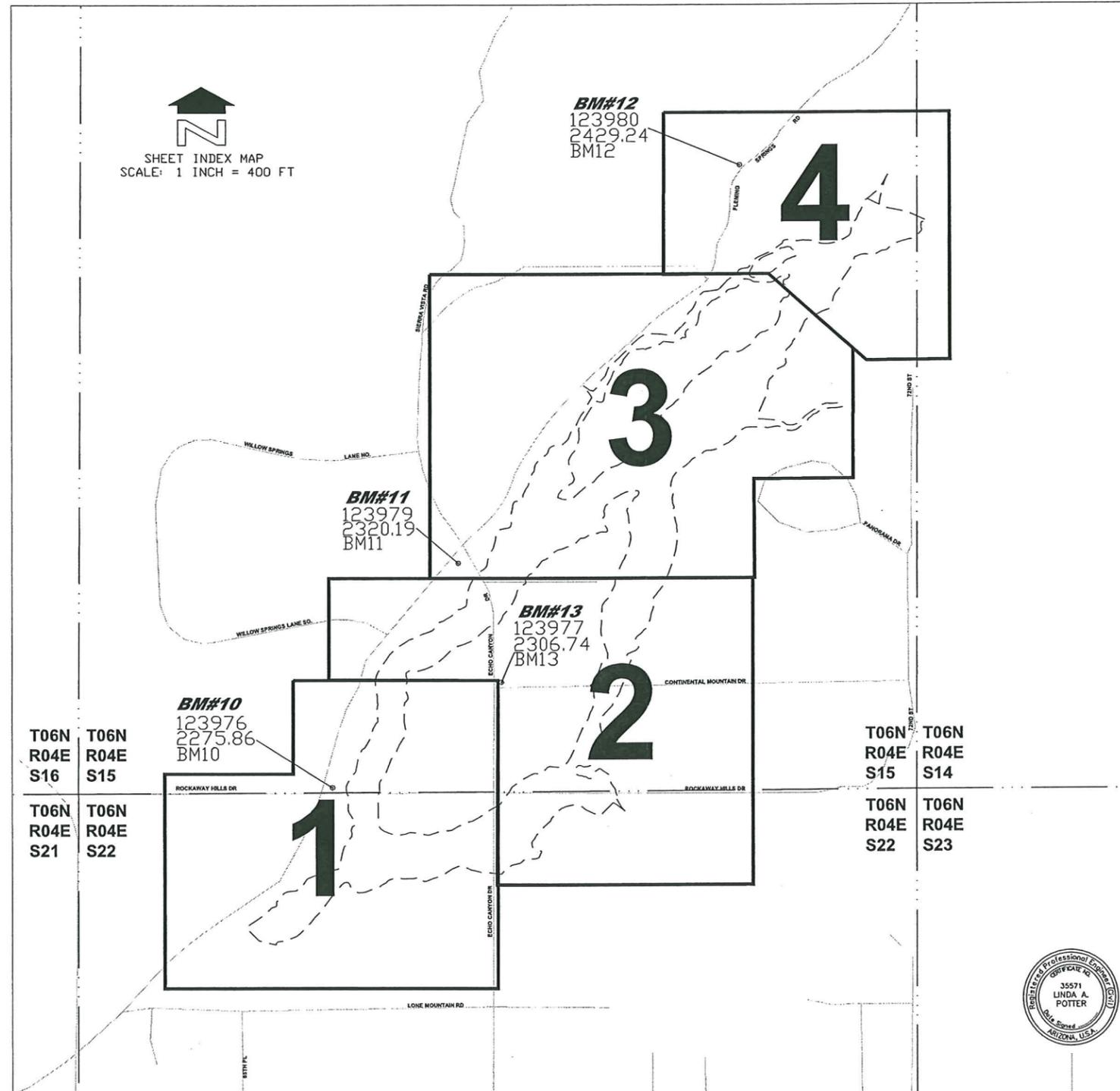LOCATED ALONG FLEMING SPRINGS ROAD ALIGNMENT ADJACENT TO PARCEL NUMBER 21616025R OR 21616025S

## SHEET INDEX

SHEET 1 – OCOTILLO WASH REACH 01, REACH 02 & SPLIT-2.
SHEET 2 – OCOTILLO WASH REACH 02, SPLIT-1 & SPLIT-2.
SHEET 3 – OCOTILLO WASH SPLIT-1, REACH 03, REACH 04, REACH 05, TRIB-5 & TRIB-6.
SHEET 4 – OCOTILLO WASH REACH 05 & TRIB-5.

## ABBREVIATIONS

DMP – DRAINAGE MASTER PLAN
CC – CAVE CREEK
ROW – RIGHT OF WAY
EXIST – EXISTING
BCHH – BRASS CAP HAND HOLE
T. – TOWNSHIP
R. – RANGE
S. – SECTION
N.T.S. – NOT TO SCALE
BM – BENCHMARK

## SHEET INDEX MAP
SCALE: 1 INCH = 400 FT

N

BM#12
123980
2429.24
BM12

4

3

BM#11
123979
2320.19
BM11

BM#13
123977
2306.74
BM13

2

BM#10
123976
2275.86
BM10

1

T06N R04E S16 | T06N R04E S15
T06N R04E S21 | T06N R04E S22

T06N R04E S15 | T06N R04E S14
T06N R04E S22 | T06N R04E S23

## SURVEY STATEMENT

I, STONE E. WAHL, AN ARIZONA REGISTERED LAND SURVEYOR, CERTIFY THAT THE FIELD SURVEYS, DOCUMENTED HEREIN, ALONG WITH ALL FIELD, AND OFFICE PROCESS PROCEDURES, USED DURING THE COURSE OF THIS SURVEY, WERE PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THESE SURVEYS, ARE RETRACEABLE, AND REPEATABLE. FURTHER, I CERTIFY THAT THE SUREY REPORT WAS PREPARED UNDER MY DIRECT SUPERVISION.
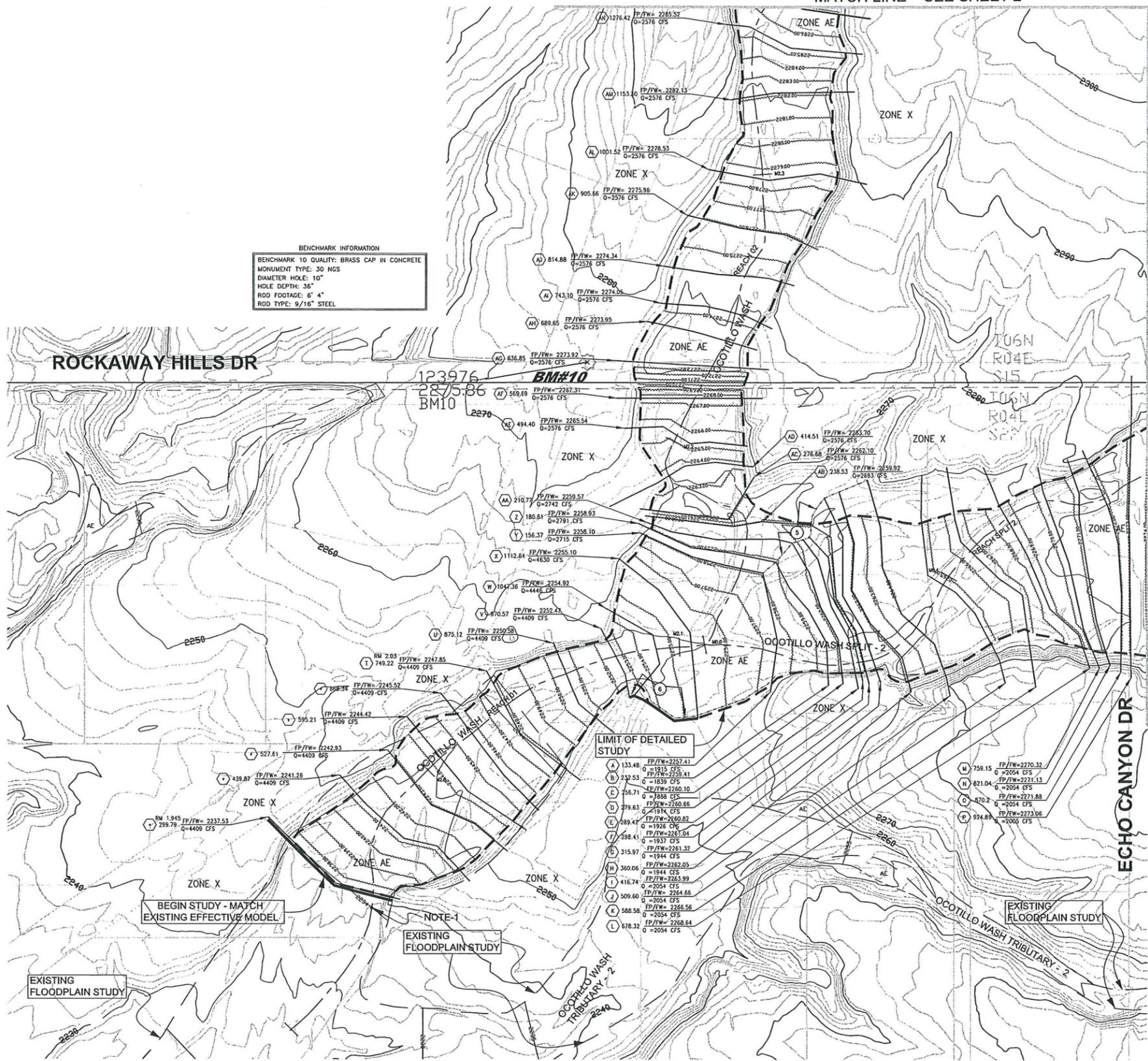
STONE E. WAHL
AZ RLS #28237

PROJECT LOCATION
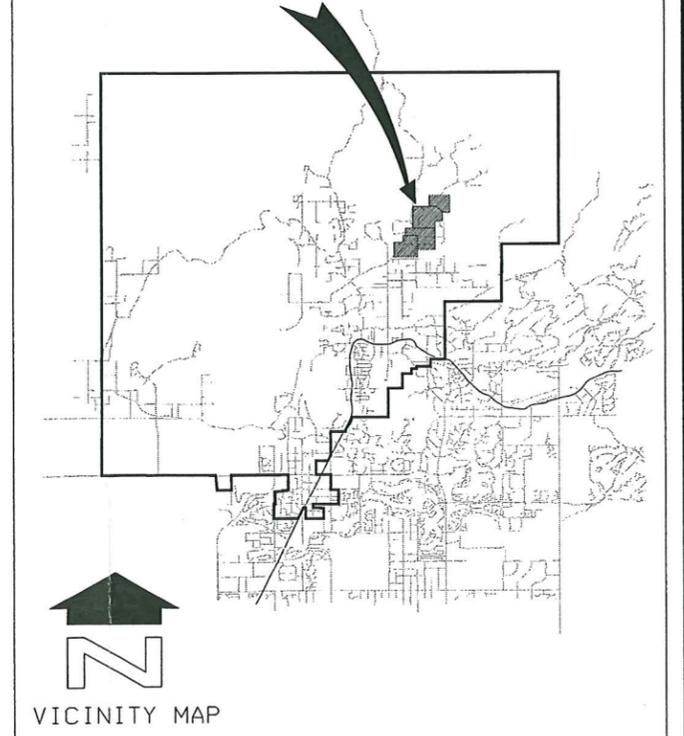
VICINITY MAP

N

ROCKAWAY HILLS DR

ECHO CANYON DR

MATCH LINE   SEE SHEET 2

BM#10

BENCHMARK INFORMATION
BENCHMARK 10 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
HOLE DEPTH: 36"
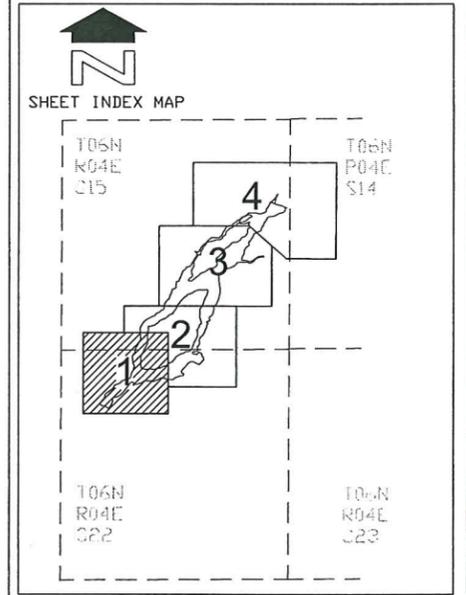ROD FOOTAGE: 6' 4"
ROD TYPE: 9/16" STEEL

LIMIT OF DETAILED STUDY

BEGIN STUDY - MATCH EXISTING EFFECTIVE MODEL

EXISTING FLOODPLAIN STUDY

EXISTING FLOORPLAIN STUDY

NOTE-1

OCOTILLO WASH TRIBUTARY - 2

OCOTILLO WASH SPLIT - 2

ZONE AE
ZONE X

LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN AND FLOODWAY BOUNDARY | |
| LATERAL BASE LINES | |
| BASE FLOOD ELEVATION | |
| HYDRAULIC BASE LINE WITH RIVER MILE | M2.0   M2.5   M3.0 |
| CROSS SECTION | FP= 2250.55  Q =4630 CFS  144.44  RM 1.945 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

BENCHMARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.07 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|
| BM #10 | 2275.856 | THE INTERSECTION OF FLEMING SPRINGS ROAD AND ROCKAWAY HILLS DRIVE. (NE CORNER) |

SHEET INDEX MAP

NOTES

1—THE HYDRAULIC BASE LINE FOR OCOTILLO WASH TIES INTO THE EXISTING RIVER MILE 1.945 PER THE FIS FLOOD PROFILE DATED SEPTEMBER 30, 2005

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

OCOTILLO WASH FLOODPLAIN DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA  85018-2311
(602) 522-7700

35571
LINDA A. POTTER
ARIZONA, USA

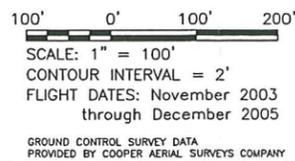| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 10-25-07 |
| DESIGN CHK. | L. POTTER | 10-25-07 |
| PLANS | MC/MF | 10-25-07 |
| PLANS CHK. | L. POTTER | 10-25-07 |

| NO. | REVISION | BY | DATE |
|---|---|---|---|

SHEET 1 OF 4

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'    0'    100'    200'
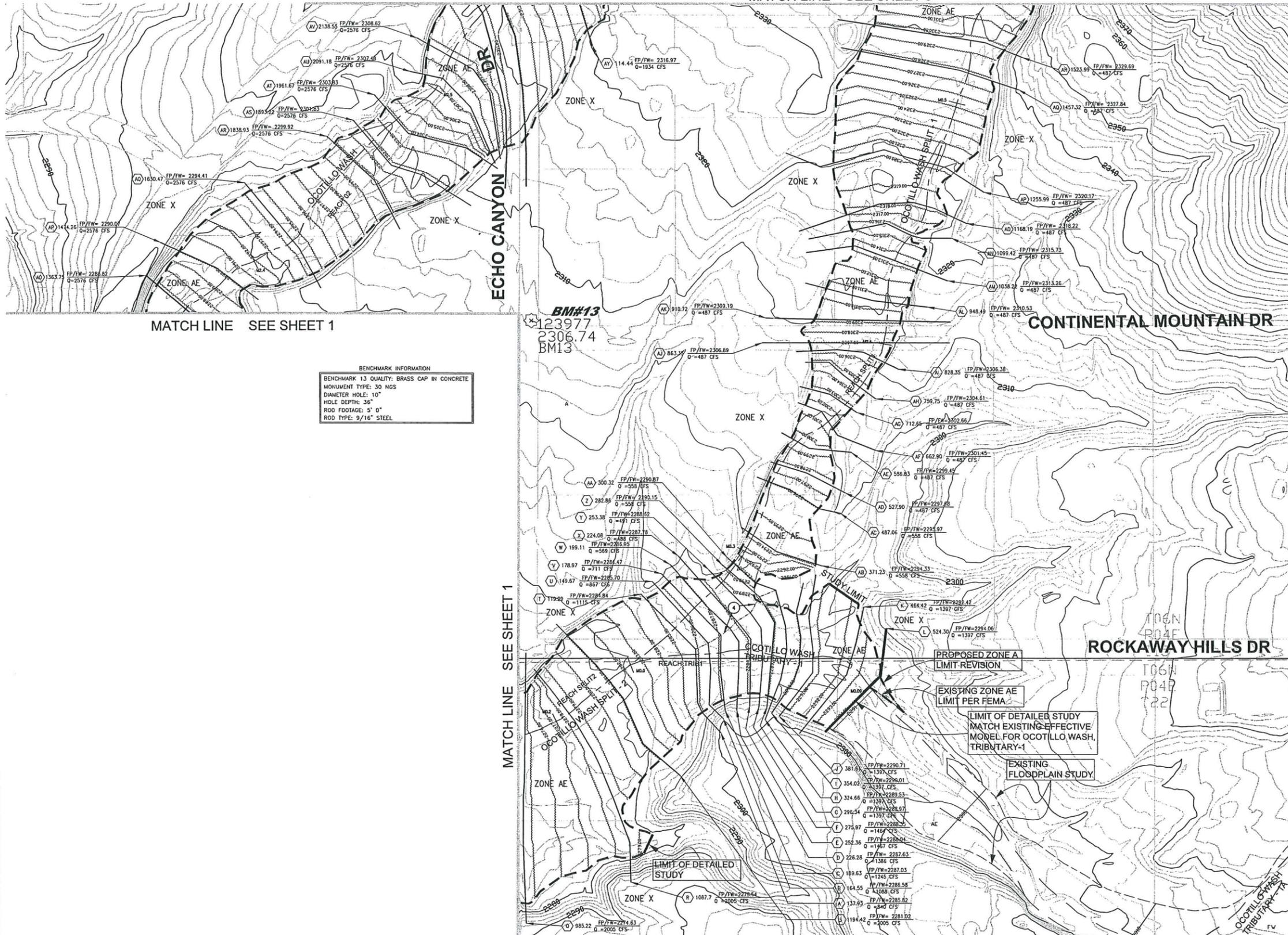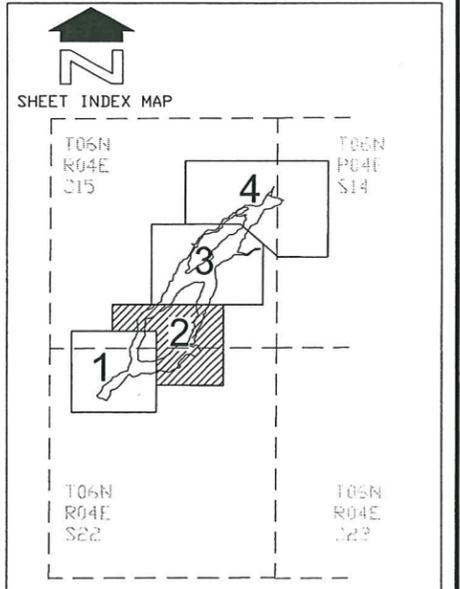
N

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY

GROUND CONTROL SURVEY DATA PROVIDED BY COOPER AERIAL SURVEYS COMPANY

MATCH LINE   SEE SHEET 3

MATCH LINE   SEE SHEET 1

MATCH LINE   SEE SHEET 1

ECHO CANYON DR

CONTINENTAL MOUNTAIN DR

ROCKAWAY HILLS DR

ZONE AE
ZONE X

PROPOSED ZONE A
LIMIT REVISION

EXISTING ZONE AE
LIMIT PER FEMA

LIMIT OF DETAILED STUDY
MATCH EXISTING EFFECTIVE
MODEL FOR OCOTILLO WASH,
TRIBUTARY-1

EXISTING
FLOODPLAIN STUDY

LIMIT OF DETAILED
STUDY

STUDY LIMIT

OCOTILLO WASH SPLIT 1
OCOTILLO WASH TRIBUTARY
REACH SPLIT 2
REACH TRIB 1
OCOTILLO WASH TRIBUTARY-1A
OCOTILLO WASH TRIBUTARY-1A

BM#13
123977
2306.74
BM13

BENCHMARK INFORMATION
BENCHMARK 13 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
HOLE DEPTH: 36"
ROD FOOTAGE: 5' 0"
ROD TYPE: 9/16" STEEL

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003
through December 2005

100'  0'  100'  200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

MATCH LINE   SEE SHEET 4

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN AND FLOODWAY BOUNDARY | |
| LATERAL BASE LINES | |
| BASE FLOOD ELEVATION | 2055.00 |
| HYDRAULIC BASE LINE WITH RIVER MILE | M2.0   M2.5   M3.0 |
| CROSS SECTION | $A$  144.44   FP= 2250.55   Q =4630 CFS   RM 1.945 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

### BENCHMARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.07 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|
| BM #11 | 2320.194 | THE INTERSECTION OF FLEMING SPRINGS ROAD AND ECHO CANYON DRIVE. (SE CORNER). |
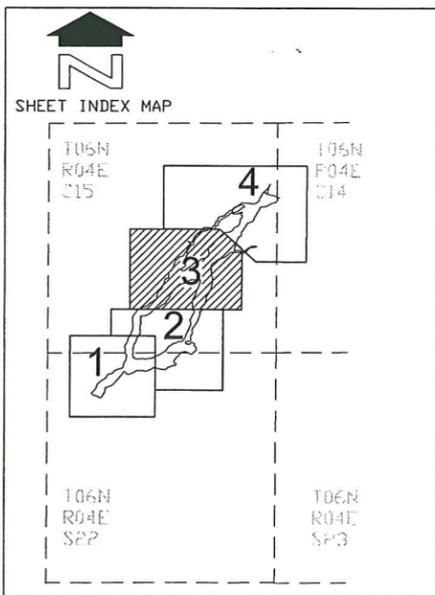
BENCHMARK INFORMATION

BENCHMARK 11 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
(HOLE DEPTH: 36"
ROD FOOTAGE: 6' 6"
ROD TYPE: 9/16" STEEL

LIMIT OF DETAILED STUDY

N

SHEET INDEX MAP

### NOTES

1—THE HYDRAULIC BASE LINE FOR OCOTILLO WASH TIES INTO THE EXISTING RIVER MILE 1.945 PER THE FIS FLOOD PROFILE DATED SEPTEMBER 30, 2005

CROSS SECTION DATA KEY FOR OCOTILLO WASH

| | FP/FW= | | FP/FW= |
|---|---|---|---|
| AZ 215.17 | 2320.57 Q =1784 CFS | BH 1054.18 | 2247.27 Q =2209 CFS |
| BA 321.58 | 2322.57 Q =1906 CFS | BI 1159.03 | 2251.16 Q =2238 CFS |
| BB 384.36 | 2325.62 Q =1964 CFS | BJ 1241.24 | 2353.81 Q =2248 CFS |
| BC 462.38 | 2328.62 Q =2286 CFS | BK 1321.67 | 2356.60 Q =2274 CFS |
| BD 671.13 | 2335.31 Q =2277 CFS | BL 1382.93 | 2358.57 Q =2313 CFS |
| BE 741.52 | 2338.15 Q =2286 CFS | BM 1458.29 | 2360.79 Q =2304 CFS |
| BF 826.04 | 2341.46 Q =2333 CFS | BN 1510.76 | 2362.11 Q =2376 CFS |
| BG 987.65 | 2345.46 Q =2219 CFS | BO 1619.75 | 2366.17 Q =2532 CFS |

| 2 | | | |
|---|---|---|---|
| NO. | REVISION | BY | DATE |

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

### CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

OCOTILLO WASH FLOODPLAIN DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA  85018-2311
(602) 522-7700

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 10-25-07 |
| DESIGN CHK. | L. POTTER | 10-25-07 |
| PLANS | MC/MF | 10-25-07 |
| PLANS CHK. | L. POTTER | 10-25-07 |

35571
LINDA A. POTTER

SHEET 3 OF 4

BM#11

MATCH LINE   SEE SHEET 2

100'   0'   100'   200'
N

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
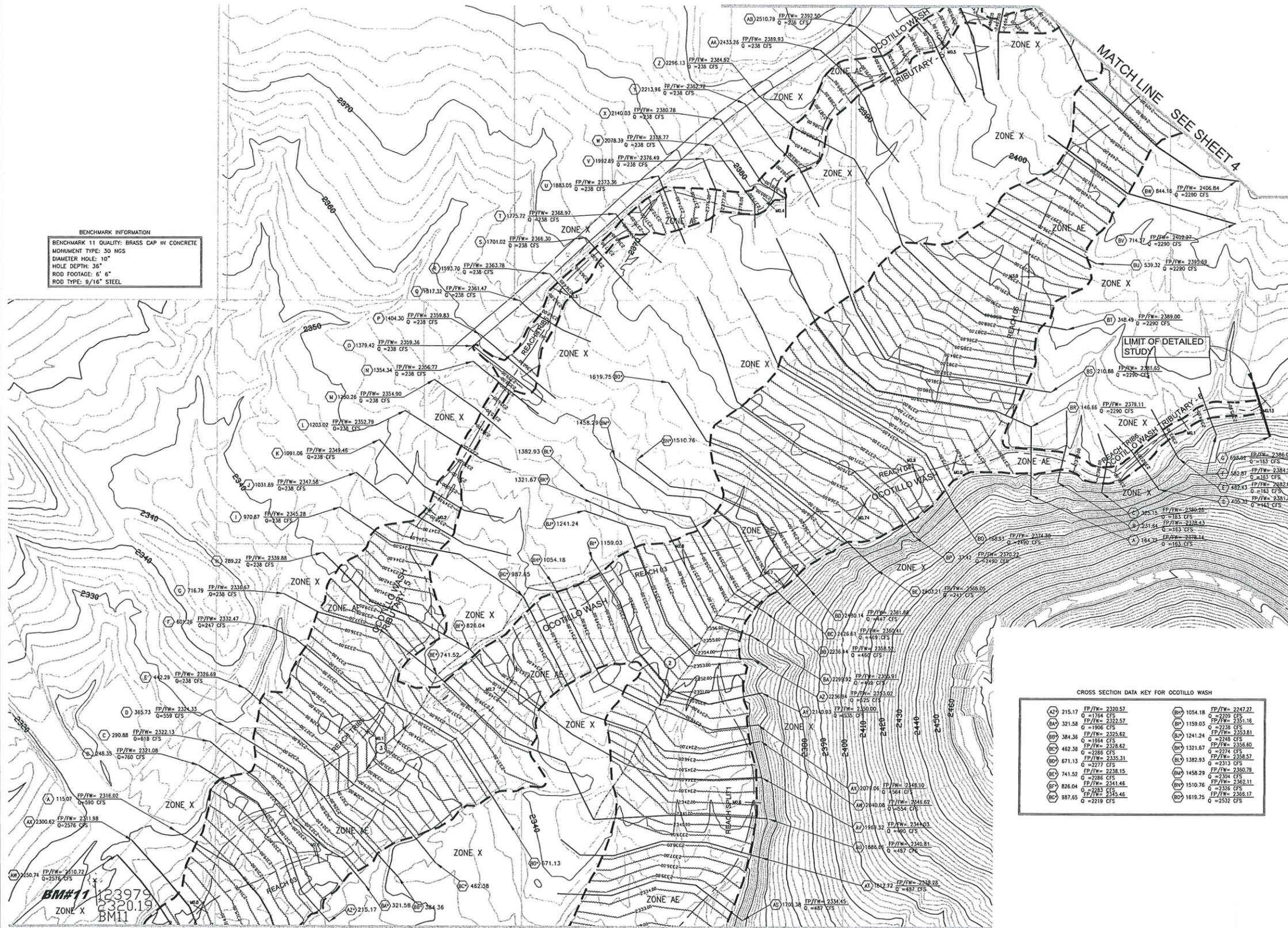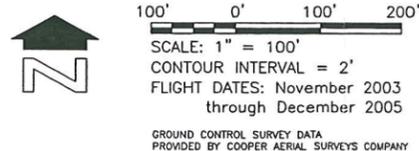FLIGHT DATES: November 2003 through December 2005

GROUND CONTROL SURVEY DATA PROVIDED BY COOPER AERIAL SURVEYS COMPANY

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN AND FLOODWAY BOUNDARY | |
| LATERAL BASE LINES | |
| BASE FLOOD ELEVATION | |
| HYDRAULIC BASE LINE WITH RIVER MILE | M2.0  M2.5  M3.0 |
| CROSS SECTION | FP= 2250.55  Q =4630 CFS  144.44  RM 1.945 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

## BENCHMARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.07 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|
| BM #12 | 2429.245 | ALONG FLEMING SPRINGS ROAD ADJACENT TO PARCEL NUMBER 21616025R OR 21616025S |

SHEET INDEX MAP

## NOTES

1—THE HYDRAULIC BASE LINE FOR OCOTILLO WASH TIES INTO THE EXISTING RIVER MILE 1.945 PER THE FIS FLOOD PROFILE DATED SEPTEMBER 30, 2005

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 2 | | | |
| 1 | | | |

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

## CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

### OCOTILLO WASH FLOODPLAIN DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

35571
LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 10-25-07 |
| DESIGN CHK. | L. POTTER | 10-25-07 |
| PLANS | MC/MF | 10-25-07 |
| PLANS CHK. | L. POTTER | 10-25-07 |

SHEET 4 OF 4

BENCHMARK INFORMATION
BENCHMARK 12 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
HOLE DEPTH: 36"
ROD FOOTAGE: 6' 0"
ROD TYPE: 9/16" STEEL

MATCH LINE    SEE SHEET 3

MATCH LINE    SEE SHEET 3

123980
2429.24
BM12

BM#12

FLEMING SPRINGS RD

OCOTILLO WASH

PROPOSED ZONE A LIMIT REVISION

EXISTING ZONE A LIMIT PER FEMA

ZONE A   EXISTING ZONE A LIMIT PER FEMA

LIMIT OF DETAILED STUDY

ZONE X

ZONE AE OCOTILLO WASH

LIMIT OF DETAILED STUDY

ZONE X

OCOTILLO WASH TRIBUTARY

100'  0'  100'  200'
SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003
through December 2005

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY

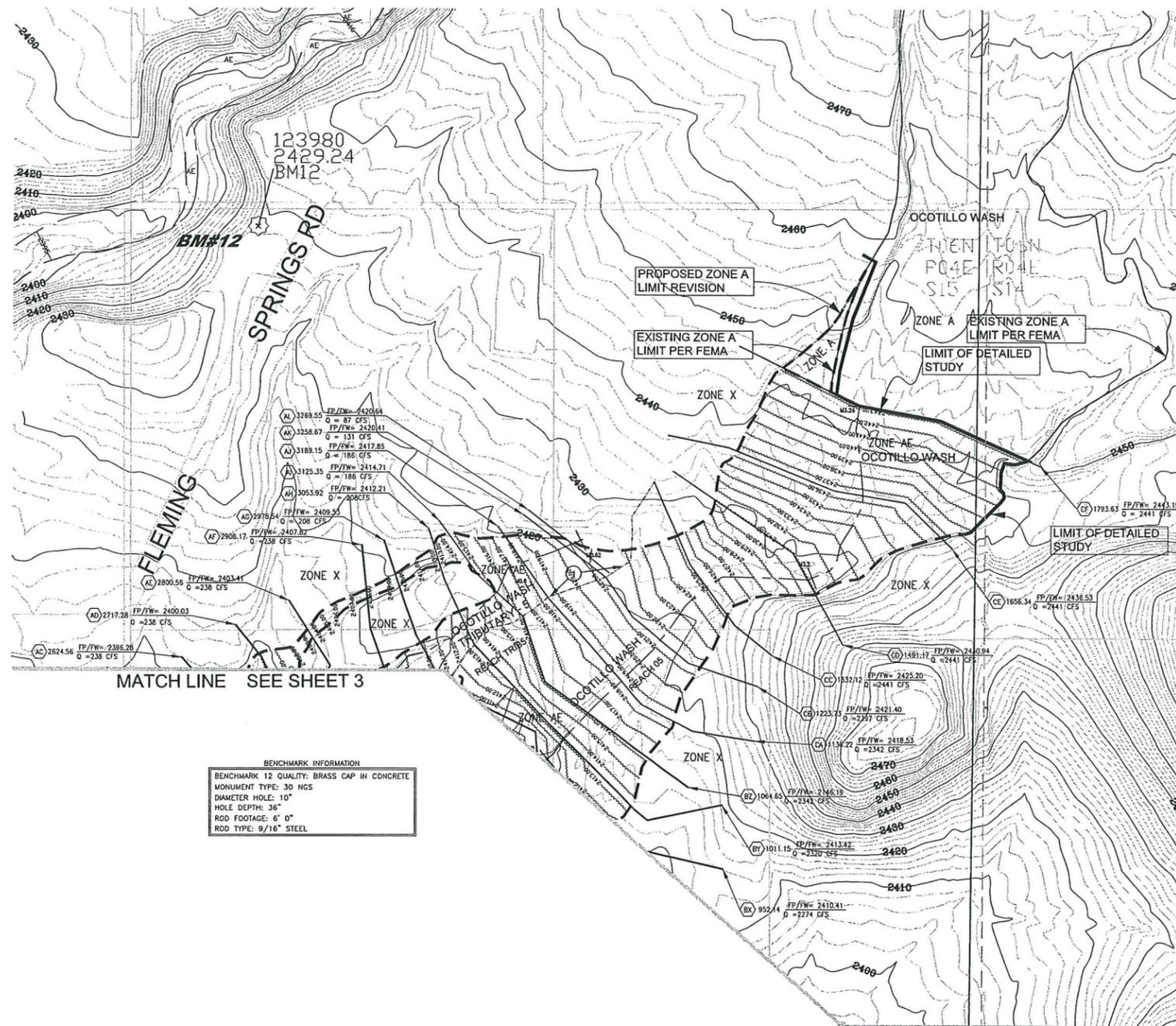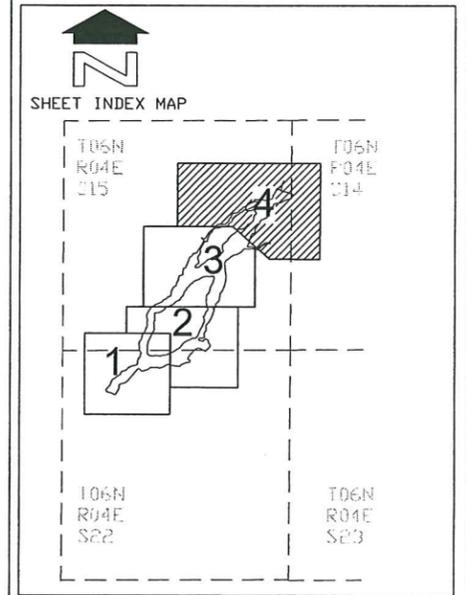GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

# GALLOWAY TRIBUTARIES

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

GWTribFPDSP.prj
HEC-RAS Plan: M4E
PF 1 = Floodplain
PF 2 = Floodway

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Galloway1 | Tributary2.1 | 51.84 | 1 | 180 | 2245.89 | 2253.77 | | 2253.78 | 0.000007 | 0.32 | 568.53 | 102.47 | 0.02 |
| Galloway1 | Tributary2.1 | 51.84 | 2 | 180 | 2245.89 | 2253.77 | | 2253.78 | 0.000007 | 0.32 | 568.56 | 102.47 | 0.02 |
| Galloway1 | Tributary2.1 | 99.49 | 1 | 180 | 2247.19 | 2253.77 | | 2253.78 | 0.00006 | 0.47 | 380.37 | 91.17 | 0.04 |
| Galloway1 | Tributary2.1 | 99.49 | 2 | 180 | 2247.19 | 2253.77 | | 2253.78 | 0.00006 | 0.47 | 380.4 | 91.17 | 0.04 |
| Galloway1 | Tributary2.1 | 148.99 | 1 | 180 | 2247.99 | 2253.77 | | 2253.78 | 0.000144 | 0.67 | 270.23 | 75.8 | 0.06 |
| Galloway1 | Tributary2.1 | 148.99 | 2 | 180 | 2247.99 | 2253.78 | | 2253.78 | 0.000144 | 0.67 | 270.24 | 75.8 | 0.06 |
| Galloway1 | Tributary2.1 | 199.93 | 1 | 180 | 2249.04 | 2253.78 | | 2253.8 | 0.000566 | 1.05 | 171.38 | 62.26 | 0.11 |
| Galloway1 | Tributary2.1 | 199.93 | 2 | 180 | 2249.04 | 2253.78 | | 2253.8 | 0.000566 | 1.05 | 171.39 | 62.26 | 0.11 |
| Galloway1 | Tributary2.1 | 249.04 | 1 | 180 | 2250.56 | 2253.81 | | 2253.86 | 0.00255 | 1.8 | 100.08 | 50.36 | 0.22 |
| Galloway1 | Tributary2.1 | 249.04 | 2 | 180 | 2250.56 | 2253.81 | | 2253.86 | 0.002549 | 1.8 | 100.09 | 50.36 | 0.22 |
| Galloway1 | Tributary2.1 | 299.42 | 1 | 180 | 2252.29 | 2254.14 | 2254.14 | 2254.65 | 0.052171 | 5.77 | 31.18 | 30.78 | 1.01 |
| Galloway1 | Tributary2.1 | 299.42 | 2 | 180 | 2252.29 | 2254.14 | 2254.14 | 2254.65 | 0.052171 | 5.77 | 31.18 | 30.78 | 1.01 |
| Galloway1 | Tributary2.1 | 348.88 | 1 | 180 | 2253.31 | 2255.57 | 2255.09 | 2255.82 | 0.012695 | 3.96 | 45.44 | 33.03 | 0.59 |
| Galloway1 | Tributary2.1 | 348.88 | 2 | 180 | 2253.31 | 2255.57 | 2255.09 | 2255.82 | 0.012695 | 3.96 | 45.44 | 33.03 | 0.59 |
| Galloway1 | Tributary2.1 | 396.87 | 1 | 180 | 2254.88 | 2256.72 | 2256.72 | 2257.14 | 0.040295 | 5.23 | 34.43 | 42.55 | 1.02 |
| Galloway1 | Tributary2.1 | 396.87 | 2 | 180 | 2254.88 | 2256.72 | 2256.72 | 2257.14 | 0.040295 | 5.23 | 34.43 | 42.55 | 1.02 |
| Galloway1 | Tributary2.1 | 446.17 | 1 | 180 | 2257.29 | 2258.84 | 2258.84 | 2259.3 | 0.034939 | 5.42 | 33.18 | 37.38 | 1.01 |
| Galloway1 | Tributary2.1 | 446.17 | 2 | 180 | 2257.29 | 2258.84 | 2258.84 | 2259.3 | 0.034939 | 5.42 | 33.18 | 37.38 | 1.01 |
| Galloway1 | Tributary2.1 | 479.46 | 1 | 180 | 2258.74 | 2260.24 | 2260.24 | 2260.62 | 0.037461 | 4.94 | 36.4 | 49.34 | 1.01 |
| Galloway1 | Tributary2.1 | 479.46 | 2 | 180 | 2258.74 | 2260.24 | 2260.24 | 2260.62 | 0.037461 | 4.94 | 36.4 | 49.34 | 1.01 |
| Galloway1 | Tributary2.1 | 519.57 | 1 | 180 | 2259.97 | 2261.95 | 2261.95 | 2262.41 | 0.037792 | 5.45 | 33.05 | 37.09 | 1.02 |
| Galloway1 | Tributary2.1 | 519.57 | 2 | 180 | 2259.97 | 2261.95 | 2261.95 | 2262.41 | 0.037792 | 5.45 | 33.05 | 37.09 | 1.02 |
| Galloway1 | Tributary2.1 | 549.45 | 1 | 180 | 2261.29 | 2262.93 | | 2263.2 | 0.019033 | 4.14 | 43.43 | 45.7 | 0.75 |
| loway1 | Tributary2.1 | 549.45 | 2 | 180 | 2261.29 | 2262.93 | | 2263.2 | 0.019033 | 4.14 | 43.43 | 45.7 | 0.75 |
| Galloway1 | Tributary2.1 | 599.63 | 1 | 180 | 2263.36 | 2264.89 | 2264.89 | 2265.32 | 0.037954 | 5.24 | 34.37 | 41.03 | 1.01 |
| Galloway1 | Tributary2.1 | 599.63 | 2 | 180 | 2263.36 | 2264.89 | 2264.89 | 2265.32 | 0.037954 | 5.24 | 34.37 | 41.03 | 1.01 |
| Galloway1 | Tributary2.1 | 648.71 | 1 | 180 | 2265.15 | 2266.63 | 2266.51 | 2266.97 | 0.02972 | 4.69 | 38.36 | 40.47 | 0.85 |
| Galloway1 | Tributary2.1 | 648.71 | 2 | 180 | 2265.15 | 2266.63 | 2266.51 | 2266.97 | 0.02972 | 4.69 | 38.36 | 40.47 | 0.85 |
| Galloway1 | Tributary2.1 | 700 | 1 | 180 | 2266.83 | 2268.59 | 2268.59 | 2269.09 | 0.036427 | 5.71 | 31.5 | 31.78 | 1.01 |
| Galloway1 | Tributary2.1 | 700 | 2 | 180 | 2266.83 | 2268.59 | 2268.59 | 2269.09 | 0.036427 | 5.71 | 31.5 | 31.78 | 1.01 |
| Galloway1 | Tributary2.1 | 749.36 | 1 | 180 | 2267.28 | 2269.98 | | 2270.18 | 0.014104 | 3.61 | 49.86 | 42.86 | 0.59 |
| Galloway1 | Tributary2.1 | 749.36 | 2 | 180 | 2267.28 | 2269.98 | | 2270.18 | 0.014104 | 3.61 | 49.86 | 42.86 | 0.59 |
| Galloway1 | Tributary2.1 | 798.58 | 1 | 180 | 2268.69 | 2270.79 | 2270.7 | 2271.16 | 0.02699 | 4.9 | 36.72 | 39.75 | 0.9 |
| Galloway1 | Tributary2.1 | 798.58 | 2 | 180 | 2268.69 | 2270.79 | 2270.7 | 2271.16 | 0.02699 | 4.9 | 36.72 | 39.75 | 0.9 |
| Galloway1 | Tributary2.1 | 849.6 | 1 | 180 | 2270.33 | 2272.31 | 2272.31 | 2272.9 | 0.031188 | 6.15 | 29.29 | 25.16 | 1 |
| Galloway1 | Tributary2.1 | 849.6 | 2 | 180 | 2270.33 | 2272.31 | 2272.31 | 2272.9 | 0.031188 | 6.15 | 29.29 | 25.16 | 1 |
| Galloway1 | Tributary2.1 | 901.12 | 1 | 180 | 2272.41 | 2274.14 | 2274.14 | 2274.63 | 0.031252 | 5.63 | 31.98 | 33.29 | 1.01 |
| Galloway1 | Tributary2.1 | 901.12 | 2 | 180 | 2272.41 | 2274.14 | 2274.14 | 2274.63 | 0.031252 | 5.63 | 31.98 | 33.29 | 1.01 |
| Galloway1 | Tributary2.1 | 950.21 | 1 | 180 | 2274.18 | 2276.29 | 2276.29 | 2276.72 | 0.036689 | 5.3 | 33.98 | 39.39 | 1 |
| Galloway1 | Tributary2.1 | 950.21 | 2 | 180 | 2274.18 | 2276.29 | 2276.29 | 2276.72 | 0.036689 | 5.3 | 33.98 | 39.39 | 1 |
| Galloway1 | Tributary2.1 | 999.06 | 1 | 180 | 2275.96 | 2277.96 | 2277.85 | 2278.35 | 0.029946 | 4.99 | 36.05 | 35.84 | 0.87 |
| Galloway1 | Tributary2.1 | 999.06 | 2 | 180 | 2275.96 | 2277.96 | 2277.85 | 2278.35 | 0.029946 | 4.99 | 36.05 | 35.84 | 0.87 |
| Galloway1 | Tributary2.1 | 1040.95 | 1 | 180 | 2278.23 | 2279.94 | 2279.94 | 2280.33 | 0.043068 | 4.95 | 36.35 | 50.04 | 1.02 |
| Galloway1 | Tributary2.1 | 1040.95 | 2 | 180 | 2278.23 | 2279.94 | 2279.94 | 2280.33 | 0.043068 | 4.95 | 36.35 | 50.04 | 1.02 |
| Galloway1 | Tributary2.1 | 1098.06 | 1 | 180 | 2280.07 | 2282.05 | 2281.95 | 2282.34 | 0.0291 | 4.31 | 41.74 | 51.54 | 0.84 |
| Galloway1 | Tributary2.1 | 1098.06 | 2 | 180 | 2280.07 | 2282.05 | 2281.95 | 2282.34 | 0.0291 | 4.31 | 41.74 | 51.54 | 0.84 |
| Galloway1 | Tributary2.1 | 1149.14 | 1 | 180 | 2281.82 | 2283.55 | 2283.5 | 2283.95 | 0.032624 | 5.08 | 35.43 | 40.21 | 0.94 |
| Galloway1 | Tributary2.1 | 1149.14 | 2 | 180 | 2281.82 | 2283.55 | 2283.5 | 2283.95 | 0.032624 | 5.08 | 35.43 | 40.21 | 0.94 |
| oway1 | Tributary2.1 | 1200.13 | 1 | 180 | 2283.28 | 2285.2 | 2285.1 | 2285.5 | 0.028108 | 4.43 | 40.63 | 49.47 | 0.86 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | # | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| Galloway1 | Tributary2.1 | 1200.13 | 2 | 180 | 2283.28 | 2285.2 | 2285.1 | 2285.5 | 0.028108 | 4.43 | 40.63 | 49.47 | 0.86 |
| Galloway1 | Tributary2.1 | 1249.67 | 1 | 180 | 2284.85 | 2286.59 | 2286.59 | 2287.2 | 0.032813 | 6.28 | 28.66 | 23.2 | 0.99 |
| Galloway1 | Tributary2.1 | 1249.67 | 2 | 180 | 2284.85 | 2286.59 | 2286.59 | 2287.2 | 0.032813 | 6.28 | 28.66 | 23.2 | 0.99 |
| Galloway1 | Tributary2.1 | 1299.5 | 1 | 180 | 2285.99 | 2288.04 | | 2288.29 | 0.014811 | 3.99 | 45.13 | 37.02 | 0.63 |
| Galloway1 | Tributary2.1 | 1299.5 | 2 | 180 | 2285.99 | 2288.04 | | 2288.29 | 0.014811 | 3.99 | 45.13 | 37.02 | 0.63 |
| Galloway1 | Tributary2.1 | 1349.34 | 1 | 180 | 2288.39 | 2289.96 | 2289.96 | 2290.49 | 0.035441 | 5.81 | 31 | 30.21 | 1.01 |
| Galloway1 | Tributary2.1 | 1349.34 | 2 | 180 | 2288.39 | 2289.96 | 2289.96 | 2290.49 | 0.035441 | 5.81 | 31 | 30.21 | 1.01 |
| Galloway1 | Tributary2.1 | 1398.57 | 1 | 180 | 2291.65 | 2293.28 | 2293.28 | 2293.67 | 0.040294 | 5.04 | 35.73 | 47.26 | 1.02 |
| Galloway1 | Tributary2.1 | 1398.57 | 2 | 180 | 2291.65 | 2293.28 | 2293.28 | 2293.67 | 0.040294 | 5.04 | 35.73 | 47.26 | 1.02 |
| Galloway1 | Tributary2.1 | 1449.01 | 1 | 180 | 2293.56 | 2295.42 | 2295.42 | 2295.96 | 0.042685 | 5.91 | 30.44 | 28.71 | 1.01 |
| Galloway1 | Tributary2.1 | 1449.01 | 2 | 180 | 2293.56 | 2295.42 | 2295.42 | 2295.96 | 0.042685 | 5.91 | 30.44 | 28.71 | 1.01 |
| Galloway1 | Tributary2.1 | 1499.97 | 1 | 180 | 2296.97 | 2298.38 | 2298.38 | 2298.79 | 0.039011 | 5.11 | 35.2 | 44.48 | 1.01 |
| Galloway1 | Tributary2.1 | 1499.97 | 2 | 180 | 2296.97 | 2298.38 | 2298.38 | 2298.79 | 0.039011 | 5.11 | 35.2 | 44.48 | 1.01 |
| Galloway1 | Tributary2.1 | 1524.43 | 1 | 180 | 2298.55 | 2299.95 | 2299.95 | 2300.39 | 0.040675 | 5.33 | 33.8 | 38.98 | 1.01 |
| Galloway1 | Tributary2.1 | 1524.43 | 2 | 180 | 2298.55 | 2299.95 | 2299.95 | 2300.39 | 0.040675 | 5.33 | 33.8 | 38.98 | 1.01 |
| Galloway1 | Tributary2.1 | 1658.06 | 1 | 180 | 2314.85 | 2316.29 | 2316.29 | 2316.55 | 0.042997 | 4.06 | 44.3 | 92.65 | 1.04 |
| Galloway1 | Tributary2.1 | 1658.06 | 2 | 180 | 2314.85 | 2316.29 | 2316.29 | 2316.55 | 0.042997 | 4.06 | 44.3 | 92.65 | 1.04 |
| Galloway1 | Tributary2.1 | 1668.4 | Inl Struct | | | | | | | | | | |
| Galloway1 | Tributary2.1 | 1678.78 | 1 | 180 | 2315.62 | 2317.53 | 2316.69 | 2317.56 | 0.001511 | 1.45 | 123.77 | 116.77 | 0.25 |
| Galloway1 | Tributary2.1 | 1678.78 | 2 | 180 | 2315.62 | 2317.53 | 2316.69 | 2317.56 | 0.001511 | 1.45 | 123.77 | 116.77 | 0.25 |
| Galloway1 | Tributary2.1 | 1695.02 | 1 | 180 | 2311.84 | 2317.56 | | 2317.56 | 0.000021 | 0.35 | 509.05 | 126.65 | 0.03 |
| Galloway1 | Tributary2.1 | 1695.02 | 2 | 180 | 2311.84 | 2317.56 | | 2317.56 | 0.000021 | 0.35 | 509.05 | 126.65 | 0.03 |
| Galloway1 | Tributary2.1 | 1721.45 | 1 | 180 | 2307.99 | 2317.56 | | 2317.56 | 0.000005 | 0.24 | 760.65 | 122.27 | 0.02 |
| Galloway1 | Tributary2.1 | 1721.45 | 2 | 180 | 2307.99 | 2317.56 | | 2317.56 | 0.000005 | 0.24 | 760.65 | 122.27 | 0.02 |
| Galloway1 | Tributary2.1 | 1748.98 | 1 | 180 | 2308.79 | 2317.56 | | 2317.56 | 0.000007 | 0.28 | 631.84 | 102.87 | 0.02 |
| Galloway1 | Tributary2.1 | 1748.98 | 2 | 180 | 2308.79 | 2317.56 | | 2317.56 | 0.000007 | 0.28 | 631.84 | 102.87 | 0.02 |
| Galloway1 | Tributary2.1 | 1799.29 | 1 | 180 | 2310.42 | 2317.56 | | 2317.57 | 0.00003 | 0.46 | 391.4 | 80.72 | 0.04 |
| Galloway1 | Tributary2.1 | 1799.29 | 2 | 180 | 2310.42 | 2317.56 | | 2317.57 | 0.00003 | 0.46 | 391.4 | 80.72 | 0.04 |
| Galloway1 | Tributary2.1 | 1850.25 | 1 | 180 | 2312.48 | 2317.56 | | 2317.57 | 0.000419 | 0.99 | 181.08 | 64.39 | 0.1 |
| Galloway1 | Tributary2.1 | 1850.25 | 2 | 180 | 2312.48 | 2317.56 | | 2317.57 | 0.000419 | 0.99 | 181.08 | 64.39 | 0.1 |
| Galloway1 | Tributary2.1 | 1898.05 | 1 | 180 | 2313.38 | 2317.57 | | 2317.62 | 0.001775 | 1.82 | 99.06 | 45.99 | 0.22 |
| Galloway1 | Tributary2.1 | 1898.05 | 2 | 180 | 2313.38 | 2317.57 | | 2317.62 | 0.001775 | 1.82 | 99.06 | 45.99 | 0.22 |
| Galloway1 | Tributary2.1 | 1949.36 | 1 | 180 | 2316.25 | 2317.85 | 2317.85 | 2318.32 | 0.030446 | 5.52 | 32.65 | 36.1 | 1.02 |
| Galloway1 | Tributary2.1 | 1949.36 | 2 | 180 | 2316.25 | 2317.85 | 2317.85 | 2318.32 | 0.030446 | 5.52 | 32.65 | 36.1 | 1.02 |
| Galloway1 | Tributary2.1 | 1999.51 | 1 | 180 | 2318.65 | 2319.93 | 2319.93 | 2320.41 | 0.029487 | 5.54 | 32.5 | 35.48 | 1.01 |
| Galloway1 | Tributary2.1 | 1999.51 | 2 | 180 | 2318.65 | 2319.93 | 2319.93 | 2320.41 | 0.029487 | 5.54 | 32.5 | 35.48 | 1.01 |
| Galloway1 | Tributary2.1 | 2049.22 | 1 | 180 | 2320.26 | 2321.65 | 2321.65 | 2322.13 | 0.029725 | 5.55 | 32.45 | 35.73 | 1.01 |
| Galloway1 | Tributary2.1 | 2049.22 | 2 | 180 | 2320.26 | 2321.65 | 2321.65 | 2322.13 | 0.029725 | 5.55 | 32.45 | 35.73 | 1.01 |
| Galloway1 | Tributary2.1 | 2098.99 | 1 | 180 | 2321.35 | 2323.1 | 2323.1 | 2323.62 | 0.027966 | 5.8 | 31.06 | 31.46 | 1.01 |
| Galloway1 | Tributary2.1 | 2098.99 | 2 | 180 | 2321.35 | 2323.1 | 2323.1 | 2323.62 | 0.027966 | 5.8 | 31.06 | 31.46 | 1.01 |
| Galloway1 | Tributary2.1 | 2150.08 | 1 | 180 | 2323.15 | 2324.69 | 2324.68 | 2325.14 | 0.031341 | 5.34 | 33.75 | 38.15 | 0.99 |
| Galloway1 | Tributary2.1 | 2150.08 | 2 | 180 | 2323.15 | 2324.69 | 2324.68 | 2325.14 | 0.031341 | 5.34 | 33.75 | 38.15 | 0.99 |
| Galloway1 | Tributary2.1 | 2199.3 | 1 | 180 | 2325.57 | 2327.08 | 2327.08 | 2327.43 | 0.029434 | 4.74 | 37.99 | 56.35 | 1.01 |
| Galloway1 | Tributary2.1 | 2199.3 | 2 | 180 | 2325.57 | 2327.08 | 2327.08 | 2327.43 | 0.029434 | 4.74 | 37.99 | 56.35 | 1.01 |
| Galloway1 | Tributary2.1 | 2325.23 | 1 | 180 | 2339.31 | 2342.34 | 2342.34 | 2343.15 | 0.02693 | 7.24 | 24.92 | 16.4 | 1.01 |
| Galloway1 | Tributary2.1 | 2325.23 | 2 | 180 | 2339.31 | 2342.34 | 2342.34 | 2343.15 | 0.02693 | 7.24 | 24.92 | 16.4 | 1.01 |
| Galloway1 | Tributary2.1 | 2330.42 | Inl Struct | | | | | | | | | | |
| Galloway1 | Tributary2.1 | 2334.18 | 1 | 180 | 2339.87 | 2343.32 | 2342.76 | 2343.68 | 0.009454 | 4.8 | 37.63 | 21.61 | 0.62 |
| Galloway1 | Tributary2.1 | 2334.18 | 2 | 180 | 2339.87 | 2343.32 | 2342.76 | 2343.68 | 0.009454 | 4.8 | 37.63 | 21.61 | 0.62 |
| Galloway1 | Tributary2.1 | 2346.04 | 1 | 180 | 2340.1 | 2343.72 | | 2343.72 | 0.000039 | 0.36 | 497.03 | 190.43 | 0.04 |
| Galloway1 | Tributary2.1 | 2346.04 | 2 | 180 | 2340.1 | 2343.72 | | 2343.72 | 0.000039 | 0.36 | 497.03 | 190.43 | 0.04 |

# Table 5.9.2.1
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| loway1 | Tributary2.1 | 2367.96 | 1 | 180 | 2334.45 | 2343.72 | | 2343.72 | 0.000002 | 0.14 | 1293.42 | 191.52 | 0.01 |
| Galloway1 | Tributary2.1 | 2367.96 | 2 | 180 | 2334.45 | 2343.72 | | 2343.72 | 0.000002 | 0.14 | 1293.42 | 191.52 | 0.01 |
| Galloway1 | Tributary2.1 | 2399.52 | 1 | 180 | 2333.21 | 2343.72 | | 2343.72 | 0.000001 | 0.13 | 1437.71 | 180.36 | 0.01 |
| Galloway1 | Tributary2.1 | 2399.52 | 2 | 180 | 2333.21 | 2343.72 | | 2343.72 | 0.000001 | 0.13 | 1437.71 | 180.36 | 0.01 |
| Galloway1 | Tributary2.1 | 2448.75 | 1 | 180 | 2333.49 | 2343.72 | | 2343.72 | 0.000004 | 0.19 | 924.55 | 129.57 | 0.01 |
| Galloway1 | Tributary2.1 | 2448.75 | 2 | 180 | 2333.49 | 2343.72 | | 2343.72 | 0.000004 | 0.19 | 924.55 | 129.57 | 0.01 |
| Galloway1 | Tributary2.1 | 2500.27 | 1 | 180 | 2335.01 | 2343.72 | | 2343.72 | 0.000024 | 0.35 | 510.95 | 104.34 | 0.03 |
| Galloway1 | Tributary2.1 | 2500.27 | 2 | 180 | 2335.01 | 2343.72 | | 2343.72 | 0.000024 | 0.35 | 510.95 | 104.34 | 0.03 |
| Galloway1 | Tributary2.1 | 2550.01 | 1 | 180 | 2336.34 | 2343.72 | | 2343.72 | 0.000101 | 0.57 | 316.35 | 78.19 | 0.05 |
| Galloway1 | Tributary2.1 | 2550.01 | 2 | 180 | 2336.34 | 2343.72 | | 2343.72 | 0.000101 | 0.57 | 316.35 | 78.19 | 0.05 |
| Galloway1 | Tributary2.1 | 2599.7 | 1 | 180 | 2337.49 | 2343.72 | | 2343.74 | 0.000379 | 0.94 | 190.84 | 58.16 | 0.09 |
| Galloway1 | Tributary2.1 | 2599.7 | 2 | 180 | 2337.49 | 2343.72 | | 2343.74 | 0.000379 | 0.94 | 190.84 | 58.16 | 0.09 |
| Galloway1 | Tributary2.1 | 2649.51 | 1 | 180 | 2339.33 | 2343.74 | | 2343.77 | 0.001301 | 1.47 | 122.38 | 48.4 | 0.16 |
| Galloway1 | Tributary2.1 | 2649.51 | 2 | 180 | 2339.33 | 2343.74 | | 2343.77 | 0.001301 | 1.47 | 122.38 | 48.4 | 0.16 |
| Galloway2 | Tributary2.2 | 1.65 | 1 | 579 | 2139.91 | 2145.23 | 2145.23 | 2146.57 | 0.023307 | 9.29 | 62.31 | 23.28 | 1 |
| Galloway2 | Tributary2.2 | 1.65 | 2 | 579 | 2139.91 | 2146.23 | 2145.23 | 2146.93 | 0.008915 | 6.72 | 86.21 | 23.95 | 0.62 |
| Galloway2 | Tributary2.2 | 48.99 | 1 | 579 | 2141.53 | 2146.71 | | 2147.42 | 0.011765 | 6.86 | 92.29 | 39.75 | 0.62 |
| Galloway2 | Tributary2.2 | 48.99 | 2 | 579 | 2141.53 | 2146.7 | | 2147.46 | 0.012386 | 7.03 | 83.81 | 22.55 | 0.63 |
| Galloway2 | Tributary2.2 | 97.12 | 1 | 579 | 2142.34 | 2147.62 | | 2147.9 | 0.007363 | 4.5 | 166.15 | 115.33 | 0.44 |
| Galloway2 | Tributary2.2 | 97.12 | 2 | 579 | 2142.34 | 2147.68 | | 2148.04 | 0.010055 | 4.88 | 125.22 | 42.4 | 0.47 |
| Galloway2 | Tributary2.2 | 149.4 | 1 | 579 | 2143.82 | 2147.98 | | 2148.51 | 0.015037 | 6.3 | 115.73 | 96.03 | 0.8 |
| Galloway2 | Tributary2.2 | 149.4 | 2 | 579 | 2143.82 | 2148.12 | | 2148.85 | 0.018201 | 6.87 | 84.23 | 40.33 | 0.84 |
| Galloway2 | Tributary2.2 | 198.8 | 1 | 579 | 2146.06 | 2148.68 | 2148.59 | 2149.26 | 0.016697 | 6.57 | 114.51 | 86.52 | 0.85 |
| Galloway2 | Tributary2.2 | 198.8 | 2 | 579 | 2146.06 | 2149.01 | 2148.69 | 2149.67 | 0.014835 | 6.51 | 88.94 | 40.73 | 0.78 |
| Galloway2 | Tributary2.2 | 249.17 | 1 | 579 | 2146.59 | 2149.52 | 2149.48 | 2150.41 | 0.025408 | 7.94 | 82.58 | 54.52 | 1.04 |
| oway2 | Tributary2.2 | 249.17 | 2 | 579 | 2146.59 | 2149.75 | 2149.75 | 2150.77 | 0.025823 | 8.1 | 71.49 | 35.13 | 1 |
| Galloway2 | Tributary2.2 | 301.42 | 1 | 579 | 2146.87 | 2150.76 | | 2151.18 | 0.007957 | 5.67 | 126.74 | 73.05 | 0.59 |
| Galloway2 | Tributary2.2 | 301.42 | 2 | 579 | 2146.87 | 2151.03 | | 2151.74 | 0.013131 | 6.74 | 85.93 | 27.07 | 0.67 |
| Galloway2 | Tributary2.2 | 349.19 | 1 | 579 | 2147.15 | 2151.35 | 2151.35 | 2152.14 | 0.014354 | 7.74 | 112.3 | 84.04 | 0.74 |
| Galloway2 | Tributary2.2 | 349.19 | 2 | 579 | 2147.15 | 2151.59 | | 2152.47 | 0.015556 | 7.87 | 88.57 | 34.26 | 0.72 |
| Galloway2 | Tributary2.2 | 400.73 | 1 | 579 | 2147.95 | 2152.26 | 2151.8 | 2152.96 | 0.017206 | 6.97 | 98.96 | 56.25 | 0.69 |
| Galloway2 | Tributary2.2 | 400.73 | 2 | 579 | 2147.95 | 2152.65 | 2151.69 | 2153.35 | 0.016606 | 6.7 | 86.44 | 24.17 | 0.62 |
| Galloway2 | Tributary2.2 | 450.71 | 1 | 579 | 2149.34 | 2153.18 | 2152.75 | 2153.63 | 0.010234 | 5.6 | 115.14 | 79.76 | 0.65 |
| Galloway2 | Tributary2.2 | 450.71 | 2 | 579 | 2149.34 | 2153.51 | 2152.72 | 2153.93 | 0.007808 | 5.26 | 111.88 | 43.92 | 0.57 |
| Galloway2 | Tributary2.2 | 502.28 | 1 | 579 | 2149.04 | 2153.95 | 2153.58 | 2154.25 | 0.015011 | 4.5 | 133.85 | 118.06 | 0.72 |
| Galloway2 | Tributary2.2 | 502.28 | 2 | 579 | 2149.04 | 2154.16 | 2153.61 | 2154.43 | 0.011837 | 4.21 | 137.53 | 97.83 | 0.63 |
| Galloway2 | Tributary2.2 | 549.8 | 1 | 579 | 2150.36 | 2154.61 | 2154.22 | 2154.87 | 0.011799 | 4.03 | 146.94 | 129.22 | 0.63 |
| Galloway2 | Tributary2.2 | 549.8 | 2 | 579 | 2150.36 | 2154.75 | 2154.46 | 2155.08 | 0.015106 | 4.65 | 124.75 | 89.61 | 0.69 |
| Galloway2 | Tributary2.2 | 600.23 | 1 | 579 | 2151.13 | 2155.29 | 2155.09 | 2155.63 | 0.018618 | 4.94 | 131.97 | 123.22 | 0.77 |
| Galloway2 | Tributary2.2 | 600.23 | 2 | 579 | 2151.13 | 2155.51 | 2155.27 | 2155.96 | 0.018612 | 5.36 | 108.56 | 71.78 | 0.77 |
| Galloway2 | Tributary2.2 | 652.61 | 1 | 579 | 2152 | 2156.03 | 2155.48 | 2156.41 | 0.012654 | 5.03 | 126.4 | 101.69 | 0.67 |
| Galloway2 | Tributary2.2 | 652.61 | 2 | 579 | 2152 | 2156.33 | 2155.46 | 2156.62 | 0.008794 | 4.35 | 137.67 | 75.6 | 0.56 |
| Galloway2 | Tributary2.2 | 678.38 | 1 | 579 | 2152.96 | 2156.41 | 2155.82 | 2156.71 | 0.009944 | 4.51 | 144.09 | 122.05 | 0.6 |
| Galloway2 | Tributary2.2 | 678.38 | 2 | 579 | 2152.96 | 2156.6 | 2155.79 | 2156.86 | 0.009679 | 4.16 | 142.56 | 91.25 | 0.59 |
| Galloway2 | Tributary2.2 | 699.26 | 1 | 579 | 2153.54 | 2156.73 | 2155.78 | 2156.9 | 0.007022 | 3.39 | 184.71 | 166.42 | 0.49 |
| Galloway2 | Tributary2.2 | 699.26 | 2 | 579 | 2153.54 | 2156.87 | 2155.78 | 2157.03 | 0.005608 | 3.21 | 182.17 | 112.88 | 0.45 |
| Galloway2 | Tributary2.2 | 721.95 | Culvert | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 731.57 | 1 | 579 | 2156.2 | 2158.52 | 2157.52 | 2158.57 | 0.001058 | 1.93 | 314.5 | 204.42 | 0.26 |
| Galloway2 | Tributary2.2 | 731.57 | 2 | 579 | 2156.2 | 2158.74 | 2157.64 | 2158.83 | 0.001309 | 2.29 | 252.83 | 130.18 | 0.29 |
| loway2 | Tributary2.2 | 743.18 | 1 | 579 | 2155.79 | 2158.51 | 2157.39 | 2158.59 | 0.001205 | 2.29 | 261.17 | 160.83 | 0.29 |
| oway2 | Tributary2.2 | 743.18 | 2 | 579 | 2155.79 | 2158.78 | 2157.39 | 2158.84 | 0.000774 | 2 | 298.27 | 149.97 | 0.24 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| loway2 | Tributary2.2 | 805.12 Culvert | | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 826.23 | 1 | 579 | 2158.56 | 2161.33 | 2161.33 | 2161.53 | 0.016375 | 3.64 | 159.24 | 109.18 | 0.53 |
| Galloway2 | Tributary2.2 | 826.23 | 2 | 579 | 2158.56 | 2161.33 | 2161.33 | 2161.53 | 0.016375 | 3.64 | 159.24 | 109.18 | 0.53 |
| Galloway2 | Tributary2.2 | 848.99 | 1 | 579 | 2157.2 | 2161.55 | | 2161.76 | 0.006558 | 3.71 | 162.95 | 87.84 | 0.46 |
| Galloway2 | Tributary2.2 | 848.99 | 2 | 579 | 2157.2 | 2161.56 | | 2161.79 | 0.007681 | 3.8 | 152.56 | 75.07 | 0.47 |
| Galloway2 | Tributary2.2 | 898.04 | 1 | 579 | 2157.93 | 2161.81 | | 2162.05 | 0.005098 | 3.94 | 155.07 | 75.7 | 0.44 |
| Galloway2 | Tributary2.2 | 898.04 | 2 | 579 | 2157.93 | 2161.86 | | 2162.1 | 0.005226 | 3.96 | 146.14 | 57.63 | 0.44 |
| Galloway2 | Tributary2.2 | 950.14 | 1 | 579 | 2159.53 | 2162.12 | | 2162.49 | 0.013321 | 4.99 | 123.42 | 66.26 | 0.61 |
| Galloway2 | Tributary2.2 | 950.14 | 2 | 579 | 2159.53 | 2162.16 | | 2162.58 | 0.015038 | 5.19 | 111.49 | 52.1 | 0.63 |
| Galloway2 | Tributary2.2 | 999.47 | 1 | 579 | 2159.86 | 2162.89 | 2162.89 | 2163.74 | 0.018189 | 8.06 | 95.58 | 59.23 | 0.91 |
| Galloway2 | Tributary2.2 | 999.47 | 2 | 579 | 2159.86 | 2163.07 | 2163.07 | 2164.41 | 0.024485 | 9.28 | 62.4 | 23.66 | 1.01 |
| Galloway2 | Tributary2.2 | 1049.33 | 1 | 579 | 2160.58 | 2164 | 2164 | 2164.87 | 0.027834 | 7.8 | 87.16 | 56.56 | 0.87 |
| Galloway2 | Tributary2.2 | 1049.33 | 2 | 579 | 2160.58 | 2164.85 | 2163.95 | 2165.5 | 0.017404 | 6.47 | 89.42 | 26.79 | 0.62 |
| Galloway2 | Tributary2.2 | 1100.11 | 1 | 579 | 2161.18 | 2165.11 | | 2165.21 | 0.002415 | 2.94 | 254.62 | 104.51 | 0.29 |
| Galloway2 | Tributary2.2 | 1100.11 | 2 | 579 | 2161.18 | 2165.71 | | 2165.94 | 0.004449 | 3.83 | 151.02 | 39.16 | 0.34 |
| Galloway2 | Tributary2.2 | 1148.77 | 1 | 579 | 2161.44 | 2165.19 | | 2165.28 | 0.000935 | 2.65 | 292.29 | 128.22 | 0.27 |
| Galloway2 | Tributary2.2 | 1148.77 | 2 | 579 | 2161.44 | 2165.9 | | 2166.05 | 0.001164 | 3.09 | 187.47 | 51.18 | 0.28 |
| Galloway2 | Tributary2.2 | 1199.79 | 1 | 579 | 2162.54 | 2164.99 | 2164.99 | 2165.59 | 0.011721 | 6.77 | 104.56 | 98.36 | 0.87 |
| Galloway2 | Tributary2.2 | 1199.79 | 2 | 579 | 2162.54 | 2165.72 | | 2166.3 | 0.007003 | 6.07 | 95.32 | 36.49 | 0.66 |
| Galloway2 | Tributary2.2 | 1222.37 Inl Struct | | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 1250.1 | 1 | 579 | 2164.24 | 2166.93 | 2166.34 | 2167.15 | 0.005528 | 3.76 | 154.2 | 104.19 | 0.54 |
| Galloway2 | Tributary2.2 | 1250.1 | 2 | 579 | 2164.24 | 2166.93 | 2166.34 | 2167.15 | 0.005528 | 3.76 | 154.2 | 104.19 | 0.54 |
| Galloway2 | Tributary2.2 | 1304.43 | 1 | 579 | 2164.88 | 2167.17 | | 2167.55 | 0.010489 | 5.16 | 119.61 | 87.64 | 0.7 |
| Galloway2 | Tributary2.2 | 1304.43 | 2 | 579 | 2164.88 | 2167.24 | 2167.24 | 2168.14 | 0.023251 | 7.62 | 75.95 | 42.83 | 1.01 |
| loway2 | Tributary2.2 | 1350.06 | 1 | 579 | 2165.54 | 2167.7 | 2167.7 | 2168.37 | 0.018454 | 7.33 | 106.64 | 83.68 | 1 |
| oway2 | Tributary2.2 | 1350.06 | 2 | 579 | 2165.54 | 2168.2 | 2168 | 2169.03 | 0.01631 | 7.31 | 79.16 | 36.49 | 0.88 |
| Galloway2 | Tributary2.2 | 1400.52 | 1 | 579 | 2166.04 | 2168.64 | 2168.62 | 2169.41 | 0.021614 | 7.45 | 97.17 | 69.09 | 0.92 |
| Galloway2 | Tributary2.2 | 1400.52 | 2 | 579 | 2166.04 | 2169.11 | | 2169.84 | 0.015459 | 6.84 | 84.68 | 33.56 | 0.76 |
| Galloway2 | Tributary2.2 | 1449.27 | 1 | 579 | 2166.45 | 2170.04 | | 2170.37 | 0.016829 | 5.03 | 140.02 | 87.44 | 0.57 |
| Galloway2 | Tributary2.2 | 1449.27 | 2 | 579 | 2166.45 | 2170.28 | | 2170.68 | 0.017682 | 5.19 | 117.81 | 48.54 | 0.56 |
| Galloway2 | Tributary2.2 | 1498.71 | 1 | 579 | 2166.96 | 2170.5 | | 2170.92 | 0.008207 | 5.54 | 134.99 | 96.4 | 0.71 |
| Galloway2 | Tributary2.2 | 1498.71 | 2 | 579 | 2166.96 | 2170.82 | | 2171.26 | 0.008622 | 5.36 | 110.13 | 50.7 | 0.63 |
| Galloway2 | Tributary2.2 | 1548.81 | 1 | 579 | 2167.48 | 2171.2 | | 2171.58 | 0.024461 | 5.18 | 128.15 | 91.36 | 0.66 |
| Galloway2 | Tributary2.2 | 1548.81 | 2 | 579 | 2167.48 | 2171.54 | | 2171.86 | 0.017099 | 4.64 | 132.17 | 64.35 | 0.54 |
| Galloway2 | Tributary2.2 | 1599.18 | 1 | 579 | 2168.3 | 2171.94 | 2171.94 | 2172.61 | 0.010231 | 6.88 | 105.79 | 80.78 | 0.97 |
| Galloway2 | Tributary2.2 | 1599.18 | 2 | 579 | 2168.3 | 2172 | 2172 | 2172.82 | 0.014066 | 7.27 | 79.66 | 48.89 | 1 |
| Galloway2 | Tributary2.2 | 1651.43 | 1 | 579 | 2168.74 | 2173.01 | | 2173.45 | 0.028411 | 5.44 | 116.34 | 73.57 | 0.66 |
| Galloway2 | Tributary2.2 | 1651.43 | 2 | 579 | 2168.74 | 2173.37 | | 2173.72 | 0.019349 | 4.8 | 124.72 | 54.77 | 0.54 |
| Galloway2 | Tributary2.2 | 1700.68 | 1 | 579 | 2169.82 | 2173.86 | | 2174.15 | 0.008624 | 4.43 | 147.68 | 80.08 | 0.48 |
| Galloway2 | Tributary2.2 | 1700.68 | 2 | 579 | 2169.82 | 2174.01 | | 2174.32 | 0.008522 | 4.43 | 130.6 | 45.96 | 0.46 |
| Galloway2 | Tributary2.2 | 1799.36 | 1 | 579 | 2171.94 | 2175.05 | | 2175.2 | 0.018668 | 2.76 | 189.42 | 141.5 | 0.46 |
| Galloway2 | Tributary2.2 | 1799.36 | 2 | 579 | 2171.94 | 2175.42 | | 2175.64 | 0.024589 | 3.81 | 152.85 | 98.78 | 0.55 |
| Galloway2 | Tributary2.2 | 1850.51 | 1 | 579 | 2172.73 | 2175.6 | | 2175.74 | 0.013213 | 2.05 | 205.96 | 145.79 | 0.37 |
| Galloway2 | Tributary2.2 | 1850.51 | 2 | 579 | 2172.73 | 2176.42 | | 2176.59 | 0.015325 | 3.32 | 175.06 | 95.18 | 0.44 |
| Galloway2 | Tributary2.2 | 1900.23 | 1 | 579 | 2173.69 | 2176.2 | | 2176.37 | 0.016929 | 3.54 | 171.44 | 139.7 | 0.71 |
| Galloway2 | Tributary2.2 | 1900.23 | 2 | 579 | 2173.69 | 2177.12 | | 2177.4 | 0.016314 | 4.29 | 138.51 | 81.13 | 0.58 |
| Galloway2 | Tributary2.2 | 1949.31 | 1 | 579 | 2175.05 | 2177.66 | | 2177.89 | 0.026648 | 4.35 | 151.91 | 130.44 | 0.77 |
| Galloway2 | Tributary2.2 | 1949.31 | 2 | 579 | 2175.05 | 2178.17 | | 2178.51 | 0.026012 | 4.89 | 127.07 | 85.83 | 0.71 |
| Galloway2 | Tributary2.2 | 1998.81 | 1 | 579 | 2176.16 | 2178.56 | | 2178.77 | 0.022895 | 4.08 | 159.33 | 129.59 | 0.71 |
| lloway2 | Tributary2.2 | 1998.81 | 2 | 579 | 2176.16 | 2179.19 | | 2179.45 | 0.017906 | 4.35 | 143.64 | 84.02 | 0.6 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| alloway2 | Tributary2.2 | 2049.56 | 1 | 579 | 2177.18 | 2179.89 | | 2180.04 | 0.013889 | 3.52 | 189.81 | 129.29 | 0.5 |
| lloway2 | Tributary2.2 | 2049.56 | 2 | 579 | 2177.18 | 2180.26 | | 2180.65 | 0.024101 | 5.02 | 115.25 | 62.41 | 0.65 |
| Galloway2 | Tributary2.2 | 2100.01 | 1 | 579 | 2177.98 | 2180.94 | 2180.84 | 2181.47 | 0.042329 | 6.91 | 115.22 | 91.86 | 0.85 |
| Galloway2 | Tributary2.2 | 2100.01 | 2 | 579 | 2177.98 | 2181.5 | | 2182.38 | 0.040523 | 7.8 | 78.88 | 30.7 | 0.85 |
| Galloway2 | Tributary2.2 | 2149.23 | 1 | 579 | 2178.69 | 2182.84 | 2182.29 | 2183.1 | 0.017129 | 4.67 | 157.01 | 95.74 | 0.54 |
| Galloway2 | Tributary2.2 | 2149.23 | 2 | 579 | 2178.69 | 2183.36 | | 2183.76 | 0.017024 | 5.26 | 118.5 | 45.32 | 0.55 |
| Galloway2 | Tributary2.2 | 2198.42 | 1 | 579 | 2179.03 | 2183.24 | | 2183.79 | 0.016147 | 6.75 | 127.45 | 85.49 | 0.74 |
| Galloway2 | Tributary2.2 | 2198.42 | 2 | 579 | 2179.03 | 2183.88 | | 2184.65 | 0.016334 | 7.09 | 84.25 | 26.34 | 0.69 |
| Galloway2 | Tributary2.2 | 2251.35 | 1 | 579 | 2180.4 | 2184.05 | | 2184.84 | 0.023765 | 8.02 | 109.65 | 83.61 | 0.87 |
| Galloway2 | Tributary2.2 | 2251.35 | 2 | 579 | 2180.4 | 2184.75 | | 2185.81 | 0.025778 | 8.25 | 70.2 | 20.95 | 0.79 |
| Galloway2 | Tributary2.2 | 2300.64 | 1 | 579 | 2181.08 | 2185.45 | | 2185.78 | 0.015121 | 5.39 | 152.51 | 94.07 | 0.55 |
| Galloway2 | Tributary2.2 | 2300.64 | 2 | 579 | 2181.08 | 2186.24 | | 2186.72 | 0.012764 | 5.79 | 110.65 | 31.17 | 0.53 |
| Galloway2 | Tributary2.2 | 2350.01 | 1 | 579 | 2182.6 | 2185.96 | | 2186.64 | 0.014461 | 6.96 | 104.77 | 61.14 | 0.73 |
| Galloway2 | Tributary2.2 | 2350.01 | 2 | 579 | 2182.6 | 2186.73 | | 2187.32 | 0.010369 | 6.19 | 93.5 | 26.01 | 0.58 |
| Galloway2 | Tributary2.2 | 2398.77 | 1 | 579 | 2184.69 | 2186.99 | 2186.99 | 2187.76 | 0.027425 | 7.53 | 97.2 | 74.48 | 0.92 |
| Galloway2 | Tributary2.2 | 2398.77 | 2 | 579 | 2184.69 | 2187.26 | 2187.13 | 2188.25 | 0.030527 | 8 | 72.35 | 31.03 | 0.92 |
| Galloway2 | Tributary2.2 | 2449.58 | 1 | 579 | 2185.48 | 2188.35 | | 2188.58 | 0.01088 | 4.17 | 170.28 | 117.38 | 0.53 |
| Galloway2 | Tributary2.2 | 2449.58 | 2 | 579 | 2185.48 | 2188.81 | | 2189.06 | 0.008409 | 4.05 | 143.12 | 60.06 | 0.46 |
| Galloway2 | Tributary2.2 | 2500.04 | 1 | 579 | 2186.7 | 2189.17 | | 2189.47 | 0.017412 | 3.64 | 143.04 | 105.81 | 0.51 |
| Galloway2 | Tributary2.2 | 2500.04 | 2 | 579 | 2186.7 | 2189.43 | | 2189.79 | 0.026659 | 4.83 | 119.86 | 65.71 | 0.63 |
| Galloway2 | Tributary2.2 | 2549.84 | 1 | 579 | 2188.49 | 2190.32 | | 2190.79 | 0.042058 | 5.88 | 110.07 | 91 | 0.89 |
| Galloway2 | Tributary2.2 | 2549.84 | 2 | 579 | 2188.49 | 2190.75 | | 2191.22 | 0.029522 | 5.5 | 105.36 | 59.42 | 0.73 |
| Galloway2 | Tributary2.2 | 2599.75 | 1 | 579 | 2189.14 | 2191.92 | 2191.92 | 2192.76 | 0.024072 | 7.74 | 91.53 | 61.43 | 0.94 |
| Galloway2 | Tributary2.2 | 2599.75 | 2 | 579 | 2189.14 | 2192.01 | 2192.01 | 2193.11 | 0.029511 | 8.41 | 68.82 | 31.61 | 1 |
| Galloway2 | Tributary2.2 | 2648.64 | 1 | 579 | 2189.86 | 2192.99 | | 2193.47 | 0.009115 | 6.23 | 128.85 | 82.79 | 0.77 |
| Galloway2 | Tributary2.2 | 2648.64 | 2 | 579 | 2189.86 | 2193.2 | 2193.02 | 2194.07 | 0.013467 | 7.46 | 77.59 | 34.9 | 0.88 |
| loway2 | Tributary2.2 | 2700.26 | 1 | 579 | 2191.68 | 2194.64 | 2194.64 | 2195.28 | 0.010871 | 7.61 | 144.56 | 112.69 | 0.84 |
| Galloway2 | Tributary2.2 | 2700.26 | 2 | 579 | 2191.68 | 2194.97 | 2194.97 | 2196.43 | 0.015874 | 9.71 | 59.65 | 20.67 | 1.01 |
| Galloway2 | Tributary2.2 | 2748.93 | 1 | 579 | 2192.77 | 2195.86 | 2195.86 | 2196.52 | 0.012827 | 7.57 | 132.63 | 102.05 | 0.86 |
| Galloway2 | Tributary2.2 | 2748.93 | 2 | 579 | 2192.77 | 2196.17 | 2196.17 | 2197.55 | 0.022059 | 9.43 | 61.41 | 22.5 | 1.01 |
| Galloway2 | Tributary2.2 | 2800.47 | 1 | 579 | 2193.76 | 2196.86 | 2196.86 | 2197.65 | 0.013446 | 8.04 | 122.38 | 99.78 | 0.87 |
| Galloway2 | Tributary2.2 | 2800.47 | 2 | 579 | 2193.76 | 2197.33 | 2197.1 | 2198.58 | 0.017828 | 8.97 | 64.56 | 20.72 | 0.9 |
| Galloway2 | Tributary2.2 | 2849.49 | 1 | 579 | 2194.93 | 2198.05 | 2198.05 | 2198.97 | 0.015817 | 8.73 | 108.85 | 69.99 | 0.89 |
| Galloway2 | Tributary2.2 | 2849.49 | 2 | 579 | 2194.93 | 2198.36 | 2198.36 | 2200.01 | 0.028437 | 10.3 | 56.19 | 17.2 | 1 |
| Galloway2 | Tributary2.2 | 2901.88 | 1 | 579 | 2196.79 | 2199.47 | 2199.47 | 2200.38 | 0.01824 | 8.13 | 96.75 | 69.74 | 0.93 |
| Galloway2 | Tributary2.2 | 2901.88 | 2 | 579 | 2196.79 | 2200.25 | | 2201.03 | 0.012152 | 7.05 | 82.09 | 25.9 | 0.7 |
| Galloway2 | Tributary2.2 | 2935.93 | 1 | 579 | 2198.78 | 2200.78 | 2200.78 | 2201.41 | 0.020639 | 7.09 | 98.52 | 83.83 | 0.94 |
| Galloway2 | Tributary2.2 | 2935.93 | 2 | 579 | 2198.78 | 2201.19 | 2201.19 | 2202.28 | 0.025536 | 8.39 | 68.98 | 31.79 | 1 |
| Galloway2 | Tributary2.2 | 2955.8 Inl Struct | | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 2971.59 | 1 | 579 | 2200.25 | 2203.26 | 2202.28 | 2203.4 | 0.003287 | 2.98 | 194.61 | 111.38 | 0.4 |
| Galloway2 | Tributary2.2 | 2971.59 | 2 | 579 | 2200.25 | 2203.25 | 2202.28 | 2203.39 | 0.003315 | 2.98 | 194.01 | 111.28 | 0.4 |
| Galloway2 | Tributary2.2 | 2999.06 | 1 | 579 | 2200.36 | 2203.3 | | 2203.55 | 0.006329 | 4.02 | 143.87 | 76.44 | 0.52 |
| Galloway2 | Tributary2.2 | 2999.06 | 2 | 579 | 2200.36 | 2203.3 | | 2203.55 | 0.006375 | 4.03 | 143.52 | 76.39 | 0.52 |
| Galloway2 | Tributary2.2 | 3048.61 | 1 | 579 | 2200.48 | 2203.66 | | 2203.96 | 0.010111 | 4.38 | 139.91 | 76.79 | 0.53 |
| Galloway2 | Tributary2.2 | 3048.61 | 2 | 579 | 2200.48 | 2203.66 | | 2203.98 | 0.011267 | 4.5 | 128.72 | 60.65 | 0.54 |
| Galloway2 | Tributary2.2 | 3099.58 | 1 | 579 | 2201.29 | 2204.35 | 2204.35 | 2205.09 | 0.017762 | 7.83 | 109.38 | 73.08 | 0.93 |
| Galloway2 | Tributary2.2 | 3099.58 | 2 | 579 | 2201.29 | 2204.67 | 2204.67 | 2205.97 | 0.023518 | 9.13 | 63.4 | 24.93 | 1.01 |
| Galloway2 | Tributary2.2 | 3150.83 | 1 | 579 | 2202.38 | 2205.39 | | 2206.14 | 0.018117 | 7.82 | 104.44 | 63.18 | 0.89 |
| Galloway2 | Tributary2.2 | 3150.83 | 2 | 579 | 2202.38 | 2206.03 | 2205.64 | 2207.04 | 0.017795 | 8.09 | 71.61 | 23.65 | 0.82 |
| Galloway2 | Tributary2.2 | 3199.35 | 1 | 579 | 2203.02 | 2206.21 | | 2206.98 | 0.017973 | 7.73 | 98.25 | 61.47 | 0.87 |
| lloway2 | Tributary2.2 | 3199.35 | 2 | 579 | 2203.02 | 2207 | | 2207.87 | 0.015766 | 7.48 | 77.42 | 23.91 | 0.73 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Galloway2 | Tributary2.2 | 3249.78 | 1 | 579 | 2204.15 | 2207.12 | 2207.12 | 2208.08 | 0.01846 | 8.76 | 91.98 | 51.71 | 0.98 |
| Galloway2 | Tributary2.2 | 3249.78 | 2 | 579 | 2204.15 | 2207.55 | 2207.55 | 2209.01 | 0.022852 | 9.71 | 59.65 | 20.41 | 1 |
| Galloway2 | Tributary2.2 | 3300.27 | 1 | 579 | 2204.93 | 2208.24 | 2208.24 | 2209.23 | 0.014239 | 8.85 | 90.97 | 51.41 | 0.94 |
| Galloway2 | Tributary2.2 | 3300.27 | 2 | 579 | 2204.93 | 2208.58 | 2208.56 | 2210.12 | 0.020118 | 9.95 | 58.22 | 18.65 | 0.99 |
| Galloway2 | Tributary2.2 | 3349.93 | 1 | 579 | 2205.63 | 2209.12 | 2209.12 | 2210.08 | 0.013444 | 8.68 | 90.38 | 50.13 | 0.9 |
| Galloway2 | Tributary2.2 | 3349.93 | 2 | 579 | 2205.63 | 2209.85 | | 2210.82 | 0.008845 | 8.16 | 79.07 | 22.92 | 0.75 |
| Galloway2 | Tributary2.2 | 3400.58 | 1 | 579 | 2206.77 | 2210.09 | | 2210.68 | 0.010192 | 6.69 | 105.66 | 56.06 | 0.74 |
| Galloway2 | Tributary2.2 | 3400.58 | 2 | 579 | 2206.77 | 2210.58 | | 2211.39 | 0.014201 | 7.21 | 80.32 | 26.56 | 0.73 |
| Galloway2 | Tributary2.2 | 3449.68 | 1 | 579 | 2207.6 | 2211.16 | 2211.16 | 2212.11 | 0.014679 | 8.72 | 100.37 | 59.98 | 0.95 |
| Galloway2 | Tributary2.2 | 3449.68 | 2 | 579 | 2207.6 | 2211.52 | 2211.52 | 2213.03 | 0.021421 | 9.86 | 58.73 | 19.69 | 1.01 |
| Galloway2 | Tributary2.2 | 3499.86 | 1 | 579 | 2208.74 | 2212.25 | 2212.25 | 2213.24 | 0.015661 | 8.29 | 88.14 | 57.15 | 0.9 |
| Galloway2 | Tributary2.2 | 3499.86 | 2 | 579 | 2208.74 | 2213 | | 2213.76 | 0.008781 | 6.98 | 82.9 | 24.58 | 0.67 |
| Galloway2 | Tributary2.2 | 3549.97 | 1 | 579 | 2209.77 | 2213.34 | 2213.34 | 2214.41 | 0.016656 | 8.8 | 84.05 | 51.71 | 0.91 |
| Galloway2 | Tributary2.2 | 3549.97 | 2 | 579 | 2209.77 | 2213.4 | 2213.4 | 2214.89 | 0.026013 | 9.81 | 58.99 | 19.93 | 1.01 |
| Galloway2 | Tributary2.2 | 3599.58 | 1 | 579 | 2211.94 | 2214.66 | | 2215.07 | 0.009226 | 5.67 | 124.95 | 75.39 | 0.66 |
| Galloway2 | Tributary2.2 | 3599.58 | 2 | 579 | 2211.94 | 2215.16 | | 2215.74 | 0.010061 | 6.15 | 94.22 | 33.36 | 0.64 |
| Galloway2 | Tributary2.2 | 3649.93 | 1 | 579 | 2213.41 | 2216.03 | 2216.03 | 2216.69 | 0.035178 | 7.2 | 100.17 | 84.32 | 0.99 |
| Galloway2 | Tributary2.2 | 3649.93 | 2 | 579 | 2213.41 | 2216.52 | 2216.52 | 2217.61 | 0.037985 | 8.39 | 69.05 | 32.25 | 1.01 |
| Galloway2 | Tributary2.2 | 3699.41 | 1 | 579 | 2215.06 | 2217.5 | | 2217.93 | 0.01791 | 5.88 | 127.41 | 86.45 | 0.72 |
| Galloway2 | Tributary2.2 | 3699.41 | 2 | 579 | 2215.06 | 2218.22 | | 2218.81 | 0.015723 | 6.2 | 94.45 | 33.67 | 0.65 |
| Galloway2 | Tributary2.2 | 3750.49 | 1 | 579 | 2215.9 | 2218.29 | | 2218.93 | 0.021038 | 7.31 | 108.53 | 78.16 | 0.92 |
| Galloway2 | Tributary2.2 | 3750.49 | 2 | 579 | 2215.9 | 2218.86 | 2218.63 | 2219.83 | 0.020223 | 7.92 | 73.14 | 28.67 | 0.87 |
| Galloway2 | Tributary2.2 | 3799.2 | 1 | 579 | 2217.44 | 2219.61 | 2219.61 | 2220.41 | 0.01999 | 7.59 | 85.7 | 57.51 | 0.94 |
| Galloway2 | Tributary2.2 | 3799.2 | 2 | 579 | 2217.44 | 2219.87 | 2219.75 | 2220.84 | 0.021338 | 7.92 | 73.14 | 32.26 | 0.93 |
| Galloway2 | Tributary2.2 | 3849.68 | 1 | 579 | 2218.8 | 2220.91 | 2220.91 | 2221.42 | 0.023233 | 6.39 | 105.88 | 103.26 | 0.96 |
| Galloway2 | Tributary2.2 | 3849.68 | 2 | 579 | 2218.8 | 2221.36 | 2221.36 | 2222.3 | 0.025857 | 7.78 | 74.46 | 40.42 | 1.01 |
| Galloway2 | Tributary2.2 | 3897.87 | 1 | 579 | 2220.7 | 2222.18 | 2222.18 | 2222.75 | 0.02695 | 5.91 | 97.26 | 86.53 | 0.98 |
| Galloway2 | Tributary2.2 | 3897.87 | 2 | 579 | 2220.7 | 2222.73 | 2222.7 | 2223.55 | 0.0254 | 7.26 | 79.78 | 47.4 | 0.99 |
| Galloway2 | Tributary2.2 | 3949.48 | 1 | 579 | 2221.61 | 2224.12 | 2224.12 | 2224.85 | 0.022206 | 7.38 | 89.07 | 62.76 | 0.97 |
| Galloway2 | Tributary2.2 | 3949.48 | 2 | 579 | 2221.61 | 2224.58 | 2224.58 | 2225.73 | 0.02609 | 8.58 | 67.46 | 30.04 | 1.01 |
| Galloway2 | Tributary2.2 | 3999.05 | 1 | 579 | 2222.66 | 2225.6 | 2225.6 | 2226.48 | 0.018073 | 8.2 | 82.31 | 48.18 | 0.93 |
| Galloway2 | Tributary2.2 | 3999.05 | 2 | 579 | 2222.66 | 2225.98 | 2225.98 | 2227.38 | 0.026059 | 9.52 | 60.79 | 21.61 | 1 |
| Galloway2 | Tributary2.2 | 4050.06 | 1 | 579 | 2223.87 | 2226.87 | 2226.87 | 2227.6 | 0.016593 | 7.61 | 93.53 | 65.29 | 0.88 |
| Galloway2 | Tributary2.2 | 4050.06 | 2 | 579 | 2223.87 | 2227.48 | | 2228.5 | 0.017341 | 8.11 | 71.42 | 24.34 | 0.83 |
| Galloway2 | Tributary2.2 | 4100.09 | 1 | 579 | 2225.35 | 2228.11 | 2228.11 | 2228.79 | 0.019897 | 7.29 | 92.34 | 68.98 | 0.93 |
| Galloway2 | Tributary2.2 | 4100.09 | 2 | 579 | 2225.35 | 2228.45 | 2228.45 | 2229.6 | 0.026127 | 8.6 | 67.34 | 29.94 | 1.01 |
| Galloway2 | Tributary2.2 | 4149.84 | 1 | 579 | 2226.24 | 2229.07 | 2229.07 | 2229.84 | 0.015992 | 7.67 | 88.69 | 55.75 | 0.87 |
| Galloway2 | Tributary2.2 | 4149.84 | 2 | 579 | 2226.24 | 2229.64 | | 2230.65 | 0.016982 | 8.08 | 71.65 | 23.96 | 0.82 |
| Galloway2 | Tributary2.2 | 4198.92 | 1 | 579 | 2228.18 | 2231.07 | 2231.07 | 2231.79 | 0.020687 | 7.4 | 87.74 | 59.22 | 0.94 |
| Galloway2 | Tributary2.2 | 4198.92 | 2 | 579 | 2228.18 | 2231.48 | 2231.48 | 2232.66 | 0.024765 | 8.73 | 66.3 | 28.58 | 1.01 |
| Galloway2 | Tributary2.2 | 4249.63 | 1 | 579 | 2230.46 | 2232.63 | 2232.63 | 2233.44 | 0.021604 | 7.88 | 86.26 | 57.59 | 0.98 |
| Galloway2 | Tributary2.2 | 4249.63 | 2 | 579 | 2230.46 | 2233.13 | 2233.13 | 2234.39 | 0.02629 | 9.01 | 64.29 | 25.77 | 1 |
| Galloway2 | Tributary2.2 | 4302.3 | 1 | 579 | 2231.17 | 2233.99 | 2233.99 | 2234.79 | 0.01858 | 7.93 | 89.07 | 57.98 | 0.93 |
| Galloway2 | Tributary2.2 | 4302.3 | 2 | 579 | 2231.17 | 2234.46 | 2234.34 | 2235.67 | 0.022584 | 8.82 | 65.62 | 23.91 | 0.94 |
| Galloway2 | Tributary2.2 | 4350.09 | 1 | 579 | 2232.13 | 2235.14 | 2234.96 | 2235.63 | 0.013489 | 6.21 | 110.88 | 83.46 | 0.77 |
| Galloway2 | Tributary2.2 | 4350.09 | 2 | 579 | 2232.13 | 2235.83 | | 2236.51 | 0.012521 | 6.62 | 87.44 | 32.46 | 0.71 |
| Galloway2 | Tributary2.2 | 4399.58 | 1 | 579 | 2233.48 | 2235.77 | 2235.77 | 2236.41 | 0.018875 | 7.18 | 99.42 | 80.95 | 0.91 |
| Galloway2 | Tributary2.2 | 4399.58 | 2 | 579 | 2233.48 | 2236.39 | | 2237.35 | 0.018951 | 7.86 | 73.63 | 28.92 | 0.87 |
| Galloway2 | Tributary2.2 | 4447.51 | 1 | 579 | 2234.41 | 2237.08 | 2237.08 | 2237.78 | 0.021117 | 7.36 | 90.55 | 64.37 | 0.95 |
| Galloway2 | Tributary2.2 | 4447.51 | 2 | 579 | 2234.41 | 2237.51 | 2237.51 | 2238.67 | 0.026138 | 8.64 | 67.05 | 29.52 | 1.01 |
| Galloway2 | Tributary2.2 | 4499.73 | 1 | 579 | 2236.29 | 2238.8 | 2238.8 | 2239.53 | 0.018909 | 7.68 | 102.31 | 76.86 | 0.93 |
| Galloway2 | Tributary2.2 | 4499.73 | 2 | 579 | 2236.29 | 2239.18 | 2239.18 | 2240.44 | 0.026065 | 9.03 | 64.13 | 25.61 | 1.01 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Galloway2 | Tributary2.2 | 4549.5 | 1 | 579 | 2237.15 | 2239.94 | | 2240.31 | 0.013488 | 5.55 | 136.11 | 91.51 | 0.66 |
| Galloway2 | Tributary2.2 | 4549.5 | 2 | 579 | 2237.15 | 2240.81 | | 2241.27 | 0.009906 | 5.53 | 111.2 | 37.22 | 0.56 |
| Galloway2 | Tributary2.2 | 4599.88 | 1 | 579 | 2237.82 | 2240.7 | 2240.7 | 2241.56 | 0.016376 | 8.15 | 86.29 | 52.52 | 0.89 |
| Galloway2 | Tributary2.2 | 4599.88 | 2 | 579 | 2237.82 | 2240.96 | 2240.96 | 2242.4 | 0.026683 | 9.63 | 60.14 | 21.07 | 1 |
| Galloway2 | Tributary2.2 | 4650.25 | 1 | 579 | 2239.61 | 2242.23 | 2242.23 | 2243.06 | 0.01895 | 7.91 | 83.79 | 52.19 | 0.93 |
| Galloway2 | Tributary2.2 | 4650.25 | 2 | 579 | 2239.61 | 2242.53 | 2242.53 | 2243.81 | 0.0258 | 9.08 | 63.77 | 25.23 | 1.01 |
| Galloway2 | Tributary2.2 | 4732.87 | 1 | 579 | 2249.03 | 2251.81 | 2251.81 | 2252.32 | 0.036639 | 5.71 | 101.46 | 103.63 | 1.02 |
| Galloway2 | Tributary2.2 | 4732.87 | 2 | 579 | 2249.03 | 2251.81 | 2251.81 | 2252.32 | 0.036725 | 5.71 | 101.36 | 103.57 | 1.02 |
| Galloway2 | Tributary2.2 | 4747.72 | Inl Struct | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 4762.7 | 1 | 579 | 2249.37 | 2253.72 | 2252.12 | 2253.76 | 0.001131 | 1.74 | 333.13 | 159.19 | 0.21 |
| Galloway2 | Tributary2.2 | 4762.7 | 2 | 579 | 2249.37 | 2253.72 | 2252.12 | 2253.77 | 0.00113 | 1.74 | 333.17 | 159.19 | 0.21 |
| Galloway2 | Tributary2.2 | 4777.8 | 1 | 579 | 2247.92 | 2253.76 | | 2253.77 | 0.000082 | 0.87 | 664.36 | 160.17 | 0.08 |
| Galloway2 | Tributary2.2 | 4777.8 | 2 | 579 | 2247.92 | 2253.76 | | 2253.77 | 0.000082 | 0.87 | 664.4 | 160.17 | 0.08 |
| Galloway2 | Tributary2.2 | 4799.61 | 1 | 579 | 2244.7 | 2253.77 | | 2253.77 | 0.000037 | 0.6 | 964.19 | 149.77 | 0.04 |
| Galloway2 | Tributary2.2 | 4799.61 | 2 | 579 | 2244.7 | 2253.77 | | 2253.77 | 0.000037 | 0.6 | 964.23 | 149.77 | 0.04 |
| Galloway3 | Tributary2A.1 | 49.46 | 1 | 81 | 2270.66 | 2277.25 | | 2277.26 | 0.000006 | 0.19 | 437.25 | 93.35 | 0.02 |
| Galloway3 | Tributary2A.1 | 49.46 | 2 | 81 | 2270.66 | 2277.25 | | 2277.26 | 0.000006 | 0.19 | 437.25 | 93.35 | 0.02 |
| Galloway3 | Tributary2A.1 | 100.05 | 1 | 81 | 2274.3 | 2277.24 | | 2277.27 | 0.001482 | 1.37 | 59.32 | 40.09 | 0.2 |
| Galloway3 | Tributary2A.1 | 100.05 | 2 | 81 | 2274.3 | 2277.24 | | 2277.27 | 0.001482 | 1.37 | 59.32 | 40.09 | 0.2 |
| Galloway3 | Tributary2A.1 | 148.26 | 1 | 81 | 2276.37 | 2277.82 | 2277.82 | 2278.19 | 0.044218 | 4.86 | 16.67 | 23.16 | 1.01 |
| Galloway3 | Tributary2A.1 | 148.26 | 2 | 81 | 2276.37 | 2277.82 | 2277.82 | 2278.19 | 0.044218 | 4.86 | 16.67 | 23.16 | 1.01 |
| Galloway3 | Tributary2A.1 | 200.06 | 1 | 81 | 2278.41 | 2280 | 2279.91 | 2280.4 | 0.040821 | 5.1 | 15.87 | 15.82 | 0.9 |
| Galloway3 | Tributary2A.1 | 200.06 | 2 | 81 | 2278.41 | 2280 | 2279.91 | 2280.4 | 0.040821 | 5.1 | 15.87 | 15.82 | 0.9 |
| Galloway3 | Tributary2A.1 | 249.3 | 1 | 81 | 2281.15 | 2282.87 | 2282.87 | 2283.38 | 0.030692 | 5.73 | 14.13 | 14.04 | 1.01 |
| Galloway3 | Tributary2A.1 | 249.3 | 2 | 81 | 2281.15 | 2282.87 | 2282.87 | 2283.38 | 0.030692 | 5.73 | 14.13 | 14.04 | 1.01 |
| Galloway3 | Tributary2A.1 | 300.43 | 1 | 81 | 2283.64 | 2285.58 | 2285.58 | 2286.1 | 0.038212 | 5.77 | 14.03 | 13.66 | 1 |
| Galloway3 | Tributary2A.1 | 300.43 | 2 | 81 | 2283.64 | 2285.58 | 2285.58 | 2286.1 | 0.038212 | 5.77 | 14.03 | 13.66 | 1 |
| Galloway3 | Tributary2A.1 | 349.82 | 1 | 81 | 2285.84 | 2287.85 | 2287.85 | 2288.37 | 0.030145 | 5.81 | 13.95 | 13.54 | 1.01 |
| Galloway3 | Tributary2A.1 | 349.82 | 2 | 81 | 2285.84 | 2287.85 | 2287.85 | 2288.37 | 0.030145 | 5.81 | 13.95 | 13.54 | 1.01 |
| Galloway3 | Tributary2A.1 | 399.72 | 1 | 81 | 2288.97 | 2290.77 | 2290.77 | 2291.21 | 0.051547 | 5.32 | 15.22 | 17.74 | 1.01 |
| Galloway3 | Tributary2A.1 | 399.72 | 2 | 81 | 2288.97 | 2290.77 | 2290.77 | 2291.21 | 0.051547 | 5.32 | 15.22 | 17.74 | 1.01 |
| Galloway3 | Tributary2A.1 | 597.02 | 1 | 81 | 2313.21 | 2314.01 | 2314.01 | 2314.22 | 0.051253 | 3.71 | 21.82 | 52.66 | 1.02 |
| Galloway3 | Tributary2A.1 | 597.02 | 2 | 81 | 2313.21 | 2314.01 | 2314.01 | 2314.22 | 0.051253 | 3.71 | 21.82 | 52.66 | 1.02 |
| Galloway3 | Tributary2A.1 | 604.11 | Inl Struct | | | | | | | | | | |
| Galloway3 | Tributary2A.1 | 613.42 | 1 | 81 | 2312.65 | 2315.19 | 2314.04 | 2315.2 | 0.000418 | 0.6 | 135.09 | 112.38 | 0.1 |
| Galloway3 | Tributary2A.1 | 613.42 | 2 | 81 | 2312.65 | 2315.19 | 2314.04 | 2315.2 | 0.000418 | 0.6 | 135.09 | 112.38 | 0.1 |
| Galloway3 | Tributary2A.1 | 616.68 | 1 | 81 | 2310.9 | 2315.2 | | 2315.2 | 0.000059 | 0.31 | 261.46 | 116.23 | 0.04 |
| Galloway3 | Tributary2A.1 | 616.68 | 2 | 81 | 2310.9 | 2315.2 | | 2315.2 | 0.000059 | 0.31 | 261.46 | 116.23 | 0.04 |
| Galloway3 | Tributary2A.1 | 635.5 | 1 | 81 | 2307.68 | 2315.2 | | 2315.2 | 0.000002 | 0.12 | 697.75 | 115.76 | 0.01 |
| Galloway3 | Tributary2A.1 | 635.5 | 2 | 81 | 2307.68 | 2315.2 | | 2315.2 | 0.000002 | 0.12 | 697.75 | 115.76 | 0.01 |
| Galloway3 | Tributary2A.1 | 650.58 | 1 | 81 | 2305.38 | 2315.2 | | 2315.2 | 0.000001 | 0.1 | 775.19 | 102 | 0.01 |
| Galloway3 | Tributary2A.1 | 650.58 | 2 | 81 | 2305.38 | 2315.2 | | 2315.2 | 0.000001 | 0.1 | 775.19 | 102 | 0.01 |
| Galloway3 | Tributary2A.1 | 700.45 | 1 | 81 | 2306.38 | 2315.2 | | 2315.2 | 0.000003 | 0.16 | 518.97 | 81.46 | 0.01 |
| Galloway3 | Tributary2A.1 | 700.45 | 2 | 81 | 2306.38 | 2315.2 | | 2315.2 | 0.000003 | 0.16 | 518.97 | 81.46 | 0.01 |
| Galloway3 | Tributary2A.1 | 749.78 | 1 | 81 | 2307.29 | 2315.2 | | 2315.2 | 0.000011 | 0.25 | 322.2 | 63.45 | 0.02 |
| Galloway3 | Tributary2A.1 | 749.78 | 2 | 81 | 2307.29 | 2315.2 | | 2315.2 | 0.000011 | 0.25 | 322.2 | 63.45 | 0.02 |
| Galloway3 | Tributary2A.1 | 799.87 | 1 | 81 | 2308.77 | 2315.2 | | 2315.2 | 0.000027 | 0.35 | 231.98 | 55.78 | 0.03 |
| Galloway3 | Tributary2A.1 | 799.87 | 2 | 81 | 2308.77 | 2315.2 | | 2315.2 | 0.000027 | 0.35 | 231.98 | 55.78 | 0.03 |
| Galloway3 | Tributary2A.1 | 847.48 | 1 | 81 | 2312.09 | 2314.98 | 2314.98 | 2315.72 | 0.026061 | 6.9 | 11.75 | 7.95 | 1 |
| Galloway3 | Tributary2A.1 | 847.48 | 2 | 81 | 2312.09 | 2314.98 | 2314.98 | 2315.72 | 0.026061 | 6.9 | 11.75 | 7.95 | 1 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| alloway3 | Tributary2A.1 | 900.14 | 1 | 81 | 2317.93 | 2319.72 | 2319.72 | 2320.2 | 0.024135 | 5.51 | 14.71 | 15.98 | 1.01 |
| lloway3 | Tributary2A.1 | 900.14 | 2 | 81 | 2317.93 | 2319.72 | 2319.72 | 2320.2 | 0.024135 | 5.51 | 14.71 | 15.98 | 1.01 |
| Galloway3 | Tributary2A.1 | 949.37 | 1 | 81 | 2321.01 | 2322.57 | 2322.57 | 2323 | 0.025808 | 5.28 | 15.35 | 18.11 | 1.01 |
| Galloway3 | Tributary2A.1 | 949.37 | 2 | 81 | 2321.01 | 2322.57 | 2322.57 | 2323 | 0.025808 | 5.28 | 15.35 | 18.11 | 1.01 |
| Galloway3 | Tributary2A.1 | 1000.7 | 1 | 81 | 2324.08 | 2326.31 | 2326.31 | 2326.89 | 0.029575 | 6.1 | 13.28 | 11.87 | 1.02 |
| Galloway3 | Tributary2A.1 | 1000.7 | 2 | 81 | 2324.08 | 2326.31 | 2326.31 | 2326.89 | 0.029575 | 6.1 | 13.28 | 11.87 | 1.02 |
| Galloway3 | Tributary2A.1 | 1049.91 | 1 | 81 | 2327.36 | 2329.29 | 2329.29 | 2329.83 | 0.02954 | 5.91 | 13.7 | 12.71 | 1 |
| Galloway3 | Tributary2A.1 | 1049.91 | 2 | 81 | 2327.36 | 2329.29 | 2329.29 | 2329.83 | 0.02954 | 5.91 | 13.7 | 12.71 | 1 |
| Galloway3 | Tributary2A.1 | 1098.25 | 1 | 81 | 2332.39 | 2334.54 | 2334.54 | 2335.09 | 0.0257 | 5.93 | 13.66 | 12.72 | 1.01 |
| Galloway3 | Tributary2A.1 | 1098.25 | 2 | 81 | 2332.39 | 2334.54 | 2334.54 | 2335.09 | 0.0257 | 5.93 | 13.66 | 12.72 | 1.01 |
| Galloway3 | Tributary2A.1 | 1149.58 | 1 | 81 | 2337.05 | 2339.16 | 2339.16 | 2339.7 | 0.027419 | 5.88 | 13.77 | 13.03 | 1.01 |
| Galloway3 | Tributary2A.1 | 1149.58 | 2 | 81 | 2337.05 | 2339.16 | 2339.16 | 2339.7 | 0.027419 | 5.88 | 13.77 | 13.03 | 1.01 |
| Galloway3 | Tributary2A.1 | 1199.68 | 1 | 81 | 2341.96 | 2343.82 | 2343.82 | 2344.3 | 0.0288 | 5.57 | 14.55 | 15.37 | 1.01 |
| Galloway3 | Tributary2A.1 | 1199.68 | 2 | 81 | 2341.96 | 2343.82 | 2343.82 | 2344.3 | 0.0288 | 5.57 | 14.55 | 15.37 | 1.01 |
| Galloway3 | Tributary2A.1 | 1249.07 | 1 | 81 | 2347.83 | 2349.63 | 2349.63 | 2350.09 | 0.034239 | 5.49 | 14.76 | 16.09 | 1.01 |
| Galloway3 | Tributary2A.1 | 1249.07 | 2 | 81 | 2347.83 | 2349.63 | 2349.63 | 2350.09 | 0.034239 | 5.49 | 14.76 | 16.09 | 1.01 |
| Galloway4 | Tributary2A.2 | 32.15 | 1 | 146 | 2244.96 | 2253.77 | | 2253.77 | 0.000002 | 0.19 | 781.74 | 111.85 | 0.01 |
| Galloway4 | Tributary2A.2 | 32.15 | 2 | 146 | 2244.96 | 2253.77 | | 2253.77 | 0.000002 | 0.19 | 781.76 | 111.85 | 0.01 |
| Galloway4 | Tributary2A.2 | 49.52 | 1 | 146 | 2245.23 | 2253.77 | | 2253.77 | 0.000004 | 0.19 | 750.19 | 126.11 | 0.01 |
| Galloway4 | Tributary2A.2 | 49.52 | 2 | 146 | 2245.23 | 2253.77 | | 2253.77 | 0.000004 | 0.19 | 750.22 | 126.11 | 0.01 |
| Galloway4 | Tributary2A.2 | 98.37 | 1 | 146 | 2246.28 | 2253.77 | | 2253.78 | 0.000006 | 0.29 | 509.32 | 103.99 | 0.02 |
| Galloway4 | Tributary2A.2 | 98.37 | 2 | 146 | 2246.28 | 2253.77 | | 2253.78 | 0.000006 | 0.29 | 509.35 | 103.99 | 0.02 |
| Galloway4 | Tributary2A.2 | 148.43 | 1 | 146 | 2248.14 | 2253.77 | | 2253.78 | 0.000038 | 0.45 | 323.37 | 82.71 | 0.04 |
| Galloway4 | Tributary2A.2 | 148.43 | 2 | 146 | 2248.14 | 2253.77 | | 2253.78 | 0.000038 | 0.45 | 323.39 | 82.71 | 0.04 |
| Galloway4 | Tributary2A.2 | 199.27 | 1 | 146 | 2250.15 | 2253.77 | | 2253.78 | 0.000219 | 0.87 | 168.09 | 75.81 | 0.1 |
| Galloway4 | Tributary2A.2 | 199.27 | 2 | 146 | 2250.15 | 2253.77 | | 2253.78 | 0.000219 | 0.87 | 168.11 | 75.81 | 0.1 |
| oway4 | Tributary2A.2 | 248.87 | 1 | 146 | 2251.33 | 2253.76 | | 2253.82 | 0.002967 | 1.97 | 73.94 | 63.63 | 0.32 |
| Galloway4 | Tributary2A.2 | 248.87 | 2 | 146 | 2251.33 | 2253.76 | | 2253.82 | 0.002966 | 1.97 | 73.96 | 63.64 | 0.32 |
| Galloway4 | Tributary2A.2 | 299.47 | 1 | 146 | 2252.74 | 2254.39 | 2254.39 | 2254.84 | 0.027612 | 5.41 | 26.99 | 30.33 | 1.01 |
| Galloway4 | Tributary2A.2 | 299.47 | 2 | 146 | 2252.74 | 2254.39 | 2254.39 | 2254.84 | 0.027612 | 5.41 | 26.99 | 30.33 | 1.01 |
| Galloway4 | Tributary2A.2 | 356.94 | 1 | 146 | 2254.74 | 2256.67 | 2256.67 | 2257.13 | 0.034315 | 5.44 | 26.85 | 29.85 | 1.01 |
| Galloway4 | Tributary2A.2 | 356.94 | 2 | 146 | 2254.74 | 2256.67 | 2256.67 | 2257.13 | 0.034315 | 5.44 | 26.85 | 29.85 | 1.01 |
| Galloway4 | Tributary2A.2 | 599.06 | 1 | 146 | 2273.66 | 2275.1 | 2275.1 | 2275.31 | 0.04915 | 3.66 | 39.9 | 97.3 | 1.01 |
| Galloway4 | Tributary2A.2 | 599.06 | 2 | 146 | 2273.66 | 2275.1 | 2275.1 | 2275.31 | 0.04915 | 3.66 | 39.9 | 97.3 | 1.01 |
| Galloway4 | Tributary2A.2 | 611.95 | Inl Struct | | | | | | | | | | |
| Galloway4 | Tributary2A.2 | 624.67 | 1 | 146 | 2274.18 | 2277.25 | 2275.42 | 2277.25 | 0.000125 | 0.5 | 291.75 | 163.03 | 0.07 |
| Galloway4 | Tributary2A.2 | 624.67 | 2 | 146 | 2274.18 | 2277.25 | 2275.42 | 2277.25 | 0.000125 | 0.5 | 291.75 | 163.03 | 0.07 |
| Galloway4 | Tributary2A.2 | 649.97 | 1 | 146 | 2269.15 | 2277.25 | | 2277.26 | 0.000003 | 0.15 | 950.27 | 145.1 | 0.01 |
| Galloway4 | Tributary2A.2 | 649.97 | 2 | 146 | 2269.15 | 2277.25 | | 2277.26 | 0.000003 | 0.15 | 950.27 | 145.1 | 0.01 |
| Galloway4 | Tributary2A.2 | 699.72 | 1 | 146 | 2267.69 | 2277.25 | | 2277.26 | 0.000003 | 0.13 | 1097.7 | 155.98 | 0.01 |
| Galloway4 | Tributary2A.2 | 699.72 | 2 | 146 | 2267.69 | 2277.25 | | 2277.26 | 0.000003 | 0.13 | 1097.7 | 155.98 | 0.01 |
| Galloway5 | Tributary2B | 39.61 | 1 | 69 | 2268.94 | 2277.26 | | 2277.26 | 0.000004 | 0.14 | 481.25 | 84.48 | 0.01 |
| Galloway5 | Tributary2B | 39.61 | 2 | 69 | 2268.94 | 2277.26 | | 2277.26 | 0.000004 | 0.14 | 481.25 | 84.48 | 0.01 |
| Galloway5 | Tributary2B | 99.47 | 1 | 69 | 2271.43 | 2277.25 | | 2277.26 | 0.00004 | 0.37 | 187.3 | 58.72 | 0.04 |
| Galloway5 | Tributary2B | 99.47 | 2 | 69 | 2271.43 | 2277.25 | | 2277.26 | 0.00004 | 0.37 | 187.3 | 58.72 | 0.04 |
| Galloway5 | Tributary2B | 148.35 | 1 | 69 | 2272.71 | 2277.25 | | 2277.26 | 0.00021 | 0.66 | 104.26 | 39.64 | 0.07 |
| Galloway5 | Tributary2B | 148.35 | 2 | 69 | 2272.71 | 2277.25 | | 2277.26 | 0.00021 | 0.66 | 104.26 | 39.64 | 0.07 |
| Galloway5 | Tributary2B | 199.05 | 1 | 69 | 2274.52 | 2277.26 | | 2277.29 | 0.001713 | 1.53 | 45.14 | 32.28 | 0.23 |
| Galloway5 | Tributary2B | 199.05 | 2 | 69 | 2274.52 | 2277.26 | | 2277.29 | 0.001713 | 1.53 | 45.14 | 32.28 | 0.23 |
| Galloway5 | Tributary2B | 248.98 | 1 | 69 | 2277.03 | 2278.35 | 2278.35 | 2278.77 | 0.031255 | 5.17 | 13.34 | 16.26 | 1.01 |
| lloway5 | Tributary2B | 248.98 | 2 | 69 | 2277.03 | 2278.35 | 2278.35 | 2278.77 | 0.031255 | 5.17 | 13.34 | 16.26 | 1.01 |

Table 5.9.2.1
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| alloway5 | Tributary2B | 299.03 | 1 | 69 | 2279.28 | 2280.23 | 2280.23 | 2280.58 | 0.036033 | 4.77 | 14.48 | 20.85 | 1.01 |
| lloway5 | Tributary2B | 299.03 | 2 | 69 | 2279.28 | 2280.23 | 2280.23 | 2280.58 | 0.036033 | 4.77 | 14.48 | 20.85 | 1.01 |
| Galloway5 | Tributary2B | 349.98 | 1 | 69 | 2281.64 | 2282.88 | 2282.88 | 2283.27 | 0.033915 | 5 | 13.8 | 18.13 | 1.01 |
| Galloway5 | Tributary2B | 349.98 | 2 | 69 | 2281.64 | 2282.88 | 2282.88 | 2283.27 | 0.033915 | 5 | 13.8 | 18.13 | 1.01 |
| Galloway5 | Tributary2B | 399.08 | 1 | 69 | 2299 | 2300.73 | 2300.73 | 2301.14 | 0.032984 | 5.1 | 13.54 | 17.17 | 1.01 |
| Galloway5 | Tributary2B | 399.08 | 2 | 69 | 2299 | 2300.73 | 2300.73 | 2301.14 | 0.032984 | 5.1 | 13.54 | 17.17 | 1.01 |
| Galloway5 | Tributary2B | 470.42 | 1 | 69 | 2300.67 | 2302.27 | 2301.97 | 2302.47 | 0.011672 | 3.6 | 19.18 | 19.07 | 0.63 |
| Galloway5 | Tributary2B | 470.42 | 2 | 69 | 2300.67 | 2302.27 | 2301.97 | 2302.47 | 0.011672 | 3.6 | 19.18 | 19.07 | 0.63 |
| Galloway5 | Tributary2B | 479.33 | Inl Struct |  |  |  |  |  |  |  |  |  |  |
| Galloway5 | Tributary2B | 486.62 | 1 | 69 | 2300.72 | 2302.4 | 2301.83 | 2302.49 | 0.004855 | 2.41 | 28.68 | 27.29 | 0.41 |
| Galloway5 | Tributary2B | 486.62 | 2 | 69 | 2300.72 | 2302.4 | 2301.83 | 2302.49 | 0.004855 | 2.41 | 28.68 | 27.29 | 0.41 |
| Galloway5 | Tributary2B | 516.28 | 1 | 69 | 2298.66 | 2302.5 |  | 2302.5 | 0.000011 | 0.2 | 338.42 | 114.82 | 0.02 |
| Galloway5 | Tributary2B | 516.28 | 2 | 69 | 2298.66 | 2302.5 |  | 2302.5 | 0.000011 | 0.2 | 338.42 | 114.82 | 0.02 |
| Galloway5 | Tributary2B | 548.9 | 1 | 69 | 2290.83 | 2302.5 |  | 2302.5 | 0.000001 | 0.09 | 790.76 | 106.14 | 0.01 |
| Galloway5 | Tributary2B | 548.9 | 2 | 69 | 2290.83 | 2302.5 |  | 2302.5 | 0.000001 | 0.09 | 790.76 | 106.14 | 0.01 |
| Galloway5 | Tributary2B | 599.31 | 1 | 69 | 2291.7 | 2302.5 |  | 2302.5 | 0.000002 | 0.11 | 627.93 | 87.26 | 0.01 |
| Galloway5 | Tributary2B | 599.31 | 2 | 69 | 2291.7 | 2302.5 |  | 2302.5 | 0.000002 | 0.11 | 627.93 | 87.26 | 0.01 |
| Galloway5 | Tributary2B | 701.05 | 1 | 69 | 2298.65 | 2302.5 |  | 2302.5 | 0.000033 | 0.29 | 241.78 | 87.35 | 0.03 |
| Galloway5 | Tributary2B | 701.05 | 2 | 69 | 2298.65 | 2302.5 |  | 2302.5 | 0.000033 | 0.29 | 241.78 | 87.35 | 0.03 |
| Galloway5 | Tributary2B | 751.53 | 1 | 69 | 2300.33 | 2302.47 |  | 2302.53 | 0.004876 | 2.01 | 34.4 | 36.77 | 0.37 |
| Galloway5 | Tributary2B | 751.53 | 2 | 69 | 2300.33 | 2302.47 |  | 2302.53 | 0.004876 | 2.01 | 34.4 | 36.77 | 0.37 |
| Galloway5 | Tributary2B | 799.64 | 1 | 69 | 2302.07 | 2303.63 | 2303.63 | 2304.05 | 0.049889 | 5.22 | 13.22 | 15.69 | 1 |
| Galloway5 | Tributary2B | 799.64 | 2 | 69 | 2302.07 | 2303.63 | 2303.63 | 2304.05 | 0.049889 | 5.22 | 13.22 | 15.69 | 1 |
| Galloway5 | Tributary2B | 849.9 | 1 | 69 | 2304.02 | 2305.18 | 2304.99 | 2305.37 | 0.015448 | 3.47 | 19.91 | 26.4 | 0.7 |
| Galloway5 | Tributary2B | 849.9 | 2 | 69 | 2304.02 | 2305.18 | 2304.99 | 2305.37 | 0.015448 | 3.47 | 19.91 | 26.4 | 0.7 |
| lloway5 | Tributary2B | 899.75 | 1 | 69 | 2305.29 | 2306.08 | 2305.97 | 2306.22 | 0.018368 | 2.92 | 23.66 | 46.44 | 0.72 |
| loway5 | Tributary2B | 899.75 | 2 | 69 | 2305.29 | 2306.08 | 2305.97 | 2306.22 | 0.018368 | 2.92 | 23.66 | 46.44 | 0.72 |
| Galloway5 | Tributary2B | 981.91 | Culvert |  |  |  |  |  |  |  |  |  |  |
| Galloway5 | Tributary2B | 999.86 | 1 | 69 | 2321.42 | 2325.44 | 2322 | 2325.44 | 0.000007 | 0.14 | 476.59 | 150.8 | 0.01 |
| Galloway5 | Tributary2B | 999.86 | 2 | 69 | 2321.42 | 2325.44 | 2322 | 2325.44 | 0.000007 | 0.14 | 476.59 | 150.8 | 0.01 |
| Galloway5 | Tributary2B | 1011.78 | 1 | 69 | 2316.86 | 2325.44 |  | 2325.44 | 0.000001 | 0.07 | 921.74 | 141.82 | 0.01 |
| Galloway5 | Tributary2B | 1011.78 | 2 | 69 | 2316.86 | 2325.44 |  | 2325.44 | 0.000001 | 0.07 | 921.74 | 141.82 | 0.01 |
| Galloway5 | Tributary2B | 1048.29 | 1 | 69 | 2310.99 | 2325.44 |  | 2325.44 | 0 | 0.05 | 1300.59 | 128.26 | 0 |
| Galloway5 . | Tributary2B | 1048.29 | 2 | 69 | 2310.99 | 2325.44 |  | 2325.44 | 0 | 0.05 | 1300.59 | 128.26 | 0 |
| Galloway5 | Tributary2B | 1099.22 | 1 | 69 | 2312.5 | 2325.44 |  | 2325.44 | 0.000001 | 0.07 | 960.5 | 115.35 | 0 |
| Galloway5 | Tributary2B | 1099.22 | 2 | 69 | 2312.5 | 2325.44 |  | 2325.44 | 0.000001 | 0.07 | 960.5 | 115.35 | 0 |
| Galloway5 | Tributary2B | 1148.76 | 1 | 69 | 2313.35 | 2325.44 |  | 2325.44 | 0.000001 | 0.09 | 737.14 | 104.2 | 0.01 |
| Galloway5 | Tributary2B | 1148.76 | 2 | 69 | 2313.35 | 2325.44 |  | 2325.44 | 0.000001 | 0.09 | 737.14 | 104.2 | 0.01 |
| Galloway5 | Tributary2B | 1199.48 | 1 | 69 | 2314.42 | 2325.44 |  | 2325.44 | 0.000004 | 0.12 | 553.71 | 95.61 | 0.01 |
| Galloway5 | Tributary2B | 1199.48 | 2 | 69 | 2314.42 | 2325.44 |  | 2325.44 | 0.000004 | 0.12 | 553.71 | 95.61 | 0.01 |
| Galloway5 | Tributary2B | 1250.9 | 1 | 69 | 2315.95 | 2325.44 |  | 2325.44 | 0.000008 | 0.16 | 418.48 | 85.52 | 0.01 |
| Galloway5 | Tributary2B | 1250.9 | 2 | 69 | 2315.95 | 2325.44 |  | 2325.44 | 0.000008 | 0.16 | 418.48 | 85.52 | 0.01 |
| Galloway5 | Tributary2B | 1267.35 | 1 | 69 | 2316.43 | 2325.44 |  | 2325.44 | 0.000006 | 0.16 | 442.06 | 83.47 | 0.01 |
| Galloway5 | Tributary2B | 1267.35 | 2 | 69 | 2316.43 | 2325.44 |  | 2325.44 | 0.000006 | 0.16 | 442.06 | 83.47 | 0.01 |
| Galloway5 | Tributary2B | 1300.17 | 1 | 69 | 2318.27 | 2325.44 |  | 2325.44 | 0.000007 | 0.19 | 371.38 | 73.08 | 0.01 |
| Galloway5 | Tributary2B | 1300.17 | 2 | 69 | 2318.27 | 2325.44 |  | 2325.44 | 0.000007 | 0.19 | 371.38 | 73.08 | 0.01 |
| Galloway5 | Tributary2B | 1347.03 | 1 | 69 | 2319.28 | 2325.44 |  | 2325.44 | 0.000026 | 0.33 | 211.6 | 52.49 | 0.03 |
| Galloway5 | Tributary2B | 1347.03 | 2 | 69 | 2319.28 | 2325.44 |  | 2325.44 | 0.000026 | 0.33 | 211.6 | 52.49 | 0.03 |
| Galloway5 | Tributary2B | 1399.79 | 1 | 69 | 2321.11 | 2325.44 |  | 2325.44 | 0.000071 | 0.43 | 159.9 | 57.53 | 0.05 |
| Galloway5 | Tributary2B | 1399.79 | 2 | 69 | 2321.11 | 2325.44 |  | 2325.44 | 0.000071 | 0.43 | 159.9 | 57.53 | 0.05 |

# Table 5.9.2.2
# HEC-RAS OUTPUT
## Structures

GWTribFPDSP.prj
HEC-RAS  Plan: M4E
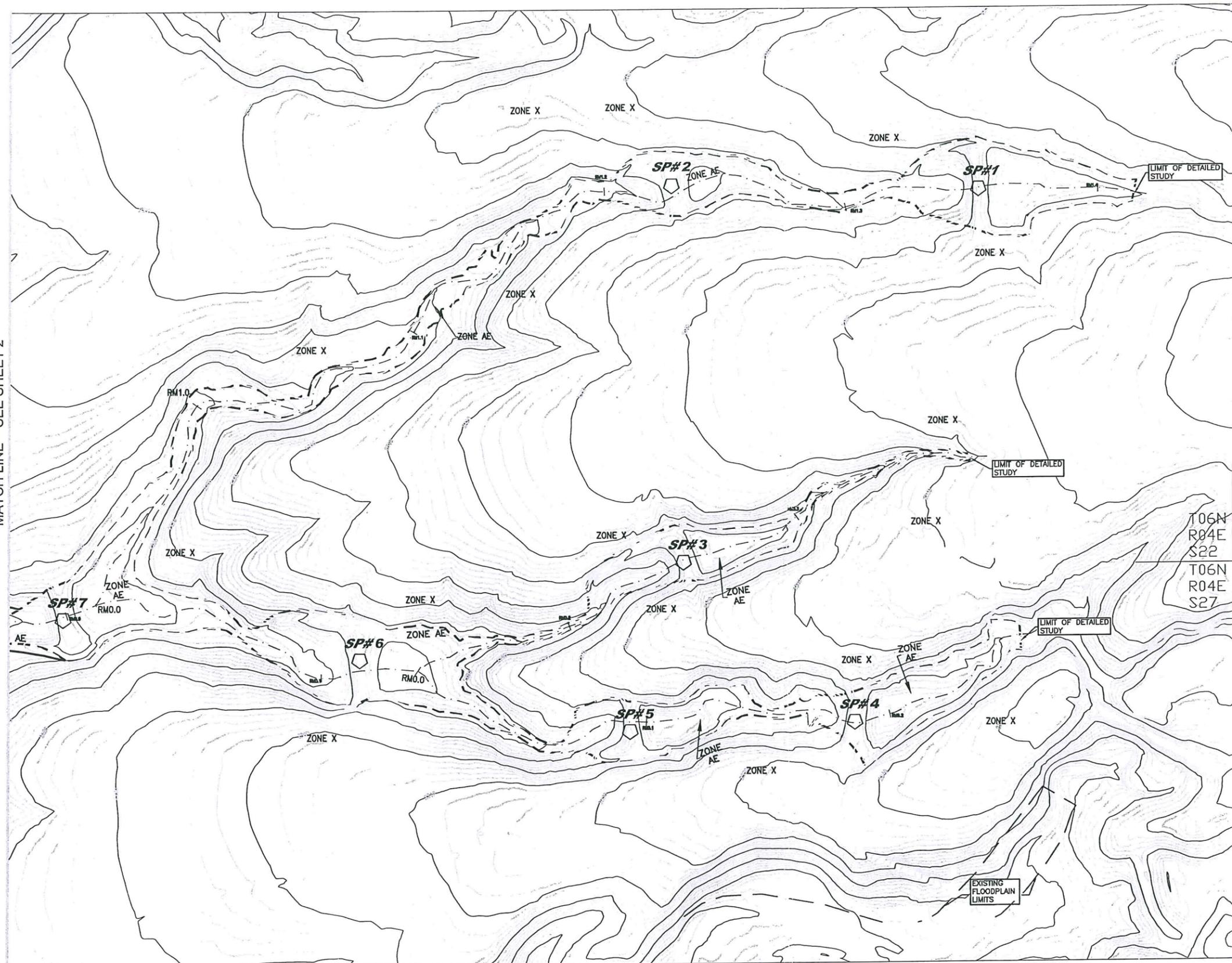PF 1 = Floodplain
PF 2 = Floodway

**CULVERTS**

| River | Reach | River Sta | | Profile # | E.G. US. (ft) | W.S. US. (ft) | E.G. IC (ft) | E.G. OC (ft) | Min El Weir Flow (ft) | Q Culv Group (cfs) | Q Weir (cfs) | Delta WS (ft) | Culv Vel US (ft/s) | Culv Vel DS (ft/s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Galloway2 | Tributary2.2 | 721.95 | Culvert #2 | 1 | 2158.57 | 2158.52 | 2158.58 | 2158.57 | 2157.16 | 34.93 | 544.07 | 1.79 | 7.51 | 7.51 |
| Galloway2 | Tributary2.2 | 721.95 | Culvert #2 | 2 | 2158.83 | 2158.74 | 2158.82 | 2158.83 | 2157.16 | 36.06 | 541.54 | 1.88 | 7.75 | 7.75 |
| | | | | | | | | | | | | | | |
| Galloway2 | Tributary2.2 | 805.12 | Culvert #1 | 1 | 2161.45 | 2161.33 | 2161.44 | 2161.45 | 2160.15 | 18.03 | 560.34 | 2.82 | 5.74 | 5.74 |
| Galloway2 | Tributary2.2 | 805.12 | Culvert #1 | 2 | 2161.45 | 2161.33 | 2161.45 | 2161.45 | 2160.15 | 17.21 | 562.08 | 2.55 | 5.48 | 5.48 |
| | | | | | | | | | | | | | | |
| Galloway5 | Tributary2B | 981.91 | Culvert #3 | 1 | 2325.44 | 2325.44 | 2325.26 | 2325.44 | 2325.06 | 39.77 | 29.23 | 19.36 | 7.71 | 10.15 |
| Galloway5 | Tributary2B | 981.91 | Culvert #3 | 2 | 2325.44 | 2325.44 | 2325.26 | 2325.44 | 2325.06 | 39.77 | 29.23 | 19.36 | 7.71 | 10.15 |

**INLINE STRUCTURES**

| River | Reach | River Sta | Profile # | E.G. Elev (ft) | W.S. Elev (ft) | Q Total (cfs) | Q Weir (cfs) |
|---|---|---|---|---|---|---|---|
| Galloway1 | Tributary2.1 | 1668.4 | 1 | 2317.56 | 2317.53 | 180 | 180 |
| Galloway1 | Tributary2.1 | 1668.4 | 2 | 2317.56 | 2317.53 | 180 | 180 |
| | | | | | | | |
| Galloway1 | Tributary2.1 | 2330.42 | 1 | 2343.68 | 2343.32 | 180 | 180 |
| Galloway1 | Tributary2.1 | 2330.42 | 2 | 2343.68 | 2343.32 | 180 | 180 |
| | | | | | | | |
| Galloway2 | Tributary2.2 | 1222.37 | 1 | 2167.15 | 2166.93 | 579 | 579 |
| Galloway2 | Tributary2.2 | 1222.37 | 2 | 2167.15 | 2166.93 | 579 | 579 |
| | | | | | | | |
| Galloway2 | Tributary2.2 | 2955.8 | 1 | 2203.4 | 2203.26 | 579 | 579 |
| Galloway2 | Tributary2.2 | 2955.8 | 2 | 2203.39 | 2203.25 | 579 | 579 |
| | | | | | | | |
| Galloway2 | Tributary2.2 | 4747.72 | 1 | 2253.76 | 2253.72 | 579 | 579 |
| Galloway2 | Tributary2.2 | 4747.72 | 2 | 2253.77 | 2253.72 | 579 | 579 |
| | | | | | | | |
| Galloway3 | Tributary2A.1 | 604.11 | 1 | 2315.2 | 2315.19 | 81 | 81 |
| Galloway3 | Tributary2A.1 | 604.11 | 2 | 2315.2 | 2315.19 | 81 | 81 |
| | | | | | | | |
| Galloway4 | Tributary2A.2 | 611.95 | 1 | 2277.25 | 2277.25 | 146 | 146 |
| Galloway4 | Tributary2A.2 | 611.95 | 2 | 2277.25 | 2277.25 | 146 | 146 |
| | | | | | | | |
| Galloway5 | Tributary2B | 479.33 | 1 | 2302.49 | 2302.4 | 69 | 69 |
| Galloway5 | Tributary2B | 479.33 | 2 | 2302.49 | 2302.4 | 69 | 69 |

## LEGEND

100-YR FLOODPLAIN BOUNDARY ————————

100-YR FLOODWAY BOUNDARY – – – – – –

STOCK POND DESIGNATION  *SP#1*  ⬠

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.04 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

SHEET INDEX MAP

T06N R04E S22

T06N R04E S27
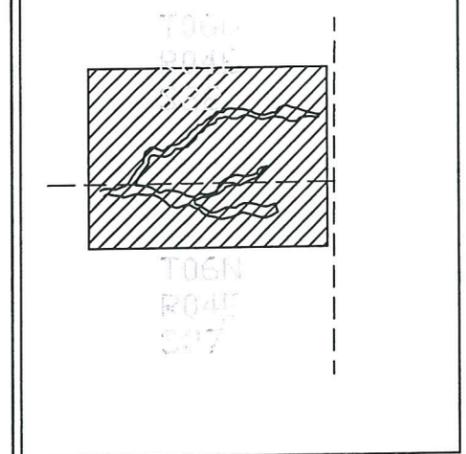
NOTES

# FIGURE B.1

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

GALLOWAY WASH TRIBUTARIES
WITH STOCK POND IDENTIFICATION
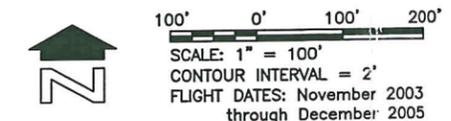
| | NO. | REVISION | BY | DATE |
|---|---|---|---|---|

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 1 OF 1

**Map labels:** ZONE X, ZONE AE, SP#1, SP#2, SP#3, SP#4, SP#5, SP#6, SP#7, RM1.0, RM0.0, LIMIT OF DETAILED STUDY, EXISTING FLOODPLAIN LIMITS

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'  0'  100'  200'

N

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

# CAVE CREEK DRAINAGE MASTER PLAN
# FCDMC CONTRACT NUMBER 2004C072
# FLOODPLAIN DELINEATION OF GALLOWAY WASH TRIBUTARIES, WILLOW SPRINGS WASH TRIBUTARIES, AND CAVE CREEK TRIBUTARIES WITHIN CAVE CREEK, ARIZONA

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

## AUTHORITY FOR STUDY

THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY (FCDMC) HAS CONTRACTED HDR TO PREPARE THIS STUDY UNDER THE CONTRACT NUMBER 2004C072 AS PART OF THE CC DMP. PROJECT CONTROL NUMBER 690.02.20.

## PROJECT LOCATION

THE PROJECT SITE IS LOCATED IN THE TOWN OF CAVE CREEK, ARIZONA WITHIN SECTION 13 OF TOWNSHIP 6 NORTH, RANGE 3 EAST, AND SECTIONS 8, 9, 16, 17, 18, 19, 22, 27 AND 28 OF TOWNSHIP 6 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN WITHIN THE COUNTY OF MARICOPA IN THE STATE OF ARIZONA.
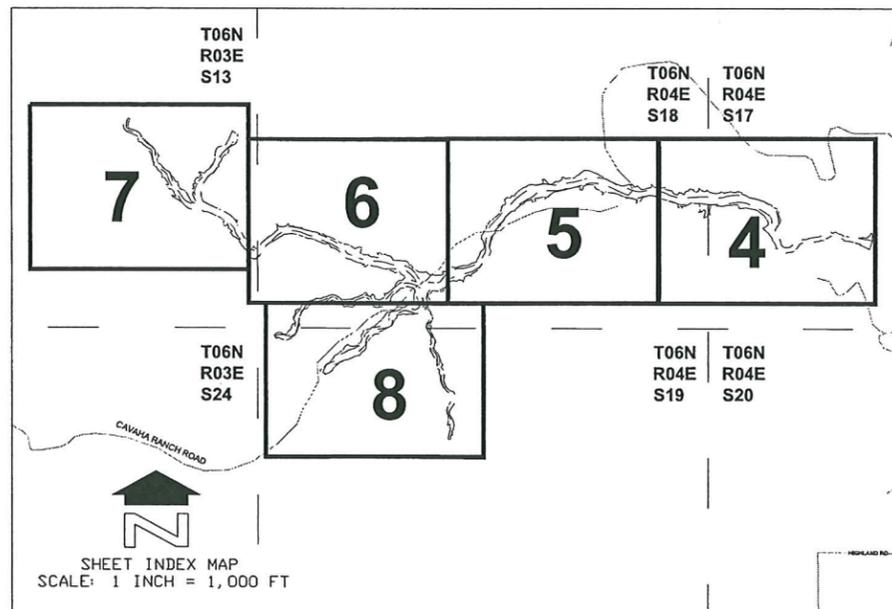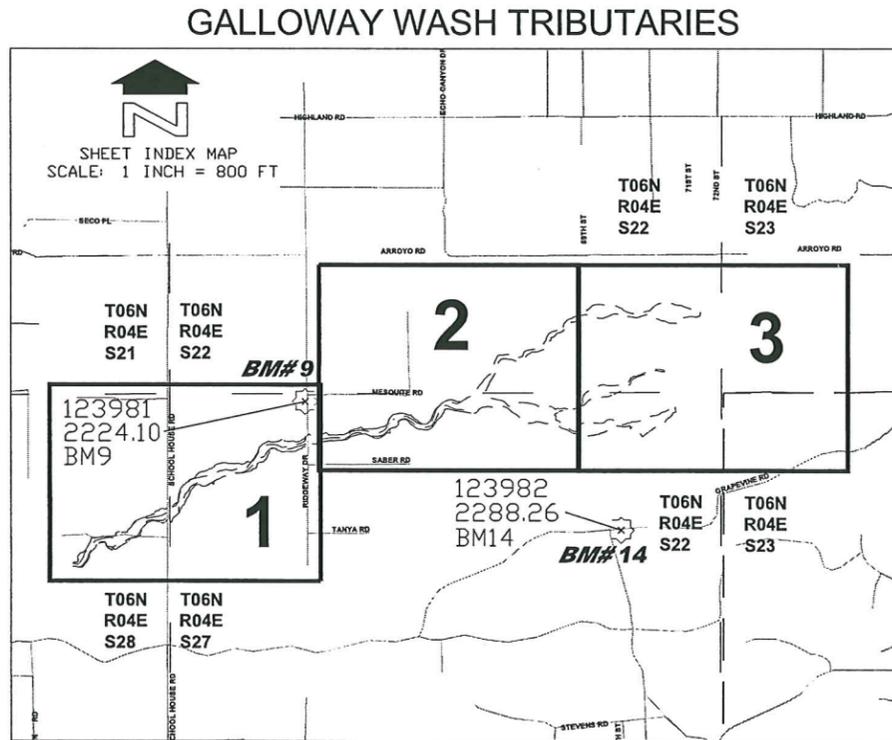
## BENCHMARKS (NAVD 88)

BM #7 – ELEVATION 2193.74
LOCATED AT THE INTERSECTION OF MORNING STAR ROAD AND 54TH STREET (NE CORNER).

BM #8 – ELEVATION 2215.21
LOCATED AT THE INTERSECTION OF SPUR CROSS ROAD AND HONDA BOW ROAD (NE CORNER).

BM #9 – ELEVATION 2224.10
LOCATED AT THE INTERSECTION OF MESQUITE ROAD AND RIDGEWAY ROAD (SW CORNER).

BM #14 – ELEVATION 2288.26
LOCATED AT THE INTERSECTION OF GRAPEVINE ROAD AND GALLOWAY DRIVE (SE CORNER)
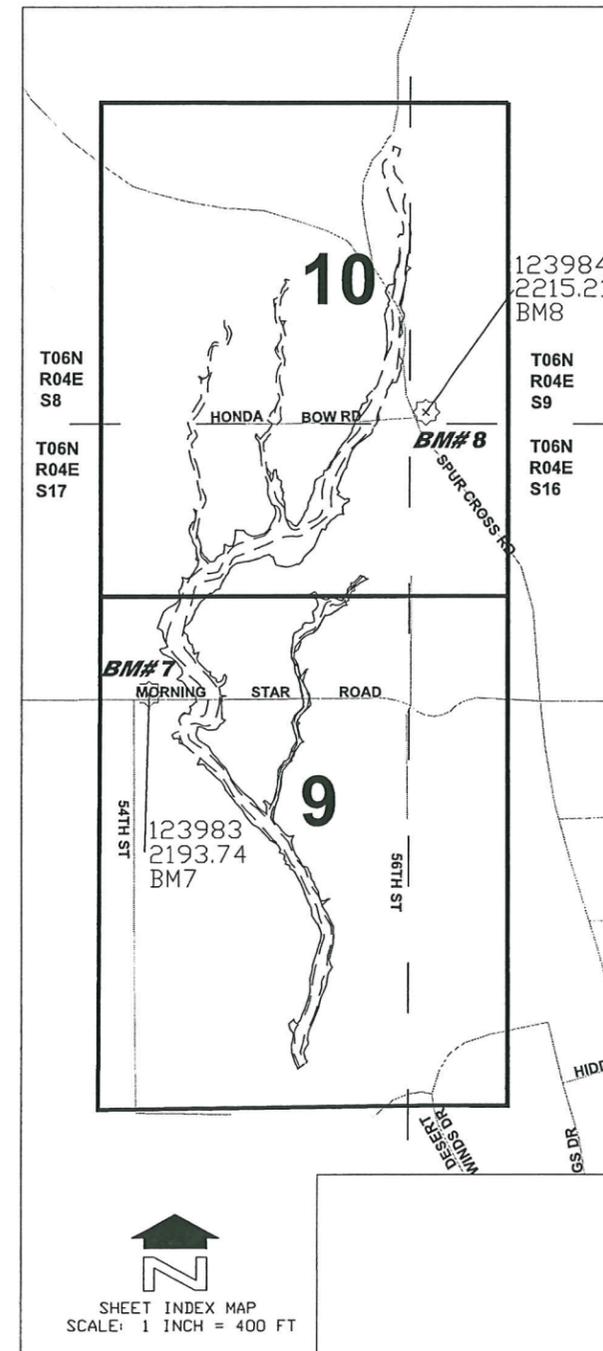
## SHEET INDEX

## GALLOWAY WASH TRIBUTARIES

SHEET INDEX MAP
SCALE: 1 INCH = 800 FT

N

HIGHLAND RD
ECHO CANYON RD
SECO PL
ARROYO RD
ARROYO RD
MESQUITE RD
SABER RD
TANYA RD
GRAPEVINE RD
SCHOOL HOUSE RD
RIDGEWAY RD

T06N R04E S21
T06N R04E S22
T06N R04E S22
T06N R04E S23

123981 2224.10 BM9
BM# 9

**2**
**3**
**1**

123982 2288.26 BM14
BM# 14
T06N R04E S22
T06N R04E S23

T06N R04E S28
T06N R04E S27

STEVENS RD

## CAVE CREEK TRIBUTARIES

T06N R03E S13
T06N R04E S18
T06N R04E S17

**7**
**6**
**5**
**4**

T06N R03E S24
**8**
T06N R04E S19
T06N R04E S20

CAVANA RANCH ROAD
HIGHLAND RD

SHEET INDEX MAP
SCALE: 1 INCH = 1,000 FT
N

## WILLOW SPRINGS WASH TRIBUTARIES

T06N R04E S22
T06N R04E S23

**10**

123984 2215.21 BM8

T06N R04E S8
T06N R04E S9
T06N R04E S16
T06N R04E S17

HONDA BOW RD
BM# 8
SPUR CROSS RD

BM# 7
MORNING STAR ROAD

54TH ST
56TH ST
123983 2193.74 BM7

**9**

DESERT WINDS DR
HIDDEN
GS DR

SHEET INDEX MAP
SCALE: 1 INCH = 400 FT
N

## SURVEY STATEMENT

I, STONE E. WAHL, AN ARIZONA REGISTERED LAND SURVEYOR, CERTIFY THAT THE FIELD SURVEYS, DOCUMENTED HEREIN, ALONG WITH ALL FIELD, AND OFFICE PROCESS PROCEDURES, USED DURING THE COURSE OF THIS SURVEY, WERE PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THESE SURVEYS, ARE RETRACEABLE, AND REPEATABLE. FURTHER, I CERTIFY THAT THE SUREY REPORT WAS PREPARED UNDER MY DIRECT SUPERVISION.
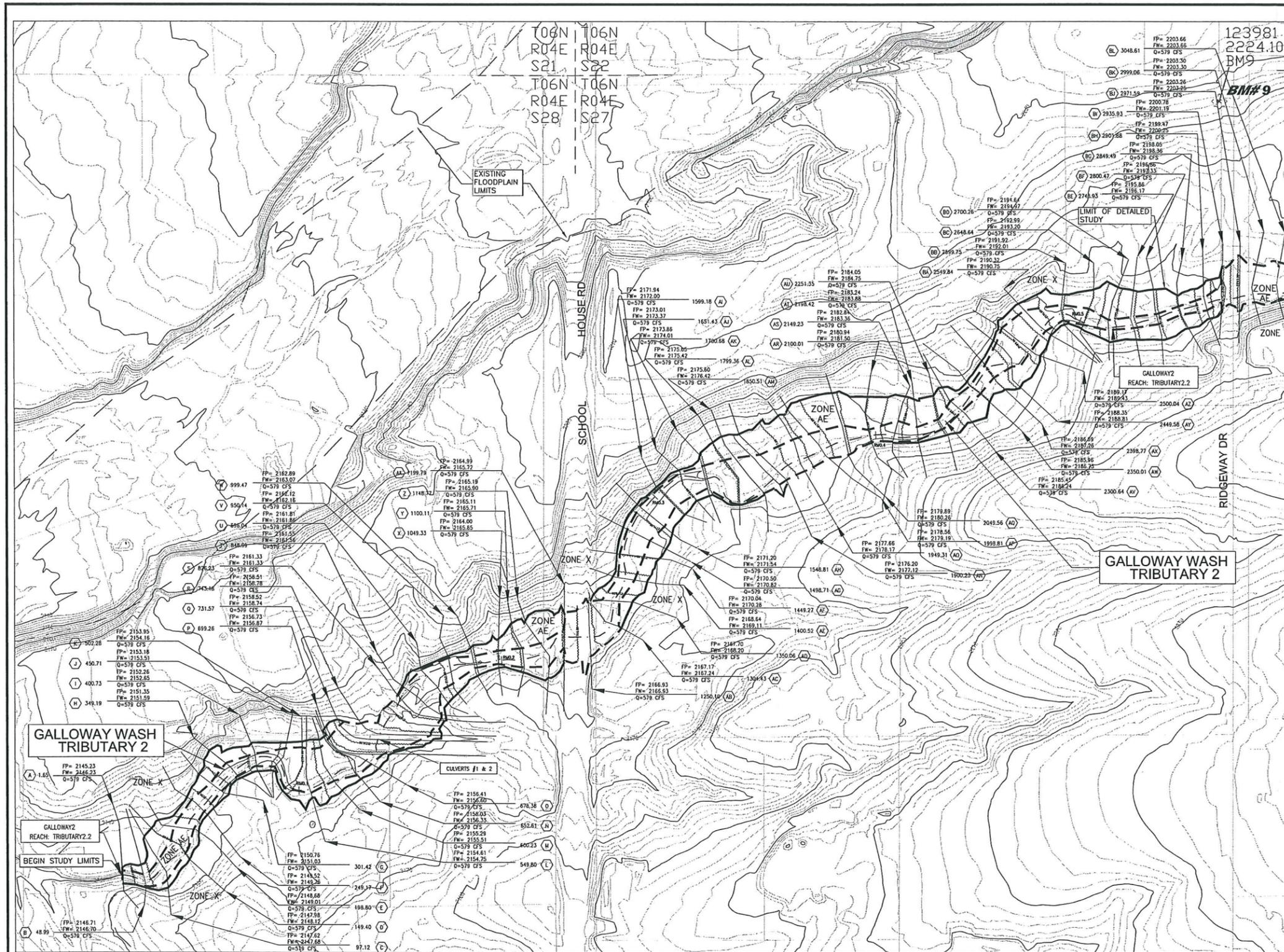
STONE E. WAHL
AZ RLS #28237

## ABBREVIATIONS

DMP – DRAINAGE MASTER PLAN
CC – CAVE CREEK
ROW – RIGHT OF WAY
EXIST – EXISTING
BCHH – BRASS CAP HAND HOLE
T. – TOWNSHIP
R. – RANGE
S. – SECTION
N.T.S. – NOT TO SCALE
BM – BENCHMARK

PROJECT LOCATIONS

CAREFREE HIGHWAY
CAVE CREEK ROAD

VICINITY MAP
N
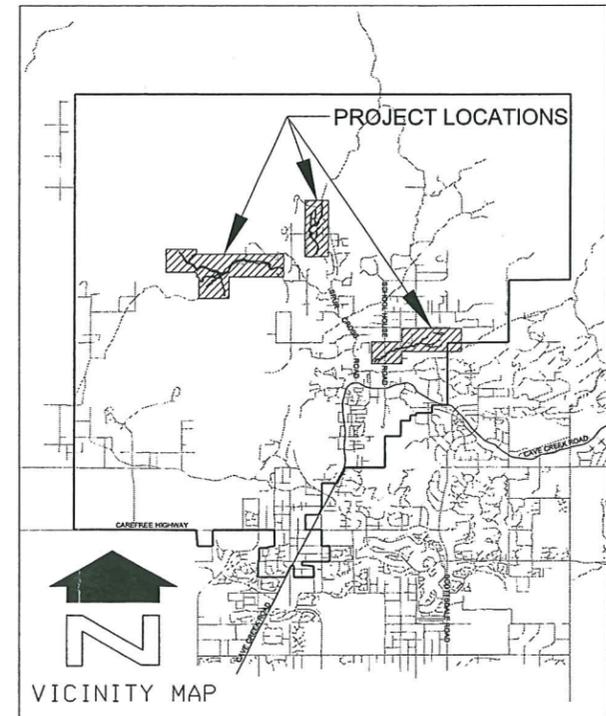
HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

MATCH LINE  SEE SHEET 2

123981
2224.10
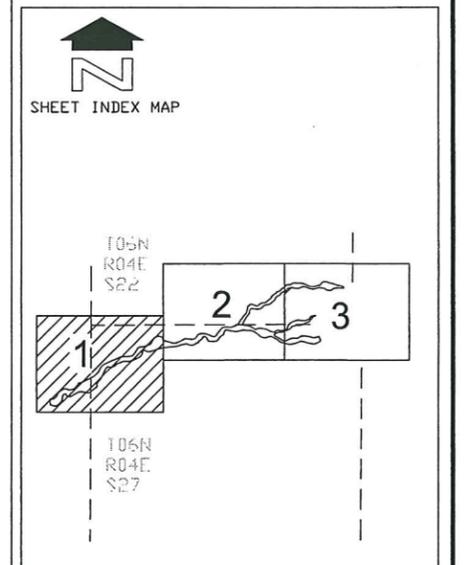BM9
BM# 9

GALLOWAY WASH TRIBUTARY 2

GALLOWAY WASH TRIBUTARY 2

GALLOWAY2 REACH: TRIBUTARY2.2

BEGIN STUDY LIMITS

CULVERTS #1 & 2

EXISTING FLOODPLAIN LIMITS

LIMIT OF DETAILED STUDY

ZONE X
ZONE AE
ZONE X

HOUSER RD

SCHOOL

RIDGEWAY DR

T06N R04E S21 | T06N R04E S22
T06N R04E S28 | T06N R04E S27

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN BOUNDARY | ———————— |
| 100-YR FLOODWAY BOUNDARY | — — — — — |
| RIVER MILE | RM2.0 ◄RM2.5► RM3.0 |
| CROSS SECTION | (A) 144.44 |
| BASE FLOOD ELEVATION | ∼∼∼ 2265.00 ∼∼∼ |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

CROSS SECTION STATION (FEET) ——— FLOODPLAIN WATER SURFACE ELEVATION
FP= 2250.55
FW= 2250.55 ——— FLOODWAY WATER SURFACE ELEVATION
Q =4630 CFS
PROPOSED FEMA CROSS SECTION DESIGNATION ——— 100 YEAR DISCHARGE

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.04 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

NO BENCHMARK INSTALLED WITHIN THIS WORK MAP

**SHEET INDEX MAP**

T06N R04E S22

1  2  3

T06N R04E S27

## NOTES

1- THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING GALLOWAY WASH FLOOD PROFILE AT RIVER MILE 5808, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "G" AND "I". REFER TO PROFILE PANEL 144P, AND REFER TO FIRM PANEL # 04013C0805H, DATED SEPTEMBER 30, 2005.

2- CROSS SECTION STATIONS DENOTED WITH "**" UTILIZE TOP WIDTHS THAT DIFFER FROM THE PROPOSED HEC-RAS MODEL. REFER TO SECTION 5.7 OF THE PHASE II TDN FOR FURTHER DISCUSSION RELATING TO THIS TOPIC.

3- CROSS SECTIONS IMMEDIATELY DOWNSTREAM OF THE STOCK PONDS HAVE BEEN PRESENTED GRAPHICALLY WITH INTERVALS OF FIVE FOOT FOR IMPROVED LEGIBILITY. A ONE FOOT ANALYSIS HAS BEEN CONDUCTED TO SUPPORT THE DELINEATION MODEL.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 2 | | | |

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072
GALLOWAY WASH TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ
STOCK POND ALTERNATIVE

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

35571
LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 2 OF 10

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
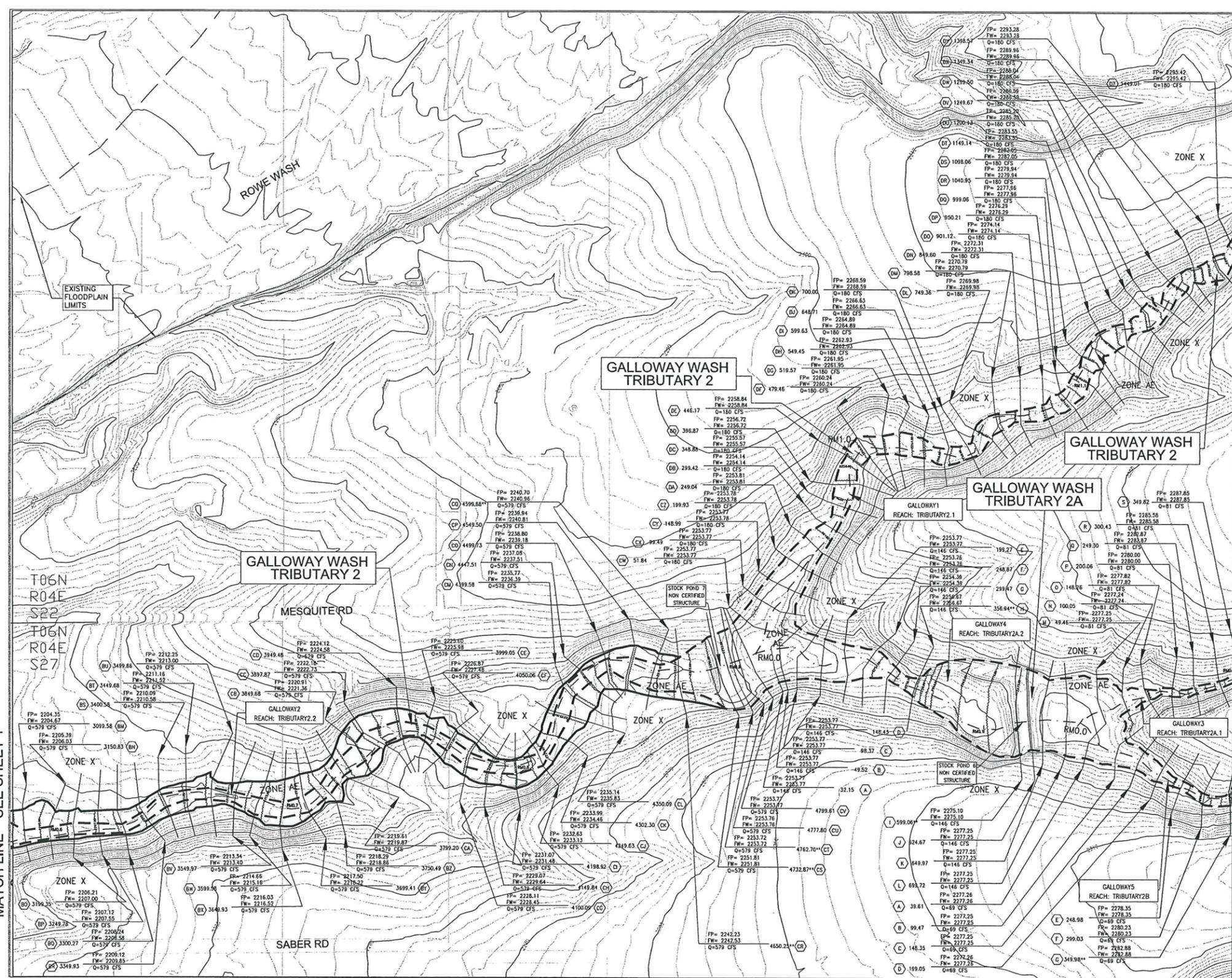FLIGHT DATES: November 2003 through December 2005

100'  0'  100'  200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA PROVIDED BY COOPER AERIAL SURVEYS COMPANY

ROWE WASH

EXISTING FLOODPLAIN LIMITS

GALLOWAY WASH TRIBUTARY 2

GALLOWAY WASH TRIBUTARY 2

GALLOWAY WASH TRIBUTARY 2A

GALLOWAY1 REACH: TRIBUTARY2.1

GALLOWAY4 REACH: TRIBUTARY2A.2

STOCK POND NON CERTIFIED STRUCTURE

STOCK POND NON CERTIFIED STRUCTURE

GALLOWAY2 REACH: TRIBUTARY2.2

GALLOWAY3 REACH: TRIBUTARY2A.1

GALLOWAY5 REACH: TRIBUTARY2B

MESQUITE RD

SABER RD

ZONE X
ZONE AE

T06N R04E S22
T06N R04E S27

MATCH LINE   SEE SHEET 1
MATCH LINE   SEE SHEET 3

GALLOWAY WASH TRIBUTARY 2

GALLOWAY1
REACH: TRIBUTARY2.1

LIMIT OF DETAILED STUDY

ZONE X

ZONE AE

GALLOWAY3
REACH: TRIBUTARY2A.1

GALLOWAY WASH
TRIBUTARY 2A

GALLOWAY5
REACH: TRIBUTARY2B

GALLOWAY WASH
TRIBUTARY 2B

GALLOWAY WASH
TRIBUTARY 2B

STOCK POND 2 NON CERTIFIED STRUCTURE
STOCK POND 1 NON CERTIFIED STRUCTURE
STOCK POND 3 NON CERTIFIED STRUCTURE
STOCK POND 5 NON CERTIFIED STRUCTURE
STOCK POND 4 NON CERTIFIED STRUCTURE WITH CULVERT #3

EXISTING FLOODPLAIN LIMITS

MATCH LINE   SEE SHEET 2

MATCH LINE   SEE RIGHT

T06N R04E S22 | T06N R04E S23
T06N R04E S27 | T06N R04E S26

## BENCHMARK LOCATION REFERENCE
MATCH LINE   SEE LEFT

UNNAMED TRIBUTARY TO GALLOWAY WASH

123982
2288.26
BM14
BM #14

GALLOWAY WASH NORTH TRIBUTARY

CROSS SECTION DATA KEY FOR GALLOWAY WASH TRIBUTARY 2B

| | | |
|---|---|---|
| (N) 701.05 | FP= 2302.50 FW= 2302.50 Q=69 CFS | |
| (O) 751.53 | FP= 2302.47 FW= 2302.47 Q=69 CFS | |
| (P) 799.84 | FP= 2303.63 FW= 2303.63 Q=69 CFS | |
| (Q) 849.90 | FP= 2305.16 FW= 2305.18 Q=69 CFS | |
| (R) 899.75** | FP= 2306.08 FW= 2306.08 Q=69 CFS | |

## LEGEND

| | |
|---|---|
| 100–YR FLOODPLAIN BOUNDARY | |
| 100–YR FLOODWAY BOUNDARY | |
| RIVER MILE | RM2.0   RM2.5   RM3.0 |
| CROSS SECTION | FP= 2250.55 FW= 2250.55 Q =4630 CFS  A  144.44 |
| | CROSS SECTION STATION (FEET) FLOODPLAIN WATER SURFACE ELEVATION FLOODWAY WATER SURFACE ELEVATION PROPOSED FEMA CROSS SECTION DESIGNATION 100 YEAR DISCHARGE |
| BASE FLOOD ELEVATION | 2265.00 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.04 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|
| BM # 14 | 2288.26 | THE INTERSECTION OF GALLOWAY DRIVE AND GRAPEVINE ROAD (NE CORNER) |

SHEET INDEX MAP

T06N R04E S22
T06N R04E S27

## NOTES

1– THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING GALLOWAY WASH FLOOD PROFILE AT RIVER MILE 5808, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "G" AND "I". REFER TO PROFILE PANEL 144P, AND REFER TO FIRM PANEL # 04013C0805H, DATED SEPTEMBER 30, 2005.

2– CROSS SECTION STATIONS DENOTED WITH "**" UTILIZE TOP WIDTHS THAT DIFFER FROM THE PROPOSED HEC-RAS MODEL. REFER TO SECTION 5.7 OF THE PHASE II TDN FOR FURTHER DISCUSSION RELATING TO THIS TOPIC.

3– CROSS SECTIONS IMMEDIATELY DOWNSTREAM OF THE STOCK PONDS HAVE BEEN PRESENTED GRAPHICALLY WITH INTERVALS OF FIVE FOOT FOR IMPROVED LEGIBILITY. A ONE FOOT ANALYSIS HAS BEEN CONDUCTED TO SUPPORT THE DELINEATION MODEL.

| | | | | |
|---|---|---|---|---|
| 2 | | | | |
| NO. | REVISION | | BY | DATE |

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072
GALLOWAY WASH TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ
STOCK POND ALTERNATIVE

35571
LINDA A. POTTER
ARIZONA, U.S.A.

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA  85018-2311
(602) 522-7700

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 3 OF 10

BENCHMARK INFORMATION
BENCHMARK 14 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
HOLE DEPTH: 36"
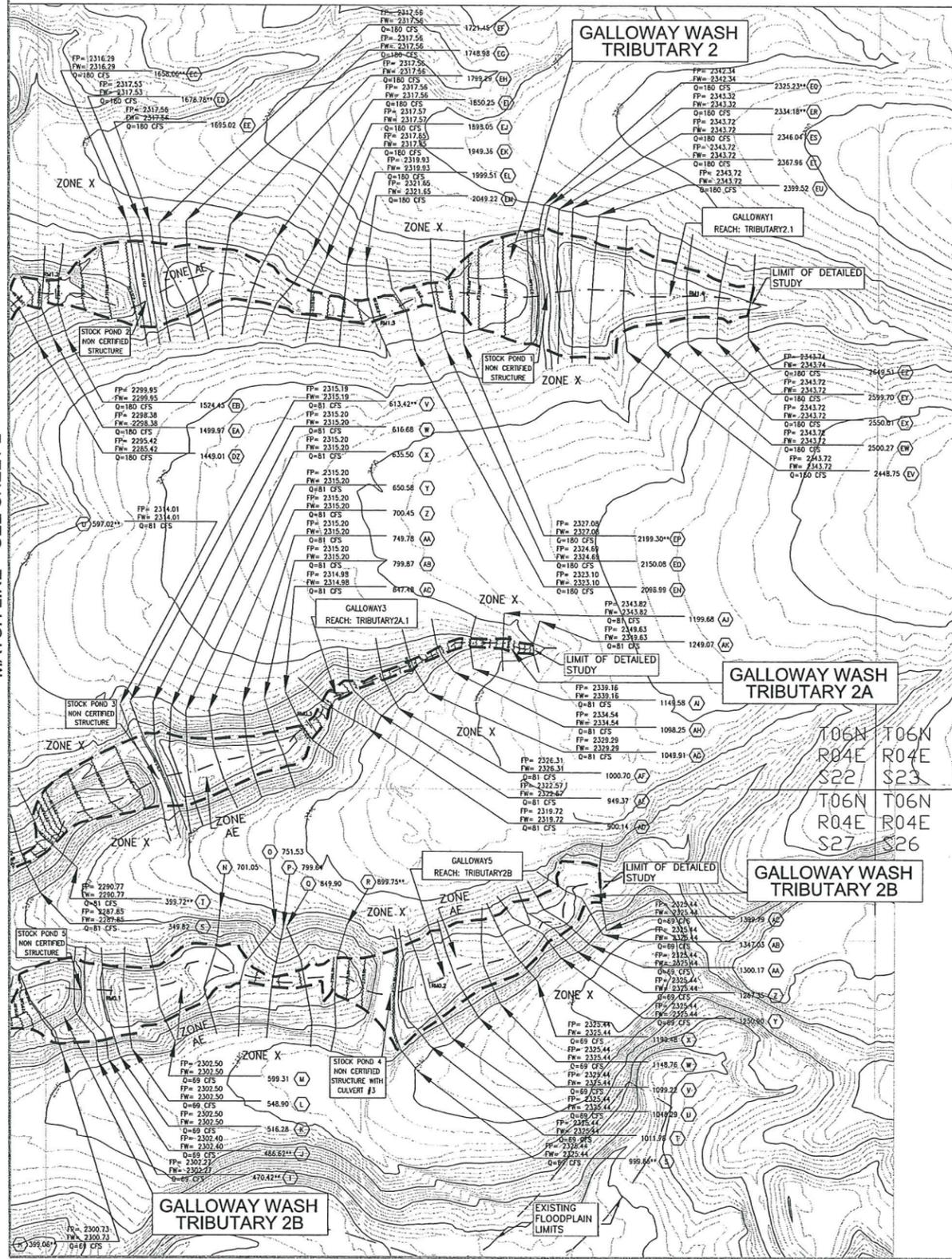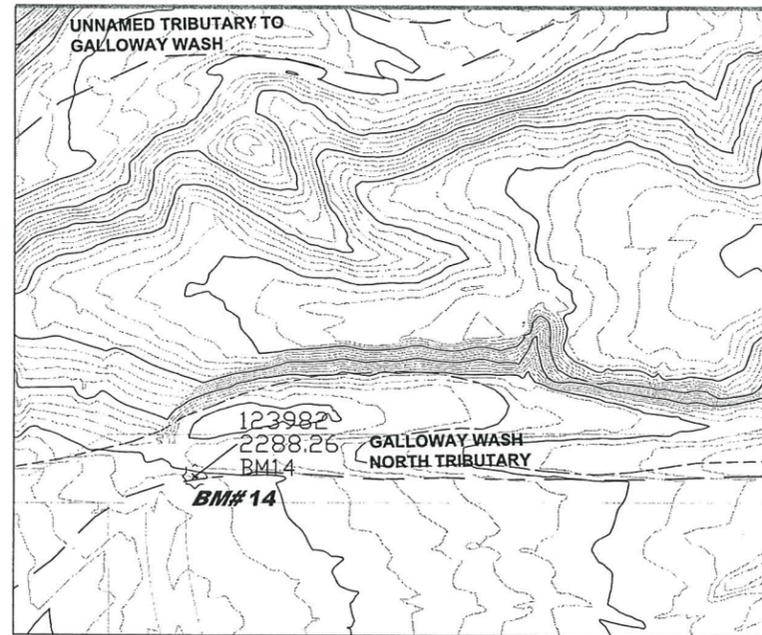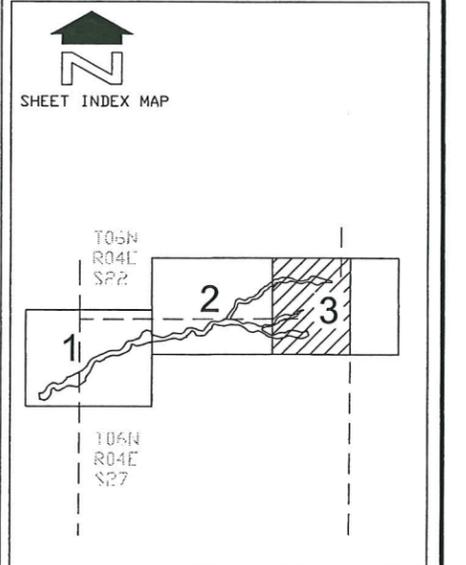ROD FOOTAGE: 12' 6"
ROD TYPE: 9/16" STEEL

** SEE NOTE NUMBER 2

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C04B, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

SCALE:  1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'   0'   100'   200'

N

# WILLOW SPRINGS TRIBUTARIES

# Table 5.9.2.3
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

WSTribFPD.prj
HEC-RAS  Plan: M4
PF 1 = Floodplain
PF 2 = Floodway

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings1 | Tributary6.1 | 51.24 | 1 | 548 | 2194.57 | 2197.94 | | 2198.25 | 0.012257 | 5.47 | 172.32 | 194.67 | 0.74 |
| WillowSprings1 | Tributary6.1 | 51.24 | 2 | 548 | 2194.57 | 2198.39 | | 2199.08 | 0.015048 | 6.7 | 84.02 | 39.55 | 0.8 |
| WillowSprings1 | Tributary6.1 | 74.47 | 1 | 548 | 2194.85 | 2198.27 | 2198.27 | 2198.73 | 0.015141 | 6.18 | 135.39 | 151.37 | 0.75 |
| WillowSprings1 | Tributary6.1 | 74.47 | 2 | 548 | 2194.85 | 2198.75 | | 2199.44 | 0.016344 | 6.68 | 82.08 | 31.49 | 0.73 |
| WillowSprings1 | Tributary6.1 | 99.74 | 1 | 548 | 2195.13 | 2198.79 | 2198.67 | 2199.22 | 0.02446 | 5.86 | 129.11 | 143.28 | 0.74 |
| WillowSprings1 | Tributary6.1 | 99.74 | 2 | 548 | 2195.13 | 2199.39 | | 2199.91 | 0.019519 | 5.78 | 94.76 | 37.02 | 0.64 |
| WillowSprings1 | Tributary6.1 | 149.94 | 1 | 548 | 2195.98 | 2199.66 | | 2200.16 | 0.014026 | 6.34 | 125.22 | 99.59 | 0.73 |
| WillowSprings1 | Tributary6.1 | 149.94 | 2 | 548 | 2195.98 | 2200.09 | | 2200.8 | 0.014098 | 6.78 | 82.8 | 30.61 | 0.72 |
| WillowSprings1 | Tributary6.1 | 192.58 | 1 | 548 | 2196.54 | 2200.12 | | 2200.88 | 0.016131 | 7.66 | 106.26 | 93.4 | 0.89 |
| WillowSprings1 | Tributary6.1 | 192.58 | 2 | 548 | 2196.54 | 2200.52 | 2200.26 | 2201.53 | 0.016119 | 8.06 | 67.98 | 25.38 | 0.87 |
| WillowSprings1 | Tributary6.1 | 247.92 | 1 | 548 | 2197.96 | 2201.14 | | 2201.51 | 0.008348 | 5.52 | 159.84 | 146.81 | 0.62 |
| WillowSprings1 | Tributary6.1 | 247.92 | 2 | 548 | 2197.96 | 2201.66 | | 2202.18 | 0.0078 | 5.81 | 94.37 | 31.47 | 0.59 |
| WillowSprings1 | Tributary6.1 | 299.63 | 1 | 548 | 2198.26 | 2201.81 | | 2202.02 | 0.010928 | 4.51 | 181.96 | 161.97 | 0.62 |
| WillowSprings1 | Tributary6.1 | 299.63 | 2 | 548 | 2198.26 | 2202.21 | | 2202.74 | 0.016006 | 5.85 | 93.71 | 46.04 | 0.72 |
| WillowSprings1 | Tributary6.1 | 349.58 | 1 | 548 | 2199.17 | 2202.25 | | 2202.82 | 0.018308 | 6.49 | 112.73 | 113.1 | 0.9 |
| WillowSprings1 | Tributary6.1 | 349.58 | 2 | 548 | 2199.17 | 2202.89 | | 2203.34 | 0.009004 | 5.39 | 101.68 | 45.48 | 0.64 |
| WillowSprings1 | Tributary6.1 | 400.48 | 1 | 548 | 2199.73 | 2203.34 | 2203.1 | 2203.77 | 0.018899 | 5.61 | 117.02 | 86.31 | 0.73 |
| WillowSprings1 | Tributary6.1 | 400.48 | 2 | 548 | 2199.73 | 2203.47 | 2203.19 | 2204.08 | 0.023385 | 6.27 | 87.46 | 44.8 | 0.79 |
| WillowSprings1 | Tributary6.1 | 449.73 | 1 | 548 | 2200.45 | 2204.2 | | 2204.64 | 0.0168 | 5.79 | 113.77 | 77.05 | 0.74 |
| WillowSprings1 | Tributary6.1 | 449.73 | 2 | 548 | 2200.45 | 2204.51 | | 2205.12 | 0.018954 | 6.28 | 87.31 | 39.18 | 0.74 |
| WillowSprings1 | Tributary6.1 | 499.35 | 1 | 548 | 2201.45 | 2204.87 | | 2205.35 | 0.012637 | 5.78 | 109.7 | 72.54 | 0.73 |
| WillowSprings1 | Tributary6.1 | 499.35 | 2 | 548 | 2201.45 | 2205.34 | | 2205.74 | 0.008433 | 5.09 | 107.75 | 44.73 | 0.58 |
| WillowSprings1 | Tributary6.1 | 550.49 | 1 | 548 | 2201.97 | 2205.44 | | 2205.98 | 0.011479 | 6.12 | 106.42 | 64.13 | 0.7 |
| WillowSprings1 | Tributary6.1 | 550.49 | 2 | 548 | 2201.97 | 2205.71 | | 2206.27 | 0.010517 | 6.01 | 91.2 | 34.41 | 0.65 |
| WillowSprings1 | Tributary6.1 | 599.55 | 1 | 548 | 2202.69 | 2206.08 | 2205.99 | 2206.85 | 0.024921 | 7.24 | 84.38 | 53.94 | 0.88 |
| WillowSprings1 | Tributary6.1 | 599.55 | 2 | 548 | 2202.69 | 2206.33 | | 2207.07 | 0.023828 | 6.9 | 79.42 | 33.54 | 0.79 |
| WillowSprings1 | Tributary6.1 | 649.64 | 1 | 548 | 2203.07 | 2207.54 | 2206.97 | 2208 | 0.019925 | 5.62 | 108.53 | 61.01 | 0.62 |
| WillowSprings1 | Tributary6.1 | 649.64 | 2 | 548 | 2203.07 | 2207.71 | | 2208.21 | 0.021066 | 5.7 | 96.11 | 34.98 | 0.61 |
| WillowSprings1 | Tributary6.1 | 699.83 | 1 | 548 | 2203.8 | 2208.41 | | 2208.61 | 0.008483 | 3.86 | 166.05 | 95.54 | 0.42 |
| WillowSprings1 | Tributary6.1 | 699.83 | 2 | 548 | 2203.8 | 2208.66 | | 2208.92 | 0.009607 | 4.12 | 133 | 46 | 0.43 |
| WillowSprings1 | Tributary6.1 | 721.14 | 1 | 548 | 2204.2 | 2208.61 | | 2208.87 | 0.016202 | 4.21 | 141.65 | 88.55 | 0.53 |
| WillowSprings1 | Tributary6.1 | 721.14 | 2 | 548 | 2204.2 | 2208.92 | | 2209.17 | 0.01383 | 4.04 | 135.77 | 62.26 | 0.48 |
| WillowSprings1 | Tributary6.1 | 748.12 | Culvert | | | | | | | | | | |
| WillowSprings1 | Tributary6.1 | 761.86 | 1 | 548 | 2205.03 | 2210.2 | 2209.01 | 2210.33 | 0.003834 | 2.96 | 196.4 | 104.97 | 0.35 |
| WillowSprings1 | Tributary6.1 | 761.86 | 2 | 548 | 2205.03 | 2210.32 | 2209 | 2210.46 | 0.003629 | 2.91 | 188.36 | 79.71 | 0.33 |
| WillowSprings1 | Tributary6.1 | 803.2 | 1 | 548 | 2206.04 | 2210.33 | | 2210.61 | 0.008713 | 4.24 | 132.45 | 71.36 | 0.5 |
| WillowSprings1 | Tributary6.1 | 803.2 | 2 | 548 | 2206.04 | 2210.45 | | 2210.7 | 0.007689 | 4.05 | 135.22 | 57.95 | 0.47 |
| WillowSprings1 | Tributary6.1 | 839.52 | 1 | 548 | 2206.45 | 2210.65 | | 2210.86 | 0.005318 | 3.7 | 154.72 | 85.17 | 0.41 |
| WillowSprings1 | Tributary6.1 | 839.52 | 2 | 548 | 2206.45 | 2210.73 | | 2210.94 | 0.005185 | 3.64 | 150.56 | 58.2 | 0.4 |
| WillowSprings1 | Tributary6.1 | 852.96 | 1 | 548 | 2207.15 | 2210.56 | 2210.56 | 2211.25 | 0.063921 | 6.88 | 84.34 | 67.41 | 1.04 |
| WillowSprings1 | Tributary6.1 | 852.96 | 2 | 548 | 2207.15 | 2210.74 | 2210.74 | 2211.49 | 0.061128 | 6.93 | 79.11 | 53.43 | 1 |
| WillowSprings1 | Tributary6.1 | 873.68 | 1 | 548 | 2209.1 | 2211.57 | | 2211.99 | 0.021559 | 5.42 | 110.88 | 82.19 | 0.8 |
| WillowSprings1 | Tributary6.1 | 873.68 | 2 | 548 | 2209.1 | 2211.75 | | 2212.22 | 0.021592 | 5.51 | 99.49 | 63.4 | 0.77 |
| WillowSprings1 | Tributary6.1 | 892.66 | 1 | 548 | 2209.45 | 2212.06 | | 2212.31 | 0.012076 | 4.2 | 140.4 | 83.89 | 0.56 |
| WillowSprings1 | Tributary6.1 | 892.66 | 2 | 548 | 2209.45 | 2212.24 | | 2212.55 | 0.012919 | 4.42 | 123.94 | 65.92 | 0.57 |
| WillowSprings1 | Tributary6.1 | 912.45 | 1 | 548 | 2209.06 | 2212.27 | | 2212.68 | 0.019883 | 5.13 | 106.74 | 61.57 | 0.69 |
| WillowSprings1 | Tributary6.1 | 912.45 | 2 | 548 | 2209.06 | 2212.5 | | 2212.82 | 0.014256 | 4.53 | 121.07 | 65 | 0.58 |
| WillowSprings1 | Tributary6.1 | 960.37 | 1 | 548 | 2209.33 | 2213.18 | | 2213.43 | 0.012064 | 4.02 | 136.17 | 57.14 | 0.46 |
| WillowSprings1 | Tributary6.1 | 960.37 | 2 | 548 | 2209.33 | 2213.2 | | 2213.45 | 0.011787 | 3.99 | 137.32 | 57.33 | 0.45 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings1 | Tributary6.1 | 1034.46 | 1 | 548 | 2210.18 | 2213.88 | | 2214.03 | 0.005587 | 3.19 | 180.46 | 81.67 | 0.37 |
| WillowSprings1 | Tributary6.1 | 1034.46 | 2 | 548 | 2210.18 | 2213.91 | | 2214.09 | 0.006625 | 3.43 | 159.82 | 67.4 | 0.39 |
| WillowSprings1 | Tributary6.1 | 1088.19 | 1 | 548 | 2210.68 | 2214.2 | | 2214.37 | 0.00692 | 3.45 | 162.94 | 85.14 | 0.41 |
| WillowSprings1 | Tributary6.1 | 1088.19 | 2 | 548 | 2210.68 | 2214.28 | | 2214.5 | 0.008277 | 3.78 | 144.97 | 64.43 | 0.44 |
| WillowSprings1 | Tributary6.1 | 1153.74 | 1 | 548 | 2211.26 | 2214.79 | | 2215.3 | 0.030075 | 5.99 | 99.25 | 57.48 | 0.75 |
| WillowSprings1 | Tributary6.1 | 1153.74 | 2 | 548 | 2211.26 | 2214.94 | | 2215.59 | 0.0325 | 6.48 | 85.1 | 40.17 | 0.78 |
| WillowSprings1 | Tributary6.1 | 1199.65 | 1 | 548 | 2211.85 | 2216.01 | 2215.44 | 2216.39 | 0.019463 | 5.29 | 114.74 | 63.74 | 0.61 |
| WillowSprings1 | Tributary6.1 | 1199.65 | 2 | 548 | 2211.85 | 2216.3 | 2215.57 | 2216.8 | 0.021596 | 5.72 | 95.75 | 36.53 | 0.62 |
| WillowSprings1 | Tributary6.1 | 1248.76 | 1 | 548 | 2212.31 | 2216.85 | | 2217.15 | 0.01211 | 4.67 | 136.84 | 74.06 | 0.49 |
| WillowSprings1 | Tributary6.1 | 1248.76 | 2 | 548 | 2212.31 | 2217.25 | | 2217.63 | 0.01309 | 4.97 | 110.17 | 34.5 | 0.49 |
| WillowSprings1 | Tributary6.1 | 1299.88 | 1 | 548 | 2212.69 | 2217.52 | | 2217.9 | 0.016144 | 5.35 | 129.1 | 93.12 | 0.57 |
| WillowSprings1 | Tributary6.1 | 1299.88 | 2 | 548 | 2212.69 | 2217.94 | | 2218.45 | 0.018171 | 5.76 | 95.11 | 29.87 | 0.57 |
| WillowSprings1 | Tributary6.1 | 1311.47 | 1 | 548 | 2213.03 | 2217.78 | | 2218.06 | 0.009888 | 4.56 | 146.81 | 91.64 | 0.46 |
| WillowSprings1 | Tributary6.1 | 1311.47 | 2 | 548 | 2213.03 | 2218.31 | | 2218.61 | 0.008692 | 4.42 | 124.1 | 34.95 | 0.41 |
| WillowSprings1 | Tributary6.1 | 1314.76 | 1 | 548 | 2215.95 | 2217.88 | 2217.88 | 2218.58 | 0.017063 | 5.16 | 100.77 | 90.33 | 0.7 |
| WillowSprings1 | Tributary6.1 | 1314.76 | 2 | 548 | 2215.95 | 2218.16 | 2218.16 | 2219.16 | 0.03812 | 8.05 | 68.03 | 34.29 | 1.01 |
| WillowSprings1 | Tributary6.1 | 1350.42 | 1 | 548 | 2216.32 | 2218.6 | 2218.6 | 2219.44 | 0.01957 | 7.42 | 80.57 | 59.12 | 0.95 |
| WillowSprings1 | Tributary6.1 | 1350.42 | 2 | 548 | 2216.32 | 2219.33 | | 2219.8 | 0.008918 | 5.49 | 99.9 | 38.27 | 0.6 |
| WillowSprings1 | Tributary6.1 | 1400.87 | 1 | 548 | 2217.17 | 2219.89 | | 2220.15 | 0.009429 | 4.38 | 147.76 | 80.69 | 0.52 |
| WillowSprings1 | Tributary6.1 | 1400.87 | 2 | 548 | 2217.17 | 2219.93 | | 2220.36 | 0.014265 | 5.28 | 103.76 | 45.84 | 0.62 |
| WillowSprings1 | Tributary6.1 | 1450.19 | 1 | 548 | 2218.05 | 2220.36 | 2220.24 | 2221.06 | 0.030687 | 6.76 | 83.1 | 51.5 | 0.89 |
| WillowSprings1 | Tributary6.1 | 1450.19 | 2 | 548 | 2218.05 | 2220.68 | | 2221.2 | 0.019304 | 5.79 | 94.69 | 44.8 | 0.7 |
| WillowSprings1 | Tributary6.1 | 1497.15 | 1 | 548 | 2218.05 | 2221.46 | | 2221.81 | 0.009034 | 4.81 | 121.4 | 56.16 | 0.52 |
| WillowSprings1 | Tributary6.1 | 1497.15 | 2 | 548 | 2218.05 | 2221.47 | | 2221.85 | 0.009941 | 4.93 | 111.25 | 41.62 | 0.53 |
| WillowSprings1 | Tributary6.1 | 1549.82 | 1 | 548 | 2218.35 | 2221.84 | | 2222.49 | 0.014319 | 6.55 | 88.59 | 45.31 | 0.72 |
| WillowSprings1 | Tributary6.1 | 1549.82 | 2 | 548 | 2218.35 | 2221.89 | | 2222.54 | 0.013743 | 6.49 | 85.58 | 33.53 | 0.71 |
| WillowSprings1 | Tributary6.1 | 1600.01 | 1 | 548 | 2219.16 | 2222.62 | | 2223.22 | 0.01455 | 6.27 | 90.92 | 44.47 | 0.72 |
| WillowSprings1 | Tributary6.1 | 1600.01 | 2 | 548 | 2219.16 | 2222.65 | | 2223.26 | 0.014642 | 6.28 | 88.04 | 36.98 | 0.72 |
| WillowSprings1 | Tributary6.1 | 1649.18 | 1 | 548 | 2219.23 | 2223.65 | | 2224.1 | 0.021241 | 5.41 | 104.11 | 50.67 | 0.61 |
| WillowSprings1 | Tributary6.1 | 1649.18 | 2 | 548 | 2219.23 | 2223.68 | | 2224.12 | 0.020216 | 5.32 | 105.86 | 50.99 | 0.6 |
| WillowSprings1 | Tributary6.1 | 1702.62 | 1 | 548 | 2219.83 | 2224.75 | | 2225.26 | 0.021593 | 5.71 | 95.94 | 36.86 | 0.62 |
| WillowSprings1 | Tributary6.1 | 1702.62 | 2 | 548 | 2219.83 | 2224.75 | | 2225.26 | 0.021656 | 5.72 | 95.84 | 36.84 | 0.62 |
| WillowSprings1 | Tributary6.1 | 1749.23 | 1 | 548 | 2221.01 | 2225.83 | 2225.72 | 2226.93 | 0.052278 | 8.39 | 65.3 | 27.28 | 0.96 |
| WillowSprings1 | Tributary6.1 | 1749.23 | 2 | 548 | 2221.01 | 2225.83 | 2225.73 | 2226.93 | 0.052251 | 8.39 | 65.31 | 27.28 | 0.96 |
| WillowSprings1 | Tributary6.1 | 1795.8 | 1 | 548 | 2222.1 | 2228.11 | 2227.47 | 2228.79 | 0.030511 | 6.64 | 82.5 | 32.44 | 0.73 |
| WillowSprings1 | Tributary6.1 | 1795.8 | 2 | 548 | 2222.1 | 2228.11 | 2227.47 | 2228.79 | 0.030519 | 6.64 | 82.5 | 32.44 | 0.73 |
| WillowSprings1 | Tributary6.1 | 1849.32 | 1 | 548 | 2223.63 | 2229.42 | | 2229.64 | 0.00878 | 3.77 | 145.42 | 51.61 | 0.4 |
| WillowSprings1 | Tributary6.1 | 1849.32 | 2 | 548 | 2223.63 | 2229.42 | | 2229.64 | 0.00878 | 3.77 | 145.42 | 51.61 | 0.4 |
| WillowSprings1 | Tributary6.1 | 1950.55 | 1 | 548 | 2226.73 | 2230.69 | | 2230.94 | 0.020199 | 4.01 | 136.49 | 81.82 | 0.55 |
| WillowSprings1 | Tributary6.1 | 1950.55 | 2 | 548 | 2226.73 | 2230.69 | | 2230.94 | 0.020199 | 4.01 | 136.49 | 81.82 | 0.55 |
| WillowSprings1 | Tributary6.1 | 1999.91 | 1 | 548 | 2228.39 | 2231.78 | | 2232.29 | 0.034041 | 5.71 | 96.05 | 52.13 | 0.74 |
| WillowSprings1 | Tributary6.1 | 1999.91 | 2 | 548 | 2228.39 | 2231.78 | | 2232.29 | 0.034041 | 5.71 | 96.05 | 52.13 | 0.74 |
| WillowSprings1 | Tributary6.1 | 2049.58 | 1 | 548 | 2230.46 | 2233.65 | 2233.48 | 2234.27 | 0.045847 | 6.31 | 86.81 | 53.02 | 0.87 |
| WillowSprings1 | Tributary6.1 | 2049.58 | 2 | 548 | 2230.46 | 2233.65 | 2233.48 | 2234.27 | 0.045847 | 6.31 | 86.81 | 53.02 | 0.87 |
| WillowSprings1 | Tributary6.1 | 2099.7 | 1 | 548 | 2232.89 | 2236.69 | 2236.69 | 2237.75 | 0.054322 | 8.26 | 66.31 | 31.28 | 1 |
| WillowSprings1 | Tributary6.1 | 2099.7 | 2 | 548 | 2232.89 | 2236.69 | 2236.69 | 2237.75 | 0.054322 | 8.26 | 66.31 | 31.28 | 1 |
| WillowSprings1 | Tributary6.1 | 2150.19 | 1 | 548 | 2234.24 | 2239.08 | | 2239.67 | 0.027009 | 6.18 | 88.73 | 35.88 | 0.69 |
| WillowSprings1 | Tributary6.1 | 2150.19 | 2 | 548 | 2234.24 | 2239.08 | | 2239.67 | 0.027009 | 6.18 | 88.73 | 35.88 | 0.69 |
| WillowSprings2 | Tributary6.2 | 48.03 | 1 | 606 | 2187.47 | 2191.95 | | 2192.12 | 0.005589 | 3.77 | 207.16 | 108.35 | 0.4 |
| WillowSprings2 | Tributary6.2 | 48.03 | 2 | 606 | 2187.47 | 2192.6 | | 2192.93 | 0.006996 | 4.57 | 132.64 | 38.82 | 0.44 |
| WillowSprings2 | Tributary6.2 | 82.26 | 1 | 606 | 2187.34 | 2192.1 | | 2192.31 | 0.004926 | 4.25 | 199.79 | 107.9 | 0.44 |
| WillowSprings2 | Tributary6.2 | 82.26 | 2 | 606 | 2187.34 | 2192.77 | | 2193.18 | 0.006285 | 5.11 | 118.69 | 33.12 | 0.48 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings2 | Tributary6.2 | 129.88 | 1 | 606 | 2188.18 | 2192.26 | | 2192.69 | 0.009074 | 6 | 149.95 | 106.77 | 0.66 |
| WillowSprings2 | Tributary6.2 | 129.88 | 2 | 606 | 2188.18 | 2192.97 | | 2193.6 | 0.008892 | 6.38 | 94.95 | 28.82 | 0.62 |
| WillowSprings2 | Tributary6.2 | 206 | 1 | 606 | 2190.16 | 2193.03 | | 2193.54 | 0.0173 | 6.52 | 127.86 | 96.51 | 0.81 |
| WillowSprings2 | Tributary6.2 | 206 | 2 | 606 | 2190.16 | 2193.75 | | 2194.43 | 0.013103 | 6.59 | 91.96 | 33.42 | 0.7 |
| WillowSprings2 | Tributary6.2 | 249.64 | 1 | 606 | 2190.81 | 2193.89 | | 2194.34 | 0.019745 | 5.99 | 130.13 | 100.82 | 0.76 |
| WillowSprings2 | Tributary6.2 | 249.64 | 2 | 606 | 2190.81 | 2194.49 | | 2195.06 | 0.015758 | 6.12 | 101.21 | 40.44 | 0.68 |
| WillowSprings2 | Tributary6.2 | 306.53 | 1 | 606 | 2191.28 | 2194.92 | | 2195.12 | 0.010328 | 3.87 | 182.36 | 116.64 | 0.47 |
| WillowSprings2 | Tributary6.2 | 306.53 | 2 | 606 | 2191.28 | 2195.51 | | 2195.75 | 0.008763 | 3.94 | 153.64 | 56.83 | 0.42 |
| WillowSprings2 | Tributary6.2 | 399.34 | 1 | 606 | 2192.6 | 2195.8 | | 2196.08 | 0.010254 | 4.67 | 160.3 | 107.08 | 0.57 |
| WillowSprings2 | Tributary6.2 | 399.34 | 2 | 606 | 2192.6 | 2196.25 | | 2196.61 | 0.009074 | 4.83 | 125.57 | 49.59 | 0.53 |
| WillowSprings2 | Tributary6.2 | 450.33 | 1 | 606 | 2192.91 | 2196.32 | | 2196.66 | 0.011651 | 5.2 | 151.84 | 103.46 | 0.63 |
| WillowSprings2 | Tributary6.2 | 450.33 | 2 | 606 | 2192.91 | 2196.71 | | 2197.21 | 0.013262 | 5.76 | 108.04 | 44.02 | 0.64 |
| WillowSprings2 | Tributary6.2 | 498.92 | 1 | 606 | 2193.81 | 2196.98 | | 2197.16 | 0.008125 | 3.98 | 219.96 | 205.96 | 0.52 |
| WillowSprings2 | Tributary6.2 | 498.92 | 2 | 606 | 2193.81 | 2197.43 | | 2197.76 | 0.009036 | 4.59 | 132.04 | 58.94 | 0.54 |
| WillowSprings3 | Tributary6.3 | 55.31 | 1 | 1017 | 2171.51 | 2174.47 | | 2175.24 | 0.013514 | 7.29 | 144.96 | 60.2 | 0.81 |
| WillowSprings3 | Tributary6.3 | 55.31 | 2 | 1017 | 2171.51 | 2174.79 | 2174.58 | 2175.91 | 0.016414 | 8.63 | 122.27 | 43.85 | 0.9 |
| WillowSprings3 | Tributary6.3 | 95.43 | 1 | 1017 | 2171.59 | 2175.19 | | 2175.63 | 0.006313 | 5.61 | 194.15 | 78.6 | 0.59 |
| WillowSprings3 | Tributary6.3 | 95.43 | 2 | 1017 | 2171.59 | 2175.73 | | 2176.41 | 0.008145 | 6.58 | 154.49 | 45.88 | 0.63 |
| WillowSprings3 | Tributary6.3 | 122.08 | 1 | 1017 | 2171.87 | 2175.29 | 2174.72 | 2175.86 | 0.008127 | 6.54 | 175.52 | 72.83 | 0.68 |
| WillowSprings3 | Tributary6.3 | 122.08 | 2 | 1017 | 2171.87 | 2175.92 | 2175.02 | 2176.63 | 0.007846 | 6.73 | 151.06 | 43.47 | 0.64 |
| WillowSprings3 | Tributary6.3 | 150.2 | 1 | 1017 | 2172.15 | 2175.47 | 2175.04 | 2176.15 | 0.009879 | 7.09 | 163.39 | 69.94 | 0.73 |
| WillowSprings3 | Tributary6.3 | 150.2 | 2 | 1017 | 2172.15 | 2176.08 | 2175.3 | 2176.92 | 0.010114 | 7.35 | 138.3 | 38.97 | 0.69 |
| WillowSprings3 | Tributary6.3 | 199.81 | 1 | 1017 | 2172.36 | 2175.9 | | 2176.79 | 0.013465 | 8.12 | 143.63 | 64.11 | 0.84 |
| WillowSprings3 | Tributary6.3 | 199.81 | 2 | 1017 | 2172.36 | 2176.48 | | 2177.58 | 0.013938 | 8.44 | 120.49 | 34.55 | 0.8 |
| WillowSprings3 | Tributary6.3 | 250.04 | 1 | 1017 | 2173 | 2176.45 | | 2177.43 | 0.011136 | 8.41 | 135.64 | 55.7 | 0.85 |
| WillowSprings3 | Tributary6.3 | 250.04 | 2 | 1017 | 2173 | 2177.11 | | 2178.2 | 0.010856 | 8.4 | 121.09 | 32.86 | 0.77 |
| WillowSprings3 | Tributary6.3 | 300.22 | 1 | 1017 | 2172.73 | 2176.85 | 2176.82 | 2178.17 | 0.014556 | 9.73 | 122.16 | 49.05 | 0.93 |
| WillowSprings3 | Tributary6.3 | 300.22 | 2 | 1017 | 2172.73 | 2177.57 | | 2178.85 | 0.01283 | 9.08 | 112.05 | 27.12 | 0.79 |
| WillowSprings3 | Tributary6.3 | 351 | 1 | 1017 | 2173.28 | 2177.89 | 2177.51 | 2178.82 | 0.01028 | 8.18 | 146.04 | 57.07 | 0.76 |
| WillowSprings3 | Tributary6.3 | 351 | 2 | 1017 | 2173.28 | 2178.43 | | 2179.44 | 0.009511 | 8.06 | 126.16 | 30.64 | 0.7 |
| WillowSprings3 | Tributary6.3 | 398.51 | 1 | 1017 | 2173.56 | 2178.69 | | 2179.25 | 0.006805 | 6.3 | 186.05 | 62.25 | 0.56 |
| WillowSprings3 | Tributary6.3 | 398.51 | 2 | 1017 | 2173.56 | 2179.29 | | 2179.87 | 0.007182 | 6.11 | 166.42 | 36.12 | 0.5 |
| WillowSprings3 | Tributary6.3 | 448.5 | 1 | 1017 | 2173.92 | 2179.11 | | 2179.6 | 0.007255 | 5.92 | 199.58 | 72.69 | 0.53 |
| WillowSprings3 | Tributary6.3 | 448.5 | 2 | 1017 | 2173.92 | 2179.72 | | 2180.21 | 0.00629 | 5.64 | 180.16 | 40.47 | 0.47 |
| WillowSprings3 | Tributary6.3 | 499.93 | 1 | 1017 | 2174.24 | 2179.62 | | 2180.05 | 0.01013 | 5.58 | 202.41 | 67.97 | 0.52 |
| WillowSprings3 | Tributary6.3 | 499.93 | 2 | 1017 | 2174.24 | 2180.11 | | 2180.65 | 0.01102 | 5.87 | 173.15 | 42.78 | 0.51 |
| WillowSprings3 | Tributary6.3 | 551.23 | 1 | 1017 | 2175.25 | 2180.1 | | 2180.74 | 0.015455 | 6.79 | 168.48 | 62.59 | 0.65 |
| WillowSprings3 | Tributary6.3 | 551.23 | 2 | 1017 | 2175.25 | 2180.64 | | 2181.37 | 0.015481 | 6.88 | 147.79 | 38.7 | 0.62 |
| WillowSprings3 | Tributary6.3 | 599.32 | 1 | 1017 | 2175.25 | 2180.79 | | 2181.35 | 0.011542 | 6.4 | 190.13 | 77.14 | 0.59 |
| WillowSprings3 | Tributary6.3 | 599.32 | 2 | 1017 | 2175.25 | 2181.36 | | 2182.03 | 0.012045 | 6.57 | 154.8 | 37.36 | 0.57 |
| WillowSprings3 | Tributary6.3 | 651.56 | 1 | 1017 | 2175.81 | 2181.42 | | 2181.99 | 0.015663 | 6.35 | 184.35 | 85.25 | 0.61 |
| WillowSprings3 | Tributary6.3 | 651.56 | 2 | 1017 | 2175.81 | 2182.18 | | 2182.68 | 0.01208 | 5.68 | 179.17 | 47.94 | 0.52 |
| WillowSprings3 | Tributary6.3 | 700.59 | 1 | 1017 | 2176.27 | 2182.18 | | 2182.38 | 0.004378 | 3.76 | 305.97 | 101.2 | 0.34 |
| WillowSprings3 | Tributary6.3 | 700.59 | 2 | 1017 | 2176.27 | 2182.8 | | 2183.05 | 0.004528 | 3.98 | 255.83 | 57.71 | 0.33 |
| WillowSprings3 | Tributary6.3 | 729.75 | 1 | 1017 | 2176.37 | 2182.25 | | 2182.56 | 0.008351 | 4.68 | 236.45 | 82.19 | 0.46 |
| WillowSprings3 | Tributary6.3 | 729.75 | 2 | 1017 | 2176.37 | 2182.88 | | 2183.27 | 0.00873 | 5.04 | 201.73 | 53.24 | 0.46 |
| WillowSprings3 | Tributary6.3 | 771.87 | 1 | 1017 | 2177.22 | 2182.4 | | 2182.95 | 0.010064 | 6.51 | 201.22 | 96.5 | 0.63 |
| WillowSprings3 | Tributary6.3 | 771.87 | 2 | 1017 | 2177.22 | 2183.04 | | 2183.76 | 0.010045 | 6.79 | 149.73 | 38.08 | 0.6 |
| WillowSprings3 | Tributary6.3 | 823.09 | 1 | 1017 | 2177.5 | 2183.11 | | 2183.37 | 0.007822 | 4.51 | 281.7 | 138.49 | 0.44 |
| WillowSprings3 | Tributary6.3 | 823.09 | 2 | 1017 | 2177.5 | 2183.89 | | 2184.25 | 0.007921 | 4.81 | 211.38 | 51.71 | 0.42 |
| WillowSprings3 | Tributary6.3 | 865.92 | 1 | 1017 | 2178.34 | 2183.37 | | 2183.62 | 0.004684 | 4.46 | 311.73 | 167.47 | 0.45 |
| WillowSprings3 | Tributary6.3 | 865.92 | 2 | 1017 | 2178.34 | 2184.16 | | 2184.49 | 0.004118 | 4.63 | 221.12 | 58.29 | 0.42 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings3 | Tributary6.3 | 903.9 | 1 | 1017 | 2178.62 | 2183.53 | | 2184 | 0.016753 | 6.08 | 216.72 | 144.74 | 0.65 |
| WillowSprings3 | Tributary6.3 | 903.9 | 2 | 1017 | 2178.62 | 2184.26 | | 2184.82 | 0.012986 | 6.02 | 171.44 | 50.81 | 0.57 |
| WillowSprings3 | Tributary6.3 | 947.58 | 1 | 1017 | 2179.19 | 2184.19 | | 2184.68 | 0.014458 | 5.92 | 204.06 | 117.37 | 0.61 |
| WillowSprings3 | Tributary6.3 | 947.58 | 2 | 1017 | 2179.19 | 2184.87 | | 2185.31 | 0.00947 | 5.35 | 191.97 | 53.91 | 0.5 |
| WillowSprings3 | Tributary6.3 | 962.45 | 1 | 1017 | 2179.74 | 2184.45 | | 2184.87 | 0.011311 | 5.47 | 226.31 | 131.87 | 0.55 |
| WillowSprings3 | Tributary6.3 | 962.45 | 2 | 1017 | 2179.74 | 2185.03 | | 2185.45 | 0.009441 | 5.23 | 194.38 | 53.28 | 0.48 |
| WillowSprings3 | Tributary6.3 | 976.01 | Inl Struct | | | | | | | | | | |
| WillowSprings3 | Tributary6.3 | 989.5 | 1 | 1017 | 2179.75 | 2184.54 | 2183.91 | 2184.95 | 0.012784 | 5.6 | 225.09 | 125.2 | 0.58 |
| WillowSprings3 | Tributary6.3 | 989.5 | 2 | 1017 | 2179.75 | 2185.12 | 2183.91 | 2185.64 | 0.010863 | 5.82 | 178.49 | 53.28 | 0.55 |
| WillowSprings3 | Tributary6.3 | 1023.98 | 1 | 1017 | 2180.23 | 2185.02 | | 2185.24 | 0.005958 | 4.06 | 295.02 | 132.08 | 0.39 |
| WillowSprings3 | Tributary6.3 | 1023.98 | 2 | 1017 | 2180.23 | 2185.66 | | 2185.92 | 0.005359 | 4.08 | 249.05 | 62.9 | 0.36 |
| WillowSprings3 | Tributary6.3 | 1099.74 | 1 | 1017 | 2180.72 | 2185.49 | | 2185.77 | 0.008474 | 4.58 | 269.82 | 137.44 | 0.45 |
| WillowSprings3 | Tributary6.3 | 1099.74 | 2 | 1017 | 2180.72 | 2186.08 | | 2186.43 | 0.007609 | 4.7 | 216.62 | 57.74 | 0.43 |
| WillowSprings3 | Tributary6.3 | 1149.01 | 1 | 1017 | 2180.87 | 2185.94 | | 2186.3 | 0.013067 | 5.2 | 231.34 | 128.94 | 0.54 |
| WillowSprings3 | Tributary6.3 | 1149.01 | 2 | 1017 | 2180.87 | 2186.49 | | 2186.89 | 0.01099 | 5.14 | 199.68 | 59.55 | 0.49 |
| WillowSprings3 | Tributary6.3 | 1191.11 | 1 | 1017 | 2181.15 | 2186.41 | | 2186.89 | 0.012659 | 5.76 | 200.56 | 90.14 | 0.55 |
| WillowSprings3 | Tributary6.3 | 1191.11 | 2 | 1017 | 2181.15 | 2186.91 | | 2187.38 | 0.011063 | 5.5 | 184.85 | 48.03 | 0.49 |
| WillowSprings3 | Tributary6.3 | 1255.73 | 1 | 1017 | 2182.28 | 2187.25 | | 2187.65 | 0.011413 | 5.33 | 216.86 | 101.04 | 0.54 |
| WillowSprings3 | Tributary6.3 | 1255.73 | 2 | 1017 | 2182.28 | 2187.64 | | 2188.07 | 0.010224 | 5.24 | 195.35 | 56.63 | 0.5 |
| WillowSprings3 | Tributary6.3 | 1301.62 | 1 | 1017 | 2182.56 | 2187.68 | | 2187.9 | 0.002873 | 3.97 | 297.14 | 137.07 | 0.39 |
| WillowSprings3 | Tributary6.3 | 1301.62 | 2 | 1017 | 2182.56 | 2188.07 | | 2188.3 | 0.002671 | 3.87 | 263.51 | 72.39 | 0.36 |
| WillowSprings3 | Tributary6.3 | 1349.91 | 1 | 1017 | 2182.84 | 2187.84 | | 2188.14 | 0.007478 | 4.54 | 247.43 | 113.78 | 0.48 |
| WillowSprings3 | Tributary6.3 | 1349.91 | 2 | 1017 | 2182.84 | 2188.22 | | 2188.51 | 0.006375 | 4.33 | 234.64 | 74.3 | 0.43 |
| WillowSprings3 | Tributary6.3 | 1400.05 | 1 | 1017 | 2183.62 | 2188.29 | | 2188.52 | 0.007699 | 4 | 267.87 | 100.98 | 0.42 |
| WillowSprings3 | Tributary6.3 | 1400.05 | 2 | 1017 | 2183.62 | 2188.58 | | 2188.88 | 0.00871 | 4.38 | 232.27 | 74.61 | 0.44 |
| WillowSprings3 | Tributary6.3 | 1455.49 | 1 | 1017 | 2184.42 | 2188.67 | | 2189.06 | 0.008977 | 5.4 | 234.42 | 134.42 | 0.58 |
| WillowSprings3 | Tributary6.3 | 1455.49 | 2 | 1017 | 2184.42 | 2188.94 | | 2189.46 | 0.009786 | 5.76 | 176.43 | 59.5 | 0.59 |
| WillowSprings3 | Tributary6.3 | 1506.59 | 1 | 1017 | 2184.81 | 2189.05 | | 2189.69 | 0.012988 | 6.62 | 177.39 | 99.76 | 0.71 |
| WillowSprings3 | Tributary6.3 | 1506.59 | 2 | 1017 | 2184.81 | 2189.4 | | 2189.99 | 0.010133 | 6.18 | 168.56 | 56.2 | 0.62 |
| WillowSprings3 | Tributary6.3 | 1552.26 | 1 | 1017 | 2185.23 | 2189.65 | | 2190.34 | 0.015195 | 7.04 | 172.72 | 100.57 | 0.78 |
| WillowSprings3 | Tributary6.3 | 1552.26 | 2 | 1017 | 2185.23 | 2189.81 | | 2190.65 | 0.016834 | 7.37 | 137.93 | 51.82 | 0.8 |
| WillowSprings3 | Tributary6.3 | 1598.41 | 1 | 1017 | 2185.97 | 2190.45 | | 2190.96 | 0.011468 | 6.26 | 214.55 | 128.44 | 0.65 |
| WillowSprings3 | Tributary6.3 | 1598.41 | 2 | 1017 | 2185.97 | 2190.57 | | 2191.41 | 0.016073 | 7.39 | 137.63 | 46.23 | 0.75 |
| WillowSprings3 | Tributary6.3 | 1642.19 | 1 | 1017 | 2186.46 | 2190.88 | | 2191.58 | 0.015205 | 7.38 | 188.55 | 123.56 | 0.8 |
| WillowSprings3 | Tributary6.3 | 1642.19 | 2 | 1017 | 2186.46 | 2191.15 | 2190.85 | 2192.24 | 0.018595 | 8.38 | 121.38 | 41.25 | 0.86 |
| WillowSprings4 | Tributary6.4 | 28.8 | 1 | 1182 | 2150.36 | 2156.08 | 2155.05 | 2156.82 | 0.011524 | 7.11 | 187.95 | 59.72 | 0.6 |
| WillowSprings4 | Tributary6.4 | 28.8 | 2 | 1182 | 2150.36 | 2157.08 | 2154.96 | 2157.67 | 0.007485 | 6.15 | 192.25 | 36.18 | 0.47 |
| WillowSprings4 | Tributary6.4 | 54.32 | 1 | 1182 | 2150.63 | 2156.25 | | 2157.17 | 0.011164 | 8.04 | 176.28 | 54.34 | 0.67 |
| WillowSprings4 | Tributary6.4 | 54.32 | 2 | 1182 | 2150.63 | 2157.1 | | 2157.97 | 0.009874 | 7.51 | 157.45 | 29.53 | 0.57 |
| WillowSprings4 | Tributary6.4 | 99.15 | 1 | 1182 | 2152.09 | 2156.9 | | 2157.82 | 0.020272 | 8.27 | 171.6 | 58.71 | 0.73 |
| WillowSprings4 | Tributary6.4 | 99.15 | 2 | 1182 | 2152.09 | 2157.56 | | 2158.66 | 0.020874 | 8.41 | 140.51 | 30.47 | 0.69 |
| WillowSprings4 | Tributary6.4 | 149.37 | 1 | 1182 | 2152.46 | 2158 | | 2158.54 | 0.010179 | 6.27 | 225.35 | 73.78 | 0.55 |
| WillowSprings4 | Tributary6.4 | 149.37 | 2 | 1182 | 2152.46 | 2158.79 | | 2159.38 | 0.009086 | 6.14 | 192.58 | 39.76 | 0.49 |
| WillowSprings4 | Tributary6.4 | 200.32 | 1 | 1182 | 2152.46 | 2158.75 | | 2158.98 | 0.00654 | 4.1 | 325.36 | 94.38 | 0.35 |
| WillowSprings4 | Tributary6.4 | 200.32 | 2 | 1182 | 2152.46 | 2159.54 | | 2159.82 | 0.007208 | 4.26 | 277.63 | 54.97 | 0.33 |
| WillowSprings4 | Tributary6.4 | 254 | 1 | 1182 | 2152.91 | 2159.01 | | 2159.76 | 0.025045 | 7.15 | 179.47 | 60.02 | 0.66 |
| WillowSprings4 | Tributary6.4 | 254 | 2 | 1182 | 2152.91 | 2159.89 | | 2160.5 | 0.018461 | 6.27 | 188.47 | 41.63 | 0.52 |
| WillowSprings4 | Tributary6.4 | 301.79 | 1 | 1182 | 2153.19 | 2160.11 | | 2160.68 | 0.014899 | 6.25 | 205.18 | 59.75 | 0.54 |
| WillowSprings4 | Tributary6.4 | 301.79 | 2 | 1182 | 2153.19 | 2160.74 | | 2161.27 | 0.013824 | 5.85 | 202.03 | 41.84 | 0.47 |
| WillowSprings4 | Tributary6.4 | 348.8 | 1 | 1182 | 2153.57 | 2160.81 | | 2161.29 | 0.011377 | 5.74 | 223.81 | 61.46 | 0.47 |
| WillowSprings4 | Tributary6.4 | 348.8 | 2 | 1182 | 2153.57 | 2161.4 | | 2161.86 | 0.011081 | 5.45 | 217.06 | 41.6 | 0.42 |
| WillowSprings4 | Tributary6.4 | 382.34 | 1 | 1182 | 2154.3 | 2161.17 | | 2161.73 | 0.013299 | 6.14 | 209.87 | 58.14 | 0.5 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings4 | Tributary6.4 | 382.34 | 2 | 1182 | 2154.3 | 2161.73 | | 2162.26 | 0.011787 | 5.89 | 201.93 | 39.04 | 0.46 |
| WillowSprings4 | Tributary6.4 | 428.32 | 1 | 1182 | 2154.66 | 2161.88 | | 2162.23 | 0.008754 | 5.01 | 263.52 | 71.35 | 0.41 |
| WillowSprings4 | Tributary6.4 | 428.32 | 2 | 1182 | 2154.66 | 2162.37 | | 2162.79 | 0.010579 | 5.17 | 228.79 | 43.62 | 0.4 |
| WillowSprings4 | Tributary6.4 | 451.96 | 1 | 1182 | 2154.66 | 2162.18 | | 2162.39 | 0.004155 | 3.94 | 347.75 | 79.89 | 0.29 |
| WillowSprings4 | Tributary6.4 | 451.96 | 2 | 1182 | 2154.66 | 2162.69 | | 2163 | 0.006814 | 4.47 | 264.52 | 42.29 | 0.31 |
| WillowSprings4 | Tributary6.4 | 504.71 | 1 | 1182 | 2155.56 | 2162.36 | | 2162.64 | 0.005017 | 4.66 | 309.61 | 81.42 | 0.37 |
| WillowSprings4 | Tributary6.4 | 504.71 | 2 | 1182 | 2155.56 | 2162.96 | | 2163.3 | 0.004726 | 4.82 | 273.13 | 51.44 | 0.36 |
| WillowSprings4 | Tributary6.4 | 550.4 | 1 | 1182 | 2156.1 | 2162.64 | | 2162.9 | 0.006587 | 4.48 | 316.61 | 91.45 | 0.35 |
| WillowSprings4 | Tributary6.4 | 550.4 | 2 | 1182 | 2156.1 | 2163.23 | | 2163.54 | 0.006245 | 4.7 | 276.27 | 54.42 | 0.35 |
| WillowSprings4 | Tributary6.4 | 600.77 | 1 | 1182 | 2156.7 | 2162.91 | | 2163.48 | 0.015373 | 6.42 | 212.05 | 65.86 | 0.54 |
| WillowSprings4 | Tributary6.4 | 600.77 | 2 | 1182 | 2156.7 | 2163.46 | | 2164.07 | 0.012874 | 6.36 | 198.16 | 41.99 | 0.5 |
| WillowSprings4 | Tributary6.4 | 650.05 | 1 | 1182 | 2157.58 | 2163.72 | | 2164.24 | 0.01564 | 6.16 | 216.41 | 65.34 | 0.53 |
| WillowSprings4 | Tributary6.4 | 650.05 | 2 | 1182 | 2157.58 | 2164.15 | | 2164.73 | 0.014206 | 6.27 | 200.66 | 44.52 | 0.51 |
| WillowSprings4 | Tributary6.4 | 700.84 | 1 | 1182 | 2157.81 | 2164.14 | | 2164.58 | 0.00371 | 5.56 | 245.83 | 68.09 | 0.46 |
| WillowSprings4 | Tributary6.4 | 700.84 | 2 | 1182 | 2157.81 | 2164.57 | | 2165.06 | 0.003551 | 5.6 | 211.82 | 42.84 | 0.44 |
| WillowSprings4 | Tributary6.4 | 715.78 | 1 | 1182 | 2157.61 | 2163.99 | | 2164.77 | 0.00842 | 7.27 | 173.55 | 57.82 | 0.65 |
| WillowSprings4 | Tributary6.4 | 715.78 | 2 | 1182 | 2157.61 | 2164.43 | | 2165.23 | 0.008467 | 7.21 | 163.97 | 37.4 | 0.61 |
| WillowSprings4 | Tributary6.4 | 746.48 | 1 | 1182 | 2160.24 | 2165.06 | 2165.06 | 2166.18 | 0.008632 | 8.88 | 146.43 | 65.82 | 0.9 |
| WillowSprings4 | Tributary6.4 | 746.48 | 2 | 1182 | 2160.24 | 2165.08 | 2165.08 | 2166.6 | 0.012061 | 9.91 | 119.22 | 39.46 | 1.01 |
| WillowSprings4 | Tributary6.4 | 800.56 | 1 | 1182 | 2161.68 | 2166.49 | 2166.49 | 2167.64 | 0.006569 | 9.45 | 152.64 | 63.71 | 0.83 |
| WillowSprings4 | Tributary6.4 | 800.56 | 2 | 1182 | 2161.68 | 2166.55 | 2166.55 | 2168.45 | 0.010919 | 11.33 | 109.34 | 29.19 | 0.99 |
| WillowSprings4 | Tributary6.4 | 851.84 | 1 | 1182 | 2161.58 | 2167.93 | 2167.93 | 2169.19 | 0.008965 | 9.5 | 137.52 | 54.53 | 0.9 |
| WillowSprings4 | Tributary6.4 | 851.84 | 2 | 1182 | 2161.58 | 2167.99 | 2167.99 | 2169.74 | 0.012156 | 10.72 | 112.69 | 32.54 | 1.01 |
| WillowSprings4 | Tributary6.4 | 901.24 | 1 | 1182 | 2163.99 | 2168.5 | 2168.5 | 2169.68 | 0.009981 | 8.98 | 139.47 | 60.54 | 0.96 |
| WillowSprings4 | Tributary6.4 | 901.24 | 2 | 1182 | 2163.99 | 2169.34 | | 2170.23 | 0.005874 | 7.58 | 155.96 | 43.62 | 0.71 |
| WillowSprings4 | Tributary6.4 | 951.78 | 1 | 1182 | 2166.02 | 2169.79 | 2169.79 | 2171.01 | 0.010119 | 9.51 | 141.63 | 62.16 | 0.98 |
| WillowSprings4 | Tributary6.4 | 951.78 | 2 | 1182 | 2166.02 | 2170.22 | 2170.22 | 2171.9 | 0.012499 | 10.39 | 113.75 | 34.01 | 1 |
| WillowSprings4 | Tributary6.4 | 994.62 | 1 | 1182 | 2166.25 | 2170.4 | 2170.4 | 2171.7 | 0.008829 | 9.82 | 146.22 | 59.98 | 0.94 |
| WillowSprings4 | Tributary6.4 | 994.62 | 2 | 1182 | 2166.25 | 2170.67 | 2170.67 | 2172.52 | 0.012515 | 10.93 | 108.18 | 29.51 | 1.01 |
| WillowSprings4 | Tributary6.4 | 1048.17 | 1 | 1182 | 2166.66 | 2171.18 | 2170.93 | 2172.15 | 0.007014 | 8.45 | 158.5 | 64.48 | 0.83 |
| WillowSprings4 | Tributary6.4 | 1048.17 | 2 | 1182 | 2166.66 | 2171.89 | 2171.27 | 2173.09 | 0.007469 | 8.8 | 134.33 | 34.1 | 0.78 |
| WillowSprings4 | Tributary6.4 | 1099.31 | 1 | 1182 | 2168.21 | 2171.8 | 2171.8 | 2173.09 | 0.009676 | 9.58 | 136.16 | 55.99 | 0.97 |
| WillowSprings4 | Tributary6.4 | 1099.31 | 2 | 1182 | 2168.21 | 2172.09 | 2172.02 | 2173.68 | 0.011582 | 10.11 | 116.89 | 34.96 | 0.97 |
| WillowSprings4 | Tributary6.4 | 1151.14 | 1 | 1182 | 2168.5 | 2172.37 | 2172.37 | 2173.67 | 0.008762 | 9.59 | 135.99 | 54.62 | 0.93 |
| WillowSprings4 | Tributary6.4 | 1151.14 | 2 | 1182 | 2168.5 | 2172.66 | 2172.52 | 2174.27 | 0.01095 | 10.17 | 116.17 | 32.4 | 0.95 |
| WillowSprings4 | Tributary6.4 | 1200.11 | 1 | 1182 | 2168.5 | 2173.51 | | 2174.04 | 0.004537 | 6.33 | 217.2 | 83.9 | 0.56 |
| WillowSprings4 | Tributary6.4 | 1200.11 | 2 | 1182 | 2168.5 | 2173.95 | | 2174.75 | 0.006335 | 7.19 | 164.43 | 37.88 | 0.61 |
| WillowSprings4 | Tributary6.4 | 1249.72 | 1 | 1182 | 2169.76 | 2173.7 | | 2174.35 | 0.006604 | 6.67 | 197.78 | 77.81 | 0.64 |
| WillowSprings4 | Tributary6.4 | 1249.72 | 2 | 1182 | 2169.76 | 2174.52 | | 2175.04 | 0.004323 | 5.78 | 204.49 | 49.16 | 0.5 |
| WillowSprings5 | Tributary6C | 57.06 | 1 | 77 | 2171.57 | 2174.8 | | 2174.82 | 0.000256 | 1.14 | 73.66 | 30.76 | 0.12 |
| WillowSprings5 | Tributary6C | 57.06 | 2 | 77 | 2171.57 | 2175.37 | | 2175.4 | 0.000352 | 1.32 | 58.25 | 16.44 | 0.12 |
| WillowSprings5 | Tributary6C | 99.91 | 1 | 77 | 2172.13 | 2174.81 | | 2174.84 | 0.000518 | 1.57 | 58.44 | 36.49 | 0.18 |
| WillowSprings5 | Tributary6C | 99.91 | 2 | 77 | 2172.13 | 2175.38 | | 2175.43 | 0.000711 | 1.72 | 44.65 | 14.71 | 0.17 |
| WillowSprings5 | Tributary6C | 157.74 | 1 | 77 | 2173.21 | 2174.71 | | 2174.99 | 0.009532 | 4.48 | 19.06 | 17.93 | 0.69 |
| WillowSprings5 | Tributary6C | 157.74 | 2 | 77 | 2173.21 | 2175.36 | | 2175.57 | 0.005699 | 3.66 | 21.06 | 10.72 | 0.46 |
| WillowSprings5 | Tributary6C | 181.57 | 1 | 77 | 2173.65 | 2174.96 | 2174.96 | 2175.42 | 0.019728 | 5.82 | 14.69 | 16.36 | 0.96 |
| WillowSprings5 | Tributary6C | 181.57 | 2 | 77 | 2173.65 | 2175.42 | | 2175.84 | 0.015025 | 5.23 | 14.73 | 9.23 | 0.73 |
| WillowSprings5 | Tributary6C | 215 | 1 | 77 | 2174.38 | 2175.72 | 2175.72 | 2176.17 | 0.020351 | 5.53 | 14.98 | 17.72 | 0.96 |
| WillowSprings5 | Tributary6C | 215 | 2 | 77 | 2174.38 | 2175.98 | | 2176.33 | 0.013872 | 4.78 | 16.12 | 12.55 | 0.74 |
| WillowSprings5 | Tributary6C | 249.98 | 1 | 77 | 2174.82 | 2176.41 | 2176.39 | 2176.85 | 0.017672 | 5.55 | 15.68 | 18.09 | 0.91 |
| WillowSprings5 | Tributary6C | 249.98 | 2 | 77 | 2174.82 | 2176.46 | 2176.43 | 2177.02 | 0.024233 | 6.04 | 12.74 | 10.57 | 0.97 |
| WillowSprings5 | Tributary6C | 300.54 | 1 | 77 | 2175.79 | 2177.32 | | 2177.67 | 0.01393 | 5.05 | 17.11 | 19.2 | 0.81 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings5 | Tributary6C | 300.54 | 2 | 77 | 2175.79 | 2177.59 | 2177.47 | 2178.18 | 0.021393 | 6.12 | 12.58 | 8.51 | 0.89 |
| WillowSprings5 | Tributary6C | 349.49 | 1 | 77 | 2176.63 | 2178.2 | 2178.2 | 2178.66 | 0.01994 | 5.87 | 15.66 | 18.1 | 0.96 |
| WillowSprings5 | Tributary6C | 349.49 | 2 | 77 | 2176.63 | 2178.61 | | 2179.03 | 0.013911 | 5.19 | 14.84 | 9.45 | 0.73 |
| WillowSprings5 | Tributary6C | 400.97 | 1 | 77 | 2177.3 | 2179.08 | | 2179.44 | 0.012478 | 5.28 | 17.09 | 18.81 | 0.78 |
| WillowSprings5 | Tributary6C | 400.97 | 2 | 77 | 2177.3 | 2179.33 | | 2179.85 | 0.017347 | 5.79 | 13.3 | 7.99 | 0.79 |
| WillowSprings5 | Tributary6C | 448.03 | 1 | 77 | 2177.76 | 2179.64 | | 2179.99 | 0.011017 | 5.13 | 18.73 | 19.23 | 0.74 |
| WillowSprings5 | Tributary6C | 448.03 | 2 | 77 | 2177.76 | 2180.12 | | 2180.45 | 0.009185 | 4.61 | 16.72 | 8.51 | 0.58 |
| WillowSprings5 | Tributary6C | 500.13 | 1 | 77 | 2179.08 | 2180.57 | 2180.57 | 2180.97 | 0.022209 | 5.32 | 16.26 | 21.4 | 0.91 |
| WillowSprings5 | Tributary6C | 500.13 | 2 | 77 | 2179.08 | 2180.75 | | 2181.13 | 0.018665 | 4.97 | 15.5 | 12.4 | 0.78 |
| WillowSprings5 | Tributary6C | 552.89 | 1 | 77 | 2180.29 | 2181.63 | | 2181.94 | 0.015061 | 5.15 | 21.25 | 35.27 | 0.84 |
| WillowSprings5 | Tributary6C | 552.89 | 2 | 77 | 2180.29 | 2181.79 | 2181.79 | 2182.46 | 0.027762 | 6.57 | 11.73 | 8.89 | 1.01 |
| WillowSprings5 | Tributary6C | 606.15 | 1 | 77 | 2181.17 | 2182.76 | 2182.76 | 2183.22 | 0.01868 | 5.64 | 15.58 | 18.83 | 0.93 |
| WillowSprings5 | Tributary6C | 606.15 | 2 | 77 | 2181.17 | 2183.05 | | 2183.43 | 0.012217 | 4.95 | 15.56 | 10.83 | 0.73 |
| WillowSprings5 | Tributary6C | 648.37 | 1 | 77 | 2182.23 | 2183.68 | | 2183.89 | 0.013355 | 3.14 | 21.57 | 24.61 | 0.58 |
| WillowSprings5 | Tributary6C | 648.37 | 2 | 77 | 2182.23 | 2183.82 | 2183.79 | 2184.32 | 0.039521 | 5.69 | 13.53 | 12.83 | 0.98 |
| WillowSprings5 | Tributary6C | 677.13 | 1 | 77 | 2183.86 | 2185.16 | 2185.16 | 2185.56 | 0.012589 | 5.37 | 15.81 | 20.12 | 0.92 |
| WillowSprings5 | Tributary6C | 677.13 | 2 | 77 | 2183.86 | 2185.26 | 2185.26 | 2185.84 | 0.017726 | 6.14 | 12.54 | 10.85 | 1.01 |
| WillowSprings5 | Tributary6C | 693.52 | Inl Struct | | | | | | | | | | |
| WillowSprings5 | Tributary6C | 707.15 | 1 | 77 | 2184.78 | 2186.3 | 2185.92 | 2186.4 | 0.003664 | 2.57 | 30.01 | 35.7 | 0.49 |
| WillowSprings5 | Tributary6C | 707.15 | 2 | 77 | 2184.78 | 2186.3 | 2185.93 | 2186.4 | 0.003664 | 2.57 | 30.01 | 35.7 | 0.49 |
| WillowSprings5 | Tributary6C | 713.03 | 1 | 77 | 2184.67 | 2186.28 | | 2186.44 | 0.004726 | 3.28 | 23.91 | 26.62 | 0.57 |
| WillowSprings5 | Tributary6C | 713.03 | 2 | 77 | 2184.67 | 2186.28 | | 2186.45 | 0.004774 | 3.29 | 23.45 | 23.22 | 0.58 |
| WillowSprings5 | Tributary6C | 750.74 | 1 | 77 | 2184.81 | 2186.42 | | 2186.71 | 0.007899 | 4.35 | 18.8 | 19.79 | 0.71 |
| WillowSprings5 | Tributary6C | 750.74 | 2 | 77 | 2184.81 | 2186.43 | | 2186.73 | 0.00939 | 4.4 | 17.48 | 14.97 | 0.72 |
| WillowSprings5 | Tributary6C | 800.16 | 1 | 77 | 2185.36 | 2187.09 | 2187.09 | 2187.62 | 0.022593 | 6.16 | 14.79 | 15.97 | 0.93 |
| WillowSprings5 | Tributary6C | 800.16 | 2 | 77 | 2185.36 | 2187.16 | 2187.16 | 2187.87 | 0.034221 | 6.74 | 11.42 | 7.97 | 0.99 |
| WillowSprings5 | Tributary6C | 850.52 | 1 | 77 | 2186.78 | 2188.55 | 2188.55 | 2189.07 | 0.021759 | 6.15 | 15.88 | 17.51 | 0.92 |
| WillowSprings5 | Tributary6C | 850.52 | 2 | 77 | 2186.78 | 2188.78 | 2188.62 | 2189.38 | 0.02622 | 6.2 | 12.42 | 7.63 | 0.86 |
| WillowSprings5 | Tributary6C | 900.27 | 1 | 77 | 2187.34 | 2189.56 | 2189.55 | 2190.19 | 0.022798 | 6.68 | 13.78 | 12.38 | 0.92 |
| WillowSprings5 | Tributary6C | 900.27 | 2 | 77 | 2187.34 | 2190.08 | | 2190.57 | 0.021824 | 5.66 | 13.6 | 6.28 | 0.68 |
| WillowSprings5 | Tributary6C | 951.53 | 1 | 77 | 2189.31 | 2190.96 | 2190.83 | 2191.22 | 0.017551 | 4.44 | 22.34 | 32.73 | 0.71 |
| WillowSprings5 | Tributary6C | 951.53 | 2 | 77 | 2189.31 | 2191.25 | | 2191.53 | 0.015307 | 4.25 | 18.11 | 12.06 | 0.61 |
| WillowSprings5 | Tributary6C | 1000.85 | 1 | 77 | 2189.87 | 2191.98 | 2191.93 | 2192.48 | 0.036901 | 5.74 | 14.13 | 13.23 | 0.91 |
| WillowSprings5 | Tributary6C | 1000.85 | 2 | 77 | 2189.87 | 2192.18 | 2191.91 | 2192.59 | 0.030001 | 5.19 | 14.83 | 10.3 | 0.76 |
| WillowSprings5 | Tributary6C | 1039.68 | 1 | 77 | 2191.13 | 2193.21 | 2193.02 | 2193.61 | 0.022898 | 5.14 | 16.62 | 40.18 | 0.77 |
| WillowSprings5 | Tributary6C | 1039.68 | 2 | 77 | 2191.13 | 2193.27 | 2193.03 | 2193.69 | 0.02653 | 5.18 | 14.87 | 10.21 | 0.76 |
| WillowSprings5 | Tributary6C | 1082.25 | 1 | 77 | 2192.15 | 2194.2 | 2194.1 | 2194.64 | 0.024684 | 5.53 | 15.86 | 15.74 | 0.82 |
| WillowSprings5 | Tributary6C | 1082.25 | 2 | 77 | 2192.15 | 2194.41 | 2194.11 | 2194.85 | 0.027468 | 5.29 | 14.56 | 8.85 | 0.73 |
| WillowSprings5 | Tributary6C | 1101.05 | 1 | 77 | 2192.69 | 2194.68 | 2194.62 | 2195.17 | 0.029812 | 5.67 | 14.27 | 14.53 | 0.9 |
| WillowSprings5 | Tributary6C | 1101.05 | 2 | 77 | 2192.69 | 2194.94 | 2194.61 | 2195.29 | 0.019946 | 4.78 | 16.11 | 10.79 | 0.69 |
| WillowSprings5 | Tributary6C | 1113.82 | 1 | 77 | 2192.69 | 2195.12 | | 2195.41 | 0.011138 | 4.41 | 20.99 | 34.54 | 0.6 |
| WillowSprings5 | Tributary6C | 1113.82 | 2 | 77 | 2192.69 | 2195.2 | | 2195.51 | 0.013685 | 4.42 | 17.44 | 10.03 | 0.59 |
| WillowSprings5 | Tributary6C | 1159.65 | 1 | 77 | 2194.21 | 2195.71 | 2195.66 | 2196.11 | 0.019994 | 5.08 | 15.58 | 39.43 | 0.93 |
| WillowSprings5 | Tributary6C | 1159.65 | 2 | 77 | 2194.21 | 2195.85 | 2195.66 | 2196.16 | 0.014689 | 4.47 | 17.23 | 16.41 | 0.77 |
| WillowSprings5 | Tributary6C | 1201.09 | 1 | 77 | 2194.76 | 2196.78 | 2196.78 | 2197.2 | 0.012955 | 5.2 | 14.81 | 62.21 | 1 |
| WillowSprings5 | Tributary6C | 1201.09 | 2 | 77 | 2194.76 | 2196.78 | 2196.78 | 2197.2 | 0.012941 | 5.2 | 14.81 | 17.48 | 1 |
| WillowSprings5 | Tributary6C | 1208.3 | 1 | 77 | 2194.9 | 2197.1 | 2196.78 | 2197.29 | 0.006468 | 3.46 | 22.24 | 106.54 | 0.68 |
| WillowSprings5 | Tributary6C | 1208.3 | 2 | 77 | 2194.9 | 2197.1 | 2196.78 | 2197.29 | 0.006468 | 3.46 | 22.24 | 32.02 | 0.68 |
| WillowSprings5 | Tributary6C | 1228.74 | 1 | 77 | 2195.31 | 2197.24 | 2196.81 | 2197.41 | 0.005163 | 3.3 | 24.72 | 28.35 | 0.52 |
| WillowSprings5 | Tributary6C | 1228.74 | 2 | 77 | 2195.31 | 2197.23 | 2196.8 | 2197.41 | 0.005457 | 3.35 | 22.98 | 18.72 | 0.53 |
| WillowSprings5 | Tributary6C | 1257.15 | 1 | 77 | 2195.5 | 2197.44 | | 2197.49 | 0.001825 | 2.17 | 52.11 | 56.01 | 0.31 |
| WillowSprings5 | Tributary6C | 1257.15 | 2 | 77 | 2195.5 | 2197.44 | | 2197.51 | 0.002585 | 2.41 | 40.03 | 34.57 | 0.35 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings5 | Tributary6C | 1300.25 | 1 | 77 | 2196.81 | 2198.26 | 2198.26 | 2198.62 | 0.016733 | 5.31 | 19.53 | 30.3 | 0.87 |
| WillowSprings5 | Tributary6C | 1300.25 | 2 | 77 | 2196.81 | 2198.37 | 2198.37 | 2199 | 0.027467 | 6.4 | 12.03 | 9.5 | 1 |
| WillowSprings5 | Tributary6C | 1349.43 | 1 | 77 | 2197.33 | 2199.11 | 2199.11 | 2199.7 | 0.013921 | 6.43 | 14.82 | 16.55 | 0.98 |
| WillowSprings5 | Tributary6C | 1349.43 | 2 | 77 | 2197.33 | 2199.46 | 2199.17 | 2199.95 | 0.013789 | 5.6 | 13.75 | 8.17 | 0.76 |
| WillowSprings5 | Tributary6C | 1399.34 | 1 | 77 | 2198.31 | 2200.16 | 2200.16 | 2200.76 | 0.018109 | 6.61 | 15.04 | 17.85 | 0.97 |
| WillowSprings5 | Tributary6C | 1399.34 | 2 | 77 | 2198.31 | 2200.27 | 2200.27 | 2201.06 | 0.031579 | 7.14 | 10.79 | 6.91 | 1.01 |
| WillowSprings5 | Tributary6C | 1454.68 | 1 | 77 | 2199.72 | 2201.2 | | 2201.57 | 0.011496 | 5.11 | 18.48 | 20.48 | 0.79 |
| WillowSprings5 | Tributary6C | 1454.68 | 2 | 77 | 2199.72 | 2201.64 | | 2201.93 | 0.00852 | 4.28 | 17.99 | 10.28 | 0.57 |
| WillowSprings6 | Tributary6B | 51.85 | 1 | 50 | 2187.86 | 2192.07 | | 2192.08 | 0.000184 | 0.65 | 85.69 | 38.87 | 0.06 |
| WillowSprings6 | Tributary6B | 51.85 | 2 | 50 | 2187.86 | 2192.79 | | 2192.8 | 0.000136 | 0.58 | 86.2 | 21.6 | 0.05 |
| WillowSprings6 | Tributary6B | 83.75 | 1 | 50 | 2188.41 | 2192.08 | | 2192.08 | 0.000142 | 0.62 | 98.53 | 57.09 | 0.07 |
| WillowSprings6 | Tributary6B | 83.75 | 2 | 50 | 2188.41 | 2192.79 | | 2192.8 | 0.000099 | 0.57 | 87.1 | 28.39 | 0.06 |
| WillowSprings6 | Tributary6B | 112.94 | 1 | 50 | 2189.25 | 2192.08 | | 2192.09 | 0.000467 | 0.88 | 70.57 | 56.16 | 0.11 |
| WillowSprings6 | Tributary6B | 112.94 | 2 | 50 | 2189.25 | 2192.8 | | 2192.81 | 0.000331 | 0.8 | 62.48 | 23.3 | 0.09 |
| WillowSprings6 | Tributary6B | 149.93 | 1 | 50 | 2189.53 | 2192.09 | | 2192.12 | 0.000821 | 1.29 | 47.84 | 41.56 | 0.16 |
| WillowSprings6 | Tributary6B | 149.93 | 2 | 50 | 2189.53 | 2192.8 | | 2192.82 | 0.000424 | 1.05 | 47.63 | 18.27 | 0.11 |
| WillowSprings6 | Tributary6B | 179.23 | 1 | 50 | 2190.17 | 2192.1 | | 2192.19 | 0.008291 | 2.47 | 21.13 | 26.56 | 0.44 |
| WillowSprings6 | Tributary6B | 179.23 | 2 | 50 | 2190.17 | 2192.82 | | 2192.85 | 0.001619 | 1.46 | 34.35 | 20.19 | 0.2 |
| WillowSprings6 | Tributary6B | 214.31 | 1 | 50 | 2190.79 | 2192.37 | | 2192.45 | 0.006392 | 2.2 | 22.73 | 21.97 | 0.38 |
| WillowSprings6 | Tributary6B | 214.31 | 2 | 50 | 2190.79 | 2192.88 | | 2192.91 | 0.001853 | 1.48 | 33.74 | 22.02 | 0.21 |
| WillowSprings6 | Tributary6B | 250.28 | 1 | 50 | 2191.22 | 2192.68 | | 2192.84 | 0.019682 | 3.44 | 17.63 | 31.07 | 0.68 |
| WillowSprings6 | Tributary6B | 250.28 | 2 | 50 | 2191.22 | 2192.93 | | 2193.09 | 0.013455 | 3.21 | 15.6 | 14.95 | 0.55 |
| WillowSprings6 | Tributary6B | 300.13 | 1 | 50 | 2192.29 | 2193.96 | 2193.93 | 2194.14 | 0.037261 | 3.45 | 16.02 | 39.82 | 0.8 |
| WillowSprings6 | Tributary6B | 300.13 | 2 | 50 | 2192.29 | 2193.97 | | 2194.17 | 0.03987 | 3.59 | 13.93 | 23.79 | 0.83 |
| WillowSprings6 | Tributary6B | 349.74 | 1 | 50 | 2193.06 | 2194.94 | | 2195.08 | 0.011376 | 2.94 | 17.47 | 21.21 | 0.51 |
| WillowSprings6 | Tributary6B | 349.74 | 2 | 50 | 2193.06 | 2194.97 | | 2195.1 | 0.010792 | 2.87 | 17.41 | 16.42 | 0.49 |
| WillowSprings6 | Tributary6B | 399.65 | 1 | 50 | 2193.74 | 2195.58 | 2195.17 | 2195.71 | 0.013985 | 2.86 | 17.48 | 19.14 | 0.53 |
| WillowSprings6 | Tributary6B | 399.65 | 2 | 50 | 2193.74 | 2195.58 | 2195.17 | 2195.71 | 0.013784 | 2.84 | 17.59 | 19.22 | 0.52 |
| WillowSprings6 | Tributary6B | 448.82 | 1 | 50 | 2194.27 | 2196.36 | | 2196.49 | 0.018157 | 2.83 | 17.68 | 24.56 | 0.59 |
| WillowSprings6 | Tributary6B | 448.82 | 2 | 50 | 2194.27 | 2196.36 | | 2196.49 | 0.018165 | 2.83 | 17.68 | 24.55 | 0.59 |
| WillowSprings6 | Tributary6B | 499.9 | 1 | 50 | 2195.44 | 2197.18 | | 2197.34 | 0.014888 | 3.18 | 15.75 | 18.13 | 0.59 |
| WillowSprings6 | Tributary6B | 499.9 | 2 | 50 | 2195.44 | 2197.18 | | 2197.34 | 0.014888 | 3.18 | 15.75 | 18.13 | 0.59 |
| WillowSprings6 | Tributary6B | 548.45 | 1 | 50 | 2195.95 | 2197.94 | | 2198.17 | 0.018907 | 3.9 | 12.83 | 13.11 | 0.69 |
| WillowSprings6 | Tributary6B | 548.45 | 2 | 50 | 2195.95 | 2197.94 | | 2198.17 | 0.018718 | 3.88 | 12.88 | 13.14 | 0.69 |
| WillowSprings6 | Tributary6B | 599.99 | 1 | 50 | 2197.31 | 2198.73 | | 2198.96 | 0.01267 | 3.78 | 13.22 | 18.36 | 0.79 |
| WillowSprings6 | Tributary6B | 599.99 | 2 | 50 | 2197.31 | 2198.73 | | 2198.96 | 0.012707 | 3.79 | 13.21 | 18.35 | 0.79 |
| WillowSprings6 | Tributary6B | 649.8 | 1 | 50 | 2197.9 | 2199.51 | | 2199.63 | 0.014084 | 2.72 | 18.38 | 20.71 | 0.51 |
| WillowSprings6 | Tributary6B | 649.8 | 2 | 50 | 2197.9 | 2199.51 | | 2199.63 | 0.014094 | 2.72 | 18.37 | 20.71 | 0.51 |
| WillowSprings6 | Tributary6B | 698.61 | 1 | 50 | 2199.08 | 2200.51 | 2200.51 | 2200.87 | 0.048741 | 4.83 | 10.36 | 14.68 | 1.01 |
| WillowSprings6 | Tributary6B | 698.61 | 2 | 50 | 2199.08 | 2200.51 | 2200.51 | 2200.87 | 0.049043 | 4.84 | 10.33 | 14.67 | 1.02 |
| WillowSprings6 | Tributary6B | 739.34 | 1 | 50 | 2199.38 | 2201.49 | | 2201.59 | 0.008711 | 2.51 | 19.95 | 18.88 | 0.43 |
| WillowSprings6 | Tributary6B | 739.34 | 2 | 50 | 2199.38 | 2201.49 | | 2201.59 | 0.008698 | 2.5 | 19.96 | 18.88 | 0.43 |
| WillowSprings6 | Tributary6B | 764.68 | 1 | 50 | 2199.97 | 2201.72 | | 2201.77 | 0.005584 | 1.77 | 28.27 | 31.13 | 0.33 |
| WillowSprings6 | Tributary6B | 764.68 | 2 | 50 | 2199.97 | 2201.72 | | 2201.77 | 0.00558 | 1.77 | 28.28 | 31.13 | 0.33 |
| WillowSprings6 | Tributary6B | 800.62 | 1 | 50 | 2200.4 | 2201.93 | 2201.93 | 2202.13 | 0.014241 | 3.58 | 13.95 | 40.49 | 1.08 |
| WillowSprings6 | Tributary6B | 800.62 | 2 | 50 | 2200.4 | 2201.94 | 2201.94 | 2202.13 | 0.013376 | 3.45 | 14.5 | 40.97 | 1.02 |
| WillowSprings6 | Tributary6B | 822.64 | 1 | 50 | 2201.2 | 2202.48 | 2202.48 | 2202.78 | 0.053057 | 4.43 | 11.28 | 18.82 | 1.01 |
| WillowSprings6 | Tributary6B | 822.64 | 2 | 50 | 2201.2 | 2202.48 | 2202.48 | 2202.78 | 0.053057 | 4.43 | 11.28 | 18.82 | 1.01 |
| WillowSprings6 | Tributary6B | 845.79 | 1 | 50 | 2201.7 | 2203.17 | | 2203.32 | 0.012261 | 3.05 | 16.39 | 17.33 | 0.55 |
| WillowSprings6 | Tributary6B | 845.79 | 2 | 50 | 2201.7 | 2203.17 | | 2203.32 | 0.012253 | 3.05 | 16.39 | 17.33 | 0.55 |
| WillowSprings6 | Tributary6B | 869.58 Culvert | | | | | | | | | | | |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings6 | Tributary6B | 879.37 | 1 | 50 | 2201.9 | 2207.78 | 2203.13 | 2207.79 | 0.000068 | 0.58 | 104.5 | 72.51 | 0.05 |
| WillowSprings6 | Tributary6B | 879.37 | 2 | 50 | 2201.9 | 2207.9 | 2203.13 | 2207.91 | 0.000095 | 0.6 | 82.98 | 20.01 | 0.05 |
| WillowSprings6 | Tributary6B | 900.04 | 1 | 50 | 2203.41 | 2207.78 | | 2207.79 | 0.000026 | 0.43 | 158.8 | 68.08 | 0.04 |
| WillowSprings6 | Tributary6B | 900.04 | 2 | 50 | 2203.41 | 2207.9 | | 2207.91 | 0.000042 | 0.52 | 96.8 | 24.43 | 0.05 |
| WillowSprings6 | Tributary6B | 926.02 | 1 | 50 | 2203.86 | 2207.79 | | 2207.79 | 0.000032 | 0.4 | 169.08 | 78.56 | 0.04 |
| WillowSprings6 | Tributary6B | 926.02 | 2 | 50 | 2203.86 | 2207.91 | | 2207.91 | 0.000061 | 0.52 | 95.58 | 27.28 | 0.05 |
| WillowSprings6 | Tributary6B | 948.18 | 1 | 50 | 2204.4 | 2207.79 | | 2207.79 | 0.000054 | 0.51 | 133.93 | 78.89 | 0.05 |
| WillowSprings6 | Tributary6B | 948.18 | 2 | 50 | 2204.4 | 2207.91 | | 2207.91 | 0.000082 | 0.61 | 82.09 | 26.85 | 0.06 |
| WillowSprings6 | Tributary6B | 973.61 | 1 | 50 | 2204.4 | 2207.79 | | 2207.79 | 0.000115 | 0.56 | 111.99 | 68.82 | 0.06 |
| WillowSprings6 | Tributary6B | 973.61 | 2 | 50 | 2204.4 | 2207.91 | | 2207.92 | 0.000198 | 0.67 | 74.08 | 27.26 | 0.07 |
| WillowSprings6 | Tributary6B | 999.73 | 1 | 50 | 2204.7 | 2207.79 | | 2207.8 | 0.000333 | 0.81 | 78.5 | 65.5 | 0.1 |
| WillowSprings6 | Tributary6B | 999.73 | 2 | 50 | 2204.7 | 2207.91 | | 2207.92 | 0.000499 | 0.93 | 53.65 | 22.94 | 0.11 |
| WillowSprings6 | Tributary6B | 1031.02 | 1 | 50 | 2205.28 | 2207.8 | | 2207.82 | 0.00136 | 1.19 | 41.98 | 30.05 | 0.18 |
| WillowSprings6 | Tributary6B | 1031.02 | 2 | 50 | 2205.28 | 2207.93 | | 2207.95 | 0.00106 | 1.09 | 46.03 | 31.13 | 0.16 |
| WillowSprings6 | Tributary6B | 1067.5 | 1 | 50 | 2205.97 | 2207.87 | | 2207.91 | 0.005307 | 1.7 | 29.39 | 33.99 | 0.32 |
| WillowSprings6 | Tributary6B | 1067.5 | 2 | 50 | 2205.97 | 2207.98 | | 2208.02 | 0.003627 | 1.5 | 33.32 | 34.77 | 0.27 |
| WillowSprings6 | Tributary6B | 1103.6 | 1 | 50 | 2207.04 | 2208.06 | | 2208.25 | 0.014321 | 3.51 | 14.26 | 23.61 | 0.8 |
| WillowSprings6 | Tributary6B | 1103.6 | 2 | 50 | 2207.04 | 2208.11 | | 2208.27 | 0.011807 | 3.25 | 15.39 | 24.4 | 0.72 |
| WillowSprings6 | Tributary6B | 1150.07 | 1 | 50 | 2207.65 | 2209.17 | 2209.17 | 2209.56 | 0.038107 | 5.02 | 9.95 | 13.07 | 1.01 |
| WillowSprings6 | Tributary6B | 1150.07 | 2 | 50 | 2207.65 | 2209.17 | 2209.17 | 2209.56 | 0.037996 | 5.02 | 9.96 | 13.07 | 1.01 |
| WillowSprings6 | Tributary6B | 1199.55 | 1 | 50 | 2208.94 | 2210.71 | 2210.49 | 2210.91 | 0.020107 | 3.63 | 13.77 | 17.02 | 0.71 |
| WillowSprings6 | Tributary6B | 1199.55 | 2 | 50 | 2208.94 | 2210.71 | 2210.49 | 2210.91 | 0.020028 | 3.62 | 13.79 | 17.03 | 0.71 |
| WillowSprings6 | Tributary6B | 1250.7 | 1 | 50 | 2210.02 | 2211.78 | | 2212.04 | 0.023761 | 4.04 | 12.37 | 13.6 | 0.75 |
| WillowSprings6 | Tributary6B | 1250.7 | 2 | 50 | 2210.02 | 2211.78 | | 2212.04 | 0.023952 | 4.06 | 12.33 | 13.58 | 0.75 |
| WillowSprings6 | Tributary6B | 1300.37 | 1 | 50 | 2211.06 | 2212.84 | | 2212.97 | 0.0148 | 2.86 | 17.5 | 21.35 | 0.56 |
| WillowSprings6 | Tributary6B | 1300.37 | 2 | 50 | 2211.06 | 2212.84 | | 2212.97 | 0.014763 | 2.86 | 17.51 | 21.36 | 0.56 |
| WillowSprings6 | Tributary6B | 1349.93 | 1 | 50 | 2212.67 | 2213.93 | 2213.93 | 2214.26 | 0.019205 | 4.63 | 10.8 | 16.53 | 1.01 |
| WillowSprings6 | Tributary6B | 1349.93 | 2 | 50 | 2212.67 | 2213.93 | 2213.93 | 2214.26 | 0.019205 | 4.63 | 10.8 | 16.53 | 1.01 |
| WillowSprings6 | Tributary6B | 1399.87 | 1 | 50 | 2213.95 | 2215.4 | 2215.4 | 2215.77 | 0.04598 | 4.89 | 10.24 | 14.16 | 1.01 |
| WillowSprings6 | Tributary6B | 1399.87 | 2 | 50 | 2213.95 | 2215.4 | 2215.4 | 2215.77 | 0.04572 | 4.87 | 10.26 | 14.18 | 1.01 |
| WillowSprings6 | Tributary6B | 1449.8 | 1 | 50 | 2215.04 | 2216.84 | | 2217.04 | 0.015958 | 3.61 | 13.86 | 15.07 | 0.66 |
| WillowSprings6 | Tributary6B | 1449.8 | 2 | 50 | 2215.04 | 2216.84 | | 2217.04 | 0.015997 | 3.61 | 13.84 | 15.06 | 0.66 |
| WillowSprings6 | Tributary6B | 1499.93 | 1 | 50 | 2216.22 | 2217.8 | 2217.65 | 2218.05 | 0.024781 | 3.97 | 12.61 | 15.68 | 0.78 |
| WillowSprings6 | Tributary6B | 1499.93 | 2 | 50 | 2216.22 | 2217.8 | | 2218.05 | 0.024961 | 3.98 | 12.57 | 15.66 | 0.78 |
| WillowSprings7 | Tributary6A | 16.67 | 1 | 60 | 2194.66 | 2197.48 | | 2197.49 | 0.000282 | 0.86 | 94.2 | 75.66 | 0.11 |
| WillowSprings7 | Tributary6A | 16.67 | 2 | 60 | 2194.66 | 2198.08 | | 2198.09 | 0.000227 | 0.87 | 69.2 | 28.83 | 0.1 |
| WillowSprings7 | Tributary6A | 41.4 | 1 | 60 | 2194.91 | 2197.48 | | 2197.51 | 0.001209 | 1.44 | 52.6 | 48.29 | 0.21 |
| WillowSprings7 | Tributary6A | 41.4 | 2 | 60 | 2194.91 | 2198.08 | | 2198.1 | 0.000675 | 1.25 | 48.15 | 23.13 | 0.15 |
| WillowSprings7 | Tributary6A | 76 | 1 | 60 | 2194.78 | 2197.51 | | 2197.54 | 0.000837 | 1.42 | 51.63 | 46.69 | 0.19 |
| WillowSprings7 | Tributary6A | 76 | 2 | 60 | 2194.78 | 2198.1 | | 2198.12 | 0.000403 | 1.15 | 52.23 | 23.25 | 0.14 |
| WillowSprings7 | Tributary6A | 102.08 | 1 | 60 | 2195.07 | 2197.54 | | 2197.57 | 0.001543 | 1.56 | 49.51 | 52.53 | 0.22 |
| WillowSprings7 | Tributary6A | 102.08 | 2 | 60 | 2195.07 | 2198.11 | | 2198.14 | 0.000979 | 1.37 | 43.89 | 21.18 | 0.17 |
| WillowSprings7 | Tributary6A | 135.24 | 1 | 60 | 2196.17 | 2197.62 | | 2197.69 | 0.015273 | 2.19 | 30.69 | 60.54 | 0.48 |
| WillowSprings7 | Tributary6A | 135.24 | 2 | 60 | 2196.17 | 2198.16 | | 2198.19 | 0.002844 | 1.38 | 43.6 | 36.62 | 0.22 |
| WillowSprings7 | Tributary6A | 161.57 | 1 | 60 | 2196.55 | 2197.93 | | 2198.11 | 0.014257 | 3.42 | 20.53 | 47.26 | 0.74 |
| WillowSprings7 | Tributary6A | 161.57 | 2 | 60 | 2196.55 | 2198.22 | | 2198.31 | 0.005563 | 2.5 | 23.99 | 26.1 | 0.46 |
| WillowSprings7 | Tributary6A | 199.4 | 1 | 60 | 2196.81 | 2198.3 | | 2198.35 | 0.003488 | 1.76 | 41.07 | 78.98 | 0.33 |
| WillowSprings7 | Tributary6A | 199.4 | 2 | 60 | 2196.81 | 2198.42 | | 2198.46 | 0.002746 | 1.67 | 35.95 | 36.5 | 0.3 |
| WillowSprings7 | Tributary6A | 249.44 | 1 | 60 | 2198.32 | 2199.11 | 2199.11 | 2199.26 | 0.047204 | 3.6 | 21.91 | 67.44 | 0.91 |
| WillowSprings7 | Tributary6A | 249.44 | 2 | 60 | 2198.32 | 2199.2 | 2199.2 | 2199.49 | 0.056933 | 4.34 | 13.82 | 24.08 | 1.01 |
| WillowSprings7 | Tributary6A | 300.54 | 1 | 60 | 2198.91 | 2200.41 | 2200.36 | 2200.69 | 0.016733 | 4.32 | 16.28 | 26.99 | 0.83 |
| WillowSprings7 | Tributary6A | 300.54 | 2 | 60 | 2198.91 | 2200.51 | 2200.34 | 2200.78 | 0.013932 | 4.13 | 14.69 | 15.73 | 0.75 |

Table 5.9.2.3
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings7 | Tributary6A | 350.24 | 1 | 60 | 2199.63 | 2201.2 | 2200.95 | 2201.37 | 0.011341 | 3.23 | 18.58 | 23.57 | 0.64 |
| WillowSprings7 | Tributary6A | 350.24 | 2 | 60 | 2199.63 | 2201.23 | 2200.95 | 2201.38 | 0.010412 | 3.12 | 19.22 | 24.03 | 0.62 |
| WillowSprings7 | Tributary6A | 399.69 | 1 | 60 | 2200.48 | 2201.87 | 2201.87 | 2202.23 | 0.021158 | 4.84 | 12.39 | 17.41 | 1.01 |
| WillowSprings7 | Tributary6A | 399.69 | 2 | 60 | 2200.48 | 2201.87 | 2201.87 | 2202.23 | 0.021216 | 4.85 | 12.38 | 17.4 | 1.01 |
| WillowSprings7 | Tributary6A | 450.17 | 1 | 60 | 2201.93 | 2203 | 2202.9 | 2203.18 | 0.014848 | 3.79 | 19.35 | 35.15 | 0.8 |
| WillowSprings7 | Tributary6A | 450.17 | 2 | 60 | 2201.93 | 2203.03 | 2203.03 | 2203.4 | 0.024364 | 4.87 | 12.31 | 17 | 1.01 |
| WillowSprings7 | Tributary6A | 488.74 | 1 | 60 | 2202.46 | 2203.8 | 2203.8 | 2204.14 | 0.033288 | 4.68 | 12.82 | 19.14 | 1.01 |
| WillowSprings7 | Tributary6A | 488.74 | 2 | 60 | 2202.46 | 2203.98 | | 2204.18 | 0.016514 | 3.66 | 16.37 | 20.19 | 0.72 |
| WillowSprings7 | Tributary6A | 512.65 | 1 | 60 | 2203.24 | 2204.56 | 2204.56 | 2204.88 | 0.024881 | 4.55 | 13.19 | 21.02 | 1.01 |
| WillowSprings7 | Tributary6A | 512.65 | 2 | 60 | 2203.24 | 2204.56 | 2204.56 | 2204.88 | 0.024833 | 4.55 | 13.2 | 21.03 | 1.01 |
| WillowSprings7 | Tributary6A | 530.05 | 1 | 60 | 2203.64 | 2205 | | 2205.24 | 0.01649 | 3.91 | 15.35 | 22.57 | 0.84 |
| WillowSprings7 | Tributary6A | 530.05 | 2 | 60 | 2203.64 | 2205 | | 2205.24 | 0.016505 | 3.91 | 15.34 | 22.57 | 0.84 |
| WillowSprings7 | Tributary6A | 550.27 | 1 | 60 | 2204.23 | 2205.56 | 2205.56 | 2205.89 | 0.024399 | 4.63 | 12.97 | 20.09 | 1.01 |
| WillowSprings7 | Tributary6A | 550.27 | 2 | 60 | 2204.23 | 2205.56 | 2205.56 | 2205.89 | 0.024399 | 4.63 | 12.97 | 20.09 | 1.01 |
| WillowSprings7 | Tributary6A | 560.39 | 1 | 60 | 2205.12 | 2206.54 | 2206.54 | 2206.79 | 0.01607 | 3.98 | 15.09 | 31.93 | 1.02 |
| WillowSprings7 | Tributary6A | 560.39 | 2 | 60 | 2205.12 | 2206.54 | 2206.54 | 2206.79 | 0.01607 | 3.98 | 15.09 | 31.93 | 1.02 |
| WillowSprings7 | Tributary6A | 570.53 | Inl Struct | | | | | | | | | | |
| WillowSprings7 | Tributary6A | 580.2 | 1 | 60 | 2204.94 | 2207.69 | 2206.45 | 2207.7 | 0.000402 | 0.87 | 68.62 | 63.96 | 0.15 |
| WillowSprings7 | Tributary6A | 580.2 | 2 | 60 | 2204.94 | 2207.69 | 2206.45 | 2207.7 | 0.000402 | 0.87 | 68.62 | 63.96 | 0.15 |
| WillowSprings7 | Tributary6A | 599.6 | 1 | 60 | 2205.45 | 2207.69 | | 2207.72 | 0.000732 | 1.39 | 48.95 | 49.17 | 0.21 |
| WillowSprings7 | Tributary6A | 599.6 | 2 | 60 | 2205.45 | 2207.69 | | 2207.72 | 0.00081 | 1.45 | 41.33 | 31.14 | 0.22 |
| WillowSprings7 | Tributary6A | 649.54 | 1 | 60 | 2206.46 | 2207.73 | 2207.73 | 2208.05 | 0.018666 | 4.55 | 13.18 | 20.76 | 1.01 |
| WillowSprings7 | Tributary6A | 649.54 | 2 | 60 | 2206.46 | 2207.73 | 2207.73 | 2208.05 | 0.018707 | 4.56 | 13.17 | 20.75 | 1.01 |
| WillowSprings7 | Tributary6A | 699.17 | 1 | 60 | 2207.77 | 2209.13 | 2209.13 | 2209.47 | 0.046411 | 4.68 | 12.82 | 19.18 | 1.01 |
| WillowSprings7 | Tributary6A | 699.17 | 2 | 60 | 2207.77 | 2209.13 | 2209.13 | 2209.47 | 0.046488 | 4.68 | 12.81 | 19.17 | 1.01 |
| WillowSprings7 | Tributary6A | 751.32 | 1 | 60 | 2208.66 | 2210.18 | 2210.01 | 2210.39 | 0.009014 | 3.74 | 16.04 | 21.18 | 0.76 |
| WillowSprings7 | Tributary6A | 751.32 | 2 | 60 | 2208.66 | 2210.18 | 2210.02 | 2210.39 | 0.009014 | 3.74 | 16.04 | 21.18 | 0.76 |
| WillowSprings7 | Tributary6A | 799.07 | 1 | 60 | 2209.76 | 2211.16 | 2211.16 | 2211.53 | 0.045216 | 4.89 | 12.27 | 16.79 | 1.01 |
| WillowSprings7 | Tributary6A | 799.07 | 2 | 60 | 2209.76 | 2211.16 | 2211.16 | 2211.53 | 0.045109 | 4.88 | 12.29 | 16.79 | 1.01 |
| WillowSprings7 | Tributary6A | 840.59 | 1 | 60 | 2210.73 | 2212.46 | | 2212.57 | 0.015381 | 2.74 | 21.87 | 25.3 | 0.52 |
| WillowSprings7 | Tributary6A | 840.59 | 2 | 60 | 2210.73 | 2212.46 | | 2212.57 | 0.015392 | 2.74 | 21.87 | 25.3 | 0.52 |
| WillowSprings7 | Tributary6A | 877.35 | 1 | 60 | 2211.62 | 2213.15 | | 2213.37 | 0.029514 | 3.81 | 15.77 | 20.53 | 0.77 |
| WillowSprings7 | Tributary6A | 877.35 | 2 | 60 | 2211.62 | 2213.15 | | 2213.37 | 0.029581 | 3.81 | 15.75 | 20.52 | 0.77 |
| WillowSprings7 | Tributary6A | 949.67 | 1 | 60 | 2214.06 | 2215.28 | 2215.28 | 2215.55 | 0.020583 | 4.18 | 14.34 | 26.99 | 1.01 |
| WillowSprings7 | Tributary6A | 949.67 | 2 | 60 | 2214.06 | 2215.28 | 2215.28 | 2215.55 | 0.020536 | 4.18 | 14.35 | 27 | 1.01 |
| WillowSprings7 | Tributary6A | 999.82 | 1 | 60 | 2216.16 | 2217.3 | 2217.3 | 2217.59 | 0.020714 | 4.33 | 13.87 | 24.24 | 1.01 |
| WillowSprings7 | Tributary6A | 999.82 | 2 | 60 | 2216.16 | 2217.3 | 2217.3 | 2217.59 | 0.020642 | 4.32 | 13.89 | 24.25 | 1.01 |
| WillowSprings7 | Tributary6A | 1049 | 1 | 60 | 2217.4 | 2218.69 | 2218.69 | 2219 | 0.014553 | 4.47 | 13.43 | 21.96 | 1.01 |
| WillowSprings7 | Tributary6A | 1049 | 2 | 60 | 2217.4 | 2218.69 | 2218.69 | 2219 | 0.014477 | 4.46 | 13.46 | 21.98 | 1 |
| WillowSprings7 | Tributary6A | 1099.83 | 1 | 60 | 2219.52 | 2220.77 | 2220.77 | 2221.1 | 0.028179 | 4.59 | 13.07 | 20.2 | 1.01 |
| WillowSprings7 | Tributary6A | 1099.83 | 2 | 60 | 2219.52 | 2220.77 | 2220.77 | 2221.1 | 0.028124 | 4.59 | 13.08 | 20.21 | 1 |
| WillowSprings7 | Tributary6A | 1148.99 | 1 | 60 | 2221.66 | 2222.83 | 2222.83 | 2223.12 | 0.03161 | 4.34 | 13.83 | 24.37 | 1.01 |
| WillowSprings7 | Tributary6A | 1148.99 | 2 | 60 | 2221.66 | 2222.83 | 2222.83 | 2223.12 | 0.03161 | 4.34 | 13.83 | 24.37 | 1.01 |
| WillowSprings7 | Tributary6A | 1202.61 | 1 | 60 | 2224.32 | 2225.49 | 2225.49 | 2225.82 | 0.03175 | 4.61 | 13.03 | 20.26 | 1.01 |
| WillowSprings7 | Tributary6A | 1202.61 | 2 | 60 | 2224.32 | 2225.49 | 2225.49 | 2225.82 | 0.031652 | 4.6 | 13.04 | 20.27 | 1.01 |
| WillowSprings7 | Tributary6A | 1251.56 | 1 | 60 | 2227.8 | 2229.01 | 2229.01 | 2229.31 | 0.032505 | 4.39 | 13.68 | 23.09 | 1 |
| WillowSprings7 | Tributary6A | 1251.56 | 2 | 60 | 2227.8 | 2229.01 | 2229.01 | 2229.31 | 0.032372 | 4.38 | 13.7 | 23.11 | 1 |
| WillowSprings7 | Tributary6A | 1298.93 | 1 | 60 | 2231.65 | 2232.67 | 2232.67 | 2232.93 | 0.034071 | 4.07 | 14.75 | 29.09 | 1.01 |
| WillowSprings7 | Tributary6A | 1298.93 | 2 | 60 | 2231.65 | 2232.67 | 2232.67 | 2232.93 | 0.033821 | 4.06 | 14.79 | 29.14 | 1 |

Table 5.9.2.4
HEC-RAS OUTPUT
Structures

WSTribFPD.prj
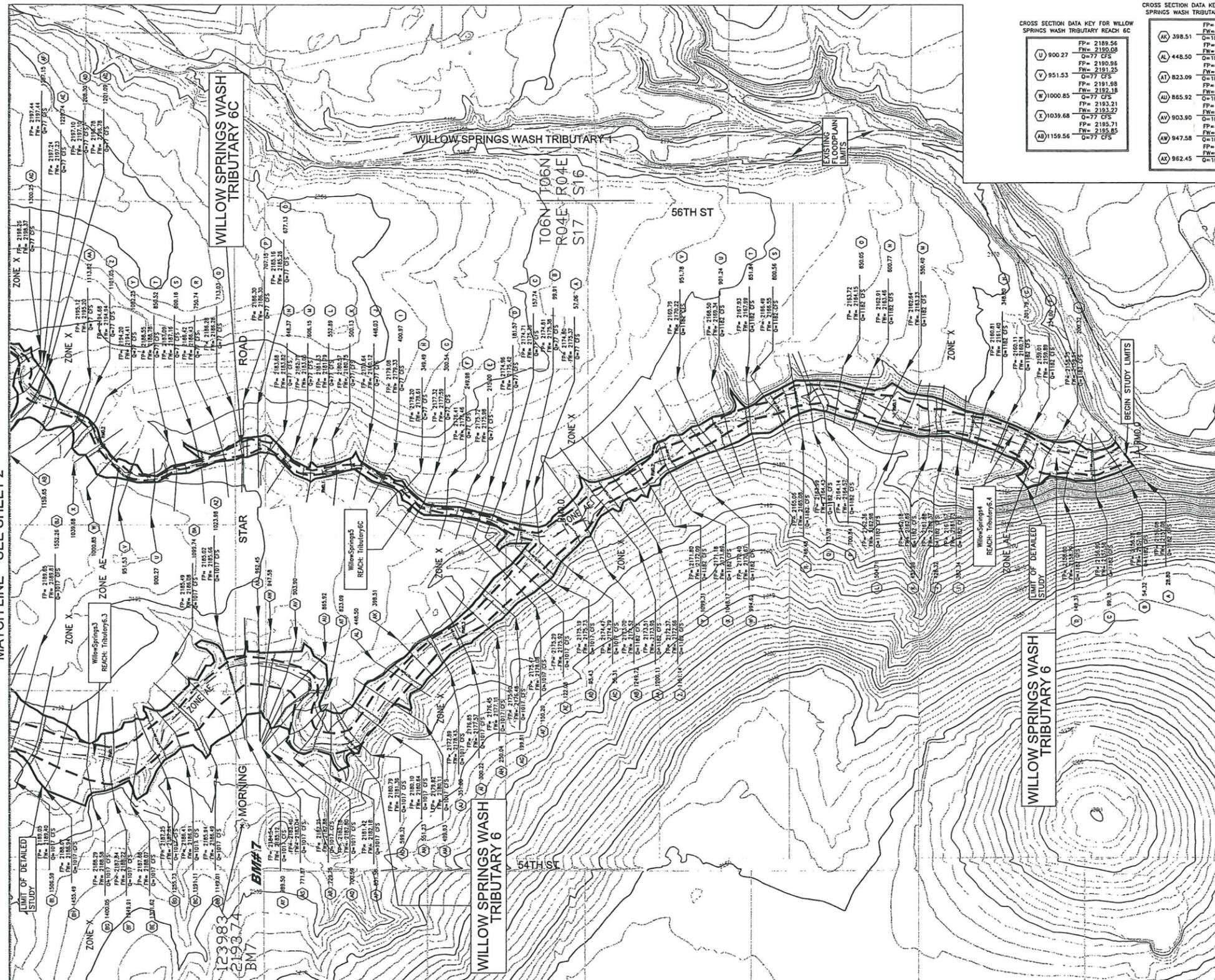HEC-RAS  Plan: M4
PF 1 = Floodplain
PF 2 = Floodway

**CULVERTS**

| River | Reach | River Sta | Profile # | E.G. US. (ft) | W.S. US. (ft) | E.G. IC (ft) | E.G. OC (ft) | Min El Weir Flow (ft) | Q Culv Group (cfs) | Q Weir (cfs) | Delta WS (ft) | Culv Vel US (ft/s) | Culv Vel DS (ft/s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WillowSprings1 | Tributary6.1 | 748.12  Culvert #1 | 1 | 2210.34 | 2210.20 | 2210.24 | 2210.34 | 2208.19 | 62.08 | 485.92 | 1.59 | 6.59 | 6.59 |
| WillowSprings1 | Tributary6.1 | 748.12  Culvert #1 | 2 | 2210.46 | 2210.32 | 2210.31 | 2210.46 | 2208.19 | 58.67 | 489.33 | 1.41 | 6.23 | 6.23 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WillowSprings6 | Tributary6B | 869.58  Culvert #1 | 1 | 2207.79 | 2207.78 | 2203.63 | 2207.79 | 2207.48 | 19.38 | 13.77 | 4.61 | 3.08 | 4.15 |
| WillowSprings6 | Tributary6B | 869.58  Culvert #2 | 2 | 2207.79 | 2207.78 | 2204.10 | 2207.78 | 2207.48 | 16.85 | 13.77 | 4.61 | 3.43 | 5.89 |
| WillowSprings6 | Tributary6B | 869.58  Culvert #1 | 1 | 2207.91 | 2207.90 | 2203.64 | 2207.91 | 2207.64 | 19.64 | 13.29 | 4.73 | 3.13 | 4.21 |
| WillowSprings6 | Tributary6B | 869.58  Culvert #2 | 2 | 2207.91 | 2207.90 | 2204.11 | 2207.90 | 2207.64 | 17.07 | 13.29 | 4.73 | 3.48 | 5.97 |

**INLINE STRUCTURES**

| River | Reach | River Sta | Profile # | E.G. Elev (ft) | W.S. Elev (ft) | Q Total (cfs) | Q Weir (cfs) |
|---|---|---|---|---|---|---|---|
| WillowSprings3 | Tributary6.3 | 976.01 | 1 | 2184.95 | 2184.54 | 1017 | 1017 |
| WillowSprings3 | Tributary6.3 | 976.01 | 2 | 2185.64 | 2185.12 | 1017 | 1017 |
|  |  |  |  |  |  |  |  |
| WillowSprings5 | Tributary6C | 693.52 | 1 | 2186.40 | 2186.30 | 77 | 77 |
| WillowSprings5 | Tributary6C | 693.52 | 2 | 2186.40 | 2186.30 | 77 | 77 |
|  |  |  |  |  |  |  |  |
| WillowSprings7 | Tributary6A | 570.53 | 1 | 2207.70 | 2207.69 | 60 | 60 |
| WillowSprings7 | Tributary6A | 570.53 | 2 | 2207.70 | 2207.69 | 60 | 60 |

## LEGEND

| | |
|---|---|
| 100—YR FLOODPLAIN BOUNDARY | |
| 100—YR FLOODWAY BOUNDARY | |
| RIVER MILE | RM2.0    RM3.0 |
| CROSS SECTION | |
| BASE FLOOD ELEVATION | 2265.00 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |
| BENCHMARK DESIGNATION | BM#10 |

### ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = −2.06 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|
| BM # 7 | 2193.74 | THE INTERSECTION OF MORNING STAR ROAD AND 54TH STREET (NE CORNER) |

SHEET INDEX MAP

### NOTES

1— THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING WILLOW SPRINGS TRIBUTARY—1 FLOOD PROFILE AT RIVER MILE 0.91, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "D" AND "E". REFER TO PROFILE PANEL 561P, AND REFER TO FIRM PANEL # 04013C0802H, DATED SEPTEMBER 30, 2005.

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY**

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072
WILLOW SPRINGS WASH TRIBUTARY
FLOODPLAIN DELINEATION,
CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 9 OF 10

### BENCHMARK INFORMATION

BENCHMARK: 7 QUALITY: BRASS CAP IN CONCRETE
MONUMENT TYPE: 30 NGS
DIAMETER HOLE: 10"
HOLE DEPTH: 36"
ROD FOOTAGE: 4' 0"
ROD TYPE: 9/16" STEEL

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'    0'    100'    200'

# CAVE CREEK TRIBUTARIES

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

CCTribFPD.prj
HEC-RAS Plan: M4
PF 1 = Floodplain
PF 2 = Floodway

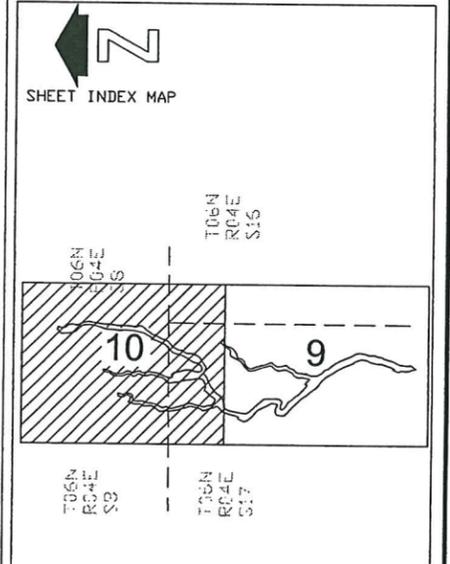| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek1 | Tributary | 19.38 | 1 | 543 | 2264.67 | 2268.4 | | 2268.55 | 0.004531 | 3.14 | 173.02 | 79.3 | 0.37 |
| CaveCreek1 | Tributary | 19.38 | 2 | 543 | 2264.67 | 2268.41 | | 2268.56 | 0.004481 | 3.12 | 173.8 | 79.48 | 0.37 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 69.51 | 1 | 543 | 2265.8 | 2268.67 | | 2268.9 | 0.009583 | 3.93 | 143.75 | 84.33 | 0.52 |
| CaveCreek1 | Tributary | 69.51 | 2 | 543 | 2265.8 | 2268.69 | | 2268.97 | 0.011637 | 4.26 | 127.35 | 71.07 | 0.56 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 119.55 | 1 | 543 | 2266.58 | 2269.23 | | 2269.48 | 0.015518 | 4.18 | 133.2 | 89.18 | 0.61 |
| CaveCreek1 | Tributary | 119.55 | 2 | 543 | 2266.58 | 2269.37 | | 2269.73 | 0.019011 | 4.9 | 112.14 | 68.08 | 0.68 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 170.85 | 1 | 543 | 2266.97 | 2269.95 | | 2270.21 | 0.018066 | 4.36 | 133.41 | 98.24 | 0.65 |
| CaveCreek1 | Tributary | 170.85 | 2 | 543 | 2266.97 | 2270.35 | | 2270.82 | 0.022076 | 5.5 | 98.7 | 56.25 | 0.73 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 220.21 | 1 | 543 | 2267.71 | 2270.85 | 2270.81 | 2271.46 | 0.027121 | 6.71 | 94.96 | 73.28 | 0.92 |
| CaveCreek1 | Tributary | 220.21 | 2 | 543 | 2267.71 | 2271.31 | | 2271.94 | 0.020103 | 6.39 | 84.95 | 41.9 | 0.79 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 269.26 | 1 | 543 | 2268.97 | 2271.81 | | 2272.14 | 0.007398 | 5.17 | 141.61 | 110.14 | 0.65 |
| CaveCreek1 | Tributary | 269.26 | 2 | 543 | 2268.97 | 2272.03 | | 2272.68 | 0.011536 | 6.48 | 83.84 | 38.71 | 0.78 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 319.29 | 1 | 543 | 2269.84 | 2273.03 | 2273.03 | 2273.66 | 0.012586 | 7.06 | 113.12 | 112.29 | 0.91 |
| CaveCreek1 | Tributary | 319.29 | 2 | 543 | 2269.84 | 2273.21 | 2273.21 | 2274.23 | 0.015917 | 8.11 | 66.94 | 32.81 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 367.43 | 1 | 543 | 2271.12 | 2274.24 | 2274.24 | 2274.94 | 0.011269 | 7.27 | 106.7 | 92.45 | 0.86 |
| CaveCreek1 | Tributary | 367.43 | 2 | 543 | 2271.12 | 2274.26 | 2274.26 | 2275.41 | 0.016233 | 8.6 | 63.16 | 28.08 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 419.46 | 1 | 543 | 2272.43 | 2275.57 | 2275.57 | 2276.2 | 0.020784 | 7.22 | 107.16 | 91.95 | 0.88 |
| CaveCreek1 | Tributary | 419.46 | 2 | 543 | 2272.43 | 2275.8 | 2275.8 | 2276.98 | 0.030999 | 8.72 | 62.29 | 26.83 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 468.21 | 1 | 543 | 2273.68 | 2276.7 | | 2277.26 | 0.022972 | 6.67 | 114.76 | 120.54 | 0.86 |
| CaveCreek1 | Tributary | 468.21 | 2 | 543 | 2273.68 | 2277.57 | | 2278.09 | 0.012427 | 5.78 | 93.97 | 34.08 | 0.61 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 519.61 | 1 | 543 | 2275.61 | 2277.92 | | 2278.49 | 0.024557 | 6.75 | 105.85 | 86.14 | 0.85 |
| CaveCreek1 | Tributary | 519.61 | 2 | 543 | 2275.61 | 2278.29 | | 2279.14 | 0.025897 | 7.41 | 73.28 | 31.29 | 0.85 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 560.25 | 1 | 543 | 2276.17 | 2278.85 | 2278.75 | 2279.42 | 0.020569 | 6.36 | 102.96 | 90.96 | 0.83 |
| veCreek1 | Tributary | 560.25 | 2 | 543 | 2276.17 | 2279.49 | | 2279.93 | 0.011055 | 5.32 | 101.98 | 41.29 | 0.6 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 596.99 | 1 | 543 | 2276.65 | 2279.64 | | 2280.08 | 0.017036 | 5.78 | 119.7 | 101.98 | 0.74 |
| CaveCreek1 | Tributary | 596.99 | 2 | 543 | 2276.65 | 2279.92 | | 2280.48 | 0.016895 | 6.02 | 90.22 | 41.36 | 0.72 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 635.6 | 1 | 543 | 2277.84 | 2280.29 | 2280.28 | 2280.79 | 0.032392 | 6.88 | 111.42 | 106.32 | 0.98 |
| CaveCreek1 | Tributary | 635.6 | 2 | 543 | 2277.84 | 2280.96 | 2280.96 | 2282.07 | 0.038502 | 8.44 | 64.3 | 29.07 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 670.23 | 1 | 543 | 2278.5 | 2281.54 | 2281.54 | 2282.25 | 0.025725 | 7.67 | 93.75 | 68.3 | 0.95 |
| CaveCreek1 | Tributary | 670.23 | 2 | 543 | 2278.5 | 2282.06 | 2281.96 | 2283.19 | 0.026941 | 8.52 | 63.7 | 25.14 | 0.94 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 719.91 | 1 | 543 | 2279.41 | 2282.62 | | 2283.21 | 0.015329 | 6.52 | 99.77 | 61.57 | 0.74 |
| CaveCreek1 | Tributary | 719.91 | 2 | 543 | 2279.41 | 2283.61 | | 2284.03 | 0.007304 | 5.2 | 104.37 | 30.51 | 0.5 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 770.28 | 1 | 543 | 2280.85 | 2283.5 | 2283.42 | 2284.22 | 0.022847 | 7.08 | 89.24 | 59.91 | 0.87 |
| CaveCreek1 | Tributary | 770.28 | 2 | 543 | 2280.85 | 2284.02 | | 2284.63 | 0.01507 | 6.28 | 86.44 | 33.79 | 0.69 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 820.01 | 1 | 543 | 2282.12 | 2285.53 | 2285.53 | 2286.4 | 0.022331 | 7.66 | 75.98 | 44.12 | 0.95 |
| CaveCreek1 | Tributary | 820.01 | 2 | 543 | 2282.12 | 2285.53 | 2285.53 | 2286.55 | 0.027067 | 8.12 | 66.88 | 33.41 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 869.49 | 1 | 543 | 2283.42 | 2286.83 | | 2287.47 | 0.018812 | 6.87 | 97.43 | 67.45 | 0.79 |
| CaveCreek1 | Tributary | 869.49 | 2 | 543 | 2283.42 | 2286.96 | | 2287.86 | 0.024387 | 7.63 | 72.44 | 29.68 | 0.85 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 919.85 | 1 | 543 | 2284.79 | 2287.88 | | 2288.2 | 0.009776 | 5 | 141.25 | 103.04 | 0.57 |
| CaveCreek1 | Tributary | 919.85 | 2 | 543 | 2284.79 | 2288.31 | | 2288.74 | 0.009934 | 5.28 | 102.78 | 36.78 | 0.56 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 967.24 | 1 | 543 | 2286.03 | 2288.96 | 2288.96 | 2289.66 | 0.029168 | 7.09 | 88.9 | 64.47 | 0.94 |
| CaveCreek1 | Tributary | 967.24 | 2 | 543 | 2286.03 | 2289.05 | 2289.05 | 2289.99 | 0.036174 | 7.78 | 69.78 | 37.87 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1020.1 | 1 | 543 | 2287.61 | 2290.16 | | 2290.65 | 0.014467 | 5.99 | 107.9 | 65.37 | 0.73 |
| CaveCreek1 | Tributary | 1020.1 | 2 | 543 | 2287.61 | 2290.61 | | 2291.16 | 0.012438 | 5.94 | 91.44 | 35.73 | 0.65 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1068.23 | 1 | 543 | 2288.84 | 2291.28 | 2291.28 | 2292.07 | 0.029304 | 7.34 | 79.65 | 51.45 | 0.99 |
| CaveCreek1 | Tributary | 1068.23 | 2 | 543 | 2288.84 | 2291.34 | 2291.34 | 2292.24 | 0.031928 | 7.61 | 71.36 | 40.35 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1120.03 | 1 | 543 | 2289.56 | 2292.7 | 2292.7 | 2293.54 | 0.024675 | 7.59 | 79.52 | 52.15 | 0.93 |
| CaveCreek1 | Tributary | 1120.03 | 2 | 543 | 2289.56 | 2292.82 | 2292.67 | 2293.73 | 0.025789 | 7.65 | 70.93 | 32.26 | 0.91 |
| | | | | | | | | | | | | | |
| veCreek1 | Tributary | 1170.11 | 1 | 543 | 2290.74 | 2294.03 | | 2294.62 | 0.016496 | 6.45 | 97.39 | 65.5 | 0.81 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek1 | Tributary | 1170.11 | 2 | 543 | 2290.74 | 2294.14 | | 2294.84 | 0.017258 | 6.71 | 80.89 | 39.33 | 0.82 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1218.92 | 1 | 543 | 2291.36 | 2295.7 | 2295.7 | 2296.55 | 0.041519 | 7.41 | 73.3 | 43.63 | 1.01 |
| CaveCreek1 | Tributary | 1218.92 | 2 | 543 | 2291.36 | 2295.7 | 2295.7 | 2296.55 | 0.041416 | 7.4 | 73.39 | 43.66 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1268.1 | 1 | 543 | 2293.75 | 2297.24 | 2297.06 | 2297.98 | 0.020844 | 6.98 | 84.45 | 52.49 | 0.82 |
| CaveCreek1 | Tributary | 1268.1 | 2 | 543 | 2293.75 | 2297.27 | | 2298.06 | 0.023271 | 7.13 | 76.16 | 33.67 | 0.84 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1320.16 | 1 | 543 | 2294.98 | 2298.46 | 2298.46 | 2299.33 | 0.021118 | 8.12 | 86.59 | 53.62 | 0.89 |
| CaveCreek1 | Tributary | 1320.16 | 2 | 543 | 2294.98 | 2298.59 | 2298.59 | 2299.96 | 0.029345 | 9.39 | 57.82 | 21.37 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1369 | 1 | 543 | 2296.68 | 2299.7 | 2299.7 | 2300.56 | 0.026475 | 8.21 | 82.53 | 48.9 | 0.96 |
| CaveCreek1 | Tributary | 1369 | 2 | 543 | 2296.68 | 2300.19 | 2300.06 | 2301.4 | 0.027821 | 8.85 | 61.38 | 22.33 | 0.94 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1418.59 | 1 | 543 | 2297.51 | 2300.97 | | 2301.54 | 0.013771 | 6.47 | 97.24 | 46.77 | 0.72 |
| CaveCreek1 | Tributary | 1418.59 | 2 | 543 | 2297.51 | 2301.82 | | 2302.38 | 0.009985 | 5.98 | 90.79 | 28.66 | 0.59 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1442.17 | 1 | 543 | 2297.83 | 2301.47 | 2301.47 | 2302.34 | 0.032207 | 8.19 | 79.87 | 47.16 | 0.99 |
| CaveCreek1 | Tributary | 1442.17 | 2 | 543 | 2297.83 | 2301.88 | 2301.86 | 2303.09 | 0.031869 | 8.87 | 62.69 | 25.52 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1469.82 | 1 | 543 | 2298.43 | 2302.45 | | 2302.96 | 0.016269 | 6.27 | 103.8 | 53.64 | 0.71 |
| CaveCreek1 | Tributary | 1469.82 | 2 | 543 | 2298.43 | 2303.24 | | 2303.77 | 0.010996 | 5.94 | 95.3 | 31.07 | 0.6 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1519.91 | 1 | 543 | 2299.97 | 2303.86 | 2303.86 | 2304.78 | 0.029558 | 8.56 | 79.37 | 44.28 | 0.96 |
| CaveCreek1 | Tributary | 1519.91 | 2 | 543 | 2299.97 | 2304.34 | 2304.34 | 2305.74 | 0.038859 | 9.47 | 57.31 | 20.59 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek1 | Tributary | 1560.12 | 1 | 543 | 2301.27 | 2305.2 | 2305.2 | 2306.04 | 0.02629 | 8.45 | 84.8 | 48.5 | 0.97 |
| CaveCreek1 | Tributary | 1560.12 | 2 | 543 | 2301.27 | 2305.89 | 2305.68 | 2307.03 | 0.024176 | 8.82 | 66.34 | 23.82 | 0.93 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 49.14 | 1 | 1118 | 2266.35 | 2269.32 | 2269.32 | 2270.14 | 0.05017 | 7.3 | 156.7 | 103.8 | 0.98 |
| CaveCreek2 | Tributary | 49.14 | 2 | 1118 | 2266.35 | 2269.32 | 2269.32 | 2270.16 | 0.051013 | 7.36 | 152.03 | 87.86 | 0.98 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 81.7 | 1 | 1118 | 2267.27 | 2270.71 | 2270.4 | 2271.36 | 0.026806 | 6.47 | 178.53 | 97.93 | 0.78 |
| CaveCreek2 | Tributary | 81.7 | 2 | 1118 | 2267.27 | 2270.74 | 2270.4 | 2271.38 | 0.026165 | 6.43 | 175.68 | 83.68 | 0.77 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 128.96 | 1 | 1118 | 2269.74 | 2272.46 | 2272.46 | 2273.29 | 0.041821 | 7.56 | 163.36 | 108.61 | 0.95 |
| CaveCreek2 | Tributary | 128.96 | 2 | 1118 | 2269.74 | 2272.48 | 2272.48 | 2273.47 | 0.04668 | 8.02 | 140.67 | 72.15 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 200.96 | 1 | 1118 | 2271.4 | 2275.08 | 2275.07 | 2276.01 | 0.032908 | 7.84 | 152.35 | 90.23 | 0.94 |
| CaveCreek2 | Tributary | 200.96 | 2 | 1118 | 2271.4 | 2275.23 | 2275.02 | 2276.11 | 0.028904 | 7.55 | 148.15 | 64.61 | 0.88 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 249.82 | 1 | 1118 | 2272.24 | 2276.77 | | 2277.33 | 0.019158 | 6.1 | 195 | 93.23 | 0.64 |
| CaveCreek2 | Tributary | 249.82 | 2 | 1118 | 2272.24 | 2276.77 | | 2277.38 | 0.020644 | 6.26 | 178.53 | 62.87 | 0.65 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 301.02 | 1 | 1118 | 2273.22 | 2277.83 | | 2278.47 | 0.024331 | 6.5 | 186.36 | 105.82 | 0.69 |
| CaveCreek2 | Tributary | 301.02 | 2 | 1118 | 2273.22 | 2277.89 | | 2278.56 | 0.024736 | 6.56 | 170.5 | 61.48 | 0.69 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 351.72 | 1 | 1118 | 2275.41 | 2279.23 | 2279.23 | 2280.28 | 0.041843 | 8.29 | 141.73 | 75.18 | 0.94 |
| CaveCreek2 | Tributary | 351.72 | 2 | 1118 | 2275.41 | 2279.3 | 2279.15 | 2280.35 | 0.041359 | 8.25 | 135.58 | 54.31 | 0.92 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 400.22 | 1 | 1118 | 2276.69 | 2281.15 | 2280.99 | 2281.98 | 0.027893 | 7.4 | 165.01 | 106.43 | 0.82 |
| CaveCreek2 | Tributary | 400.22 | 2 | 1118 | 2276.69 | 2281.21 | 2280.89 | 2282.07 | 0.028747 | 7.45 | 150.03 | 58.27 | 0.82 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 450.61 | 1 | 1118 | 2278.46 | 2282.42 | | 2283.2 | 0.020502 | 7.09 | 161.25 | 70.21 | 0.76 |
| CaveCreek2 | Tributary | 450.61 | 2 | 1118 | 2278.46 | 2282.53 | | 2283.26 | 0.018601 | 6.85 | 163.26 | 58.68 | 0.72 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 498.23 | 1 | 1118 | 2278.91 | 2283.71 | | 2284.2 | 0.017871 | 5.63 | 202.53 | 77.25 | 0.58 |
| CaveCreek2 | Tributary | 498.23 | 2 | 1118 | 2278.91 | 2283.72 | | 2284.22 | 0.018926 | 5.68 | 197 | 67.44 | 0.59 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 551.16 | 1 | 1118 | 2280.24 | 2284.53 | | 2284.96 | 0.011414 | 5.28 | 220.54 | 78.28 | 0.52 |
| CaveCreek2 | Tributary | 551.16 | 2 | 1118 | 2280.24 | 2284.6 | | 2285.05 | 0.012578 | 5.34 | 209.28 | 64.1 | 0.52 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 600.05 | 1 | 1118 | 2281.56 | 2285.14 | 2284.94 | 2286.03 | 0.028468 | 7.71 | 156.62 | 80.65 | 0.85 |
| CaveCreek2 | Tributary | 600.05 | 2 | 1118 | 2281.56 | 2285.25 | | 2286.16 | 0.027908 | 7.66 | 145.89 | 55.28 | 0.83 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 649.73 | 1 | 1118 | 2282.43 | 2286.67 | 2286.11 | 2287.28 | 0.019118 | 6.48 | 187.98 | 77.7 | 0.69 |
| CaveCreek2 | Tributary | 649.73 | 2 | 1118 | 2282.43 | 2286.67 | 2286.21 | 2287.48 | 0.024069 | 7.22 | 156.34 | 56.73 | 0.76 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 700.49 | 1 | 1118 | 2282.8 | 2288.08 | 2288.08 | 2289.03 | 0.044383 | 8.17 | 154.79 | 81.61 | 0.9 |
| CaveCreek2 | Tributary | 700.49 | 2 | 1118 | 2282.8 | 2288.18 | 2288.12 | 2289.39 | 0.050035 | 8.85 | 127.9 | 50.42 | 0.96 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 749.66 | 1 | 1118 | 2284.03 | 2289.8 | | 2290.1 | 0.010824 | 4.61 | 263.18 | 103.24 | 0.47 |
| CaveCreek2 | Tributary | 749.66 | 2 | 1118 | 2284.03 | 2290.22 | | 2290.53 | 0.009105 | 4.51 | 247.86 | 73.94 | 0.43 |
| | | | | | | | | | | | | | |
| CaveCreek2 | Tributary | 800.2 | 1 | 1118 | 2285.74 | 2290.39 | | 2290.75 | 0.015465 | 4.95 | 246.65 | 121.07 | 0.56 |
| CaveCreek2 | Tributary | 800.2 | 2 | 1118 | 2285.74 | 2290.73 | | 2291.09 | 0.012674 | 4.82 | 232.1 | 84.22 | 0.51 |

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| aveCreek2 | Tributary | 850.35 | 1 | 1118 | 2287.38 | 2291.55 | 2291.55 | 2292.33 | 0.053436 | 7.65 | 167.09 | 109.15 | 1 |
| aveCreek2 | Tributary | 850.35 | 2 | 1118 | 2287.38 | 2291.89 | 2291.89 | 2292.96 | 0.052907 | 8.33 | 134.24 | 62.45 | 1 |
| CaveCreek2 | Tributary | 900.01 | 1 | 1118 | 2289.59 | 2293.91 | 2293.91 | 2295.22 | 0.039657 | 9.24 | 125.73 | 53.11 | 0.97 |
| CaveCreek2 | Tributary | 900.01 | 2 | 1118 | 2289.59 | 2294.03 | 2293.87 | 2295.29 | 0.038844 | 9 | 124.18 | 42.62 | 0.93 |
| CaveCreek2 | Tributary | 950.92 | 1 | 1118 | 2292.04 | 2296.08 | 2295.59 | 2296.78 | 0.019459 | 6.7 | 166.76 | 67.3 | 0.75 |
| CaveCreek2 | Tributary | 950.92 | 2 | 1118 | 2292.04 | 2296.11 | 2295.59 | 2296.8 | 0.018791 | 6.62 | 168.85 | 67.5 | 0.74 |
| CaveCreek2 | Tributary | 1000.81 | 1 | 1118 | 2293.38 | 2297.9 | 2297.9 | 2298.74 | 0.060819 | 7.61 | 158.55 | 97.1 | 0.94 |
| CaveCreek2 | Tributary | 1000.81 | 2 | 1118 | 2293.38 | 2297.92 | 2297.92 | 2298.96 | 0.069765 | 8.17 | 136.79 | 66.63 | 1.01 |
| CaveCreek2 | Tributary | 1049.9 | 1 | 1118 | 2295.57 | 2301.22 | 2301.22 | 2302.15 | 0.062719 | 7.84 | 148.79 | 83.54 | 0.96 |
| CaveCreek2 | Tributary | 1049.9 | 2 | 1118 | 2295.57 | 2301.27 | 2301.2 | 2302.25 | 0.063819 | 7.95 | 140.55 | 66.63 | 0.97 |
| CaveCreek2 | Tributary | 1100.44 | 1 | 1118 | 2299.03 | 2303.18 | | 2303.68 | 0.015896 | 5.72 | 199.81 | 80.41 | 0.62 |
| CaveCreek2 | Tributary | 1100.44 | 2 | 1118 | 2299.03 | 2303.28 | | 2303.77 | 0.014893 | 5.58 | 200.41 | 72.64 | 0.59 |
| CaveCreek3 | Tributary | 55.46 | 1 | 1691 | 2219.52 | 2225.5 | | 2225.94 | 0.005339 | 6.15 | 406.23 | 158.43 | 0.51 |
| CaveCreek3 | Tributary | 55.46 | 2 | 1691 | 2219.52 | 2226.17 | | 2227.03 | 0.009034 | 7.42 | 227.78 | 44.25 | 0.58 |
| CaveCreek3 | Tributary | 126.15 | 1 | 1691 | 2220.21 | 2225.76 | | 2226.47 | 0.006213 | 7.36 | 339.79 | 182.41 | 0.64 |
| CaveCreek3 | Tributary | 126.15 | 2 | 1691 | 2220.21 | 2226.7 | | 2227.5 | 0.00483 | 7.18 | 235.44 | 46.92 | 0.57 |
| CaveCreek3 | Tributary | 175.97 | 1 | 1691 | 2221.34 | 2226.48 | 2226.48 | 2227.41 | 0.016929 | 8.32 | 266.84 | 163.63 | 0.8 |
| CaveCreek3 | Tributary | 175.97 | 2 | 1691 | 2221.34 | 2226.93 | | 2228.09 | 0.01712 | 8.62 | 196.14 | 51.82 | 0.78 |
| CaveCreek3 | Tributary | 226.29 | 1 | 1691 | 2221.86 | 2227.54 | | 2228.17 | 0.010737 | 6.77 | 309.65 | 147.9 | 0.59 |
| CaveCreek3 | Tributary | 226.29 | 2 | 1691 | 2221.86 | 2228.17 | | 2228.87 | 0.009959 | 6.72 | 251.63 | 54 | 0.55 |
| CaveCreek3 | Tributary | 276.7 | 1 | 1691 | 2222 | 2228.02 | | 2228.59 | 0.006076 | 6.77 | 367.55 | 166.58 | 0.56 |
| CaveCreek3 | Tributary | 276.7 | 2 | 1691 | 2222 | 2228.54 | | 2229.49 | 0.009832 | 7.84 | 215.65 | 42.27 | 0.61 |
| CaveCreek3 | Tributary | 327.03 | 1 | 1691 | 2222.14 | 2228.28 | | 2229.03 | 0.006857 | 7.49 | 311.08 | 138.82 | 0.63 |
| CaveCreek3 | Tributary | 327.03 | 2 | 1691 | 2222.14 | 2228.97 | | 2229.91 | 0.006737 | 7.75 | 218.24 | 42.96 | 0.61 |
| CaveCreek3 | Tributary | 377.26 | 1 | 1691 | 2222.58 | 2228.91 | | 2229.48 | 0.008719 | 6.64 | 324.87 | 132.55 | 0.56 |
| CaveCreek3 | Tributary | 377.26 | 2 | 1691 | 2222.58 | 2229.49 | | 2230.36 | 0.01142 | 7.47 | 226.25 | 45.85 | 0.59 |
| veCreek3 | Tributary | 426.19 | 1 | 1691 | 2223.32 | 2229.26 | | 2230.03 | 0.010865 | 7.53 | 286.85 | 139.94 | 0.63 |
| CaveCreek3 | Tributary | 426.19 | 2 | 1691 | 2223.32 | 2230.04 | | 2230.92 | 0.011163 | 7.54 | 224.31 | 43.07 | 0.58 |
| CaveCreek3 | Tributary | 476.86 | 1 | 1691 | 2224.85 | 2230.17 | | 2230.66 | 0.010497 | 6.15 | 345.04 | 155.09 | 0.56 |
| CaveCreek3 | Tributary | 476.86 | 2 | 1691 | 2224.85 | 2230.88 | | 2231.53 | 0.010373 | 6.49 | 260.73 | 58.24 | 0.54 |
| CaveCreek3 | Tributary | 527.08 | 1 | 1691 | 2225.06 | 2230.75 | | 2231.15 | 0.009018 | 5.5 | 374.92 | 165.41 | 0.52 |
| CaveCreek3 | Tributary | 527.08 | 2 | 1691 | 2225.06 | 2231.57 | | 2232.01 | 0.006536 | 5.33 | 322.76 | 75.83 | 0.45 |
| CaveCreek3 | Tributary | 579.37 | 1 | 1691 | 2225.9 | 2231.21 | | 2231.54 | 0.006035 | 4.95 | 420.3 | 167.39 | 0.43 |
| CaveCreek3 | Tributary | 579.37 | 2 | 1691 | 2225.9 | 2231.95 | | 2232.34 | 0.005591 | 4.98 | 339.36 | 73.03 | 0.41 |
| CaveCreek3 | Tributary | 626.69 | 1 | 1691 | 2226.11 | 2231.42 | 2230.97 | 2232.38 | 0.020684 | 7.95 | 229.48 | 107.71 | 0.78 |
| CaveCreek3 | Tributary | 626.69 | 2 | 1691 | 2226.11 | 2232.18 | | 2232.86 | 0.012098 | 6.61 | 255.63 | 63.67 | 0.58 |
| CaveCreek3 | Tributary | 676.99 | 1 | 1691 | 2225.72 | 2232.55 | | 2233.15 | 0.009592 | 6.57 | 310.28 | 119.05 | 0.57 |
| CaveCreek3 | Tributary | 676.99 | 2 | 1691 | 2225.72 | 2232.72 | | 2233.57 | 0.012801 | 7.37 | 229.53 | 52.73 | 0.62 |
| CaveCreek3 | Tributary | 726.51 | 1 | 1691 | 2226.38 | 2232.98 | | 2233.61 | 0.009109 | 6.79 | 297.39 | 98.7 | 0.58 |
| CaveCreek3 | Tributary | 726.51 | 2 | 1691 | 2226.38 | 2233.31 | | 2234.16 | 0.011239 | 7.39 | 228.71 | 50.68 | 0.61 |
| CaveCreek3 | Tributary | 777.1 | 1 | 1691 | 2227.22 | 2233.49 | | 2233.94 | 0.003692 | 5.7 | 380.32 | 141.13 | 0.46 |
| CaveCreek3 | Tributary | 777.1 | 2 | 1691 | 2227.22 | 2234.06 | | 2234.57 | 0.003699 | 5.69 | 297.03 | 56.11 | 0.44 |
| CaveCreek3 | Tributary | 827.18 | 1 | 1691 | 2227.71 | 2233.5 | 2233.42 | 2234.67 | 0.020966 | 9.12 | 221.95 | 99.34 | 0.84 |
| CaveCreek3 | Tributary | 827.18 | 2 | 1691 | 2227.71 | 2234.08 | | 2235.27 | 0.018853 | 8.75 | 193.18 | 47.31 | 0.76 |
| CaveCreek3 | Tributary | 876.05 | 1 | 1691 | 2229.02 | 2234.97 | | 2235.46 | 0.007542 | 6.04 | 374.29 | 181.8 | 0.52 |
| CaveCreek3 | Tributary | 876.05 | 2 | 1691 | 2229.02 | 2235.38 | | 2236.05 | 0.009323 | 6.58 | 256.89 | 56.67 | 0.54 |
| CaveCreek3 | Tributary | 926.59 | 1 | 1691 | 2229.56 | 2235.38 | | 2235.91 | 0.009335 | 6.21 | 331.61 | 135.97 | 0.54 |
| CaveCreek3 | Tributary | 926.59 | 2 | 1691 | 2229.56 | 2235.93 | | 2236.54 | 0.00937 | 6.3 | 268.43 | 58.64 | 0.52 |
| CaveCreek3 | Tributary | 977.03 | 1 | 1691 | 2229.73 | 2235.85 | | 2236.36 | 0.009405 | 6.27 | 346.85 | 147.52 | 0.54 |
| CaveCreek3 | Tributary | 977.03 | 2 | 1691 | 2229.73 | 2236.38 | | 2237.11 | 0.011014 | 6.87 | 246.2 | 52.76 | 0.56 |
| veCreek3 | Tributary | 1025.89 | 1 | 1691 | 2229.99 | 2236.36 | | 2236.77 | 0.007896 | 5.69 | 376.17 | 149.18 | 0.5 |
| veCreek3 | Tributary | 1025.89 | 2 | 1691 | 2229.99 | 2237.04 | | 2237.63 | 0.008698 | 6.16 | 274.57 | 59.38 | 0.5 |

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| aveCreek3 | Tributary | 1076.84 | 1 | 1691 | 2231 | 2236.74 | | 2237.29 | 0.010754 | 6.67 | 330.58 | 145.8 | 0.63 |
| CaveCreek3 | Tributary | 1076.84 | 2 | 1691 | 2231 | 2237.47 | | 2238.15 | 0.009809 | 6.74 | 262.08 | 67.56 | 0.6 |
| CaveCreek3 | Tributary | 1126.52 | 1 | 1691 | 2231.23 | 2237.03 | | 2237.88 | 0.008073 | 7.78 | 271.5 | 111.39 | 0.69 |
| CaveCreek3 | Tributary | 1126.52 | 2 | 1691 | 2231.23 | 2237.78 | | 2238.6 | 0.006231 | 7.27 | 232.67 | 49.85 | 0.59 |
| CaveCreek3 | Tributary | 1176.55 | 1 | 1691 | 2232.11 | 2237.4 | 2237.4 | 2238.8 | 0.012857 | 9.91 | 211.87 | 91.24 | 0.89 |
| CaveCreek3 | Tributary | 1176.55 | 2 | 1691 | 2232.11 | 2237.88 | | 2239.32 | 0.011357 | 9.65 | 175.28 | 40.66 | 0.82 |
| CaveCreek3 | Tributary | 1227.05 | 1 | 1691 | 2233.1 | 2238.44 | | 2239.45 | 0.009089 | 8.54 | 254.44 | 102.99 | 0.75 |
| CaveCreek3 | Tributary | 1227.05 | 2 | 1691 | 2233.1 | 2238.53 | | 2239.91 | 0.011357 | 9.44 | 179.06 | 42.99 | 0.82 |
| CaveCreek3 | Tributary | 1276.26 | 1 | 1691 | 2234.24 | 2238.84 | 2238.79 | 2240.18 | 0.016455 | 9.79 | 205.16 | 83.73 | 0.94 |
| CaveCreek3 | Tributary | 1276.26 | 2 | 1691 | 2234.24 | 2239.07 | 2238.99 | 2240.77 | 0.018358 | 10.45 | 161.79 | 45.19 | 0.97 |
| CaveCreek3 | Tributary | 1326.19 | 1 | 1691 | 2234.82 | 2240.18 | | 2240.81 | 0.004846 | 6.66 | 293.29 | 106.64 | 0.57 |
| CaveCreek3 | Tributary | 1326.19 | 2 | 1691 | 2234.82 | 2240.81 | | 2241.49 | 0.004639 | 6.58 | 256.95 | 52.37 | 0.52 |
| CaveCreek3 | Tributary | 1376.88 | 1 | 1691 | 2236.3 | 2240.33 | 2240.33 | 2241.59 | 0.019092 | 8.99 | 195.12 | 89.91 | 0.93 |
| CaveCreek3 | Tributary | 1376.88 | 2 | 1691 | 2236.3 | 2240.84 | 2240.68 | 2242.33 | 0.021161 | 9.79 | 172.69 | 50.41 | 0.93 |
| CaveCreek3 | Tributary | 1426.68 | 1 | 1691 | 2236.68 | 2241.64 | 2240.84 | 2242.36 | 0.008107 | 6.84 | 262.89 | 100.07 | 0.64 |
| CaveCreek3 | Tributary | 1426.68 | 2 | 1691 | 2236.68 | 2242.31 | 2241.23 | 2243.19 | 0.009364 | 7.51 | 225.24 | 53.18 | 0.64 |
| CaveCreek3 | Tributary | 1476.67 | 1 | 1691 | 2237.02 | 2242.03 | | 2242.84 | 0.008348 | 7.51 | 250.38 | 91.48 | 0.68 |
| CaveCreek3 | Tributary | 1476.67 | 2 | 1691 | 2237.02 | 2242.75 | | 2243.66 | 0.008795 | 7.64 | 221.37 | 49.15 | 0.63 |
| CaveCreek3 | Tributary | 1526.67 | 1 | 1691 | 2238.33 | 2242.42 | 2242.42 | 2243.83 | 0.013941 | 9.9 | 204.42 | 83.88 | 0.94 |
| CaveCreek3 | Tributary | 1526.67 | 2 | 1691 | 2238.33 | 2243.05 | | 2244.33 | 0.010704 | 9.08 | 186.14 | 46 | 0.8 |
| CaveCreek3 | Tributary | 1576.2 | 1 | 1691 | 2238.28 | 2243.86 | | 2244.48 | 0.005486 | 6.66 | 304.03 | 91.23 | 0.57 |
| CaveCreek3 | Tributary | 1576.2 | 2 | 1691 | 2238.28 | 2244.05 | | 2244.88 | 0.006766 | 7.31 | 231.48 | 51.83 | 0.61 |
| CaveCreek3 | Tributary | 1626.37 | 1 | 1691 | 2238.23 | 2244.11 | | 2244.74 | 0.005522 | 6.9 | 309.45 | 92.72 | 0.58 |
| CaveCreek3 | Tributary | 1626.37 | 2 | 1691 | 2238.23 | 2244.33 | | 2245.33 | 0.007765 | 8 | 211.36 | 45.57 | 0.65 |
| CaveCreek3 | Tributary | 1676.33 | 1 | 1691 | 2238.37 | 2244.5 | | 2245.08 | 0.007255 | 6.56 | 317.78 | 91.67 | 0.51 |
| veCreek3 | Tributary | 1676.33 | 2 | 1691 | 2238.37 | 2245.01 | | 2245.81 | 0.00959 | 7.2 | 234.9 | 41.61 | 0.53 |
| CaveCreek3 | Tributary | 1727.16 | 1 | 1691 | 2238.61 | 2244.86 | | 2245.57 | 0.00952 | 7.32 | 286.43 | 85.73 | 0.58 |
| CaveCreek3 | Tributary | 1727.16 | 2 | 1691 | 2238.61 | 2245.47 | | 2246.43 | 0.011827 | 7.88 | 214.53 | 38.38 | 0.59 |
| CaveCreek3 | Tributary | 1775.85 | 1 | 1691 | 2239.8 | 2245.39 | | 2246.02 | 0.008696 | 6.79 | 298.17 | 88.81 | 0.55 |
| CaveCreek3 | Tributary | 1775.85 | 2 | 1691 | 2239.8 | 2246.33 | | 2247 | 0.008295 | 6.58 | 256.92 | 45.17 | 0.49 |
| CaveCreek3 | Tributary | 1826.28 | 1 | 1691 | 2240.18 | 2246.06 | | 2246.46 | 0.006287 | 5.39 | 377.4 | 120.71 | 0.44 |
| CaveCreek3 | Tributary | 1826.28 | 2 | 1691 | 2240.18 | 2247 | | 2247.42 | 0.005913 | 5.25 | 321.85 | 56.64 | 0.39 |
| CaveCreek3 | Tributary | 1875.82 | 1 | 1691 | 2240.26 | 2246.27 | | 2247.13 | 0.013559 | 7.83 | 255.93 | 91.39 | 0.66 |
| CaveCreek3 | Tributary | 1875.82 | 2 | 1691 | 2240.26 | 2247.2 | | 2248 | 0.01082 | 7.18 | 235.5 | 44.75 | 0.55 |
| CaveCreek3 | Tributary | 1926.02 | 1 | 1691 | 2241.19 | 2247.23 | | 2247.77 | 0.008953 | 6.18 | 324.65 | 112.65 | 0.51 |
| CaveCreek3 | Tributary | 1926.02 | 2 | 1691 | 2241.19 | 2247.99 | | 2248.55 | 0.008495 | 6.02 | 281.04 | 53.67 | 0.46 |
| CaveCreek3 | Tributary | 1975.87 | 1 | 1691 | 2241.47 | 2247.61 | | 2248.35 | 0.011051 | 7.26 | 271.53 | 86.59 | 0.61 |
| CaveCreek3 | Tributary | 1975.87 | 2 | 1691 | 2241.47 | 2248.33 | | 2249.1 | 0.009419 | 7.05 | 239.74 | 47.56 | 0.55 |
| CaveCreek3 | Tributary | 2026.23 | 1 | 1691 | 2241.71 | 2248.15 | | 2248.97 | 0.012488 | 7.61 | 254.14 | 74.7 | 0.62 |
| CaveCreek3 | Tributary | 2026.23 | 2 | 1691 | 2241.71 | 2248.82 | | 2249.67 | 0.01205 | 7.4 | 228.36 | 44.39 | 0.58 |
| CaveCreek3 | Tributary | 2076.05 | 1 | 1691 | 2243.1 | 2248.79 | | 2249.53 | 0.009268 | 7.06 | 263.24 | 75.98 | 0.58 |
| CaveCreek3 | Tributary | 2076.05 | 2 | 1691 | 2243.1 | 2249.57 | | 2250.19 | 0.007043 | 6.33 | 267.17 | 49.85 | 0.48 |
| CaveCreek3 | Tributary | 2126.56 | 1 | 1691 | 2243.9 | 2249.33 | | 2250.23 | 0.016865 | 7.69 | 226.89 | 67.83 | 0.68 |
| CaveCreek3 | Tributary | 2126.56 | 2 | 1691 | 2243.9 | 2249.99 | | 2250.68 | 0.011728 | 6.67 | 253.5 | 54.9 | 0.55 |
| CaveCreek3 | Tributary | 2176.55 | 1 | 1691 | 2244.52 | 2250.21 | | 2251.24 | 0.021385 | 8.18 | 208.68 | 61.94 | 0.75 |
| CaveCreek3 | Tributary | 2176.55 | 2 | 1691 | 2244.52 | 2250.6 | | 2251.45 | 0.016476 | 7.42 | 228 | 55.89 | 0.65 |
| CaveCreek3 | Tributary | 2226.36 | 1 | 1691 | 2244.94 | 2251.45 | 2250.28 | 2252.28 | 0.017845 | 7.32 | 230.96 | 59.25 | 0.65 |
| CaveCreek3 | Tributary | 2226.36 | 2 | 1691 | 2244.94 | 2251.49 | 2250.28 | 2252.31 | 0.017293 | 7.23 | 233.78 | 59.58 | 0.64 |
| CaveCreek3 | Tributary | 2275.58 | 1 | 1691 | 2245.57 | 2252.43 | 2250.86 | 2253.11 | 0.014618 | 6.64 | 254.77 | 62.21 | 0.58 |
| CaveCreek3 | Tributary | 2275.58 | 2 | 1691 | 2245.57 | 2252.44 | 2250.86 | 2253.12 | 0.01449 | 6.61 | 255.63 | 62.32 | 0.58 |
| veCreek3 | Tributary | 2307.26 | 1 | 1691 | 2245.78 | 2253.16 | | 2253.52 | 0.007097 | 4.85 | 353.69 | 94.16 | 0.4 |

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek3 | Tributary | 2307.26 | 2 | 1691 | 2245.78 | 2253.17 | | 2253.53 | 0.00724 | 4.85 | 348.5 | 77.28 | 0.4 |
| CaveCreek3 | Tributary | 2392.89 | 1 | 1691 | 2246.05 | 2253.86 | | 2254.07 | 0.005034 | 3.71 | 476.1 | 149.16 | 0.32 |
| CaveCreek3 | Tributary | 2392.89 | 2 | 1691 | 2246.05 | 2253.88 | | 2254.1 | 0.00527 | 3.77 | 448.76 | 109.88 | 0.33 |
| CaveCreek3 | Tributary | 2448.51 | 1 | 1691 | 2247.18 | 2254.16 | | 2254.61 | 0.013048 | 5.42 | 328.99 | 139.19 | 0.52 |
| CaveCreek3 | Tributary | 2448.51 | 2 | 1691 | 2247.18 | 2254.2 | | 2254.67 | 0.013381 | 5.47 | 309.2 | 91.09 | 0.52 |
| CaveCreek3 | Tributary | 2484.05 | 1 | 1691 | 2248.46 | 2254.58 | 2253.49 | 2255.25 | 0.016864 | 6.54 | 262.51 | 86.33 | 0.6 |
| CaveCreek3 | Tributary | 2484.05 | 2 | 1691 | 2248.46 | 2254.64 | 2253.49 | 2255.29 | 0.016601 | 6.47 | 261.55 | 71.04 | 0.59 |
| CaveCreek3 | Tributary | 2527.13 | 1 | 1691 | 2249.77 | 2255.07 | 2255.02 | 2256.7 | 0.031888 | 10.3 | 169.98 | 54.87 | 0.94 |
| CaveCreek3 | Tributary | 2527.13 | 2 | 1691 | 2249.77 | 2255.14 | 2254.95 | 2256.78 | 0.034472 | 10.28 | 164.5 | 43.14 | 0.93 |
| CaveCreek3 | Tributary | 2577.17 | 1 | 1691 | 2251.53 | 2256.57 | | 2257.53 | 0.006609 | 7.95 | 238.17 | 108.43 | 0.77 |
| CaveCreek3 | Tributary | 2577.17 | 2 | 1691 | 2251.53 | 2256.63 | | 2257.62 | 0.006677 | 8 | 211.38 | 62.36 | 0.77 |
| CaveCreek3 | Tributary | 2626.98 | 1 | 1691 | 2252.31 | 2256.88 | 2256.54 | 2257.95 | 0.00824 | 8.41 | 218.27 | 86.51 | 0.81 |
| CaveCreek3 | Tributary | 2626.98 | 2 | 1691 | 2252.31 | 2256.94 | | 2258.06 | 0.008445 | 8.49 | 199.22 | 58.81 | 0.81 |
| CaveCreek3 | Tributary | 2677.04 | 1 | 1691 | 2253.22 | 2257.92 | 2257.92 | 2259.48 | 0.010858 | 10.21 | 181.7 | 66.92 | 0.99 |
| CaveCreek3 | Tributary | 2677.04 | 2 | 1691 | 2253.22 | 2258 | 2258 | 2259.7 | 0.012986 | 10.48 | 161.39 | 48.2 | 1.01 |
| CaveCreek3 | Tributary | 2726.6 | 1 | 1691 | 2254.29 | 2259.13 | | 2260.07 | 0.006528 | 7.89 | 232.16 | 86.53 | 0.74 |
| CaveCreek3 | Tributary | 2726.6 | 2 | 1691 | 2254.29 | 2259.52 | | 2260.35 | 0.005062 | 7.28 | 232.24 | 59.69 | 0.65 |
| CaveCreek3 | Tributary | 2776.16 | 1 | 1691 | 2254.74 | 2259.58 | | 2260.4 | 0.004973 | 7.53 | 268.95 | 107.08 | 0.71 |
| CaveCreek3 | Tributary | 2776.16 | 2 | 1691 | 2254.74 | 2259.72 | | 2260.66 | 0.005303 | 7.81 | 216.59 | 59.11 | 0.72 |
| CaveCreek3 | Tributary | 2825.71 | 1 | 1691 | 2254.81 | 2260.42 | 2260.42 | 2261.65 | 0.006978 | 9.43 | 221.87 | 97.61 | 0.9 |
| CaveCreek3 | Tributary | 2825.71 | 2 | 1691 | 2254.81 | 2260.47 | 2260.47 | 2262.2 | 0.00984 | 10.55 | 160.27 | 46.73 | 1 |
| CaveCreek3 | Tributary | 2874.41 | 1 | 1691 | 2255.95 | 2261.43 | | 2262.27 | 0.016336 | 7.56 | 242.91 | 103.43 | 0.78 |
| CaveCreek3 | Tributary | 2874.41 | 2 | 1691 | 2255.95 | 2262.39 | | 2262.97 | 0.007901 | 6.1 | 277.08 | 71.26 | 0.55 |
| CaveCreek3 | Tributary | 2926.5 | 1 | 1691 | 2255.83 | 2262.39 | 2261.08 | 2262.85 | 0.006017 | 5.59 | 323.96 | 97.25 | 0.51 |
| CaveCreek3 | Tributary | 2926.5 | 2 | 1691 | 2255.83 | 2262.89 | 2261.03 | 2263.34 | 0.005083 | 5.35 | 315.88 | 73.44 | 0.45 |
| CaveCreek3 | Tributary | 2976.89 | 1 | 1691 | 2256.83 | 2262.66 | | 2263.1 | 0.004116 | 5.54 | 357.8 | 143.19 | 0.51 |
| CaveCreek3 | Tributary | 2976.89 | 2 | 1691 | 2256.83 | 2263.11 | | 2263.55 | 0.003568 | 5.35 | 316.23 | 79.39 | 0.47 |
| CaveCreek3 | Tributary | 3026.25 | 1 | 1691 | 2256.85 | 2262.84 | 2261.87 | 2263.54 | 0.011752 | 6.7 | 254.56 | 85.21 | 0.65 |
| CaveCreek3 | Tributary | 3026.25 | 2 | 1691 | 2256.85 | 2263.31 | 2261.87 | 2263.85 | 0.007946 | 5.88 | 287.44 | 76.53 | 0.53 |
| CaveCreek3 | Tributary | 3076.09 | 1 | 1691 | 2258.19 | 2263.66 | | 2264.38 | 0.024976 | 6.79 | 249.13 | 80.33 | 0.67 |
| CaveCreek3 | Tributary | 3076.09 | 2 | 1691 | 2258.19 | 2263.87 | | 2264.5 | 0.020501 | 6.36 | 266.46 | 84.9 | 0.61 |
| CaveCreek3 | Tributary | 3126.26 | 1 | 1691 | 2258.96 | 2264.89 | | 2265.56 | 0.021903 | 6.6 | 258.88 | 85.44 | 0.65 |
| CaveCreek3 | Tributary | 3126.26 | 2 | 1691 | 2258.96 | 2264.91 | | 2265.58 | 0.022049 | 6.57 | 257.42 | 78.86 | 0.64 |
| CaveCreek3 | Tributary | 3176.64 | 1 | 1691 | 2259.52 | 2265.96 | | 2266.53 | 0.016116 | 6.12 | 282.51 | 85.79 | 0.57 |
| CaveCreek3 | Tributary | 3176.64 | 2 | 1691 | 2259.52 | 2265.98 | | 2266.55 | 0.01587 | 6.09 | 281.44 | 79.97 | 0.56 |
| CaveCreek3 | Tributary | 3225.5 | 1 | 1691 | 2259.8 | 2266.77 | | 2267.19 | 0.010014 | 5.2 | 329.82 | 89.34 | 0.45 |
| CaveCreek3 | Tributary | 3225.5 | 2 | 1691 | 2259.8 | 2266.78 | | 2267.2 | 0.009957 | 5.2 | 327.92 | 82.83 | 0.45 |
| CaveCreek3 | Tributary | 3276.91 | 1 | 1691 | 2262.58 | 2267.46 | | 2268.11 | 0.027772 | 6.48 | 263.88 | 105.7 | 0.7 |
| CaveCreek3 | Tributary | 3276.91 | 2 | 1691 | 2262.58 | 2267.47 | | 2268.12 | 0.027724 | 6.49 | 262.07 | 100.64 | 0.7 |
| CaveCreek4 | Tributary | 63.09 | 1 | 294 | 2220.31 | 2225.76 | | 2225.83 | 0.000588 | 2.13 | 171.24 | 77.76 | 0.19 |
| CaveCreek4 | Tributary | 63.09 | 2 | 294 | 2220.31 | 2226.54 | | 2226.59 | 0.000404 | 1.93 | 152.69 | 31.91 | 0.16 |
| CaveCreek4 | Tributary | 199.2 | 1 | 294 | 2223.81 | 2226.09 | 2226.09 | 2226.45 | 0.02214 | 5.28 | 76.08 | 108.32 | 0.84 |
| CaveCreek4 | Tributary | 199.2 | 2 | 294 | 2223.81 | 2226.55 | | 2226.91 | 0.013628 | 4.83 | 60.91 | 36.26 | 0.66 |
| CaveCreek4 | Tributary | 250.01 | 1 | 294 | 2225.16 | 2227.24 | | 2227.64 | 0.02291 | 6.12 | 74.44 | 98.7 | 0.87 |
| CaveCreek4 | Tributary | 250.01 | 2 | 294 | 2225.16 | 2227.6 | 2227.6 | 2228.58 | 0.03485 | 7.94 | 37.05 | 19.32 | 1.01 |
| CaveCreek4 | Tributary | 300.24 | 1 | 294 | 2225.99 | 2228.32 | 2228.32 | 2228.79 | 0.020774 | 6.48 | 67.5 | 79.83 | 0.85 |
| CaveCreek4 | Tributary | 300.24 | 2 | 294 | 2225.99 | 2229.2 | 2228.64 | 2229.88 | 0.017716 | 6.63 | 44.31 | 16.43 | 0.71 |
| CaveCreek4 | Tributary | 349.34 | 1 | 294 | 2226.54 | 2229.23 | | 2229.67 | 0.015789 | 6 | 66.55 | 60.92 | 0.75 |
| CaveCreek4 | Tributary | 349.34 | 2 | 294 | 2226.54 | 2230.14 | | 2230.62 | 0.010837 | 5.53 | 53.16 | 18.28 | 0.57 |
| CaveCreek4 | Tributary | 398.78 | 1 | 294 | 2227.18 | 2230.05 | | 2230.57 | 0.018414 | 6.2 | 61.48 | 56.19 | 0.8 |
| CaveCreek4 | Tributary | 398.78 | 2 | 294 | 2227.18 | 2230.69 | | 2231.15 | 0.01057 | 5.43 | 54.17 | 21.46 | 0.6 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek4 | Tributary | 449.12 | 1 | 294 | 2228.28 | 2231.04 | | 2231.4 | 0.013434 | 4.96 | 67.63 | 63.16 | 0.66 |
| CaveCreek4 | Tributary | 449.12 | 2 | 294 | 2228.28 | 2231.39 | | 2231.68 | 0.008716 | 4.33 | 67.88 | 31.9 | 0.52 |
| CaveCreek4 | Tributary | 499.9 | 1 | 294 | 2229.4 | 2231.83 | | 2232.17 | 0.017826 | 5 | 75.05 | 84.77 | 0.72 |
| CaveCreek4 | Tributary | 499.9 | 2 | 294 | 2229.4 | 2231.95 | | 2232.38 | 0.018908 | 5.34 | 56.33 | 35.33 | 0.74 |
| CaveCreek4 | Tributary | 550.21 | 1 | 294 | 2230.32 | 2232.62 | | 2233 | 0.014666 | 5.08 | 67.79 | 68.1 | 0.7 |
| CaveCreek4 | Tributary | 550.21 | 2 | 294 | 2230.32 | 2232.79 | | 2233.17 | 0.012524 | 4.9 | 60.01 | 33.34 | 0.64 |
| CaveCreek4 | Tributary | 591.49 | 1 | 294 | 2230.58 | 2233.25 | | 2233.47 | 0.007516 | 4.15 | 90.65 | 75.2 | 0.52 |
| CaveCreek4 | Tributary | 591.49 | 2 | 294 | 2230.58 | 2233.31 | | 2233.8 | 0.015412 | 5.61 | 52.37 | 25.61 | 0.69 |
| CaveCreek4 | Tributary | 649.6 | 1 | 294 | 2231.2 | 2233.76 | | 2234.06 | 0.016636 | 5.24 | 84.9 | 96.99 | 0.73 |
| CaveCreek4 | Tributary | 649.6 | 2 | 294 | 2231.2 | 2234.24 | | 2234.8 | 0.018029 | 6.02 | 48.81 | 23.7 | 0.74 |
| CaveCreek4 | Tributary | 702.29 | 1 | 294 | 2231.57 | 2234.49 | 2234.42 | 2234.94 | 0.020978 | 6.1 | 70.02 | 82.97 | 0.81 |
| CaveCreek4 | Tributary | 702.29 | 2 | 294 | 2231.57 | 2235.14 | | 2235.72 | 0.016587 | 6.07 | 48.42 | 19.99 | 0.69 |
| CaveCreek4 | Tributary | 750.06 | 1 | 294 | 2232.67 | 2235.36 | | 2235.65 | 0.013646 | 4.89 | 85.92 | 94.43 | 0.68 |
| CaveCreek4 | Tributary | 750.06 | 2 | 294 | 2232.67 | 2235.99 | | 2236.33 | 0.008418 | 4.68 | 62.8 | 28.05 | 0.55 |
| CaveCreek4 | Tributary | 799.92 | 1 | 294 | 2234.28 | 2236.11 | | 2236.45 | 0.022232 | 5.38 | 78 | 100.53 | 0.81 |
| CaveCreek4 | Tributary | 799.92 | 2 | 294 | 2234.28 | 2236.51 | | 2237.05 | 0.020075 | 5.88 | 49.97 | 27.88 | 0.77 |
| CaveCreek4 | Tributary | 850.83 | 1 | 294 | 2235.77 | 2237.23 | | 2237.48 | 0.028017 | 4.53 | 76.23 | 81.85 | 0.78 |
| CaveCreek4 | Tributary | 850.83 | 2 | 294 | 2235.77 | 2237.75 | | 2238.26 | 0.028268 | 5.76 | 51.67 | 33.1 | 0.81 |
| CaveCreek4 | Tributary | 899.79 | 1 | 294 | 2235.05 | 2237.72 | | 2237.82 | 0.004915 | 3.21 | 133.02 | 97.34 | 0.4 |
| CaveCreek4 | Tributary | 899.79 | 2 | 294 | 2235.05 | 2238.63 | | 2238.91 | 0.006524 | 4.25 | 69.19 | 24.12 | 0.44 |
| CaveCreek4 | Tributary | 950.75 | 1 | 294 | 2235.89 | 2238.03 | | 2238.44 | 0.022238 | 5.97 | 73.08 | 87.31 | 0.84 |
| CaveCreek4 | Tributary | 950.75 | 2 | 294 | 2235.89 | 2238.98 | | 2239.42 | 0.011046 | 5.3 | 55.46 | 21.89 | 0.59 |
| CaveCreek4 | Tributary | 999.76 | 1 | 294 | 2236.16 | 2238.96 | 2238.92 | 2239.49 | 0.017921 | 6.1 | 62.14 | 70.98 | 0.79 |
| CaveCreek4 | Tributary | 999.76 | 2 | 294 | 2236.16 | 2239.53 | | 2239.94 | 0.010319 | 5.18 | 56.71 | 23.55 | 0.59 |
| CaveCreek4 | Tributary | 1050.89 | 1 | 294 | 2237.2 | 2240.1 | 2240.03 | 2240.54 | 0.022584 | 5.44 | 62.14 | 80.85 | 0.77 |
| CaveCreek4 | Tributary | 1050.89 | 2 | 294 | 2237.2 | 2240.23 | | 2240.65 | 0.019486 | 5.23 | 56.22 | 33.14 | 0.71 |
| CaveCreek4 | Tributary | 1099.46 | 1 | 294 | 2238.04 | 2241.02 | | 2241.2 | 0.00782 | 3.71 | 96.94 | 65.28 | 0.48 |
| CaveCreek4 | Tributary | 1099.46 | 2 | 294 | 2238.04 | 2241.1 | | 2241.47 | 0.014146 | 4.88 | 60.21 | 30.95 | 0.62 |
| CaveCreek4 | Tributary | 1150.26 | 1 | 294 | 2238.27 | 2241.34 | | 2241.51 | 0.006143 | 3.88 | 108.26 | 82.22 | 0.46 |
| CaveCreek4 | Tributary | 1150.26 | 2 | 294 | 2238.27 | 2241.65 | | 2242.02 | 0.008629 | 4.88 | 60.24 | 24.23 | 0.55 |
| CaveCreek4 | Tributary | 1200.58 | 1 | 294 | 2239.09 | 2241.69 | 2241.69 | 2242.29 | 0.024131 | 6.52 | 54.23 | 52.22 | 0.88 |
| CaveCreek4 | Tributary | 1200.58 | 2 | 294 | 2239.09 | 2242.15 | | 2242.67 | 0.015835 | 5.78 | 50.84 | 23.61 | 0.69 |
| CaveCreek4 | Tributary | 1250.9 | 1 | 294 | 2240.44 | 2243.04 | | 2243.32 | 0.01553 | 4.76 | 80.6 | 77.95 | 0.65 |
| CaveCreek4 | Tributary | 1250.9 | 2 | 294 | 2240.44 | 2243.11 | | 2243.64 | 0.023485 | 5.86 | 50.21 | 29.29 | 0.79 |
| CaveCreek4 | Tributary | 1299.45 | 1 | 294 | 2241.43 | 2243.73 | | 2244.09 | 0.016613 | 5.64 | 72.06 | 60.88 | 0.74 |
| CaveCreek4 | Tributary | 1299.45 | 2 | 294 | 2241.43 | 2244.13 | | 2244.89 | 0.023082 | 6.99 | 42.05 | 19.02 | 0.83 |
| CaveCreek4 | Tributary | 1349.34 | 1 | 294 | 2241.96 | 2244.46 | | 2244.98 | 0.021699 | 6.4 | 62.11 | 65.32 | 0.86 |
| CaveCreek4 | Tributary | 1349.34 | 2 | 294 | 2241.96 | 2245.3 | | 2245.75 | 0.010972 | 5.37 | 54.77 | 21.19 | 0.59 |
| CaveCreek4 | Tributary | 1400.14 | 1 | 294 | 2243.42 | 2245.63 | | 2245.93 | 0.014696 | 5.23 | 80.13 | 69.91 | 0.71 |
| CaveCreek4 | Tributary | 1400.14 | 2 | 294 | 2243.42 | 2245.95 | 2245.83 | 2246.8 | 0.0285 | 7.41 | 39.67 | 19.66 | 0.92 |
| CaveCreek4 | Tributary | 1449.78 | 1 | 294 | 2243.92 | 2246.43 | | 2246.96 | 0.030182 | 6.48 | 57.66 | 53.56 | 0.91 |
| CaveCreek4 | Tributary | 1449.78 | 2 | 294 | 2243.92 | 2247.38 | | 2247.82 | 0.012283 | 5.27 | 55.74 | 22.12 | 0.59 |
| CaveCreek4 | Tributary | 1499.9 | 1 | 294 | 2244.18 | 2247.35 | | 2247.66 | 0.00796 | 4.77 | 75.14 | 48.96 | 0.54 |
| CaveCreek4 | Tributary | 1499.9 | 2 | 294 | 2244.18 | 2247.98 | | 2248.26 | 0.005471 | 4.25 | 69.22 | 22.85 | 0.43 |
| CaveCreek4 | Tributary | 1550.11 | 1 | 294 | 2245.47 | 2247.88 | | 2248.16 | 0.011548 | 4.68 | 80.16 | 57.54 | 0.58 |
| CaveCreek4 | Tributary | 1550.11 | 2 | 294 | 2245.47 | 2248.32 | | 2248.73 | 0.013405 | 5.18 | 56.72 | 23.04 | 0.58 |
| CaveCreek4 | Tributary | 1600.12 | 1 | 294 | 2246.84 | 2248.87 | 2248.87 | 2249.48 | 0.02984 | 6.89 | 53.29 | 46.01 | 0.96 |
| CaveCreek4 | Tributary | 1600.12 | 2 | 294 | 2246.84 | 2249.09 | 2249.09 | 2250.01 | 0.035318 | 7.7 | 38.16 | 20.81 | 1 |
| CaveCreek4 | Tributary | 1650.15 | 1 | 294 | 2247.91 | 2250.11 | | 2250.38 | 0.009909 | 4.29 | 77.63 | 53.92 | 0.54 |
| CaveCreek4 | Tributary | 1650.15 | 2 | 294 | 2247.91 | 2250.61 | | 2250.83 | 0.005988 | 3.71 | 79.26 | 32.12 | 0.42 |
| CaveCreek4 | Tributary | 1698.95 | 1 | 294 | 2249.14 | 2250.76 | | 2251.03 | 0.020065 | 4.65 | 76.56 | 83.03 | 0.7 |
| CaveCreek4 | Tributary | 1698.95 | 2 | 294 | 2249.14 | 2251.01 | | 2251.45 | 0.023029 | 5.3 | 55.44 | 34.19 | 0.73 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek4 | Tributary | 1750.07 | 1 | 294 | 2249.58 | 2251.96 | 2251.96 | 2252.62 | 0.027856 | 6.64 | 49.06 | 42.46 | 0.94 |
| CaveCreek4 | Tributary | 1750.07 | 2 | 294 | 2249.58 | 2252.12 | 2251.94 | 2252.76 | 0.024138 | 6.39 | 46.04 | 26.71 | 0.86 |
| CaveCreek4 | Tributary | 1798.07 | 1 | 294 | 2249.94 | 2253.06 | | 2253.26 | 0.005805 | 3.83 | 90.02 | 57.79 | 0.44 |
| CaveCreek4 | Tributary | 1798.07 | 2 | 294 | 2249.94 | 2253.18 | | 2253.45 | 0.007242 | 4.14 | 70.94 | 28.9 | 0.47 |
| CaveCreek4 | Tributary | 1849.57 | 1 | 294 | 2250.3 | 2253.35 | | 2253.56 | 0.006128 | 4.02 | 86.45 | 60.88 | 0.48 |
| CaveCreek4 | Tributary | 1849.57 | 2 | 294 | 2250.3 | 2253.55 | | 2253.89 | 0.008658 | 4.68 | 62.78 | 25.95 | 0.53 |
| CaveCreek4 | Tributary | 1899.5 | 1 | 294 | 2251.23 | 2253.68 | | 2253.86 | 0.006411 | 3.61 | 92.53 | 66.75 | 0.47 |
| CaveCreek4 | Tributary | 1899.5 | 2 | 294 | 2251.23 | 2254.07 | | 2254.27 | 0.005297 | 3.52 | 83.54 | 37.73 | 0.42 |
| CaveCreek4 | Tributary | 1949.68 | 1 | 294 | 2252.61 | 2254.34 | 2254.34 | 2254.94 | 0.031355 | 6.27 | 48.68 | 43.26 | 0.98 |
| CaveCreek4 | Tributary | 1949.68 | 2 | 294 | 2252.61 | 2254.41 | 2254.33 | 2254.97 | 0.028413 | 6.05 | 48.62 | 36.8 | 0.93 |
| CaveCreek4 | Tributary | 1999.48 | 1 | 294 | 2253.75 | 2255.9 | 2255.78 | 2256.22 | 0.017661 | 4.89 | 73.8 | 85.91 | 0.72 |
| CaveCreek4 | Tributary | 1999.48 | 2 | 294 | 2253.75 | 2255.92 | 2255.85 | 2256.56 | 0.034253 | 6.44 | 45.62 | 31.6 | 0.95 |
| CaveCreek4 | Tributary | 2050.03 | 1 | 294 | 2254.96 | 2256.86 | | 2257.16 | 0.018922 | 4.67 | 72.45 | 70.42 | 0.69 |
| CaveCreek4 | Tributary | 2050.03 | 2 | 294 | 2254.96 | 2257.31 | | 2257.56 | 0.010496 | 4.03 | 73.03 | 38.91 | 0.52 |
| CaveCreek4 | Tributary | 2100.35 | 1 | 294 | 2255.26 | 2257.54 | | 2257.73 | 0.006945 | 3.92 | 89.54 | 62.68 | 0.5 |
| CaveCreek4 | Tributary | 2100.35 | 2 | 294 | 2255.26 | 2257.78 | | 2258.15 | 0.0106 | 4.88 | 60.3 | 27.62 | 0.58 |
| CaveCreek4 | Tributary | 2149.47 | 1 | 294 | 2256.64 | 2258.05 | 2258.05 | 2258.5 | 0.02742 | 6.09 | 59.31 | 69.04 | 0.93 |
| CaveCreek4 | Tributary | 2149.47 | 2 | 294 | 2256.64 | 2258.41 | 2258.34 | 2259.17 | 0.030475 | 7.01 | 41.95 | 24.72 | 0.95 |
| CaveCreek4 | Tributary | 2199.7 | 1 | 294 | 2257.4 | 2259.38 | 2259.38 | 2259.75 | 0.025219 | 5.93 | 73.55 | 106.43 | 0.89 |
| CaveCreek4 | Tributary | 2199.7 | 2 | 294 | 2257.4 | 2259.88 | 2259.79 | 2260.71 | 0.029568 | 7.32 | 40.14 | 21.43 | 0.94 |
| CaveCreek4 | Tributary | 2247.07 | 1 | 294 | 2258.52 | 2260.6 | 2260.6 | 2261.07 | 0.021908 | 6.19 | 61.58 | 64.46 | 0.86 |
| CaveCreek4 | Tributary | 2247.07 | 2 | 294 | 2258.52 | 2261.24 | | 2261.86 | 0.01839 | 6.35 | 46.28 | 20.49 | 0.74 |
| CaveCreek4 | Tributary | 2299.81 | 1 | 294 | 2259.55 | 2261.64 | | 2261.99 | 0.015262 | 5.11 | 71.68 | 73.38 | 0.71 |
| CaveCreek4 | Tributary | 2299.81 | 2 | 294 | 2259.55 | 2262.26 | | 2262.56 | 0.007634 | 4.37 | 67.3 | 30.28 | 0.52 |
| CaveCreek4 | Tributary | 2350.46 | 1 | 294 | 2260.51 | 2262.91 | 2262.91 | 2263.55 | 0.023551 | 6.91 | 51.34 | 42.5 | 0.9 |
| CaveCreek4 | Tributary | 2350.46 | 2 | 294 | 2260.51 | 2263.01 | 2263.01 | 2263.98 | 0.034504 | 7.94 | 37.02 | 19.28 | 1.01 |
| CaveCreek5 | Tributary | 28.32 | 1 | 1985 | 2217.86 | 2224.98 | | 2225.11 | 0.001925 | 3.11 | 818.33 | 312.4 | 0.27 |
| CaveCreek5 | Tributary | 28.32 | 2 | 1985 | 2217.86 | 2225.47 | | 2225.67 | 0.002417 | 3.61 | 550.03 | 120.44 | 0.3 |
| CaveCreek5 | Tributary | 56.87 | 1 | 1985 | 2217.93 | 2225.03 | | 2225.21 | 0.004342 | 3.89 | 661.27 | 275.13 | 0.34 |
| CaveCreek5 | Tributary | 56.87 | 2 | 1985 | 2217.93 | 2225.5 | | 2225.85 | 0.006288 | 4.76 | 416.6 | 93.48 | 0.4 |
| CaveCreek6 | Tributary | 59.11 | 1 | 650 | 2221 | 2225.15 | | 2225.26 | 0.00142 | 2.87 | 281.22 | 110.01 | 0.28 |
| CaveCreek6 | Tributary | 59.11 | 2 | 650 | 2221 | 2225.71 | | 2225.91 | 0.002114 | 3.55 | 183.22 | 48.44 | 0.32 |
| CaveCreek6 | Tributary | 86.23 | 1 | 650 | 2221.55 | 2225.18 | | 2225.33 | 0.002925 | 3.26 | 222.11 | 109.37 | 0.38 |
| CaveCreek6 | Tributary | 86.23 | 2 | 650 | 2221.55 | 2225.85 | | 2225.98 | 0.00187 | 2.92 | 222.79 | 74.52 | 0.3 |
| CaveCreek6 | Tributary | 140.24 | 1 | 650 | 2222.1 | 2225.33 | | 2225.75 | 0.013038 | 5.84 | 145.74 | 123.46 | 0.78 |
| CaveCreek6 | Tributary | 140.24 | 2 | 650 | 2222.1 | 2225.82 | | 2226.41 | 0.011321 | 6.14 | 105.83 | 47.01 | 0.72 |
| CaveCreek6 | Tributary | 181.19 | 1 | 650 | 2222.39 | 2225.76 | | 2226.21 | 0.010356 | 6.15 | 149.79 | 125.43 | 0.76 |
| CaveCreek6 | Tributary | 181.19 | 2 | 650 | 2222.39 | 2226.19 | | 2226.96 | 0.011077 | 7.03 | 92.47 | 37.44 | 0.79 |
| CaveCreek6 | Tributary | 228.67 | 1 | 650 | 2223.4 | 2226.35 | | 2226.77 | 0.014885 | 6.11 | 148.49 | 135.1 | 0.8 |
| CaveCreek6 | Tributary | 228.67 | 2 | 650 | 2223.4 | 2226.85 | | 2227.57 | 0.014861 | 6.98 | 96.92 | 43.69 | 0.82 |
| CaveCreek6 | Tributary | 281.03 | 1 | 650 | 2223.71 | 2226.99 | | 2227.26 | 0.00829 | 4.79 | 182.14 | 152.38 | 0.61 |
| CaveCreek6 | Tributary | 281.03 | 2 | 650 | 2223.71 | 2227.77 | | 2228.14 | 0.006089 | 4.96 | 134.94 | 50.35 | 0.53 |
| CaveCreek6 | Tributary | 333.36 | 1 | 650 | 2223.94 | 2227.38 | | 2227.89 | 0.016462 | 6.62 | 146.7 | 149.27 | 0.82 |
| CaveCreek6 | Tributary | 333.36 | 2 | 650 | 2223.94 | 2228.05 | | 2228.81 | 0.015286 | 7.01 | 92.73 | 34.62 | 0.75 |
| CaveCreek6 | Tributary | 381.15 | 1 | 650 | 2224.69 | 2228.15 | | 2228.59 | 0.013286 | 6.21 | 150.92 | 141.04 | 0.77 |
| CaveCreek6 | Tributary | 381.15 | 2 | 650 | 2224.69 | 2228.8 | | 2229.47 | 0.011887 | 6.74 | 101.97 | 40.39 | 0.72 |
| CaveCreek6 | Tributary | 431.58 | 1 | 650 | 2225.07 | 2228.8 | 2228.8 | 2229.44 | 0.014241 | 6.95 | 122.37 | 111.89 | 0.8 |
| CaveCreek6 | Tributary | 431.58 | 2 | 650 | 2225.07 | 2229.36 | | 2230.07 | 0.011135 | 6.77 | 96.02 | 32.71 | 0.7 |
| CaveCreek6 | Tributary | 481.63 | 1 | 650 | 2225.04 | 2229.71 | 2229.71 | 2230.59 | 0.013437 | 7.94 | 104.5 | 71.42 | 0.81 |
| CaveCreek6 | Tributary | 481.63 | 2 | 650 | 2225.04 | 2229.84 | 2229.52 | 2230.99 | 0.017968 | 8.58 | 75.78 | 24.04 | 0.85 |
| CaveCreek6 | Tributary | 531.04 | 1 | 650 | 2226.22 | 2230.68 | | 2231.02 | 0.003105 | 5.08 | 171.66 | 97.89 | 0.51 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek6 | Tributary | 531.04 | 2 | 650 | 2226.22 | 2231.06 | | 2231.54 | 0.003795 | 5.54 | 117.24 | 34.03 | 0.53 |
| CaveCreek6 | Tributary | 579.05 | 1 | 650 | 2226.99 | 2231.01 | 2231.01 | 2231.86 | 0.014925 | 8.08 | 104.88 | 76.9 | 0.92 |
| CaveCreek6 | Tributary | 579.05 | 2 | 650 | 2226.99 | 2231.25 | 2231.25 | 2232.58 | 0.020654 | 9.25 | 70.26 | 26.63 | 1 |
| CaveCreek6 | Tributary | 608.01 | 1 | 650 | 2227.36 | 2231.76 | | 2232.19 | 0.003878 | 5.6 | 159.46 | 86.9 | 0.57 |
| CaveCreek6 | Tributary | 608.01 | 2 | 650 | 2227.36 | 2232.61 | | 2233.02 | 0.002494 | 5.11 | 127.31 | 33.06 | 0.46 |
| CaveCreek6 | Tributary | 654.88 | 1 | 650 | 2227.67 | 2232.25 | | 2232.38 | 0.001578 | 3.16 | 266.51 | 132.87 | 0.33 |
| CaveCreek6 | Tributary | 654.88 | 2 | 650 | 2227.67 | 2233.02 | | 2233.18 | 0.001352 | 3.23 | 204.26 | 55.96 | 0.3 |
| CaveCreek6 | Tributary | 681.58 | 1 | 650 | 2228.68 | 2232.24 | | 2232.5 | 0.003094 | 4.69 | 210.85 | 140.6 | 0.5 |
| CaveCreek6 | Tributary | 681.58 | 2 | 650 | 2228.68 | 2232.96 | | 2233.33 | 0.002673 | 4.89 | 135.86 | 39.19 | 0.46 |
| CaveCreek6 | Tributary | 712.75 | 1 | 650 | 2229.26 | 2232.44 | 2232.44 | 2233.07 | 0.015359 | 6.85 | 121.55 | 116.48 | 0.82 |
| CaveCreek6 | Tributary | 712.75 | 2 | 650 | 2229.26 | 2232.98 | | 2233.61 | 0.011275 | 6.38 | 101.81 | 37.62 | 0.68 |
| CaveCreek6 | Tributary | 781.52 | 1 | 650 | 2230 | 2233.58 | | 2233.74 | 0.005295 | 3.58 | 214.62 | 143.45 | 0.44 |
| CaveCreek6 | Tributary | 781.52 | 2 | 650 | 2230 | 2234 | | 2234.28 | 0.006046 | 4.19 | 155.06 | 62.5 | 0.47 |
| CaveCreek6 | Tributary | 830.89 | 1 | 650 | 2230.92 | 2233.86 | | 2234.19 | 0.016258 | 5.28 | 151.41 | 129.5 | 0.76 |
| CaveCreek6 | Tributary | 830.89 | 2 | 650 | 2230.92 | 2234.31 | | 2234.93 | 0.018265 | 6.32 | 102.91 | 53.94 | 0.81 |
| CaveCreek6 | Tributary | 880.63 | 1 | 650 | 2231.22 | 2234.56 | 2234.4 | 2234.99 | 0.014934 | 5.97 | 145.74 | 115.94 | 0.73 |
| CaveCreek6 | Tributary | 880.63 | 2 | 650 | 2231.22 | 2235.09 | | 2235.78 | 0.014877 | 6.71 | 98.64 | 38.26 | 0.73 |
| CaveCreek6 | Tributary | 930.87 | 1 | 650 | 2231.42 | 2235.28 | | 2235.87 | 0.017316 | 6.94 | 128.65 | 110.68 | 0.79 |
| CaveCreek6 | Tributary | 930.87 | 2 | 650 | 2231.42 | 2235.81 | | 2236.71 | 0.017945 | 7.6 | 85.57 | 29.39 | 0.78 |
| CaveCreek6 | Tributary | 980.8 | 1 | 650 | 2232.6 | 2236.11 | 2236.11 | 2236.8 | 0.017648 | 7.45 | 118.73 | 93.86 | 0.82 |
| CaveCreek6 | Tributary | 980.8 | 2 | 650 | 2232.6 | 2236.68 | | 2237.67 | 0.01886 | 7.96 | 81.64 | 26.16 | 0.79 |
| CaveCreek6 | Tributary | 1031.9 | 1 | 650 | 2231.52 | 2237.03 | | 2237.49 | 0.009433 | 6.07 | 141.98 | 84.96 | 0.61 |
| CaveCreek6 | Tributary | 1031.9 | 2 | 650 | 2231.52 | 2237.85 | | 2238.41 | 0.008326 | 6.1 | 111.15 | 29.25 | 0.54 |
| CaveCreek6 | Tributary | 1081.94 | 1 | 650 | 2233.4 | 2237.65 | | 2237.95 | 0.007394 | 4.86 | 169.94 | 101.89 | 0.53 |
| CaveCreek6 | Tributary | 1081.94 | 2 | 650 | 2233.4 | 2238.45 | | 2238.82 | 0.006099 | 4.86 | 133.83 | 39.04 | 0.46 |
| CaveCreek6 | Tributary | 1130.69 | 1 | 650 | 2234.38 | 2238.06 | | 2238.28 | 0.005413 | 4.02 | 190.3 | 101.96 | 0.43 |
| CaveCreek6 | Tributary | 1130.69 | 2 | 650 | 2234.38 | 2238.86 | | 2239.11 | 0.004453 | 4 | 162.5 | 45.77 | 0.37 |
| CaveCreek6 | Tributary | 1181.67 | 1 | 650 | 2235.6 | 2238.92 | 2238.92 | 2239.63 | 0.020879 | 7.38 | 110.21 | 81.31 | 0.86 |
| CaveCreek6 | Tributary | 1181.67 | 2 | 650 | 2235.6 | 2239.03 | 2239.03 | 2240.27 | 0.032285 | 8.91 | 72.98 | 30.2 | 1.01 |
| CaveCreek6 | Tributary | 1231.01 | 1 | 650 | 2236.7 | 2239.89 | | 2240.38 | 0.011589 | 6.1 | 124.49 | 71.46 | 0.66 |
| CaveCreek6 | Tributary | 1231.01 | 2 | 650 | 2236.7 | 2240.72 | | 2241.25 | 0.009324 | 5.87 | 110.76 | 31.46 | 0.55 |
| CaveCreek6 | Tributary | 1281.34 | 1 | 650 | 2237.08 | 2240.65 | | 2240.89 | 0.007209 | 4.37 | 182.13 | 112.62 | 0.51 |
| CaveCreek6 | Tributary | 1281.34 | 2 | 650 | 2237.08 | 2241.38 | | 2241.69 | 0.006017 | 4.5 | 144.29 | 47.58 | 0.46 |
| CaveCreek6 | Tributary | 1331.71 | 1 | 650 | 2237.72 | 2241.02 | | 2241.27 | 0.009067 | 4.33 | 170.45 | 119.59 | 0.59 |
| CaveCreek6 | Tributary | 1331.71 | 2 | 650 | 2237.72 | 2241.72 | | 2242.02 | 0.007088 | 4.42 | 146.99 | 61.5 | 0.5 |
| CaveCreek6 | Tributary | 1381.36 | 1 | 650 | 2238.83 | 2241.47 | | 2241.79 | 0.013352 | 3.7 | 154.61 | 128.43 | 0.61 |
| CaveCreek6 | Tributary | 1381.36 | 2 | 650 | 2238.83 | 2242.16 | | 2242.44 | 0.009442 | 4.22 | 154.49 | 83.89 | 0.55 |
| CaveCreek6 | Tributary | 1422.32 | 1 | 650 | 2239.45 | 2242.1 | | 2242.3 | 0.00989 | 3.47 | 184.9 | 162.07 | 0.57 |
| CaveCreek6 | Tributary | 1422.32 | 2 | 650 | 2239.45 | 2242.56 | | 2242.85 | 0.010612 | 4.34 | 150.87 | 92.98 | 0.6 |
| CaveCreek6 | Tributary | 1481.05 | 1 | 650 | 2240.59 | 2242.67 | | 2242.94 | 0.015868 | 3.59 | 160.28 | 168.24 | 0.68 |
| CaveCreek6 | Tributary | 1481.05 | 2 | 650 | 2240.59 | 2243.25 | | 2243.56 | 0.01357 | 4.5 | 145.23 | 100.62 | 0.66 |
| CaveCreek6 | Tributary | 1530.78 | 1 | 650 | 2241.7 | 2243.9 | 2243.9 | 2244.34 | 0.02415 | 4.42 | 126.26 | 133.78 | 0.86 |
| CaveCreek6 | Tributary | 1530.78 | 2 | 650 | 2241.7 | 2244.29 | 2244.29 | 2244.89 | 0.031537 | 6.24 | 104.76 | 88.28 | 1.01 |
| CaveCreek6 | Tributary | 1556.15 | 1 | 650 | 2241.92 | 2244.73 | 2244.48 | 2245.08 | 0.015457 | 4.06 | 141.32 | 114 | 0.69 |
| CaveCreek6 | Tributary | 1556.15 | 2 | 650 | 2241.92 | 2245.12 | 2244.88 | 2245.56 | 0.018965 | 5.29 | 122.95 | 85.64 | 0.78 |
| CaveCreek6 | Tributary | 1581.06 | 1 | 650 | 2242.36 | 2245.24 | 2245.22 | 2245.77 | 0.025797 | 5.87 | 112.48 | 102.48 | 0.97 |
| CaveCreek6 | Tributary | 1581.06 | 2 | 650 | 2242.36 | 2245.58 | | 2246.05 | 0.019398 | 5.5 | 118.17 | 79.98 | 0.8 |
| CaveCreek6 | Tributary | 1604.3 | 1 | 650 | 2243.1 | 2245.96 | | 2246.17 | 0.007365 | 3.7 | 181.59 | 118.52 | 0.5 |
| CaveCreek6 | Tributary | 1604.3 | 2 | 650 | 2243.1 | 2246.02 | | 2246.46 | 0.015273 | 5.34 | 121.81 | 69.54 | 0.71 |
| CaveCreek6 | Tributary | 1630.77 | 1 | 650 | 2243.31 | 2246.14 | | 2246.5 | 0.011994 | 5.15 | 142.28 | 97.81 | 0.65 |
| CaveCreek6 | Tributary | 1630.77 | 2 | 650 | 2243.31 | 2246.34 | | 2247.05 | 0.019908 | 6.75 | 96.25 | 45.42 | 0.82 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| CaveCreek6 | Tributary | 1667.12 | 1 | 650 | 2244 | 2246.95 | 2246.95 | 2247.59 | 0.012372 | 7 | 110.66 | 86.63 | 0.89 |
| aveCreek6 | Tributary | 1667.12 | 2 | 650 | 2244 | 2247.17 | 2247.17 | 2248.24 | 0.016027 | 8.31 | 78.19 | 36.52 | 1 |
| CaveCreek6 | Tributary | 1732.08 | 1 | 650 | 2244.78 | 2247.99 | 2247.99 | 2248.78 | 0.013675 | 7.89 | 113.02 | 80.87 | 0.9 |
| CaveCreek6 | Tributary | 1732.08 | 2 | 650 | 2244.78 | 2248.19 | 2248.19 | 2249.51 | 0.019067 | 9.22 | 70.49 | 27.09 | 1.01 |
| CaveCreek6 | Tributary | 1780.69 | 1 | 650 | 2245.38 | 2248.84 | 2248.84 | 2249.57 | 0.019207 | 7.74 | 116.6 | 94.65 | 0.91 |
| CaveCreek6 | Tributary | 1780.69 | 2 | 650 | 2245.38 | 2249.51 | 2249.14 | 2250.51 | 0.018154 | 8.01 | 81.13 | 27.79 | 0.83 |
| CaveCreek6 | Tributary | 1832.84 | 1 | 650 | 2246.2 | 2249.73 | 2249.73 | 2250.45 | 0.011817 | 7.38 | 119.18 | 89.78 | 0.84 |
| CaveCreek6 | Tributary | 1832.84 | 2 | 650 | 2246.2 | 2250.48 | | 2251.19 | 0.007931 | 6.77 | 96.05 | 30.56 | 0.67 |
| CaveCreek6 | Tributary | 1881.6 | 1 | 650 | 2247.73 | 2251.14 | 2251.14 | 2251.95 | 0.012204 | 7.88 | 113.95 | 81.23 | 0.88 |
| CaveCreek6 | Tributary | 1881.6 | 2 | 650 | 2247.73 | 2251.22 | 2251.22 | 2252.54 | 0.018291 | 9.2 | 70.68 | 27.36 | 1.01 |
| CaveCreek7 | Tributary | 23.91 | 1 | 933 | 2218.72 | 2225.06 | | 2225.1 | 0.000863 | 1.91 | 571.33 | 192.83 | 0.17 |
| CaveCreek7 | Tributary | 23.91 | 2 | 933 | 2218.72 | 2225.59 | | 2225.67 | 0.001082 | 2.23 | 418.6 | 92.26 | 0.18 |
| CaveCreek7 | Tributary | 45.2 | 1 | 933 | 2219.02 | 2225.07 | | 2225.14 | 0.001871 | 2.33 | 441.05 | 170.55 | 0.22 |
| CaveCreek7 | Tributary | 45.2 | 2 | 933 | 2219.02 | 2225.6 | | 2225.73 | 0.002648 | 2.9 | 321.49 | 81.5 | 0.26 |
| CaveCreek8 | Tributary | 20.37 | 1 | 283 | 2220.03 | 2225.13 | | 2225.18 | 0.000733 | 1.98 | 162.73 | 65.68 | 0.19 |
| CaveCreek8 | Tributary | 20.37 | 2 | 283 | 2220.03 | 2225.72 | | 2225.79 | 0.000856 | 2.11 | 133.9 | 35.23 | 0.19 |
| CaveCreek8 | Tributary | 39.6 | 1 | 283 | 2220.61 | 2225.13 | | 2225.21 | 0.001418 | 2.34 | 129.71 | 62.12 | 0.26 |
| CaveCreek8 | Tributary | 39.6 | 2 | 283 | 2220.61 | 2225.74 | | 2225.81 | 0.001099 | 2.14 | 132.09 | 42.17 | 0.21 |
| CaveCreek8 | Tributary | 99.35 | 1 | 283 | 2222.26 | 2225.2 | | 2225.51 | 0.010378 | 4.51 | 63.6 | 53.84 | 0.69 |
| CaveCreek8 | Tributary | 99.35 | 2 | 283 | 2222.26 | 2225.81 | | 2225.96 | 0.003552 | 3.11 | 91.1 | 47.32 | 0.39 |
| CaveCreek8 | Tributary | 150.37 | 1 | 283 | 2223.46 | 2226.59 | 2226.59 | 2227.33 | 0.015858 | 7.26 | 43.55 | 33.36 | 0.92 |
| CaveCreek8 | Tributary | 150.37 | 2 | 283 | 2223.46 | 2226.63 | 2226.63 | 2227.63 | 0.021299 | 8.06 | 35.11 | 17.85 | 1.01 |
| CaveCreek8 | Tributary | 200.44 | 1 | 283 | 2224.34 | 2227.57 | | 2227.92 | 0.00664 | 4.96 | 67.72 | 45.68 | 0.6 |
| CaveCreek8 | Tributary | 200.44 | 2 | 283 | 2224.34 | 2227.96 | | 2228.3 | 0.005237 | 4.68 | 60.5 | 24.5 | 0.52 |
| CaveCreek8 | Tributary | 249.31 | 1 | 283 | 2227.7 | 2229.88 | 2229.88 | 2230.42 | 0.018444 | 6.25 | 51.34 | 47.49 | 0.95 |
| CaveCreek8 | Tributary | 249.31 | 2 | 283 | 2227.7 | 2229.98 | 2229.98 | 2230.7 | 0.02125 | 6.81 | 41.53 | 29.28 | 1.01 |
| aveCreek8 | Tributary | 284.89 | 1 | 283 | 2228.42 | 2230.73 | 2230.73 | 2231.25 | 0.020403 | 6.21 | 51.41 | 48.69 | 0.98 |
| CaveCreek8 | Tributary | 284.89 | 2 | 283 | 2228.42 | 2230.95 | 2230.95 | 2231.68 | 0.021981 | 6.85 | 41.29 | 29.22 | 1.02 |
| CaveCreek8 | Tributary | 328.87 | 1 | 283 | 2230.78 | 2232.59 | 2232.59 | 2233.21 | 0.020694 | 6.31 | 44.8 | 36.72 | 1.05 |
| CaveCreek8 | Tributary | 328.87 | 2 | 283 | 2230.78 | 2233.12 | 2233.12 | 2233.96 | 0.021009 | 7.35 | 38.48 | 23.55 | 1.01 |
| CaveCreek8 | Tributary | 353.1 | 1 | 283 | 2231.03 | 2233.58 | 2233.58 | 2234.25 | 0.018369 | 6.99 | 46.23 | 35.41 | 1 |
| CaveCreek8 | Tributary | 353.1 | 2 | 283 | 2231.03 | 2233.82 | 2233.82 | 2234.68 | 0.019622 | 7.47 | 37.88 | 22.26 | 1.01 |
| CaveCreek8 | Tributary | 394.91 | 1 | 283 | 2231.36 | 2234.62 | 2234.62 | 2235.29 | 0.014331 | 7.11 | 48.05 | 38.3 | 0.87 |
| CaveCreek8 | Tributary | 394.91 | 2 | 283 | 2231.36 | 2234.73 | 2234.73 | 2235.83 | 0.019525 | 8.42 | 33.63 | 15.57 | 1.01 |
| CaveCreek8 | Tributary | 421.98 | 1 | 283 | 2232.23 | 2235.62 | 2235.62 | 2236.11 | 0.013751 | 6.05 | 61 | 64.05 | 0.8 |
| CaveCreek8 | Tributary | 421.98 | 2 | 283 | 2232.23 | 2235.79 | 2235.55 | 2236.46 | 0.018066 | 6.58 | 43.02 | 22.34 | 0.84 |
| CaveCreek8 | Tributary | 449.41 | 1 | 283 | 2232.75 | 2236.34 | 2236.34 | 2236.92 | 0.022732 | 6.28 | 51.37 | 57.67 | 0.82 |
| CaveCreek8 | Tributary | 449.41 | 2 | 283 | 2232.75 | 2236.38 | 2236.24 | 2237.12 | 0.029852 | 6.93 | 40.85 | 22.05 | 0.9 |
| CaveCreek8 | Tributary | 498.24 | 1 | 283 | 2234.07 | 2237.26 | 2237.26 | 2238.09 | 0.016851 | 7.47 | 40.29 | 25.37 | 0.95 |
| CaveCreek8 | Tributary | 498.24 | 2 | 283 | 2234.07 | 2237.4 | 2237.27 | 2238.27 | 0.017253 | 7.48 | 37.86 | 18.35 | 0.92 |
| CaveCreek8 | Tributary | 549.57 | 1 | 283 | 2235.15 | 2238.41 | 2238.41 | 2239.33 | 0.014604 | 8.03 | 39.77 | 24.39 | 0.92 |
| CaveCreek8 | Tributary | 549.57 | 2 | 283 | 2235.15 | 2238.45 | 2238.45 | 2239.68 | 0.023111 | 8.89 | 31.82 | 13.14 | 1.01 |
| CaveCreek8 | Tributary | 589.8 | 1 | 283 | 2237.07 | 2239.73 | 2239.73 | 2240.41 | 0.016583 | 7.02 | 45.74 | 38.93 | 0.96 |
| CaveCreek8 | Tributary | 589.8 | 2 | 283 | 2237.07 | 2239.97 | 2239.97 | 2240.94 | 0.022408 | 7.94 | 35.66 | 18.61 | 1.01 |
| CaveCreek8 | Tributary | 650.95 | 1 | 283 | 2239.24 | 2241.47 | 2241.47 | 2242.02 | 0.016543 | 6.2 | 51.18 | 53.2 | 0.94 |
| CaveCreek8 | Tributary | 650.95 | 2 | 283 | 2239.24 | 2241.62 | 2241.55 | 2242.29 | 0.018918 | 6.58 | 42.99 | 28.41 | 0.94 |
| CaveCreek8 | Tributary | 694.11 | 1 | 283 | 2241.19 | 2242.64 | 2242.64 | 2243.16 | 0.021098 | 6.15 | 49.42 | 49.57 | 1 |
| CaveCreek8 | Tributary | 694.11 | 2 | 283 | 2241.19 | 2243.14 | 2243.14 | 2243.98 | 0.021488 | 7.38 | 38.32 | 22.86 | 1.01 |
| CaveCreek8 | Tributary | 732.6 | 1 | 283 | 2241.49 | 2243.76 | 2243.76 | 2244.35 | 0.014958 | 6.36 | 50.86 | 51.81 | 0.88 |
| CaveCreek8 | Tributary | 732.6 | 2 | 283 | 2241.49 | 2244.15 | | 2244.62 | 0.009463 | 5.52 | 51.24 | 25.66 | 0.69 |
| aveCreek8 | Tributary | 764.86 | 1 | 283 | 2242.26 | 2244.97 | 2244.97 | 2245.47 | 0.01381 | 6.21 | 58.37 | 62.04 | 0.85 |
| veCreek8 | Tributary | 764.86 | 2 | 283 | 2242.26 | 2245.06 | 2245.06 | 2245.95 | 0.021077 | 7.57 | 37.39 | 21.45 | 1.01 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CaveCreek8 | Tributary | 798.77 | 1 | 283 | 2242.91 | 2245.65 | 2245.65 | 2246.16 | 0.014847 | 6.37 | 58.31 | 56.02 | 0.88 |
| CaveCreek8 | Tributary | 798.77 | 2 | 283 | 2242.91 | 2245.77 | 2245.77 | 2246.68 | 0.020971 | 7.63 | 37.07 | 20.96 | 1.01 |
| CaveCreek8 | Tributary | 849.27 | 1 | 283 | 2244.58 | 2246.9 | 2246.9 | 2247.47 | 0.015824 | 6.43 | 54.21 | 55.17 | 0.89 |
| CaveCreek8 | Tributary | 849.27 | 2 | 283 | 2244.58 | 2246.99 | 2246.9 | 2247.73 | 0.018653 | 6.9 | 41 | 23.97 | 0.93 |
| CaveCreek8 | Tributary | 900.17 | 1 | 283 | 2246.82 | 2248.67 | 2248.67 | 2249.22 | 0.017701 | 6.28 | 53.03 | 50.99 | 0.94 |
| CaveCreek8 | Tributary | 900.17 | 2 | 283 | 2246.82 | 2248.73 | 2248.73 | 2249.47 | 0.021895 | 6.88 | 41.11 | 28.43 | 1.01 |
| CaveCreek8 | Tributary | 948.74 | 1 | 283 | 2247.57 | 2249.98 | 2249.98 | 2250.48 | 0.016495 | 6.41 | 58.22 | 57.17 | 0.91 |
| CaveCreek8 | Tributary | 948.74 | 2 | 283 | 2247.57 | 2250.22 | 2250.22 | 2251.12 | 0.021728 | 7.63 | 37.1 | 20.9 | 1.01 |
| CaveCreek8 | Tributary | 999.92 | 1 | 283 | 2249.31 | 2251.32 | 2251.32 | 2251.93 | 0.017307 | 6.46 | 49.5 | 46.92 | 0.94 |
| CaveCreek8 | Tributary | 999.92 | 2 | 283 | 2249.31 | 2251.53 | | 2252.12 | 0.014765 | 6.19 | 45.75 | 27.3 | 0.84 |
| CaveCreek8 | Tributary | 1049.95 | 1 | 283 | 2250.4 | 2253.07 | 2253.07 | 2253.66 | 0.014749 | 6.56 | 51.11 | 48.63 | 0.88 |
| CaveCreek8 | Tributary | 1049.95 | 2 | 283 | 2250.4 | 2253.09 | 2253.09 | 2253.98 | 0.021046 | 7.57 | 37.38 | 21.49 | 1.01 |
| CaveCreek8 | Tributary | 1099.76 | 1 | 283 | 2252.38 | 2254.4 | 2254.4 | 2254.96 | 0.022399 | 6.23 | 52.01 | 51.14 | 0.92 |
| CaveCreek8 | Tributary | 1099.76 | 2 | 283 | 2252.38 | 2254.51 | 2254.41 | 2255.15 | 0.023145 | 6.44 | 43.93 | 29.02 | 0.92 |
| CaveCreek8 | Tributary | 1148.38 | 1 | 283 | 2253.5 | 2255.45 | | 2255.85 | 0.014161 | 5.29 | 58.53 | 49.19 | 0.73 |
| CaveCreek8 | Tributary | 1148.38 | 2 | 283 | 2253.5 | 2255.63 | | 2256.09 | 0.014675 | 5.45 | 51.93 | 28.43 | 0.71 |
| CaveCreek8 | Tributary | 1200.37 | 1 | 283 | 2254.11 | 2256.7 | 2256.7 | 2257.41 | 0.015177 | 7.1 | 48.37 | 39.9 | 0.91 |
| CaveCreek8 | Tributary | 1200.37 | 2 | 283 | 2254.11 | 2256.74 | 2256.74 | 2257.71 | 0.020852 | 7.92 | 35.75 | 18.76 | 1.01 |
| CaveCreek8 | Tributary | 1250.15 | 1 | 283 | 2256.13 | 2258.8 | 2258.8 | 2259.55 | 0.015996 | 7.23 | 44.52 | 34.37 | 0.93 |
| CaveCreek8 | Tributary | 1250.15 | 2 | 283 | 2256.13 | 2258.84 | 2258.84 | 2259.81 | 0.021282 | 7.91 | 35.78 | 18.74 | 1.01 |
| CaveCreek8 | Tributary | 1292.59 | 1 | 283 | 2257.6 | 2260.04 | 2260.04 | 2260.74 | 0.016984 | 6.82 | 44.3 | 33.58 | 0.98 |
| CaveCreek8 | Tributary | 1292.59 | 2 | 283 | 2257.6 | 2260.05 | 2260.05 | 2260.82 | 0.018218 | 7.04 | 40.2 | 26.51 | 1.01 |
| CaveCreek8 | Tributary | 1324.46 | 1 | 283 | 2258.34 | 2261.31 | 2261.31 | 2262.08 | 0.020629 | 7.01 | 40.39 | 27.08 | 1.01 |
| CaveCreek8 | Tributary | 1324.46 | 2 | 283 | 2258.34 | 2261.31 | 2261.31 | 2262.08 | 0.020578 | 7 | 40.43 | 27.09 | 1.01 |
| CaveCreek8 | Tributary | 1371.69 | 1 | 283 | 2260.15 | 2262.51 | | 2262.88 | 0.010822 | 4.89 | 58.01 | 41.74 | 0.72 |
| CaveCreek8 | Tributary | 1371.69 | 2 | 283 | 2260.15 | 2262.51 | | 2262.88 | 0.010925 | 4.88 | 57.97 | 40.52 | 0.72 |
| CaveCreek8 | Tributary | 1406.24 | 1 | 283 | 2261.19 | 2263.63 | 2263.63 | 2264.1 | 0.017668 | 5.46 | 51.88 | 58.87 | 1.02 |
| CaveCreek8 | Tributary | 1406.24 | 2 | 283 | 2261.19 | 2263.64 | 2263.64 | 2264.1 | 0.017541 | 5.44 | 52.06 | 59.05 | 1.02 |
| CaveCreek8 | Tributary | 1450.16 | 1 | 283 | 2260.5 | 2264.47 | | 2264.66 | 0.007329 | 3.45 | 82.12 | 54.76 | 0.5 |
| CaveCreek8 | Tributary | 1450.16 | 2 | 283 | 2260.5 | 2264.47 | | 2264.65 | 0.007351 | 3.45 | 82 | 54.7 | 0.5 |
| CaveCreek8 | Tributary | 1500.84 | 1 | 283 | 2262.56 | 2264.87 | | 2265.12 | 0.010086 | 4.03 | 70.28 | 71.38 | 0.72 |
| CaveCreek8 | Tributary | 1500.84 | 2 | 283 | 2262.56 | 2264.87 | | 2265.12 | 0.010113 | 4.03 | 70.19 | 71.3 | 0.72 |
| CaveCreek8 | Tributary | 1550.15 | 1 | 283 | 2263.88 | 2265.84 | 2265.84 | 2266.34 | 0.018857 | 5.7 | 49.66 | 49.95 | 1.01 |
| CaveCreek8 | Tributary | 1550.15 | 2 | 283 | 2263.88 | 2265.84 | 2265.84 | 2266.34 | 0.018857 | 5.7 | 49.66 | 49.95 | 1.01 |
| CaveCreek8 | Tributary | 1593.76 | 1 | 283 | 2265.12 | 2267.14 | 2267.14 | 2267.68 | 0.019365 | 5.92 | 47.8 | 44.44 | 1.01 |
| CaveCreek8 | Tributary | 1593.76 | 2 | 283 | 2265.12 | 2267.14 | 2267.14 | 2267.68 | 0.019365 | 5.92 | 47.8 | 44.44 | 1.01 |
| CaveCreek8 | Tributary | 1624.07 | 1 | 283 | 2265.91 | 2267.98 | 2267.98 | 2268.6 | 0.01602 | 6.7 | 50.02 | 44.61 | 0.92 |
| CaveCreek8 | Tributary | 1624.07 | 2 | 283 | 2265.91 | 2268.02 | 2268.02 | 2268.88 | 0.021814 | 7.44 | 38.03 | 22.54 | 1.01 |
| CaveCreek8 | Tributary | 1650.94 | 1 | 283 | 2265.92 | 2268.91 | 2268.91 | 2269.58 | 0.013568 | 7 | 48.13 | 41.42 | 0.87 |
| CaveCreek8 | Tributary | 1650.94 | 2 | 283 | 2265.92 | 2268.91 | 2268.91 | 2269.92 | 0.021144 | 8.09 | 34.99 | 17.23 | 1 |
| CaveCreek8 | Tributary | 1700.46 | 1 | 283 | 2266.98 | 2270.37 | 2270.37 | 2271.43 | 0.019553 | 8.56 | 36 | 26.76 | 1.03 |
| CaveCreek8 | Tributary | 1700.46 | 2 | 283 | 2266.98 | 2270.57 | 2270.57 | 2271.75 | 0.022791 | 8.72 | 32.47 | 13.92 | 1.01 |
| CaveCreek8 | Tributary | 1749.39 | 1 | 283 | 2269.67 | 2272.06 | | 2272.47 | 0.014352 | 6.05 | 62.7 | 57.78 | 0.85 |
| CaveCreek8 | Tributary | 1749.39 | 2 | 283 | 2269.67 | 2272.47 | 2272.47 | 2273.47 | 0.02152 | 8.02 | 35.27 | 17.96 | 1.01 |
| CaveCreek8 | Tributary | 1799.45 | 1 | 283 | 2271.31 | 2273.9 | 2273.9 | 2274.32 | 0.013346 | 6.14 | 65.94 | 74.18 | 0.83 |
| CaveCreek8 | Tributary | 1799.45 | 2 | 283 | 2271.31 | 2274.18 | 2274.18 | 2275.18 | 0.021441 | 8.03 | 35.22 | 17.91 | 1.01 |
| CaveCreek8 | Tributary | 1849.65 | 1 | 283 | 2272.91 | 2275.31 | 2275.31 | 2275.92 | 0.01417 | 6.65 | 51.96 | 47.97 | 0.88 |
| CaveCreek8 | Tributary | 1849.65 | 2 | 283 | 2272.91 | 2275.37 | 2275.33 | 2276.26 | 0.02003 | 7.55 | 37.49 | 20.23 | 0.98 |
| CaveCreek8 | Tributary | 1900.27 | 1 | 283 | 2273.37 | 2276.12 | 2276.11 | 2276.86 | 0.02264 | 6.93 | 41.95 | 30.44 | 0.96 |
| CaveCreek8 | Tributary | 1900.27 | 2 | 283 | 2273.37 | 2276.66 | | 2277.09 | 0.010144 | 5.3 | 53.38 | 24.76 | 0.64 |
| CaveCreek8 | Tributary | 1951.5 | 1 | 283 | 2275.19 | 2277.9 | 2277.9 | 2278.59 | 0.025447 | 6.68 | 42.36 | 31.19 | 1.01 |

# Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek8 | Tributary | 1951.5 | 2 | 283 | 2275.19 | 2277.91 | 2277.91 | 2278.59 | 0.025273 | 6.66 | 42.49 | 31.24 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek8 | Tributary | 2000.81 | 1 | 283 | 2277.16 | 2279.43 | 2279.43 | 2280.14 | 0.027738 | 6.74 | 41.99 | 30.22 | 1.01 |
| CaveCreek8 | Tributary | 2000.81 | 2 | 283 | 2277.16 | 2279.43 | 2279.43 | 2280.14 | 0.027762 | 6.74 | 41.97 | 30.22 | 1.01 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 39.15 | 1 | 3699 | 2110.86 | 2119.78 | 2119.5 | 2120.99 | 0.01891 | 9.12 | 474.44 | 196.06 | 0.8 |
| CaveCreek9 | Tributary | 39.15 | 2 | 3699 | 2110.86 | 2120.78 | 2119.34 | 2121.74 | 0.012354 | 7.86 | 470.74 | 93.09 | 0.62 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 72.13 | 1 | 3699 | 2111.16 | 2120.78 | | 2121.71 | 0.019733 | 7.9 | 505.3 | 151.39 | 0.62 |
| CaveCreek9 | Tributary | 72.13 | 2 | 3699 | 2111.16 | 2121.38 | | 2122.24 | 0.016495 | 7.43 | 497.54 | 86.88 | 0.55 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 110.68 | 1 | 3699 | 2111.16 | 2121.54 | | 2122.35 | 0.012641 | 7.37 | 535.99 | 106.63 | 0.52 |
| CaveCreek9 | Tributary | 110.68 | 2 | 3699 | 2111.16 | 2122.01 | | 2122.81 | 0.01258 | 7.18 | 515.3 | 76.17 | 0.49 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 165.99 | 1 | 3699 | 2112.05 | 2122.11 | | 2123.05 | 0.010425 | 7.93 | 501.11 | 89.1 | 0.51 |
| CaveCreek9 | Tributary | 165.99 | 2 | 3699 | 2112.05 | 2122.61 | | 2123.53 | 0.011244 | 7.72 | 479.33 | 60.6 | 0.48 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 200.99 | 1 | 3699 | 2112.71 | 2122.35 | | 2123.61 | 0.012661 | 9.15 | 430.59 | 74.97 | 0.6 |
| CaveCreek9 | Tributary | 200.99 | 2 | 3699 | 2112.71 | 2122.89 | | 2124.09 | 0.013093 | 8.82 | 419.3 | 53.28 | 0.55 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 259.9 | 1 | 3699 | 2114.39 | 2122.85 | 2122.74 | 2125.56 | 0.040737 | 13.22 | 279.89 | 48.99 | 0.97 |
| CaveCreek9 | Tributary | 259.9 | 2 | 3699 | 2114.39 | 2123.52 | | 2125.69 | 0.029628 | 11.8 | 313.46 | 50.88 | 0.83 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 310.51 | 1 | 3699 | 2115.04 | 2124.57 | 2124.18 | 2127.2 | 0.026073 | 13.1 | 291.21 | 49.55 | 0.9 |
| CaveCreek9 | Tributary | 310.51 | 2 | 3699 | 2115.04 | 2124.69 | 2124.18 | 2127.23 | 0.0245 | 12.85 | 297.27 | 49.94 | 0.87 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 356.15 | 1 | 3699 | 2117.13 | 2125.83 | 2125.76 | 2128.53 | 0.030719 | 13.23 | 285.38 | 54.41 | 0.97 |
| CaveCreek9 | Tributary | 356.15 | 2 | 3699 | 2117.13 | 2125.86 | 2125.76 | 2128.53 | 0.030088 | 13.15 | 287.31 | 54.5 | 0.96 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 400.11 | 1 | 3699 | 2120.72 | 2132.79 | 2132.79 | 2136.1 | 0.048863 | 14.59 | 253.5 | 38.64 | 1 |
| CaveCreek9 | Tributary | 400.11 | 2 | 3699 | 2120.72 | 2132.79 | 2132.79 | 2136.1 | 0.048863 | 14.59 | 253.5 | 38.64 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 448.71 | 1 | 3699 | 2126.4 | 2136.33 | | 2137.98 | 0.01864 | 10.32 | 358.44 | 49.45 | 0.68 |
| CaveCreek9 | Tributary | 448.71 | 2 | 3699 | 2126.4 | 2136.33 | | 2137.98 | 0.01864 | 10.32 | 358.44 | 49.45 | 0.68 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 499.39 | 1 | 3699 | 2127 | 2137.49 | | 2138.99 | 0.019276 | 9.84 | 376.06 | 56.07 | 0.67 |
| CaveCreek9 | Tributary | 499.39 | 2 | 3699 | 2127 | 2137.49 | | 2138.99 | 0.019276 | 9.84 | 376.06 | 56.07 | 0.67 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 549.03 | 1 | 3699 | 2127.66 | 2138.07 | 2137.61 | 2141.08 | 0.040093 | 13.91 | 265.92 | 37.2 | 0.92 |
| CaveCreek9 | Tributary | 549.03 | 2 | 3699 | 2127.66 | 2138.07 | 2137.61 | 2141.08 | 0.040093 | 13.91 | 265.92 | 37.2 | 0.92 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 599.9 | 1 | 3699 | 2129.33 | 2141.58 | | 2142.73 | 0.013516 | 8.61 | 429.85 | 56.29 | 0.55 |
| CaveCreek9 | Tributary | 599.9 | 2 | 3699 | 2129.33 | 2141.58 | | 2142.73 | 0.013516 | 8.61 | 429.85 | 56.29 | 0.55 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 649.5 | 1 | 3699 | 2130.88 | 2142.14 | | 2143.57 | 0.014558 | 9.57 | 386.4 | 52.49 | 0.62 |
| CaveCreek9 | Tributary | 649.5 | 2 | 3699 | 2130.88 | 2142.14 | | 2143.57 | 0.014558 | 9.57 | 386.4 | 52.49 | 0.62 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 700.56 | 1 | 3699 | 2131.51 | 2142.91 | | 2144.55 | 0.020596 | 10.26 | 360.68 | 56.9 | 0.72 |
| CaveCreek9 | Tributary | 700.56 | 2 | 3699 | 2131.51 | 2142.91 | | 2144.55 | 0.020596 | 10.26 | 360.68 | 56.9 | 0.72 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 749.58 | 1 | 3699 | 2134.84 | 2144.34 | 2144.34 | 2147.04 | 0.036244 | 13.17 | 280.83 | 52.31 | 1 |
| CaveCreek9 | Tributary | 749.58 | 2 | 3699 | 2134.84 | 2144.34 | 2144.34 | 2147.04 | 0.036244 | 13.17 | 280.83 | 52.31 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 799.63 | 1 | 3699 | 2137.16 | 2146.99 | | 2148.71 | 0.021621 | 10.52 | 351.56 | 58.83 | 0.76 |
| CaveCreek9 | Tributary | 799.63 | 2 | 3699 | 2137.16 | 2146.99 | | 2148.71 | 0.021621 | 10.52 | 351.56 | 58.83 | 0.76 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 849.15 | 1 | 3699 | 2138.35 | 2148.03 | | 2149.91 | 0.023589 | 10.98 | 336.98 | 54.44 | 0.78 |
| CaveCreek9 | Tributary | 849.15 | 2 | 3699 | 2138.35 | 2148.03 | | 2149.91 | 0.023589 | 10.98 | 336.98 | 54.44 | 0.78 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 899.77 | 1 | 3699 | 2138.96 | 2149.25 | 2149.25 | 2152.48 | 0.044202 | 14.43 | 256.29 | 39.9 | 1 |
| CaveCreek9 | Tributary | 899.77 | 2 | 3699 | 2138.96 | 2149.25 | 2149.25 | 2152.48 | 0.044202 | 14.43 | 256.29 | 39.9 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 949.51 | 1 | 3699 | 2139.43 | 2151.94 | 2150.97 | 2154.47 | 0.029334 | 12.76 | 289.99 | 40.06 | 0.84 |
| CaveCreek9 | Tributary | 949.51 | 2 | 3699 | 2139.43 | 2151.94 | 2150.97 | 2154.47 | 0.029334 | 12.76 | 289.99 | 40.06 | 0.84 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 999.54 | 1 | 3699 | 2144.18 | 2153.98 | 2153.98 | 2156.74 | 0.043677 | 13.32 | 277.7 | 50.81 | 1 |
| CaveCreek9 | Tributary | 999.54 | 2 | 3699 | 2144.18 | 2153.98 | 2153.98 | 2156.74 | 0.043677 | 13.32 | 277.7 | 50.81 | 1 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 1048.85 | 1 | 3699 | 2145.57 | 2157.45 | | 2158.44 | 0.014817 | 7.98 | 463.63 | 73.75 | 0.56 |
| CaveCreek9 | Tributary | 1048.85 | 2 | 3699 | 2145.57 | 2157.45 | | 2158.44 | 0.014817 | 7.98 | 463.63 | 73.75 | 0.56 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 1099.52 | 1 | 3699 | 2147.48 | 2158.11 | | 2159.34 | 0.016031 | 8.89 | 415.98 | 61.73 | 0.6 |
| CaveCreek9 | Tributary | 1099.52 | 2 | 3699 | 2147.48 | 2158.11 | | 2159.34 | 0.016031 | 8.89 | 415.98 | 61.73 | 0.6 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 1149.76 | 1 | 3699 | 2148.81 | 2158.88 | | 2160.76 | 0.031431 | 11 | 336.16 | 57.99 | 0.81 |
| CaveCreek9 | Tributary | 1149.76 | 2 | 3699 | 2148.81 | 2158.88 | | 2160.76 | 0.031431 | 11 | 336.16 | 57.99 | 0.81 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek9 | Tributary | 1198.87 | 1 | 3699 | 2149.11 | 2161.19 | | 2161.85 | 0.008592 | 6.52 | 567.58 | 79.91 | 0.43 |
| aveCreek9 | Tributary | 1198.87 | 2 | 3699 | 2149.11 | 2161.19 | | 2161.85 | 0.008592 | 6.52 | 567.58 | 79.91 | 0.43 |
| CaveCreek9 | Tributary | 1250.76 | 1 | 3699 | 2152.1 | 2161.56 | 2161.56 | 2163.95 | 0.045722 | 12.42 | 297.94 | 62.19 | 1 |
| CaveCreek9 | Tributary | 1250.76 | 2 | 3699 | 2152.1 | 2161.56 | 2161.56 | 2163.95 | 0.045722 | 12.42 | 297.94 | 62.19 | 1 |
| CaveCreek9 | Tributary | 1300.1 | 1 | 3699 | 2154.69 | 2164.5 | | 2165.93 | 0.026494 | 9.58 | 385.98 | 73.58 | 0.74 |
| CaveCreek9 | Tributary | 1300.1 | 2 | 3699 | 2154.69 | 2164.5 | | 2165.93 | 0.026494 | 9.58 | 385.98 | 73.58 | 0.74 |
| CaveCreek9 | Tributary | 1349.78 | 1 | 3699 | 2156.21 | 2165.84 | | 2167.46 | 0.031644 | 10.2 | 362.82 | 72.58 | 0.8 |
| CaveCreek9 | Tributary | 1349.78 | 2 | 3699 | 2156.21 | 2165.84 | | 2167.46 | 0.031644 | 10.2 | 362.82 | 72.58 | 0.8 |
| CaveCreek9 | Tributary | 1400.02 | 1 | 3699 | 2157.11 | 2167.8 | | 2168.78 | 0.016995 | 7.96 | 464.45 | 82.14 | 0.59 |
| CaveCreek9 | Tributary | 1400.02 | 2 | 3699 | 2157.11 | 2167.8 | | 2168.78 | 0.016995 | 7.96 | 464.45 | 82.14 | 0.59 |
| CaveCreek9 | Tributary | 1450.07 | 1 | 3699 | 2159.53 | 2168.74 | | 2169.83 | 0.023295 | 8.37 | 441.84 | 91.74 | 0.67 |
| CaveCreek9 | Tributary | 1450.07 | 2 | 3699 | 2159.53 | 2168.74 | | 2169.83 | 0.023295 | 8.37 | 441.84 | 91.74 | 0.67 |
| CaveCreek9 | Tributary | 1499.84 | 1 | 3699 | 2160.47 | 2169.74 | | 2171.04 | 0.021017 | 9.27 | 434.56 | 120.65 | 0.68 |
| CaveCreek9 | Tributary | 1499.84 | 2 | 3699 | 2160.47 | 2169.77 | | 2171.17 | 0.024518 | 9.48 | 392.8 | 69.9 | 0.7 |
| CaveCreek9 | Tributary | 1549.38 | 1 | 3699 | 2162.56 | 2170.62 | | 2171.85 | 0.012661 | 9.05 | 449.56 | 122.79 | 0.67 |
| CaveCreek9 | Tributary | 1549.38 | 2 | 3699 | 2162.56 | 2170.79 | | 2172.07 | 0.013193 | 9.09 | 407.05 | 69.65 | 0.66 |
| CaveCreek9 | Tributary | 1598.8 | 1 | 3699 | 2162.86 | 2171.88 | | 2172.51 | 0.007448 | 6.57 | 652.19 | 157.17 | 0.46 |
| CaveCreek9 | Tributary | 1598.8 | 2 | 3699 | 2162.86 | 2172.02 | | 2172.79 | 0.01007 | 7.05 | 524.39 | 79.8 | 0.48 |
| CaveCreek9 | Tributary | 1649.72 | 1 | 3699 | 2163.63 | 2172.3 | | 2172.88 | 0.006819 | 6.29 | 672.19 | 158.67 | 0.43 |
| CaveCreek9 | Tributary | 1649.72 | 2 | 3699 | 2163.63 | 2172.65 | | 2173.29 | 0.008044 | 6.43 | 575.17 | 83.9 | 0.43 |
| CaveCreek9 | Tributary | 1699.68 | 1 | 3699 | 2163.46 | 2172.82 | | 2173.24 | 0.005763 | 5.35 | 779.48 | 168.98 | 0.37 |
| CaveCreek9 | Tributary | 1699.68 | 2 | 3699 | 2163.46 | 2173.24 | | 2173.69 | 0.00591 | 5.42 | 693.17 | 100.74 | 0.36 |
| CaveCreek9 | Tributary | 1749.76 | 1 | 3699 | 2163.76 | 2173.13 | | 2173.48 | 0.003826 | 4.93 | 835.42 | 164.91 | 0.34 |
| CaveCreek9 | Tributary | 1749.76 | 2 | 3699 | 2163.76 | 2173.57 | | 2173.95 | 0.00399 | 4.95 | 755.1 | 110.46 | 0.33 |
| CaveCreek9 | Tributary | 1799.89 | 1 | 3699 | 2164.06 | 2173.33 | | 2173.75 | 0.005942 | 5.38 | 744.26 | 157.26 | 0.4 |
| CaveCreek9 | Tributary | 1799.89 | 2 | 3699 | 2164.06 | 2173.77 | | 2174.26 | 0.00684 | 5.59 | 661.54 | 108.23 | 0.4 |
| aveCreek9 | Tributary | 1849.84 | 1 | 3699 | 2165.32 | 2173.5 | | 2174.01 | 0.003339 | 5.91 | 688.43 | 147.88 | 0.45 |
| CaveCreek9 | Tributary | 1849.84 | 2 | 3699 | 2165.32 | 2173.98 | | 2174.51 | 0.0032 | 5.82 | 635.11 | 107.18 | 0.42 |
| CaveCreek9 | Tributary | 1899.4 | 1 | 3699 | 2166.21 | 2173.61 | | 2174.24 | 0.003481 | 6.51 | 618.29 | 139.37 | 0.51 |
| CaveCreek9 | Tributary | 1899.4 | 2 | 3699 | 2166.21 | 2174.1 | | 2174.7 | 0.003181 | 6.24 | 592.88 | 106.27 | 0.47 |
| CaveCreek9 | Tributary | 1949.95 | 1 | 3699 | 2166.45 | 2173.71 | | 2174.51 | 0.003913 | 7.36 | 553.02 | 130.8 | 0.58 |
| CaveCreek9 | Tributary | 1949.95 | 2 | 3699 | 2166.45 | 2174.18 | | 2174.96 | 0.003656 | 7.09 | 521.57 | 94.41 | 0.53 |
| CaveCreek9 | Tributary | 1999.3 | 1 | 3699 | 2166.75 | 2173.8 | | 2174.85 | 0.004914 | 8.46 | 494.95 | 133.38 | 0.68 |
| CaveCreek9 | Tributary | 1999.3 | 2 | 3699 | 2166.75 | 2174.26 | | 2175.29 | 0.004581 | 8.14 | 454.21 | 87.15 | 0.63 |
| CaveCreek9 | Tributary | 2049.17 | 1 | 3699 | 2166.45 | 2173.9 | | 2175.34 | 0.00732 | 9.78 | 432.08 | 130.02 | 0.78 |
| CaveCreek9 | Tributary | 2049.17 | 2 | 3699 | 2166.45 | 2174.38 | | 2175.71 | 0.006532 | 9.27 | 399.1 | 75.23 | 0.71 |
| CaveCreek9 | Tributary | 2099.27 | 1 | 3699 | 2166.75 | 2174.21 | | 2175.78 | 0.007887 | 10.31 | 420.94 | 133.87 | 0.86 |
| CaveCreek9 | Tributary | 2099.27 | 2 | 3699 | 2166.75 | 2174.63 | | 2176.18 | 0.007892 | 9.97 | 371.08 | 75.73 | 0.79 |
| CaveCreek9 | Tributary | 2149.54 | 1 | 3699 | 2167.34 | 2175.62 | | 2176.26 | 0.002453 | 6.69 | 667.65 | 167.76 | 0.5 |
| CaveCreek9 | Tributary | 2149.54 | 2 | 3699 | 2167.34 | 2175.79 | | 2176.63 | 0.003289 | 7.36 | 502.9 | 88.11 | 0.54 |
| CaveCreek9 | Tributary | 2199.8 | 1 | 3699 | 2167.5 | 2175.7 | | 2176.45 | 0.002776 | 7.27 | 639.56 | 165.17 | 0.55 |
| CaveCreek9 | Tributary | 2199.8 | 2 | 3699 | 2167.5 | 2175.91 | | 2176.83 | 0.003029 | 7.69 | 480.81 | 84.61 | 0.57 |
| CaveCreek9 | Tributary | 2250.59 | 1 | 3699 | 2167.64 | 2175.79 | | 2176.82 | 0.008951 | 8.36 | 504.76 | 150.91 | 0.68 |
| CaveCreek9 | Tributary | 2250.59 | 2 | 3699 | 2167.64 | 2176.07 | | 2177.17 | 0.009543 | 8.4 | 440.13 | 88.01 | 0.66 |
| CaveCreek9 | Tributary | 2299.67 | 1 | 3699 | 2168.42 | 2176.62 | | 2177.31 | 0.007733 | 6.99 | 603.36 | 159.52 | 0.55 |
| CaveCreek9 | Tributary | 2299.67 | 2 | 3699 | 2168.42 | 2176.83 | | 2177.7 | 0.009441 | 7.51 | 492.73 | 92.77 | 0.57 |
| CaveCreek9 | Tributary | 2350.05 | 1 | 3699 | 2168.49 | 2177.04 | | 2177.86 | 0.012016 | 7.68 | 544.3 | 151.77 | 0.62 |
| CaveCreek9 | Tributary | 2350.05 | 2 | 3699 | 2168.49 | 2177.31 | | 2178.4 | 0.01469 | 8.39 | 440.95 | 86.41 | 0.65 |
| CaveCreek9 | Tributary | 2399.34 | 1 | 3699 | 2169.14 | 2177.55 | | 2178.39 | 0.009335 | 7.71 | 570.06 | 170.58 | 0.59 |
| CaveCreek9 | Tributary | 2399.34 | 2 | 3699 | 2169.14 | 2178.03 | | 2179.03 | 0.01029 | 8.01 | 462.05 | 79.68 | 0.59 |
| aveCreek9 | Tributary | 2450.02 | 1 | 3699 | 2169.68 | 2177.99 | | 2178.89 | 0.009193 | 8 | 540.57 | 149.04 | 0.61 |
| eCreek9 | Tributary | 2450.02 | 2 | 3699 | 2169.68 | 2178.51 | | 2179.59 | 0.010048 | 8.34 | 443.53 | 76.55 | 0.61 |

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

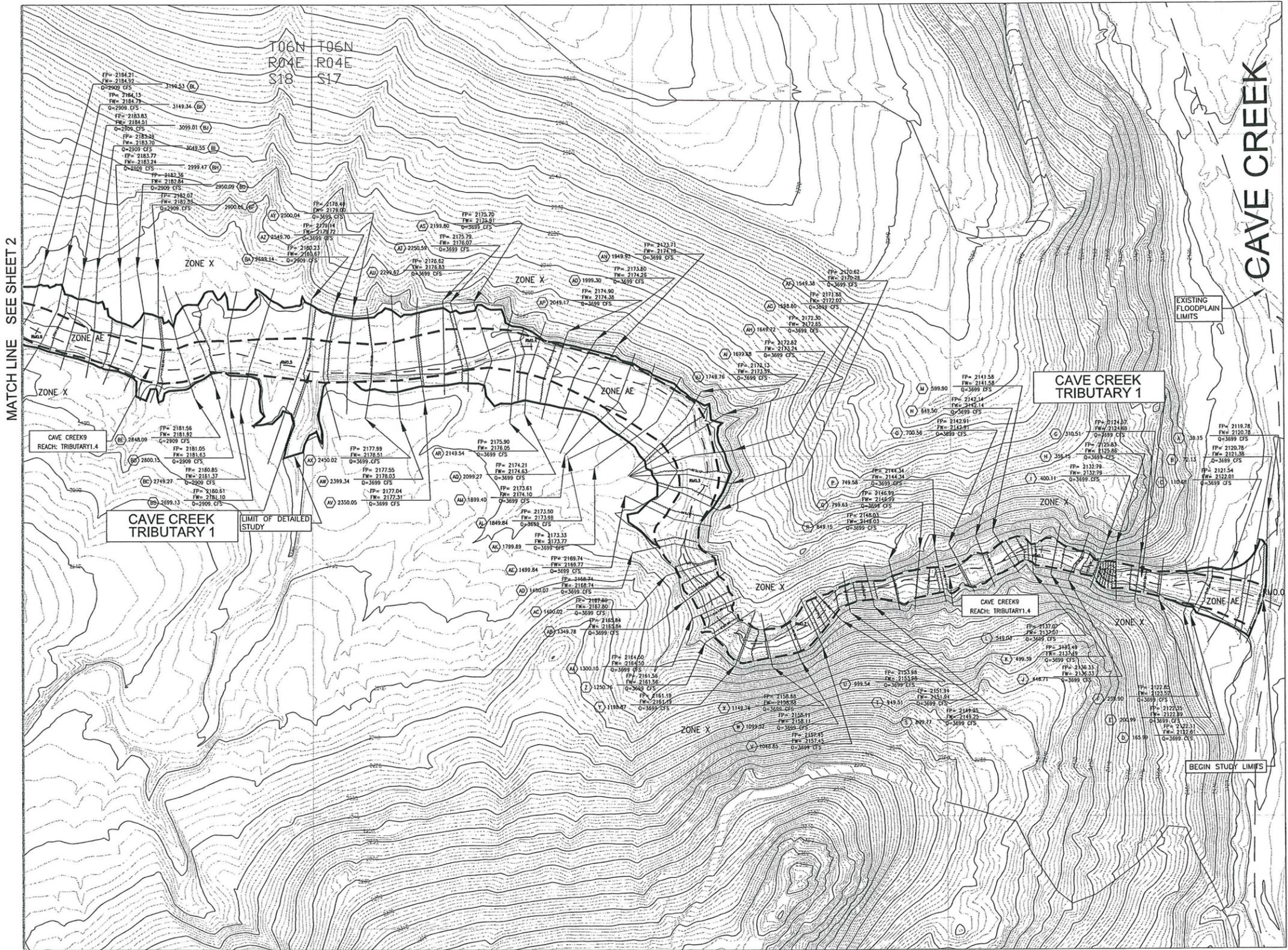| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| aveCreek9 | Tributary | 2500.04 | 1 | 3699 | 2171.15 | 2178.4 | | 2179.53 | 0.01252 | 8.87 | 472.69 | 131.4 | 0.72 |
| CaveCreek9 | Tributary | 2500.04 | 2 | 3699 | 2171.15 | 2179 | | 2180.16 | 0.011277 | 8.61 | 429.5 | 81.23 | 0.66 |
| CaveCreek9 | Tributary | 2549.7 | 1 | 3699 | 2171.85 | 2179.14 | | 2180.13 | 0.010473 | 8.28 | 506.22 | 145.92 | 0.67 |
| CaveCreek9 | Tributary | 2549.7 | 2 | 3699 | 2171.85 | 2179.72 | | 2180.71 | 0.009373 | 7.99 | 463.15 | 86.75 | 0.61 |
| CaveCreek9 | Tributary | 2599.14 | 1 | 2909 | 2172.42 | 2180.23 | | 2180.62 | 0.003746 | 5.34 | 699.06 | 229.36 | 0.4 |
| CaveCreek9 | Tributary | 2599.14 | 2 | 2909 | 2172.42 | 2180.67 | | 2181.17 | 0.004206 | 5.72 | 519.04 | 88.67 | 0.41 |
| CaveCreek9 | Tributary | 2699.13 | 1 | 2909 | 2173.92 | 2180.61 | | 2181.19 | 0.006359 | 6.45 | 539.25 | 166.81 | 0.5 |
| CaveCreek9 | Tributary | 2699.13 | 2 | 2909 | 2173.92 | 2181.1 | | 2181.81 | 0.007015 | 6.79 | 428.73 | 75.13 | 0.5 |
| CaveCreek9 | Tributary | 2749.27 | 1 | 2909 | 2174.22 | 2180.85 | | 2181.59 | 0.005788 | 7.18 | 482.95 | 140.27 | 0.53 |
| CaveCreek9 | Tributary | 2749.27 | 2 | 2909 | 2174.22 | 2181.37 | | 2182.18 | 0.005873 | 7.21 | 403.6 | 65.21 | 0.51 |
| CaveCreek9 | Tributary | 2800.15 | 1 | 2909 | 2174.52 | 2181.05 | | 2182.09 | 0.008211 | 8.34 | 401.62 | 154.16 | 0.67 |
| CaveCreek9 | Tributary | 2800.15 | 2 | 2909 | 2174.52 | 2181.63 | | 2182.57 | 0.006884 | 7.77 | 374.5 | 69.67 | 0.59 |
| CaveCreek9 | Tributary | 2848.09 | 1 | 2909 | 2175.73 | 2181.56 | | 2182.52 | 0.009041 | 8.25 | 414.61 | 143.47 | 0.68 |
| CaveCreek9 | Tributary | 2848.09 | 2 | 2909 | 2175.73 | 2181.92 | | 2183.06 | 0.010033 | 8.58 | 338.99 | 68.66 | 0.68 |
| CaveCreek9 | Tributary | 2900.65 | 1 | 2909 | 2176.61 | 2182.07 | | 2182.96 | 0.007088 | 7.98 | 448.73 | 163.61 | 0.65 |
| CaveCreek9 | Tributary | 2900.65 | 2 | 2909 | 2176.61 | 2182.53 | | 2183.55 | 0.007512 | 8.14 | 357.51 | 68.86 | 0.63 |
| CaveCreek9 | Tributary | 2950.09 | 1 | 2909 | 2176.91 | 2182.36 | | 2183.45 | 0.009064 | 8.76 | 373.56 | 136.05 | 0.72 |
| CaveCreek9 | Tributary | 2950.09 | 2 | 2909 | 2176.91 | 2182.84 | | 2184.05 | 0.009024 | 8.82 | 329.86 | 65.62 | 0.69 |
| CaveCreek9 | Tributary | 2999.47 | 1 | 2909 | 2177.21 | 2182.77 | | 2183.94 | 0.009362 | 9.05 | 352.44 | 102.19 | 0.74 |
| CaveCreek9 | Tributary | 2999.47 | 2 | 2909 | 2177.21 | 2183.24 | | 2184.59 | 0.010021 | 9.32 | 312.15 | 61.02 | 0.73 |
| CaveCreek9 | Tributary | 3049.55 | 1 | 2909 | 2177.5 | 2183.39 | | 2184.42 | 0.007943 | 8.65 | 387.71 | 127.44 | 0.69 |
| CaveCreek9 | Tributary | 3049.55 | 2 | 2909 | 2177.5 | 2183.7 | | 2185.11 | 0.009513 | 9.56 | 306.47 | 58.77 | 0.74 |
| CaveCreek9 | Tributary | 3099.01 | 1 | 2909 | 2178.07 | 2183.83 | | 2184.74 | 0.004457 | 8.08 | 407.16 | 121.15 | 0.67 |
| CaveCreek9 | Tributary | 3099.01 | 2 | 2909 | 2178.07 | 2184.51 | | 2185.55 | 0.004582 | 8.17 | 355.87 | 67.86 | 0.63 |
| CaveCreek9 | Tributary | 3149.34 | 1 | 2909 | 2178.81 | 2184.13 | | 2184.98 | 0.004727 | 7.81 | 410.46 | 137.07 | 0.68 |
| veCreek9 | Tributary | 3149.34 | 2 | 2909 | 2178.81 | 2184.79 | | 2185.79 | 0.004854 | 8.04 | 361.95 | 76.28 | 0.65 |
| CaveCreek9 | Tributary | 3199.53 | 1 | 2909 | 2179 | 2184.21 | 2184.21 | 2185.61 | 0.007812 | 9.85 | 327.58 | 122.91 | 0.89 |
| CaveCreek9 | Tributary | 3199.53 | 2 | 2909 | 2179 | 2184.92 | | 2186.23 | 0.006658 | 9.16 | 317.51 | 70.28 | 0.76 |
| CaveCreek9 | Tributary | 3249.95 | 1 | 2909 | 2180.44 | 2184.62 | 2184.62 | 2186.11 | 0.007329 | 10.22 | 315.17 | 109.44 | 0.93 |
| CaveCreek9 | Tributary | 3249.95 | 2 | 2909 | 2180.44 | 2185.12 | 2184.73 | 2186.73 | 0.007051 | 10.2 | 285.25 | 67.16 | 0.87 |
| CaveCreek9 | Tributary | 3300.97 | 1 | 2909 | 2180.83 | 2185.58 | 2185.58 | 2187.45 | 0.009874 | 11.53 | 309.2 | 92.93 | 1 |
| CaveCreek9 | Tributary | 3300.97 | 2 | 2909 | 2180.83 | 2185.86 | 2185.86 | 2188.1 | 0.010644 | 12.04 | 241.7 | 54.39 | 1.01 |
| CaveCreek9 | Tributary | 3349.04 | 1 | 2909 | 2181.39 | 2186.22 | 2186.22 | 2188.05 | 0.013245 | 11.4 | 291.71 | 87.41 | 0.97 |
| CaveCreek9 | Tributary | 3349.04 | 2 | 2909 | 2181.39 | 2186.98 | 2186.41 | 2188.75 | 0.010215 | 10.79 | 273.2 | 54.47 | 0.85 |
| CaveCreek9 | Tributary | 3399.41 | 1 | 2909 | 2181.99 | 2187.11 | 2187.11 | 2188.98 | 0.012124 | 11.15 | 292.23 | 94.96 | 0.93 |
| CaveCreek9 | Tributary | 3399.41 | 2 | 2909 | 2181.99 | 2187.61 | | 2189.28 | 0.009837 | 10.38 | 280.36 | 56.56 | 0.82 |
| CaveCreek9 | Tributary | 3449.16 | 1 | 2909 | 2181.99 | 2189.28 | 2187.48 | 2189.86 | 0.008349 | 6.38 | 538.39 | 174.13 | 0.49 |
| CaveCreek9 | Tributary | 3449.16 | 2 | 2909 | 2181.99 | 2189.33 | | 2190.08 | 0.011157 | 6.94 | 419.05 | 77.31 | 0.53 |
| CaveCreek9 | Tributary | 3499.14 | 1 | 2909 | 2182.97 | 2189.6 | | 2190.15 | 0.003929 | 6.2 | 552.8 | 140.91 | 0.46 |
| CaveCreek9 | Tributary | 3499.14 | 2 | 2909 | 2182.97 | 2189.78 | | 2190.45 | 0.004818 | 6.58 | 442.2 | 77.26 | 0.48 |
| CaveCreek9 | Tributary | 3549.58 | 1 | 2909 | 2183.78 | 2189.8 | | 2190.35 | 0.004448 | 6.4 | 568.23 | 148.6 | 0.49 |
| CaveCreek9 | Tributary | 3549.58 | 2 | 2909 | 2183.78 | 2189.99 | | 2190.83 | 0.007068 | 7.38 | 393.98 | 70.77 | 0.55 |
| CaveCreek9 | Tributary | 3600.86 | 1 | 2909 | 2184.13 | 2190.21 | | 2190.59 | 0.003369 | 5.47 | 643.59 | 183.68 | 0.42 |
| CaveCreek9 | Tributary | 3600.86 | 2 | 2909 | 2184.13 | 2190.46 | | 2191.2 | 0.005907 | 6.95 | 425.85 | 77.24 | 0.52 |
| CaveCreek9 | Tributary | 3664.96 | 1 | 2909 | 2184.46 | 2190.24 | | 2191.31 | 0.01158 | 8.74 | 387.48 | 106.78 | 0.7 |
| CaveCreek9 | Tributary | 3664.96 | 2 | 2909 | 2184.46 | 2190.75 | | 2191.99 | 0.013196 | 8.93 | 325.61 | 60.65 | 0.68 |
| CaveCreek9 | Tributary | 3700.07 | 1 | 2909 | 2185.28 | 2190.69 | | 2191.68 | 0.008676 | 8.4 | 408.37 | 106.3 | 0.67 |
| CaveCreek9 | Tributary | 3700.07 | 2 | 2909 | 2185.28 | 2191.28 | | 2192.4 | 0.008497 | 8.48 | 343.09 | 62.26 | 0.64 |
| CaveCreek9 | Tributary | 3750.26 | 1 | 2909 | 2185.57 | 2191.11 | | 2192.16 | 0.009118 | 8.72 | 408.94 | 115.54 | 0.68 |
| CaveCreek9 | Tributary | 3750.26 | 2 | 2909 | 2185.57 | 2191.66 | | 2192.94 | 0.009924 | 9.06 | 321.23 | 56.32 | 0.67 |
| veCreek9 | Tributary | 3799.78 | 1 | 2909 | 2185.44 | 2191.55 | | 2192.83 | 0.013714 | 9.18 | 337.27 | 89.29 | 0.74 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek9 | Tributary | 3799.78 | 2 | 2909 | 2185.44 | 2192.55 | | 2193.5 | 0.008975 | 7.81 | 372.48 | 63.92 | 0.57 |
| CaveCreek9 | Tributary | 3850.32 | 1 | 2909 | 2185.28 | 2192.72 | | 2193.54 | 0.009978 | 7.65 | 466.09 | 156.23 | 0.59 |
| CaveCreek9 | Tributary | 3850.32 | 2 | 2909 | 2185.28 | 2193.04 | | 2194.05 | 0.01193 | 8.08 | 364.22 | 67.39 | 0.61 |
| CaveCreek9 | Tributary | 3875.49 | 1 | 2909 | 2185.28 | 2193.4 | | 2193.85 | 0.006049 | 5.71 | 621.4 | 167.55 | 0.4 |
| CaveCreek9 | Tributary | 3875.49 | 2 | 2909 | 2185.28 | 2193.83 | | 2194.42 | 0.007974 | 6.19 | 470.19 | 70.76 | 0.42 |
| CaveCreek9 | Tributary | 3900.01 | 1 | 2909 | 2185.46 | 2193.46 | | 2194.2 | 0.012924 | 7.15 | 474.97 | 154.46 | 0.56 |
| CaveCreek9 | Tributary | 3900.01 | 2 | 2909 | 2185.46 | 2193.98 | | 2194.77 | 0.0133 | 7.13 | 407.83 | 73.24 | 0.53 |
| CaveCreek9 | Tributary | 3949.46 | 1 | 2909 | 2185.86 | 2194.17 | | 2194.8 | 0.010834 | 6.8 | 511.5 | 166.04 | 0.53 |
| CaveCreek9 | Tributary | 3949.46 | 2 | 2909 | 2185.86 | 2194.61 | | 2195.5 | 0.014441 | 7.56 | 384.92 | 68.8 | 0.56 |
| CaveCreek9 | Tributary | 3999.67 | 1 | 2909 | 2185.93 | 2194.74 | | 2195.25 | 0.006333 | 6.2 | 582.68 | 173.12 | 0.44 |
| CaveCreek9 | Tributary | 3999.67 | 2 | 2909 | 2185.93 | 2195.36 | | 2196.08 | 0.008222 | 6.84 | 425.25 | 63.81 | 0.47 |
| CaveCreek9 | Tributary | 4049.3 | 1 | 2909 | 2187.21 | 2195.03 | | 2195.64 | 0.006883 | 6.79 | 555.17 | 159.34 | 0.49 |
| CaveCreek9 | Tributary | 4049.3 | 2 | 2909 | 2187.21 | 2195.73 | | 2196.56 | 0.009053 | 7.31 | 397.74 | 59.23 | 0.5 |
| CaveCreek9 | Tributary | 4099.75 | 1 | 2909 | 2187.66 | 2195.4 | | 2195.93 | 0.004191 | 6.44 | 635.59 | 175.74 | 0.45 |
| CaveCreek9 | Tributary | 4099.75 | 2 | 2909 | 2187.66 | 2196.12 | | 2196.93 | 0.005636 | 7.22 | 402.64 | 57.47 | 0.48 |
| CaveCreek9 | Tributary | 4149.22 | 1 | 2909 | 2187.72 | 2195.56 | | 2196.28 | 0.006035 | 7.26 | 520.33 | 148.4 | 0.53 |
| CaveCreek9 | Tributary | 4149.22 | 2 | 2909 | 2187.72 | 2196.39 | | 2197.24 | 0.006387 | 7.4 | 392.87 | 59.67 | 0.51 |
| CaveCreek9 | Tributary | 4205.69 | 1 | 2909 | 2188.88 | 2195.9 | | 2196.85 | 0.011434 | 8.16 | 428.12 | 131 | 0.62 |
| CaveCreek9 | Tributary | 4205.69 | 2 | 2909 | 2188.88 | 2196.81 | | 2197.73 | 0.010387 | 7.68 | 378.8 | 59.72 | 0.54 |
| CaveCreek9 | Tributary | 4249.02 | 1 | 2909 | 2189.53 | 2196.33 | | 2197.48 | 0.013085 | 8.9 | 378.47 | 104.73 | 0.67 |
| CaveCreek9 | Tributary | 4249.02 | 2 | 2909 | 2189.53 | 2197.23 | | 2198.28 | 0.012025 | 8.23 | 353.28 | 54.94 | 0.57 |
| CaveCreek9 | Tributary | 4299.58 | 1 | 2909 | 2190.45 | 2197.25 | | 2198.12 | 0.009671 | 7.76 | 441.4 | 121.01 | 0.58 |
| CaveCreek9 | Tributary | 4299.58 | 2 | 2909 | 2190.45 | 2198.02 | | 2198.88 | 0.009818 | 7.48 | 388.99 | 60.78 | 0.52 |
| CaveCreek9 | Tributary | 4349.25 | 1 | 2909 | 2191.36 | 2197.76 | | 2198.54 | 0.006513 | 7.5 | 482.69 | 124.31 | 0.55 |
| CaveCreek9 | Tributary | 4349.25 | 2 | 2909 | 2191.36 | 2198.4 | | 2199.32 | 0.007026 | 7.67 | 379.06 | 59.57 | 0.54 |
| CaveCreek9 | Tributary | 4399.43 | 1 | 2909 | 2192.43 | 2198.07 | | 2199.04 | 0.010093 | 8.16 | 419.27 | 122.78 | 0.64 |
| CaveCreek9 | Tributary | 4399.43 | 2 | 2909 | 2192.43 | 2198.81 | | 2199.74 | 0.009681 | 7.73 | 376.2 | 64.36 | 0.56 |
| CaveCreek9 | Tributary | 4449.14 | 1 | 2909 | 2192.73 | 2198.7 | | 2199.51 | 0.007306 | 7.37 | 442.9 | 110.18 | 0.55 |
| CaveCreek9 | Tributary | 4449.14 | 2 | 2909 | 2192.73 | 2199.48 | | 2200.2 | 0.006745 | 6.81 | 427.04 | 67.06 | 0.48 |
| CaveCreek9 | Tributary | 4499.39 | 1 | 2909 | 2192.9 | 2199.09 | | 2199.86 | 0.006623 | 7.25 | 447.95 | 107.22 | 0.54 |
| CaveCreek9 | Tributary | 4499.39 | 2 | 2909 | 2192.9 | 2199.81 | | 2200.52 | 0.006072 | 6.77 | 429.58 | 67.43 | 0.47 |
| CaveCreek9 | Tributary | 4549.73 | 1 | 2909 | 2193.02 | 2199.44 | | 2200.25 | 0.008461 | 7.47 | 453.65 | 130.47 | 0.59 |
| CaveCreek9 | Tributary | 4549.73 | 2 | 2909 | 2193.02 | 2200.11 | | 2200.9 | 0.007567 | 7.12 | 408.58 | 71.97 | 0.53 |
| CaveCreek9 | Tributary | 4600.58 | 1 | 2909 | 2194.15 | 2200.27 | | 2200.66 | 0.003759 | 5.26 | 653.02 | 192.64 | 0.4 |
| CaveCreek9 | Tributary | 4600.58 | 2 | 2909 | 2194.15 | 2200.65 | | 2201.28 | 0.005924 | 6.41 | 453.68 | 80.27 | 0.48 |
| CaveCreek9 | Tributary | 4649.75 | 1 | 2909 | 2194.37 | 2200.33 | | 2201.16 | 0.008768 | 7.73 | 477.11 | 159.23 | 0.61 |
| CaveCreek9 | Tributary | 4649.75 | 2 | 2909 | 2194.37 | 2200.85 | | 2201.78 | 0.008819 | 7.8 | 383.16 | 71.14 | 0.59 |
| CaveCreek9 | Tributary | 4699.86 | 1 | 2909 | 2194.53 | 2201.13 | | 2201.71 | 0.011128 | 6.53 | 521.55 | 156.62 | 0.53 |
| CaveCreek9 | Tributary | 4699.86 | 2 | 2909 | 2194.53 | 2201.62 | | 2202.36 | 0.012021 | 6.87 | 423.53 | 80.09 | 0.53 |
| CaveCreek9 | Tributary | 4750.23 | 1 | 2909 | 2195.09 | 2201.77 | | 2202.21 | 0.007947 | 5.66 | 605.66 | 180.33 | 0.46 |
| CaveCreek9 | Tributary | 4750.23 | 2 | 2909 | 2195.09 | 2202.38 | | 2202.92 | 0.00857 | 5.9 | 492.91 | 91.43 | 0.45 |
| CaveCreek9 | Tributary | 4798.38 | 1 | 2909 | 2195.08 | 2202 | | 2202.76 | 0.007964 | 7.27 | 476.76 | 185.54 | 0.67 |
| CaveCreek9 | Tributary | 4798.38 | 2 | 2909 | 2195.08 | 2202.66 | | 2203.36 | 0.006633 | 6.71 | 433.66 | 101.22 | 0.57 |
| CaveCreek9 | Tributary | 4866.43 | 1 | 2909 | 2194.68 | 2203.01 | 2200.49 | 2203.32 | 0.005462 | 4.73 | 694.64 | 166.74 | 0.35 |
| CaveCreek9 | Tributary | 4866.43 | 2 | 2909 | 2194.68 | 2203.51 | 2200.43 | 2203.89 | 0.006092 | 4.93 | 590.01 | 96.17 | 0.35 |
| CaveCreek9 | Tributary | 4900.48 | 1 | 2909 | 2194.94 | 2203.13 | | 2203.56 | 0.005282 | 5.52 | 616.76 | 159.79 | 0.43 |
| CaveCreek9 | Tributary | 4900.48 | 2 | 2909 | 2194.94 | 2203.66 | | 2204.16 | 0.006193 | 5.68 | 512.2 | 88.81 | 0.42 |
| CaveCreek9 | Tributary | 4948.9 | 1 | 2909 | 2195.22 | 2203.45 | | 2203.93 | 0.010022 | 5.86 | 566.78 | 158.46 | 0.46 |
| CaveCreek9 | Tributary | 4948.9 | 2 | 2909 | 2195.22 | 2204.02 | | 2204.56 | 0.010158 | 5.93 | 490.78 | 85.96 | 0.44 |
| CaveCreek9 | Tributary | 4999.6 | 1 | 2909 | 2196.02 | 2203.8 | | 2204.56 | 0.009358 | 7.16 | 452.42 | 135.98 | 0.57 |
| CaveCreek9 | Tributary | 4999.6 | 2 | 2909 | 2196.02 | 2204.39 | | 2205.08 | 0.007675 | 6.67 | 436.2 | 78.76 | 0.5 |

Table 5.9.2.5
HEC-RAS OUTPUT
FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| CaveCreek9 | Tributary | 5049.33 | 1 | 2909 | 2197.61 | 2204.33 | | 2205.04 | 0.008953 | 7.01 | 493.77 | 153.46 | 0.54 |
| aveCreek9 | Tributary | 5049.33 | 2 | 2909 | 2197.61 | 2204.75 | | 2205.54 | 0.008935 | 7.1 | 409.51 | 71.52 | 0.52 |
| CaveCreek9 | Tributary | 5086.65 | 1 | 2909 | 2197.82 | 2204.78 | | 2205.38 | 0.007511 | 6.84 | 566.94 | 163.9 | 0.52 |
| CaveCreek9 | Tributary | 5086.65 | 2 | 2909 | 2197.82 | 2204.99 | | 2206.06 | 0.011607 | 8.33 | 349.18 | 61.67 | 0.62 |
| CaveCreek9 | Tributary | 5150.5 | 1 | 2909 | 2197.54 | 2205.32 | | 2206.12 | 0.013252 | 7.46 | 449.15 | 125.16 | 0.57 |
| CaveCreek9 | Tributary | 5150.5 | 2 | 2909 | 2197.54 | 2206.1 | | 2206.9 | 0.011927 | 7.17 | 405.68 | 65.6 | 0.51 |
| CaveCreek9 | Tributary | 5199.1 | 1 | 2909 | 2198.97 | 2205.91 | 2205.33 | 2207.32 | 0.027506 | 9.61 | 321.06 | 105.31 | 0.79 |
| CaveCreek9 | Tributary | 5199.1 | 2 | 2909 | 2198.97 | 2206.68 | | 2207.78 | 0.019587 | 8.42 | 345.57 | 64.24 | 0.64 |
| CaveCreek9 | Tributary | 5250.57 | 1 | 2909 | 2199.5 | 2207.54 | | 2208.28 | 0.009149 | 7.08 | 444.94 | 88.59 | 0.5 |
| CaveCreek9 | Tributary | 5250.57 | 2 | 2909 | 2199.5 | 2207.78 | | 2208.61 | 0.011211 | 7.33 | 396.86 | 61.56 | 0.51 |
| CaveCreek9 | Tributary | 5300.11 | 1 | 2909 | 2199.81 | 2207.99 | | 2208.66 | 0.006127 | 6.85 | 458.17 | 99.08 | 0.51 |
| CaveCreek9 | Tributary | 5300.11 | 2 | 2909 | 2199.81 | 2208.23 | | 2209.07 | 0.007749 | 7.34 | 396.55 | 67.72 | 0.53 |
| CaveCreek9 | Tributary | 5346.56 | 1 | 2909 | 2202.04 | 2208.23 | | 2209.15 | 0.01063 | 8.07 | 393.81 | 106.8 | 0.66 |
| CaveCreek9 | Tributary | 5346.56 | 2 | 2909 | 2202.04 | 2208.51 | | 2209.73 | 0.013679 | 8.86 | 328.51 | 65.83 | 0.7 |
| CaveCreek9 | Tributary | 5399.5 | 1 | 2909 | 2201.85 | 2208.73 | | 2209.7 | 0.010066 | 8.36 | 395.76 | 110.35 | 0.69 |
| CaveCreek9 | Tributary | 5399.5 | 2 | 2909 | 2201.85 | 2209.18 | | 2210.41 | 0.011812 | 8.91 | 326.62 | 64.79 | 0.7 |
| CaveCreek9 | Tributary | 5449.72 | 1 | 2909 | 2204.15 | 2209.31 | | 2210.26 | 0.010744 | 8.21 | 403.27 | 118.77 | 0.7 |
| CaveCreek9 | Tributary | 5449.72 | 2 | 2909 | 2204.15 | 2209.97 | | 2211.02 | 0.010274 | 8.2 | 354.6 | 72.41 | 0.65 |
| CaveCreek9 | Tributary | 5498.99 | 1 | 2909 | 2205.24 | 2209.81 | | 2210.98 | 0.013713 | 9.1 | 354.01 | 116.37 | 0.79 |
| CaveCreek9 | Tributary | 5498.99 | 2 | 2909 | 2205.24 | 2210.42 | | 2211.74 | 0.013791 | 9.23 | 315.32 | 66.95 | 0.75 |
| CaveCreek9 | Tributary | 5549.53 | 1 | 2909 | 2205.8 | 2210.49 | | 2211.71 | 0.013769 | 9.33 | 358.98 | 119.99 | 0.8 |
| CaveCreek9 | Tributary | 5549.53 | 2 | 2909 | 2205.8 | 2211.08 | | 2212.49 | 0.014166 | 9.5 | 306.05 | 63.18 | 0.76 |
| CaveCreek9 | Tributary | 5606.87 | 1 | 2909 | 2206.27 | 2211.24 | | 2212.66 | 0.014529 | 10.1 | 334.6 | 99.28 | 0.83 |
| CaveCreek9 | Tributary | 5606.87 | 2 | 2909 | 2206.27 | 2211.8 | | 2213.49 | 0.016075 | 10.44 | 278.66 | 53.91 | 0.81 |
| CaveCreek9 | Tributary | 5649.37 | 1 | 2909 | 2205.78 | 2211.68 | 2211.49 | 2213.54 | 0.016729 | 11.3 | 292.32 | 76.35 | 0.89 |
| CaveCreek9 | Tributary | 5649.37 | 2 | 2909 | 2205.78 | 2212.42 | | 2214.17 | 0.014152 | 10.61 | 274.1 | 47.48 | 0.78 |
| aveCreek9 | Tributary | 5694.94 | 1 | 2909 | 2205.84 | 2212.53 | 2212.53 | 2214.58 | 0.02602 | 11.65 | 273.31 | 80.61 | 0.89 |
| CaveCreek9 | Tributary | 5694.94 | 2 | 2909 | 2205.84 | 2213.18 | | 2214.96 | 0.021017 | 10.7 | 271.86 | 45.98 | 0.78 |
| CaveCreek9 | Tributary | 5736.39 | 1 | 2909 | 2205.83 | 2214.83 | | 2215.6 | 0.010522 | 7.33 | 460.31 | 119.23 | 0.53 |
| CaveCreek9 | Tributary | 5736.39 | 2 | 2909 | 2205.83 | 2214.88 | | 2215.88 | 0.013517 | 8.02 | 362.74 | 60.61 | 0.58 |
| CaveCreek9 | Tributary | 5798.99 | 1 | 2909 | 2206.9 | 2215.45 | | 2216.28 | 0.011601 | 7.53 | 437.9 | 112.92 | 0.55 |
| CaveCreek9 | Tributary | 5798.99 | 2 | 2909 | 2206.9 | 2215.81 | | 2216.72 | 0.012406 | 7.66 | 379.67 | 61.9 | 0.55 |
| CaveCreek9 | Tributary | 5850.09 | 1 | 2909 | 2207.52 | 2215.92 | | 2216.82 | 0.008385 | 7.89 | 425.03 | 94.46 | 0.53 |
| CaveCreek9 | Tributary | 5850.09 | 2 | 2909 | 2207.52 | 2216.33 | | 2217.33 | 0.00995 | 8.04 | 362.04 | 49.98 | 0.53 |
| CaveCreek9 | Tributary | 5900.01 | 1 | 2909 | 2208.04 | 2216.18 | | 2217.6 | 0.014237 | 10 | 342.46 | 78.27 | 0.68 |
| CaveCreek9 | Tributary | 5900.01 | 2 | 2909 | 2208.04 | 2216.66 | | 2218.31 | 0.018188 | 10.33 | 281.52 | 39.46 | 0.68 |
| CaveCreek9 | Tributary | 5954.73 | 1 | 2909 | 2209.4 | 2217.29 | | 2218.25 | 0.006755 | 8.19 | 416.63 | 87.77 | 0.56 |
| CaveCreek9 | Tributary | 5954.73 | 2 | 2909 | 2209.4 | 2218.1 | | 2219.09 | 0.006896 | 7.98 | 364.61 | 48.57 | 0.51 |
| CaveCreek9 | Tributary | 6052.53 | 1 | 2909 | 2211.35 | 2218.19 | | 2218.97 | 0.007001 | 7.37 | 464.46 | 114.74 | 0.53 |
| CaveCreek9 | Tributary | 6052.53 | 2 | 2909 | 2211.35 | 2219.11 | | 2219.86 | 0.007399 | 6.96 | 417.74 | 61.13 | 0.47 |
| CaveCreek9 | Tributary | 6100 | 1 | 2909 | 2212.22 | 2218.5 | | 2219.38 | 0.008368 | 7.79 | 436.97 | 112.43 | 0.57 |
| CaveCreek9 | Tributary | 6100 | 2 | 2909 | 2212.22 | 2219.45 | | 2220.27 | 0.008324 | 7.26 | 400.7 | 60.22 | 0.5 |
| CaveCreek9 | Tributary | 6149.61 | 1 | 2909 | 2212.33 | 2219.12 | | 2219.86 | 0.009546 | 7.39 | 484.89 | 133.28 | 0.55 |
| CaveCreek9 | Tributary | 6149.61 | 2 | 2909 | 2212.33 | 2219.84 | | 2220.71 | 0.008494 | 7.55 | 401.34 | 64.76 | 0.53 |
| CaveCreek9 | Tributary | 6199.9 | 1 | 2909 | 2211.79 | 2219.91 | | 2220.32 | 0.00563 | 5.44 | 628.7 | 155.89 | 0.39 |
| CaveCreek9 | Tributary | 6199.9 | 2 | 2909 | 2211.79 | 2220.7 | | 2221.16 | 0.005283 | 5.5 | 537.22 | 80 | 0.37 |
| CaveCreek9 | Tributary | 6250.09 | 1 | 2909 | 2212.77 | 2220.15 | | 2220.6 | 0.004832 | 5.61 | 608.8 | 164.32 | 0.43 |
| CaveCreek9 | Tributary | 6250.09 | 2 | 2909 | 2212.77 | 2220.95 | | 2221.4 | 0.00402 | 5.35 | 543.27 | 87.53 | 0.38 |
| CaveCreek9 | Tributary | 6299.56 | 1 | 2909 | 2213.66 | 2220.39 | | 2220.88 | 0.005741 | 6 | 579.97 | 158.93 | 0.48 |
| CaveCreek9 | Tributary | 6299.56 | 2 | 2909 | 2213.66 | 2221.12 | | 2221.69 | 0.005266 | 6.05 | 480.71 | 84.5 | 0.45 |
| CaveCreek9 | Tributary | 6350.21 | 1 | 2909 | 2215.31 | 2220.69 | | 2221.32 | 0.009253 | 6.83 | 513.51 | 147.98 | 0.55 |
| eCreek9 | Tributary | 6350.21 | 2 | 2909 | 2215.31 | 2221.38 | | 2222.15 | 0.010389 | 7.03 | 413.81 | 74.42 | 0.53 |

## Table 5.9.2.5
## HEC-RAS OUTPUT
## FLOODWAY AND FLOODPLAIN

| River | Reach | River Sta | Profile # | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | Chl |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6401.71 | 1 | 2909 | 2214.73 | 2221 | | 2221.98 | 0.010011 | 8.3 | 412.04 | 116.12 | 0.65 |
| CaveCreek9 | Tributary | 6401.71 | 2 | 2909 | 2214.73 | 2221.77 | | 2222.75 | 0.008967 | 7.95 | 365.91 | 62.08 | 0.58 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6447.86 | 1 | 2909 | 2214.34 | 2221.9 | | 2222.55 | 0.010391 | 6.84 | 510.04 | 155.23 | 0.53 |
| CaveCreek9 | Tributary | 6447.86 | 2 | 2909 | 2214.34 | 2222.51 | | 2223.28 | 0.011114 | 7.02 | 414.18 | 72.77 | 0.52 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6510.02 | 1 | 2909 | 2215.63 | 2222.61 | | 2223.09 | 0.006285 | 5.99 | 611.83 | 204.93 | 0.49 |
| CaveCreek9 | Tributary | 6510.02 | 2 | 2909 | 2215.63 | 2223.19 | | 2223.87 | 0.007581 | 6.64 | 438.34 | 85.42 | 0.52 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6562.48 | 1 | 2909 | 2215.64 | 2222.9 | | 2223.58 | 0.009158 | 6.95 | 507.78 | 186.56 | 0.59 |
| CaveCreek9 | Tributary | 6562.48 | 2 | 2909 | 2215.64 | 2223.59 | | 2224.3 | 0.008278 | 6.76 | 430.31 | 85.43 | 0.53 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6599.99 | 1 | 2909 | 2216.66 | 2223.18 | | 2224.18 | 0.015053 | 8.29 | 404.98 | 178.17 | 0.74 |
| CaveCreek9 | Tributary | 6599.99 | 2 | 2909 | 2216.66 | 2223.86 | | 2224.74 | 0.010908 | 7.53 | 386.17 | 84.84 | 0.62 |
| | | | | | | | | | | | | | |
| CaveCreek9 | Tributary | 6649.15 | 1 | 2909 | 2218.38 | 2224.48 | | 2224.9 | 0.008846 | 5.64 | 638.24 | 232.67 | 0.46 |
| CaveCreek9 | Tributary | 6649.15 | 2 | 2909 | 2218.38 | 2224.7 | | 2225.37 | 0.012406 | 6.6 | 443.05 | 91.75 | 0.53 |

CAVE CREEK

100-YR FLOODPLAIN BOUNDARY

100-YR FLOODWAY BOUNDARY

RIVER MILE

CROSS SECTION

BASE FLOOD ELEVATION

ELEVATION REFERENCE MARK          ERM 2400

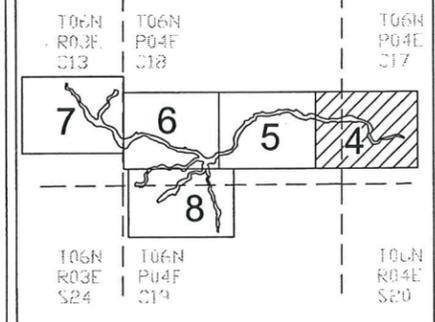ZONE DESIGNATION          ZONE AE

ZONE DESIGNATION          ZONE X

ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.05 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

SHEET INDEX MAP

NOTES

1— THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING CAVE CREEK WASH FLOOD PROFILE AT RIVER MILE 39.41. LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "FE" AND "FF". REFER TO PROFILE PANEL 1019P, AND REFER TO FIRM PANEL # 0413C0805H DATED SEPTEMBER 30, 2005.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 2 | | | |

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

CAVE CREEK TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

35571
LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 4 OF 10

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'  0'  100'  200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

CAVE CREEK TRIBUTARY 1

CAVE CREEK TRIBUTARY 1

MATCH LINE  SEE SHEET 2

ZONE X

ZONE AE

ZONE X

T06N R04E S18 | T06N R04E S17

This map is a flood control engineering drawing (Sheet 5 of 10) for the Cave Creek Tributary Floodplain Delineation, Cave Creek, AZ.

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN BOUNDARY | ———— |
| 100-YR FLOODWAY BOUNDARY | — — — — |
| RIVER MILE | RM2.0  RM2.5  RM3.0 |
| CROSS SECTION | (A) 144.44 — CROSS SECTION STATION (FEET)<br>FP= 2250.55 FLOODPLAIN WATER SURFACE ELEVATION<br>FW= 2250.55 FLOODWAY WATER SURFACE ELEVATION<br>Q =4630 CFS — 100 YEAR DISCHARGE<br>PROPOSED FEMA CROSS SECTION DESIGNATION |
| BASE FLOOD ELEVATION | ∼∼∼∼∼ 2265.00 ∼∼∼∼∼ |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.06 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

SHEET INDEX MAP

NOTES

1- THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING CAVE CREEK WASH FLOOD PROFILE AT RIVER MILE 39.41, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "FE" AND "FF", REFER TO PROFILE PANEL 1019P, AND REFER TO FIRM PANEL # 04013C0805H DATED SEPTEMBER 30, 2005.

| 2 | | | |
| 1 | | | |
| NO. | REVISION | BY | DATE |

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY**

**CAVE CREEK DRAINAGE MASTER PLAN**
**PROJECT CONTROL NUMBER: 690.02.20**
**CONTRACT NUMBER: FCD 2004C072**

**CAVE CREEK TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ**

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA  85018-2311
(602) 522-7700

35571
LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 5 OF 10

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
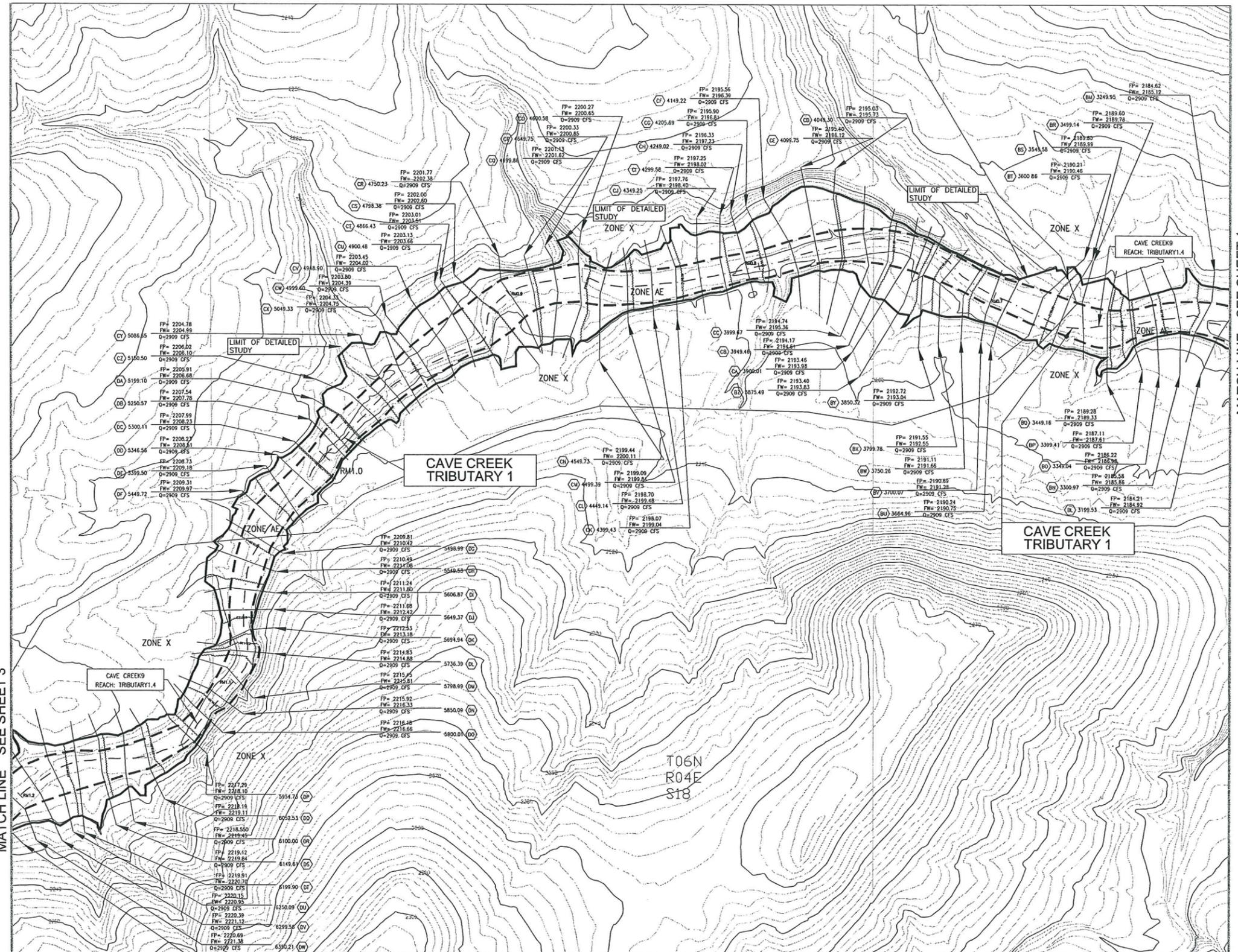FLIGHT DATES: November 2003 through December 2005

100'  0  100'  200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

CAVE CREEK TRIBUTARY 1

CAVE CREEK9 REACH: TRIBUTARY1.4

ZONE X
ZONE AE
LIMIT OF DETAILED STUDY

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN BOUNDARY | ——— |
| 100-YR FLOODWAY BOUNDARY | — — — |
| RIVER MILE | RM2.0   RM3.0 |
| CROSS SECTION | (A) 144.44 FP= 2250.55 FW= 2250.55 Q = 4630 CFS |
| | CROSS SECTION STATION (FEET) |
| | FLOODPLAIN WATER SURFACE ELEVATION |
| | FLOODWAY WATER SURFACE ELEVATION |
| | 100 YEAR DISCHARGE |
| | PROPOSED FEMA CROSS SECTION DESIGNATION |
| BASE FLOOD ELEVATION | ~~~ 2265.00 ~~~ |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.06 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

**SHEET INDEX MAP**

| | | | |
|---|---|---|---|
| T06N R03E S13 | T06N R04E S18 | | T06N R04E S17 |
| 7 | 6 | 5 | 4 |
| | 8 | | |
| T06N R03E S24 | T06N R04E S19 | | T06N R04E S20 |

## NOTES

1- THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING CAVE CREEK WASH FLOOD PROFILE AT RIVER MILE 39.41, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "FE" AND "FF". REFER TO PROFILE PANEL 1019P, AND REFER TO FIRM PANEL # 04013C0805H DATED SEPTEMBER 30, 2005.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY**

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

CAVE CREEK TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ

**HDR ENGINEERING, INC.**
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

35571 LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 6 OF 10

---

CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1.2

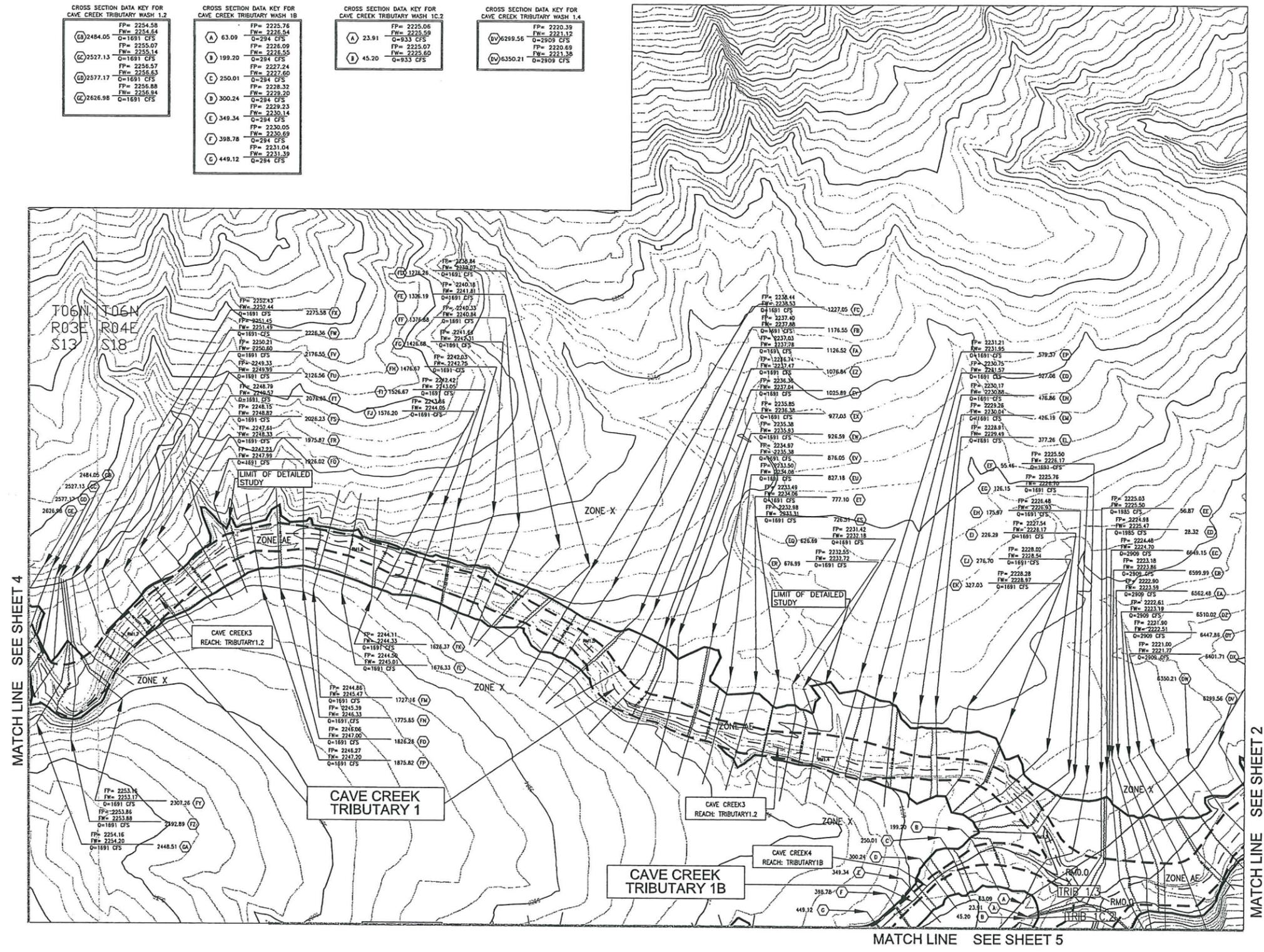| | | |
|---|---|---|
| GB | 2484.05 | FP= 2254.58 FW= 2254.64 Q=1691 CFS |
| GC | 2527.13 | FP= 2255.07 FW= 2255.14 Q=1691 CFS |
| GD | 2577.17 | FP= 2256.57 FW= 2256.63 Q=1691 CFS |
| GE | 2626.98 | FP= 2256.88 FW= 2256.94 Q=1691 CFS |

CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1B

| | | |
|---|---|---|
| A | 63.09 | FP= 2225.76 FW= 2226.54 Q= 294 CFS |
| B | 199.20 | FP= 2226.09 FW= 2226.55 Q= 294 CFS |
| C | 250.01 | FP= 2227.24 FW= 2227.60 Q= 294 CFS |
| D | 300.24 | FP= 2228.32 FW= 2229.20 Q= 294 CFS |
| E | 349.34 | FP= 2229.23 FW= 2230.14 Q= 294 CFS |
| F | 398.78 | FP= 2230.05 FW= 2230.69 Q= 294 CFS |
| G | 449.12 | FP= 2231.04 FW= 2231.39 Q= 294 CFS |

CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1C.2

| | | |
|---|---|---|
| A | 23.91 | FP= 2225.06 FW= 2225.59 Q= 933 CFS |
| B | 45.20 | FP= 2225.07 FW= 2225.60 Q= 933 CFS |

CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1.4

| | | |
|---|---|---|
| BV | 6299.56 | FP= 2220.39 FW= 2221.12 Q=2909 CFS |
| BV | 6350.21 | FP= 2220.69 FW= 2221.38 Q=2909 CFS |

---

CAVE CREEK TRIBUTARY 1

CAVE CREEK TRIBUTARY 1B

CAVE CREEK3 REACH: TRIBUTARY1.2

CAVE CREEK4 REACH: TRIBUTARY1B

LIMIT OF DETAILED STUDY

ZONE X
ZONE AE

MATCH LINE   SEE SHEET 4
MATCH LINE   SEE SHEET 2
MATCH LINE   SEE SHEET 5

T06N T06N R03E R04E S13 S18

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
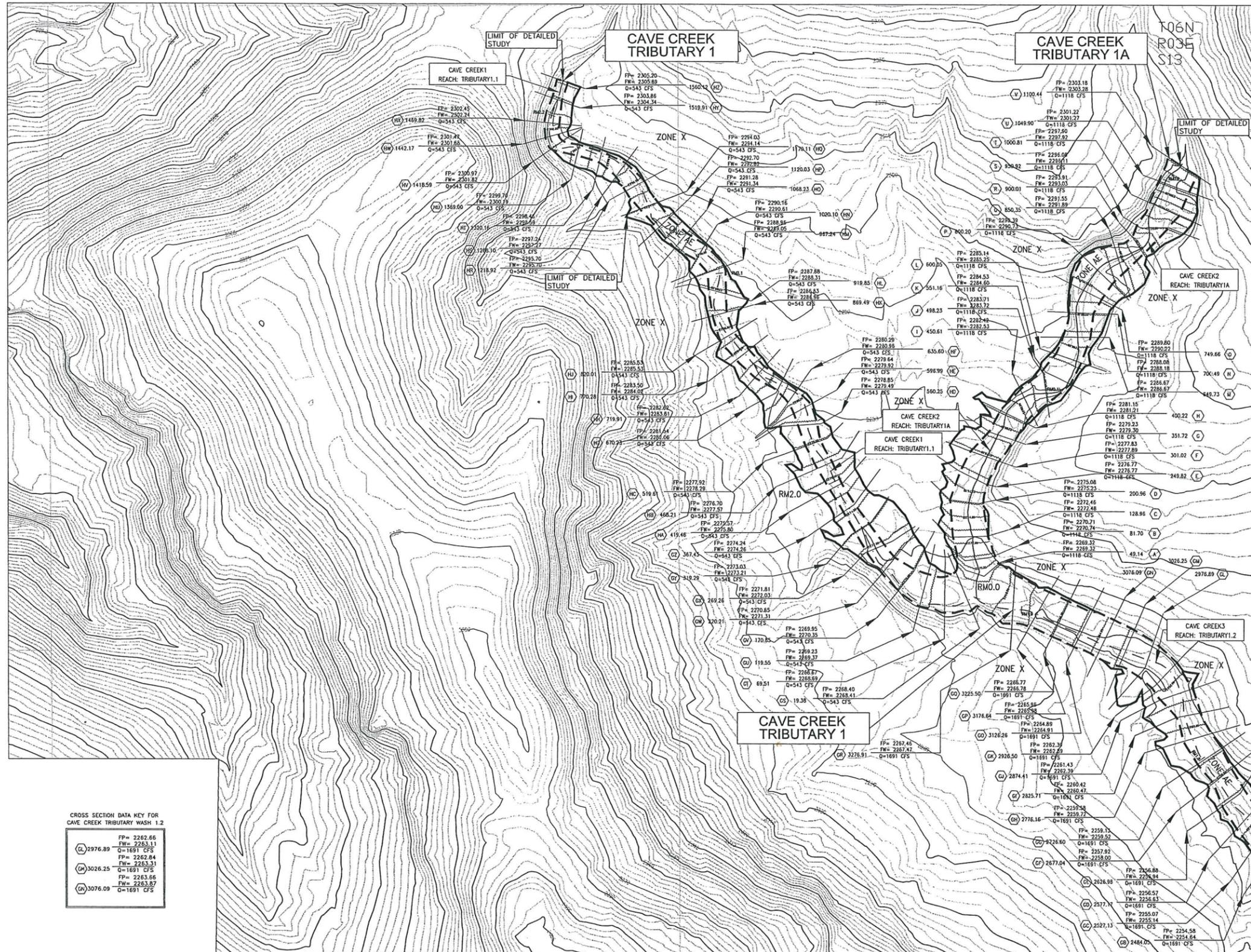FLIGHT DATES: November 2003 through December 2005

N

100'   0'   100'   200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA PROVIDED BY COOPER AERIAL SURVEYS COMPANY

CAVE CREEK TRIBUTARY 1

CAVE CREEK TRIBUTARY 1A

T06N R03E S13

CAVE CREEK1
REACH: TRIBUTARY1.1

LIMIT OF DETAILED STUDY

LIMIT OF DETAILED STUDY

LIMIT OF DETAILED STUDY

ZONE X

ZONE AE

ZONE X

CAVE CREEK2
REACH: TRIBUTARY1A

CAVE CREEK2
REACH: TRIBUTARY1A

CAVE CREEK1
REACH: TRIBUTARY1.1

CAVE CREEK3
REACH: TRIBUTARY1.2

CAVE CREEK TRIBUTARY 1

RM2.0

RM0.0

ZONE X

MATCH LINE   SEE SHEET 3

CROSS SECTION DATA KEY FOR
CAVE CREEK TRIBUTARY WASH 1.2

| | FP= 2262.66 |
| DL 2976.89 | FW= 2263.11 |
| | Q=1691 CFS |
| | FP= 2262.84 |
| DM 3026.25 | FW= 2263.31 |
| | Q=1691 CFS |
| | FP= 2263.66 |
| DN 3076.09 | FW= 2263.87 |
| | Q=1691 CFS |

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN BOUNDARY | ———— |
| 100-YR FLOODWAY BOUNDARY | – – – – |
| RIVER MILE | RM2.0 ⬥ RM3.0 |
| CROSS SECTION | FP= 2250.55  FW= 2250.55  Q =4630 CFS  (A) 144.44 |
| BASE FLOOD ELEVATION | ∿∿∿ 2265.00 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |

CROSS SECTION STATION (FEET)
FLOODPLAIN WATER SURFACE ELEVATION
FLOODWAY WATER SURFACE ELEVATION
PROPOSED FEMA CROSS SECTION DESIGNATION
100 YEAR DISCHARGE

## ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.06 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

SHEET INDEX MAP

N

| T06N R03E S13 | T06N R04E S18 | T06N R04E S17 |
|---|---|---|
| 7 | 6  8 | 5   4 |
| T05N R03E S24 | T06N R04E S19 | T06N R04E S20 |

## NOTES

1– THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING CAVE CREEK WASH FLOOD PROFILE AT RIVER MILE 39.41, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "FE" AND "FF". REFER TO PROFILE PANEL 1019P, AND REFER TO FIRM PANEL # 04013C0805H DATED SEPTEMBER 30, 2005.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 2 | | | |

## FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

CAVE CREEK TRIBUTARY FLOODPLAIN DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA 85018-2311
(602) 522-7700

35571
LINDA A. POTTER

| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 7 OF 10

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'   0'   100'   200'

N

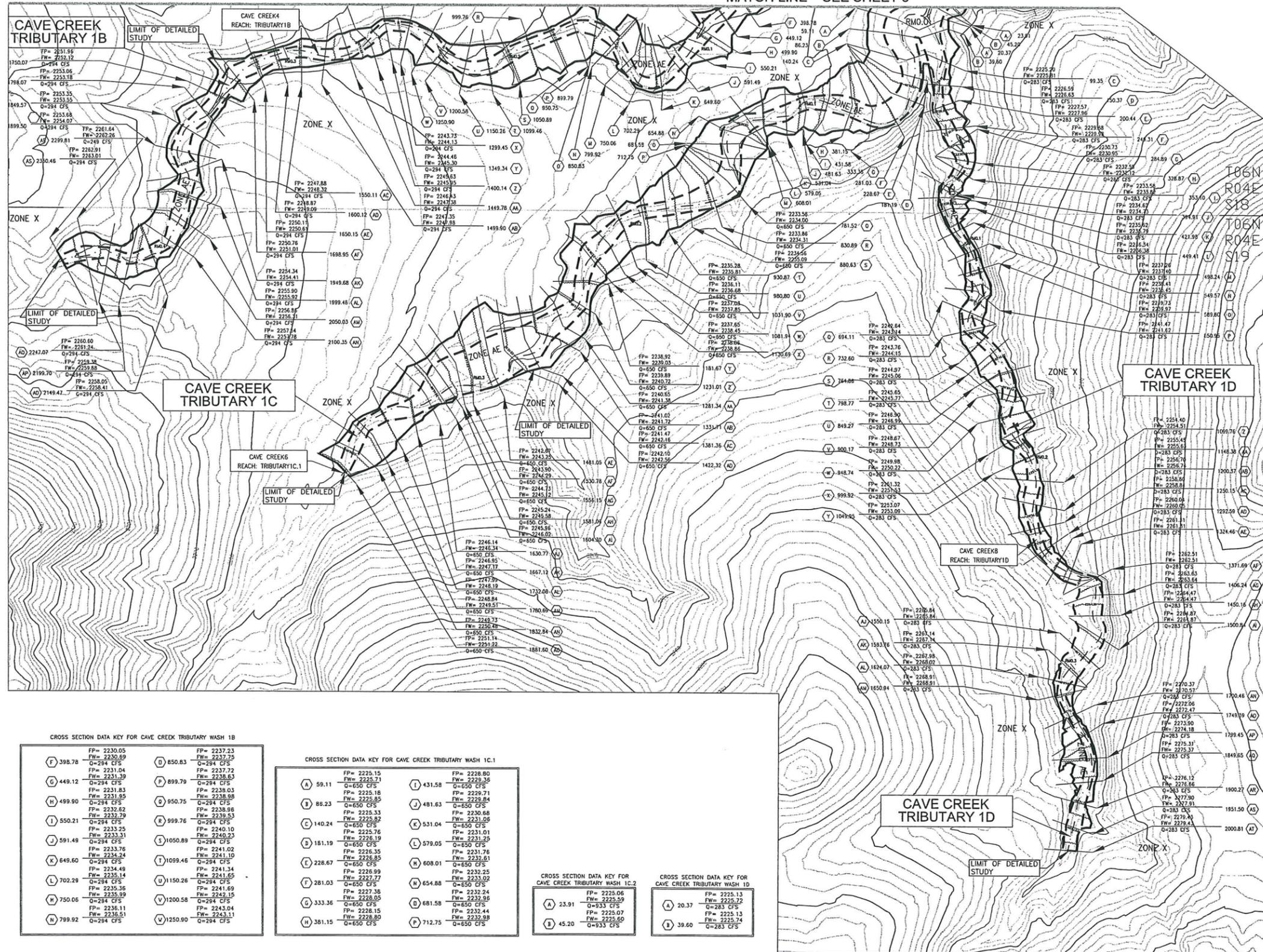THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"=100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY

CAVE CREEK
TRIBUTARY 1B

CAVE CREEK4
REACH: TRIBUTARY1B

LIMIT OF DETAILED STUDY

CAVE CREEK
TRIBUTARY 1C

CAVE CREEK6
REACH: TRIBUTARY1C.1

LIMIT OF DETAILED STUDY

CAVE CREEK
TRIBUTARY 1D

CAVE CREEK8
REACH: TRIBUTARY1D

CAVE CREEK
TRIBUTARY 1D

LIMIT OF DETAILED STUDY

ZONE X
ZONE AE

## LEGEND

| | |
|---|---|
| 100-YR FLOODPLAIN BOUNDARY | |
| 100-YR FLOODWAY BOUNDARY | |
| RIVER MILE | RM2.0    RM3.0 |
| CROSS SECTION | A 144.44 |
| | CROSS SECTION STATION (FEET) FP= 2250.55 FLOODPLAIN WATER SURFACE ELEVATION |
| | FW= 2250.55 FLOODWAY WATER SURFACE ELEVATION |
| | Q =4630 CFS 100 YEAR DISCHARGE |
| | PROPOSED FEMA CROSS SECTION DESIGNATION |
| BASE FLOOD ELEVATION | 2265.00 |
| ELEVATION REFERENCE MARK | ERM 2400 |
| ZONE DESIGNATION | ZONE AE |
| ZONE DESIGNATION | ZONE X |

### ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS = -2.06 FOOT.

| I.D. NUMBER | ELEVATION (FT) | DESCRIPTION/LOCATION |
|---|---|---|

SHEET INDEX MAP

| 7 | 6 | 5 | 4 |
|---|---|---|---|
| | 8 | | |

## NOTES

1– THIS MODEL HAS BEEN PREPARED TO TIE INTO THE EXISTING CAVE CREEK WASH FLOOD PROFILE AT RIVER MILE 39.41, LOCATED BETWEEN THE EXISTING CROSS SECTIONS OF "FE" AND "FF". REFER TO PROFILE PANEL 1019P, AND REFER TO FIRM PANEL # 04013C0805H DATED SEPTEMBER 30, 2005.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 2 | | | |
| 1 | | | |

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY

CAVE CREEK DRAINAGE MASTER PLAN
PROJECT CONTROL NUMBER: 690.02.20
CONTRACT NUMBER: FCD 2004C072

CAVE CREEK TRIBUTARY FLOODPLAIN
DELINEATION, CAVE CREEK, AZ

HDR ENGINEERING, INC.
3200 East Camelback Road, Suite 350
PHOENIX, ARIZONA  85018-2311
(602) 522-7700

35571
LINDA A. POTTER

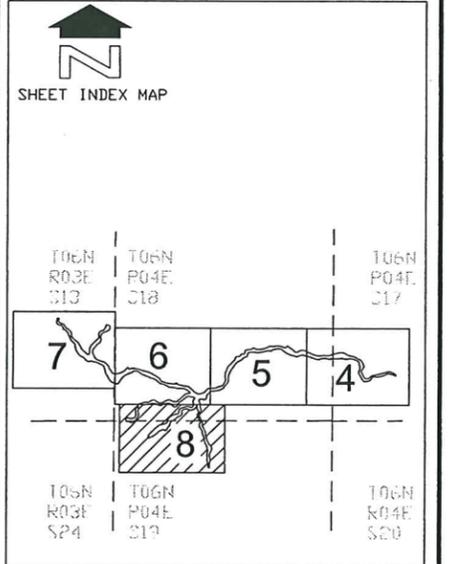| | BY | DATE |
|---|---|---|
| DESIGN | M. FOUNTAIN | 12-21-07 |
| DESIGN CHK. | L. POTTER | 12-21-07 |
| PLANS | MC/MF | 12-21-07 |
| PLANS CHK. | L. POTTER | 12-21-07 |

SHEET 8 OF 10

### CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1B

| ID | Station | FP= | FW= | Q= |
|---|---|---|---|---|
| F | 398.78 | 2230.05 | 2230.69 | 294 CFS |
| | | 2237.23 | 2237.75 | 294 CFS |
| G | 449.12 | 2231.04 | 2231.39 | 294 CFS |
| | | 2237.22 | 2237.72 | 294 CFS |
| | 499.90 | 2231.83 | 2231.95 | 294 CFS |
| | | 2238.03 | 2238.98 | 294 CFS |
| | 550.21 | 2232.62 | 2232.79 | 294 CFS |
| | | 2238.96 | 2239.53 | 294 CFS |
| J | 591.49 | 2233.31 | 2233.76 | 294 CFS |
| | | 2240.10 | 2240.93 | 294 CFS |
| K | 649.60 | 2234.24 | 2234.49 | 294 CFS |
| | | 2241.02 | 2241.10 | 294 CFS |
| L | 702.29 | 2235.14 | 2235.36 | 294 CFS |
| | | 2241.34 | 2242.15 | 294 CFS |
| H | 750.06 | 2235.99 | 2236.11 | 294 CFS |
| | | 2242.43 | 2243.11 | 294 CFS |
| H | 799.92 | 2236.51 | | 294 CFS |

### CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1C.1

| ID | Station | FP= | FW= | Q= |
|---|---|---|---|---|
| A | 59.11 | 2225.15 | 2225.71 | 650 CFS |
| B | 86.23 | 2225.18 | 2225.85 | 650 CFS |
| C | 140.24 | 2225.53 | 2225.82 | 650 CFS |
| D | 181.19 | 2225.76 | 2226.19 | 650 CFS |
| E | 228.67 | 2226.35 | 2226.85 | 650 CFS |
| F | 281.03 | 2226.77 | 2227.38 | 650 CFS |
| G | 333.36 | 2228.05 | 2228.80 | 650 CFS |
| H | 381.15 | | | 650 CFS |
| I | 431.58 | 2228.80 | 2229.36 | 650 CFS |
| J | 481.63 | 2229.71 | 2229.84 | 650 CFS |
| K | 531.04 | 2230.68 | 2231.06 | 650 CFS |
| L | 579.05 | 2231.01 | 2231.25 | 650 CFS |
| H | 608.01 | 2232.35 | 2232.61 | 650 CFS |
| N | 654.88 | 2232.25 | 2233.02 | 650 CFS |
| G | 681.58 | 2232.24 | 2232.98 | 650 CFS |
| P | 712.75 | 2232.44 | 2232.99 | 650 CFS |

### CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1C.2

| ID | Station | FP= | FW= | Q= |
|---|---|---|---|---|
| A | 23.91 | 2225.06 | 2225.59 | 933 CFS |
| B | 45.20 | 2225.07 | 2225.60 | 933 CFS |

### CROSS SECTION DATA KEY FOR CAVE CREEK TRIBUTARY WASH 1D

| ID | Station | FP= | FW= | Q= |
|---|---|---|---|---|
| A | 20.37 | 2225.13 | 2225.72 | 283 CFS |
| B | 39.60 | 2225.13 | 2225.74 | 283 CFS |

SCALE: 1" = 100'
CONTOUR INTERVAL = 2'
FLIGHT DATES: November 2003 through December 2005

100'   0'   100'   200'

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS FOR 1"= 100' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS.

COOPER AERIAL SURVEYS COMPANY
CONTRACT NUMBER: FCD2003C048, Assignment #4
FCD2005C030

GROUND CONTROL SURVEY DATA
PROVIDED BY COOPER AERIAL SURVEYS COMPANY