



* Travel time is measured from the initiation of breach formation to the time the breach wave arrives at the section.

The inundation area was developed based on a breach with the water surface at the Top of Dam elevation. Cross Sections were developed using 2-meter LIDAR data.

| Section | HECRAS Station | Distance Downstream of Dam, ft | Max. Elev of Breach Flood | Elevation of Stream bed | Travel Time, hrs | Flow at Section @ Peak Elev | Flow Top Width at Section @ Peak Elev | Avg. Velocity at Section, ft/sec |
|---------|--------------------|--------------------------------------|---------------------------------|----------------------------|---------------------|-----------------------------------|------------------------------------------------|-------------------------------------------|
| CL Dam | DDG- 0274_1_37429 | 0 | 1041.5 | 1034.6 | 0.2 | 13,275 | 297 | 9.1 |
| 34 | DDG- 0274_1_36069 | 1,360 | 1027.5 | 1015.3 | 0.2 | 12,743 | 287 | 7.89 |
| 33 | DDG- 0274_1_35265 | 2,164 | 1020.2 | 1007.0 | 0.3 | 12,342 | 281 | 8.27 |
| 32 | DDG- 0274_1_33845 | 3,585 | 1003.1 | 993.9 | 0.3 | 11,916 | 189 | 12.66 |
| 31 | DDG- 0274_1_32785 | 4,644 | 995.5 | 984.1 | 0.3 | 10,775 | 770 | 3.04 |
| 30 | DDG- 0274_1_32392 | 5,037 | 994.3 | 983.2 | 0.3 | 10,699 | 386 | 5.48 |
| 29 | DDG- 0274_1_31777 | 5,652 | 989.9 | 978.2 | 0.4 | 9,904 | 285 | 4.77 |
| 28 | DDG- 0274_1_29285 | 8,144 | 983.0 | 973.4 | 0.5 | 8,188 | 790 | 2.68 |
| 27 | DDG- 0274_1_27558 | 9,871 | 977.8 | 965.9 | 0.6 | 6,897 | 299 | 5.31 |
| 26 | DDG- 0274_1_26443 | 10,986 | 971.5 | 961.3 | 0.7 | 6,661 | 629 | 3.49 |
| 25 | DDG- 0274_1_25292 | 12,137 | 966.8 | 955.8 | 0.7 | 6,196 | 296 | 4 |
| 24 | DDG- 0274_1_24293 | 13,136 | 963.8 | 952.7 | 0.8 | 5,989 | 428 | 4.73 |
| 23 | DDG- 0274_1_22317 | 15,112 | 954.5 | 944.4 | 0.9 | 5,733 | 318 | 5.07 |
| 22 | DDG- 0274_1_21830 | 15,600 | 952.5 | 943.8 | 0.9 | 5,644 | 418 | 3.9 |
| 21 | DDG- 0274_1_21070 | 16,359 | 949.4 | 940.0 | 0.9 | 5,529 | 508 | 4.09 |
| 20 | DDG- 0274_1_19692 | 17,738 | 944.0 | 933.7 | 1.0 | 5,303 | 502 | 3.84 |
| 19 | DDG- 0274_1_18642 | 18,787 | 937.1 | 926.7 | 1.0 | 5,279 | 142 | 7.75 |
| 18 | Rock Creek_1_65823 | 37,429 | 932.4 | 923.0 | 1.1 | 5,121 | 152 | 7.41 |
| 17 | Rock Creek_1_65619 | 37,634 | 932.2 | 921.6 | 1.1 | 5,107 | 216 | 3.77 |
| 16 | Rock Creek_1_63393 | 39,860 | 925.1 | 914.8 | 1.2 | 4,951 | 273 | 5.6 |
| 15 | Rock Creek_1_60812 | 42,440 | 916.1 | 906.0 | 1.3 | 4,679 | 348 | 3.16 |
| 14 | Rock Creek_1_59308 | 43,945 | 912.7 | 901.1 | 1.5 | 4,244 | 309 | 3.05 |
| 13 | Rock Creek_1_57239 | 46,014 | 909.7 | 899.0 | 1.6 | 3,975 | 544 | 2.84 |
| 12 | Rock Creek_1_55793 | 47,460 | 907.7 | 896.1 | 1.7 | 3,492 | 942 | 1.49 |
| 11 | Rock Creek_1_54631 | 48,621 | 904.1 | 894.5 | 1.8 | 3,443 | 373 | 2.72 |
| 10 | Rock Creek_1_53631 | 49,622 | 901.5 | 888.9 | 1.9 | 3,152 | 292 | 2.5 |
| 9 | Rock Creek_1_50535 | 52,718 | 897.6 | 886.9 | 2.1 | 2,906 | 282 | 3.23 |
| 8 | Rock Creek_1_48265 | 54,987 | 890.6 | 881.9 | 2.3 | 2,787 | 172 | 5.01 |

| | | | |
|----------|-----|------|------------|
| Designed | EWB | Date | 06/20/09 |
| Drawn | DMM | Date | 06/29/2009 |
| Checked | JW | Date | 06/20/09 |
| Approved | AGB | Date | 06/20/09 |

DDG-0274 NID-KS07161
DOUGLAS COUNTY, KANSAS



| |
|--------------|
| File Name |
| Drawing Name |
| 6/29/2009 |
| Sheet 1 of 2 |

| REVISIONS | | |
|-----------|----------|-------|
| DATE | APPROVED | TITLE |
| | | |
| | | |

Attachment 1:
Inundation Area
Boundary Map

