Urban Drainage and Flood Control District

E-19 Surveys

Montview
ALERT ID: 403
LID: MOVC2

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Introduction

HDR Engineering Inc. was contracted by the Urban Drainage and Flood Control District to survey and provide information about various flood warning stream gage sites in a manner consistent with National Weather Service E-19 procedures. On December 20, 2002, HDR personnel surveyed five sites. This report is a summary of the work done and information gathered for the Montview gage on Westerly Creek. Included in this report are elevations of critical points in the vicinity of the site, and estimates of stages causing flood damage in vicinity of the gage.

Site

The stream gage is located immediately south of the Montview Blvd. on Westerly Creek. The ALERT ID number for this Gage is 403 while the National Weather Service LID is MOVC2 and is referred to as Montview. There are two 8' x 6' concrete box culverts under Monteview Blvd. at the gage site. Potential flooding at the gage site itself will consist of Montview Park being flooded. During high flows the apartment buildings to the west of the creek will be flooded along with the Montview Blvd. being overtopped. Figure 1 shows a general location map of the site.

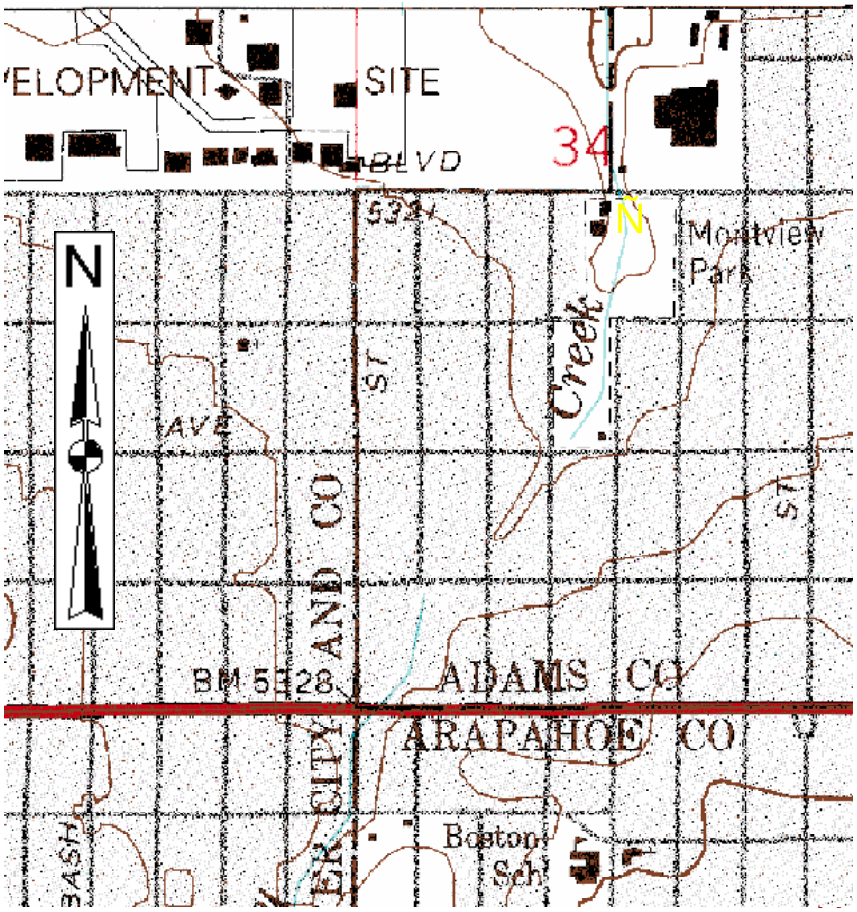

Figure – 1 Location Map

Surveyed locations

Ground elevations were surveyed along a cross section for a possible future rating curve for the site. In addition, the elevations and locations of any buildings along Westerly Creek were surveyed, along with low flow channel water surface elevations up and downstream from the gage. Figure 2 shows locations of the surveyed points in the vicinity of the gage. The base of the ALERT transmitter was surveyed at an elevation of 100.00 for a temporary benchmark. The flow line elevation is 92.4 feet. The creek will be bank full at an elevation of 7.7 feet above the invert. Water will begin to overtop the road at 9.7 feet and flood the apartment buildings at an elevation of 9.0 feet above the invert. Based on the surveyed water surface elevations, the estimated channel energy slope is 0.7 percent.

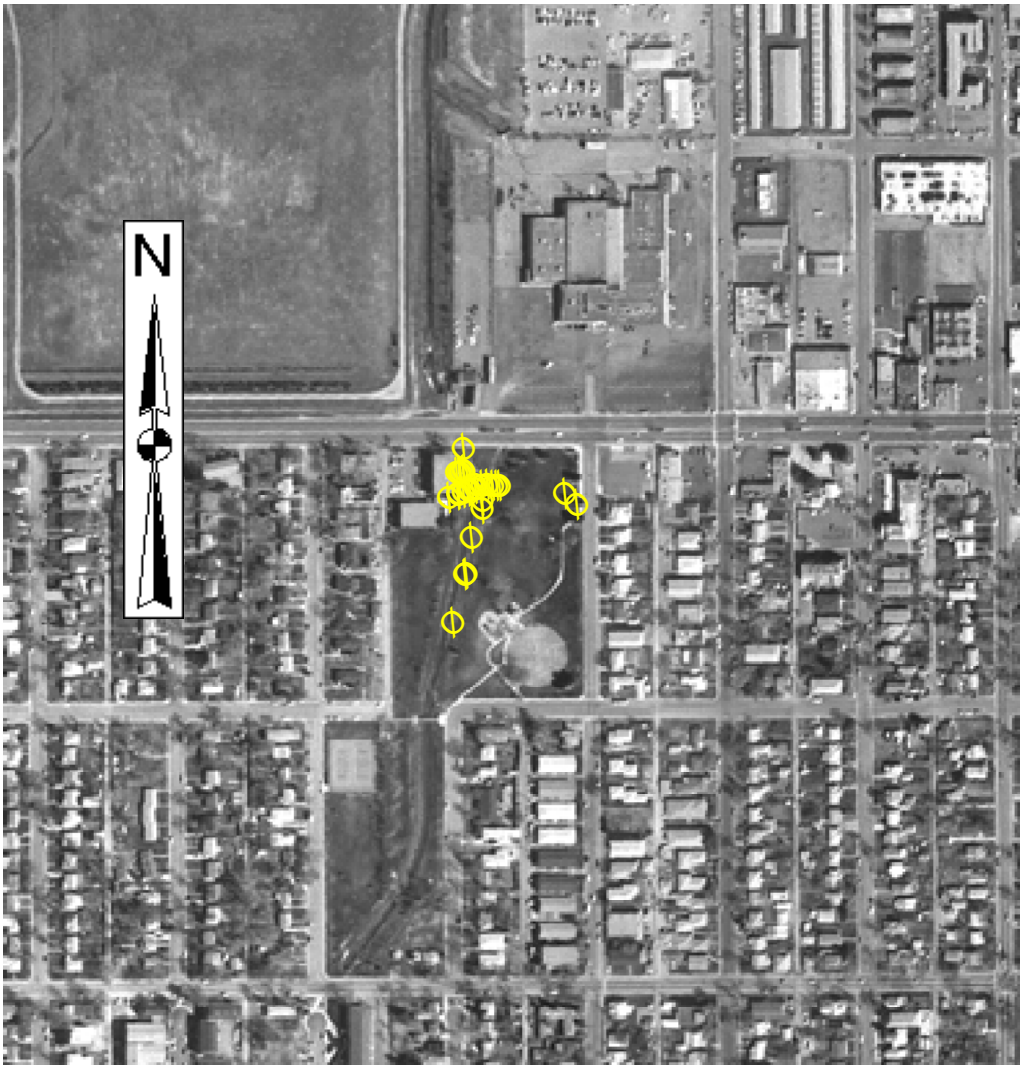

Figure – 2 Surveyed Points

Site photographs

Several photographs were taken of the site. Figure 3 shows Westerly Creek at the gage location looking downstream through the culverts. Figure 4 shows Westerly Creek at the gage location looking upstream.

Figure – 3 Looking Downstream

Figure – 4 Looking Upstream

Historic records

Since the gauge installation date in June 9, 1988, a peak flow rate of 1200 cfs was recorded on July 19, 1997. Figure 6 shows the approximate 100-year flood boundary as depicted on district's annual flood hazard information brochures

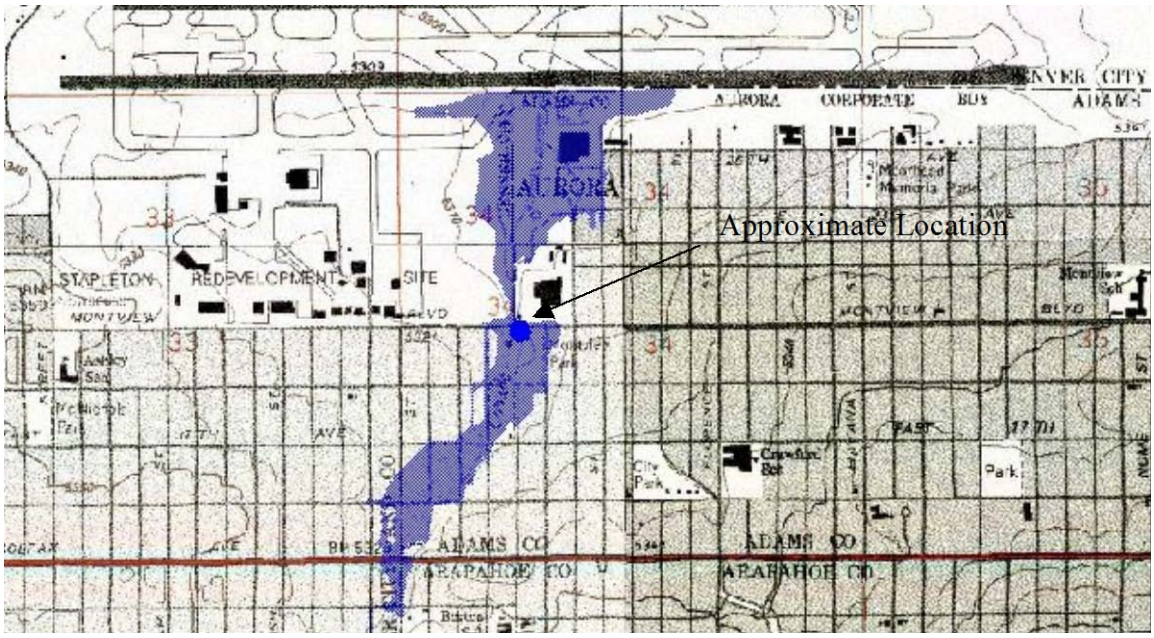

Figure – 6 Approximate 100-Year Flood Boundary As Depicted on District's Annual Flood Hazard Information Brochures

Flood warning template

The graphics template was created based on the surveyed information, historic records, another information supplied by the Urban Drainage and Flood Control District and the National Weather Service. The graphics template is compatible with the flood warning system and has been created and installed on the District's WebServer. This template is named 403e19.tpt and is located in the appropriate directory in the District's WebServer. Figure 7 shows the graphics template online from the WebServer.

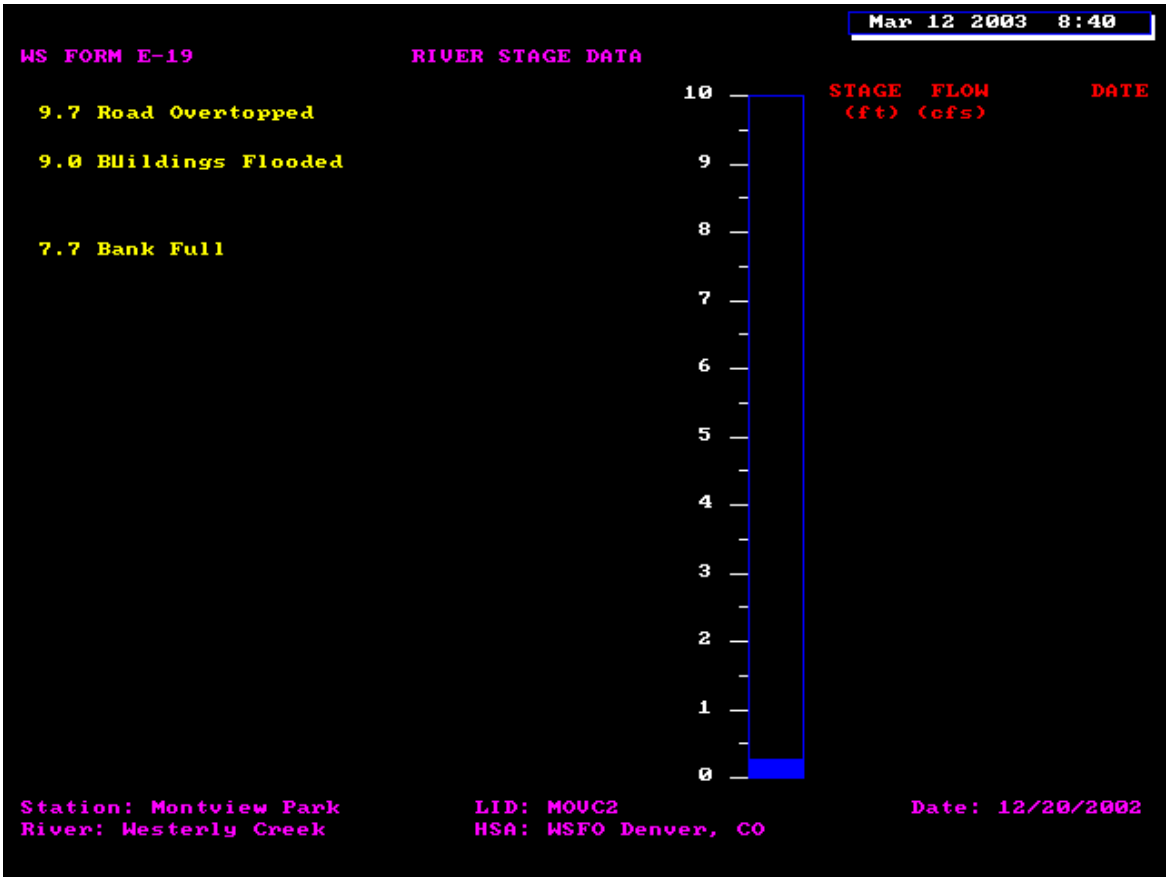

Figure – 7 Graphic Template

APPENDIX
Surveyed Data Points

Montview Gage

ID	X	Y	Elevation (ft)	Description
1000	10000	10000	99.229332	INST
1001	10018.5494	10000	98.5091226	BS
1002	9961.66491	10014.3912	100	BASETRANS
1003	9876.31102	10043.7129	102.12735	TOPROAD
1004	9992.19096	10079.962	101.405919	LOWDAMAGEXS
1005	9985.58054	10057.971	99.592472	TOPCONXS
1006	9985.04873	10056.6161	99.599446	TOPCONXS
1007	9979.67654	10042.7129	91.6194581	INXS
1008	9976.1894	10029.9773	91.6341145	INXS
1009	9977.05042	10031.507	91.9094335	WSXS
1010	9975.49204	10027.0298	93.8870683	TOPGUGETUBE
1011	9972.03915	10016.221	99.336276	TOPCONXS
1012	9966.47669	9998.89443	100.345643	XS
1013	9962.31183	9987.58041	99.860817	XS
1014	9965.96759	9974.5315	95.2635277	XS
1015	9964.20252	9963.12968	95.148688	XS
1016	9964.22248	9956.99069	97.6089146	XS
1017	9984.49802	9800.43126	98.5584223	XS
1018	10010.2552	9771.84456	100.911102	XS
1019	10090.8356	10024.3842	93.0785875	FLINV
1020	10176.6816	10040.1005	92.8201375	FLINV
1021	10179.8527	10040.8111	93.4634171	WSEL
1022	10292.5021	10070.9138	93.1910628	WSEL
1023	9934.13763	10059.9739	91.2757734	CONCRTBOXINVT
1024	9931.71685	10052.5087	91.2028085	CONCRTBOXINVT
1025	9931.17598	10050.811	91.1832447	CONCRTBOXINVT
1026	9928.87877	10043.7969	91.305764	CONCRTBOXINVT
1027	9929.10238	10043.4036	97.1224517	LCCONCTBOX