

Urban Drainage and Flood Control District



E-19 Surveys



Van Bibber @ HWY 93 Gage

ALERT ID: 333

LID: VBCC2

HDR Engineering, Inc.

303 E 17th Ave. Suite 300

Denver CO, 80203

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 March 9, 2000, five sites were surveyed by HDR personnel in the Raslton Creek vicinity. This report is a summary of the work done and information gathered for the Van Bibber @ Hwy 93 gage on Van Bibber 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 off of HWY 93 and West 58th Street on Van Bibber Creek. The ALERT ID number for this Gage is 333 while the National Weather Service LID is VBCC2 and is referred to as Van Bibber @ Hwy 93. Potential flooding at the gage site would be the flooding of homes on the east side of Hwy 93. During high flood stages Hwy 93 could be overtopped. Figure 1 shows a general location map of the site.

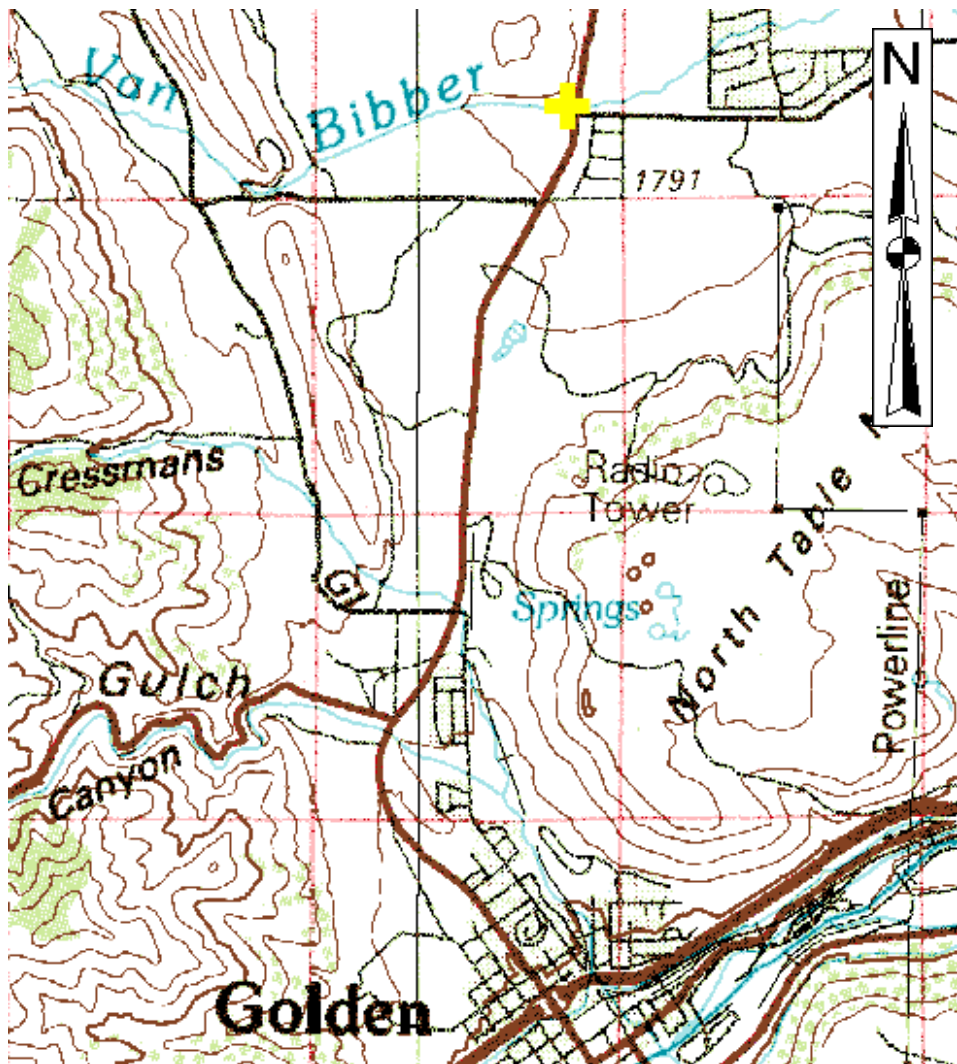


Figure – 1 Location Map

Surveyed locations

The elevations and locations of any buildings near the gage site were surveyed, along with water surface elevations up and down stream from the gage. In addition, ground elevations were surveyed along a cross section for a possible future rating curve for the site. 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 90.2 feet. The bankfull stage is at 1.3 feet above the flow line. Highway 93 will be overtopped at 13.1 feet above the flow line. Based on the topography of the area, the estimated channel energy slope is 1.6 percent.

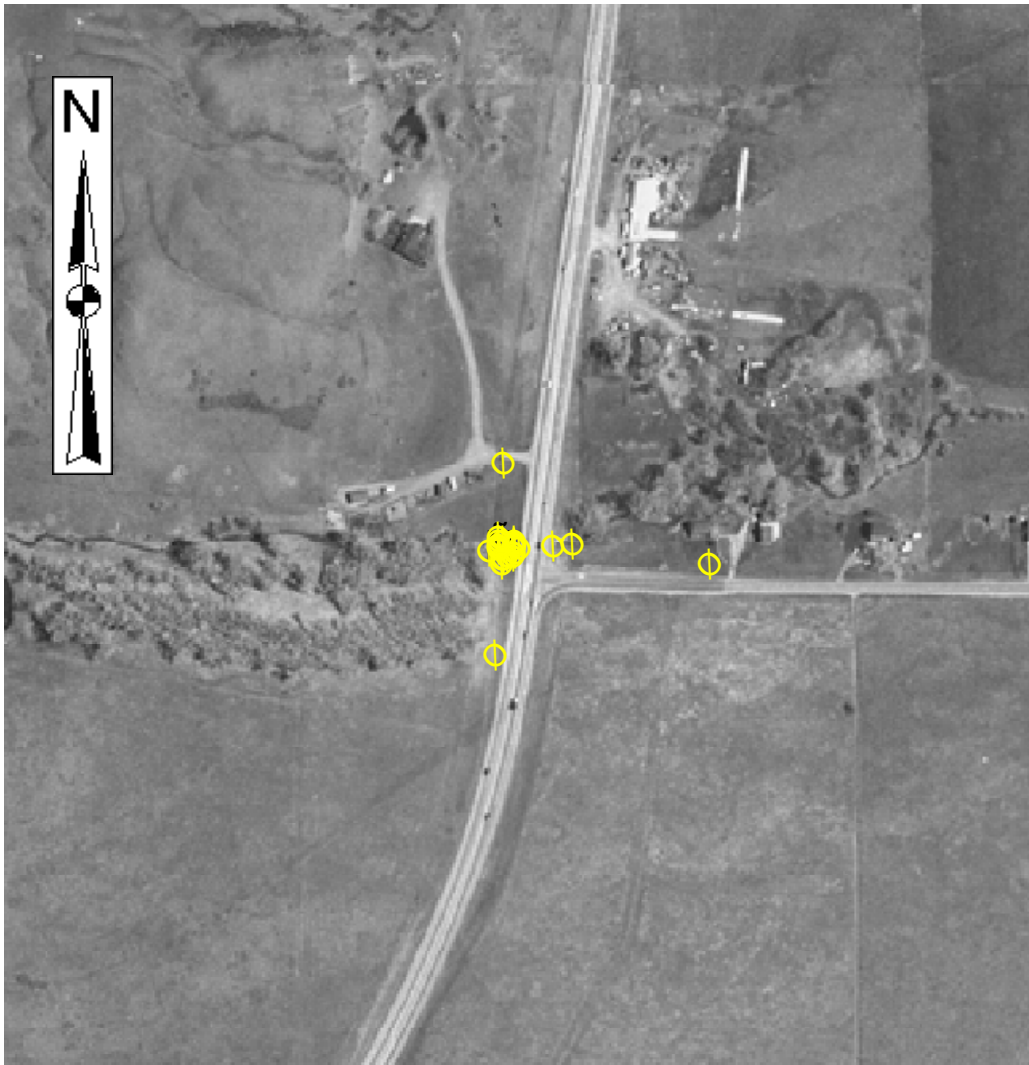


Figure – 2 Surveyed Points

Site photographs

Several photographs were taken of the site. Figure 3 shows Van Bibber Creek at the gage location looking downstream after the culverts. Figure 4 shows Van Bibber Creek at the gage location looking upstream. Figure 5 is looking downstream through the culverts.

Figure – 3 Looking Downstream after culverts



Figure – 4 Looking Upstream



Figure – 5 Looking Downstream Through Culverts



Historic records

There is limited information available for this gage. The location has been recently converted to a pressure transducer with an ALERT transmitter. Since the gauge installation date in August, 1990, a peak stage of 3.6 feet (corresponding to 560 cfs) was recorded on May 18, 1995. Records of flooding previous to the gauge installation could not be identified during the reconnaissance and library searches. Figure 6 shows the approximate 100-year flood boundary as depicted on district's annual flood hazard information brochures.

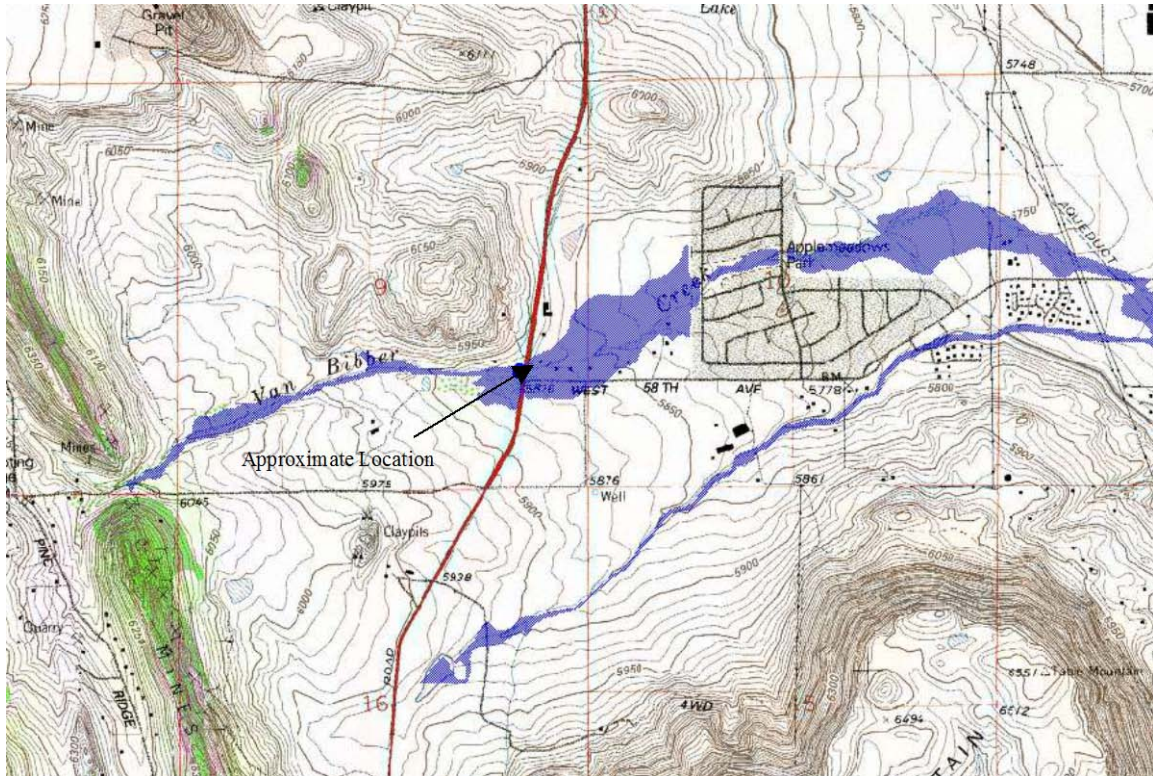


Figure - 6 Approximate 100-Year Flood Boundary As Depicted on District's Annual Flood Hazard Information Brochures

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 333e19.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

**Vanbibber
at 93**

ID	X (ft)	Y (ft)	Distance (ft)	Station (ft)	Z (ft)	Label
900.00	10000.00	10000.00			91.56	CP1
901.00	10038.82	10000.00			94.38	SWINGWALL
1000.00	10031.30	9974.77			100.00	BASEOFTRANSMIT
1001.00	10033.70	9989.52			97.55	TOPOFPT
1002.00	10269.40	10018.10			97.44	GR
1003.00	10050.69	10002.77			93.93	GR
1004.00	10039.76	10002.28			92.06	GR
1005.00	10018.39	10006.62		D/S Slope %	91.74	GR
1006.00	10015.79	10009.63	175.84	2.01	90.51	GRANDWS
1007.00	10012.49	10009.51			90.24	FL
1008.00	10008.03	10009.86			90.33	GRANDWATERSURFA
1009.00	10007.12	10010.39			91.54	GR
1010.00	9998.16	10009.82			91.46	GR
1011.00	9987.78	10011.80			94.39	GR
1012.00	9811.24	9996.64		U/S Slope %	102.22	GRRDHOUSE
1013.00	10022.04	10031.38	22.63	1.246	90.79	WS
1014.00	10010.70	9971.22			90.81	CULVERTXSEC
1015.00	10011.99	9971.28			90.84	CULVERTXSEC
1016.00	10025.42	9972.65			90.48	CULVERTXSEC
1017.00	10003.48	9970.97			90.21	WS
1018.00	10009.31	9878.93			88.62	WSDSFACE
1019.00	10006.80	9834.03			86.98	WS
1020.00	10053.30	9507.07			84.20	HOUSELEV
1021.00	10007.43	9971.36			100.01	LOWCHORD
1022.00	9996.89	9970.77			90.05	CULVERTXSECTION
1023.00	10013.68	9961.31			103.30	TOPOFROAD
Cross-Section Points						
1012.00	9811.24	9996.64		0.00	102.22	GRRDHOUSE
1011.00	9987.78	10011.80	177.20	177.20	94.39	GR
1010.00	9998.16	10009.82	10.56	187.76	91.46	GR
1009.00	10007.12	10010.39	8.98	196.74	91.54	GR
1008.00	10008.03	10009.86	1.06	197.80	90.33	GRANDWATERSURFA
1007.00	10012.49	10009.51	4.47	202.26	90.24	FL
1006.00	10015.79	10009.63	3.31	205.57	90.51	GRANDWS
1005.00	10018.39	10006.62	3.98	209.55	91.74	GR
1004.00	10039.76	10002.28	21.80	231.35	92.06	GR
1003.00	10050.69	10002.77	10.94	242.29	93.93	GR

1002.00 10269.40 10018.10 219.25 461.54 97.44 GR

