

Erratum

2006 Colville River Delta and Fish Creek Basin Spring Breakup and Hydrological Assessment

The elevation of Monument 1 control should be changed from 27.59-feet to 27.93-feet (BPMSL). Reported 2006 water surface elevations at Monument 1 Upstream, Monument 1, and Monument 1 Downstream should also be corrected by the associated difference of plus (+) 0.34-feet.

Tabular and graphical data with corrected elevation values are attached (Graph 4-1, Table 4-1, Table 4-19, Table 4-20, Table 4-21, Table 4-22, and Table A-1). Additional tables and graphs containing 2006 elevation data at Monument 1 (i.e. Section 6.0 Colville River Delta Flood and Stage Frequency) are not presented here.

Table 4-20 does not represent Monument 1Upstream and 1Downstream data as stated. The correct table is presented here.

Table 4-1 Measured Daily Discharge Summary – Monument 1

Site Number	Date & Time	WSE (ft)	Made By	Mean Width (ft)	Mean Area (ft ²)	Mean Velocity (ft/s)	Mean Discharge (cfs)	Corrected Discharge ¹ (cfs)	MS Rated ²	Number of Transects	MS Type
Mon 1D	5/29/06 17:00	19.66	MDM, MTA	3,486	73,253	3.28	240,135	273,000	P	4	ADCP
Mon 1D	5/30/06 14:00	19.20	MDM, MTA	3,487	71,786	3.70	265,398	281,000	P	4	ADCP
Mon 1	5/31/06 17:00	14.03	MDM, MTA	2,951	46,259	4.36	201,270	210,000	P	6	ADCP
Mon 1	6/1/06 16:00	11.41	MDM, MTA	3,099	43,237	3.71	153,206	168,000	F	6	ADCP
Notes: <ol style="list-style-type: none"> 1. Corrected Discharge - Average velocity of moving bed from Loop Test applied to each transect 2. Measured Rating - E - Excellent, G - Good, F - Fair, P - Poor 											

Graph 4-1 Monument 1 Rating Curve with Observed Direct Discharge Values

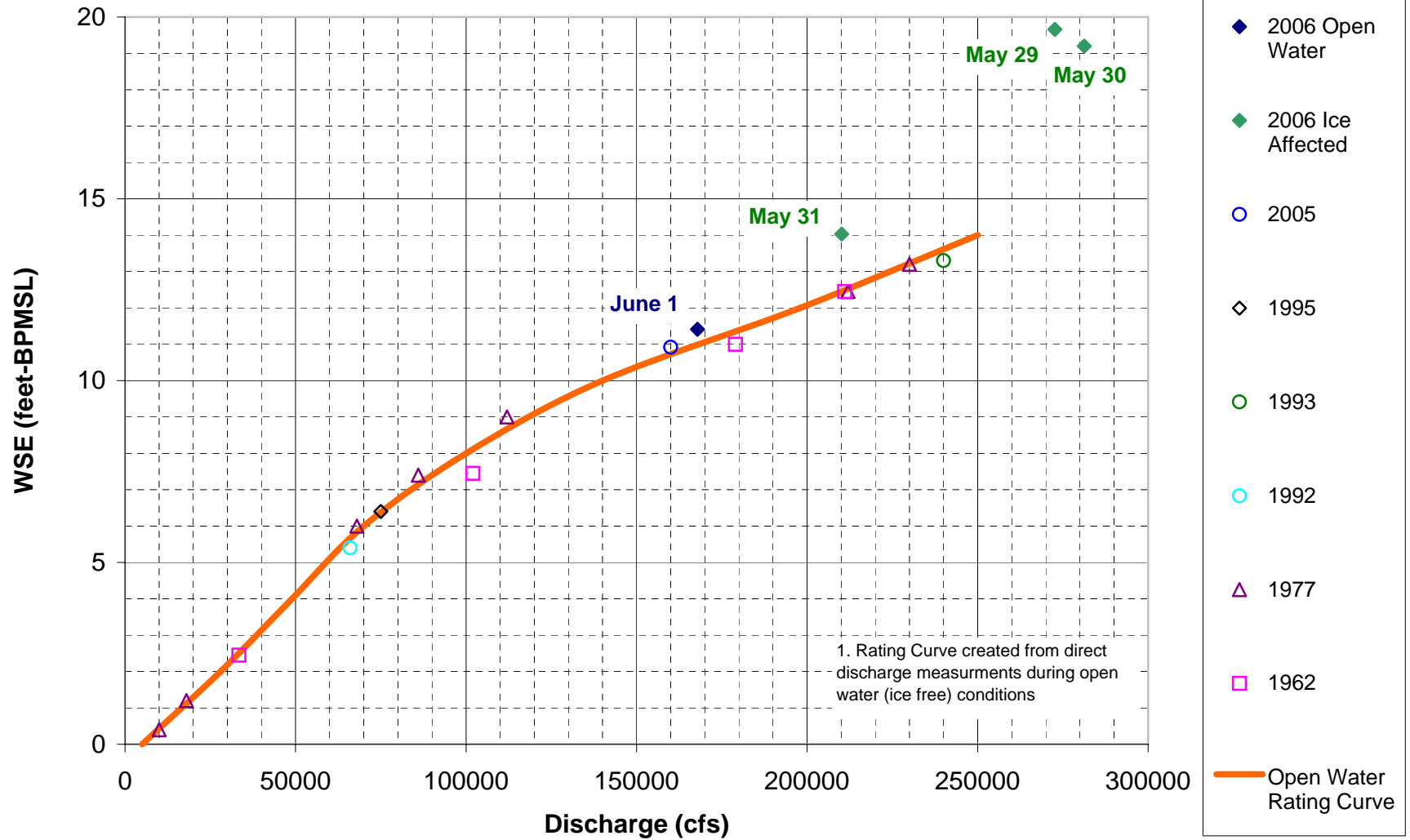


Table 4-2 Colville Rive Breakup Peak Annual Discharge, 1992-2006

Year	Monument 1 Peak Discharge (cfs)			Monument 1 Peak Water Surface Elevation (feet-BPMSL)	
	Discharge	Method	Reference	Mon 1	Reference
2006	281,000	ADCP Measurement	This report	19.83	This report
2005	195,000	Estimated-Mon 1 Rating Curve	Baker 2005	13.18	Baker 2005
2004	360,000	Estimated-Indirect Calculation	Baker 2004	19.54	Baker 2004
2003	232,000	Estimated-Mon 1 Rating Curve	Baker 2006	13.76	Baker 2003
2002	249,000	Estimated-Mon 1 Rating Curve	Baker 2006	16.87	Baker 2002d
2001	255,000	Estimated-Mon 1 Rating Curve	Baker 2006	17.37	Baker 2001
2000	580,000	Estimated-Indirect Calculation	Baker 2000	19.33	Baker 2000
1999	203,000	Estimated-Indirect Calculation	Baker 1999	13.97	Baker 1999
1998	213,000	Estimated-Indirect Calculation	Baker 1998	18.11	Baker 1998
1997	177,000	Estimated-Indirect Calculation	Baker 2002a	15.05	Baker 1999
1996	160,000	Estimated-Indirect Calculation	Shannon & Wilson 1996a	17.19	Shannon & Wilson 1996a
1995	233,000	Estimated-Indirect Calculation	ABR 1996	14.88	Shannon & Wilson 1996a
1994	165,000	Estimated-Indirect Calculation	ABR 1994b	12.20	ABR 1996
1993	379,000	Estimated-Indirect Calculation	ABR 1994a	19.20	ABR 1996
1992	164,000	Estimated-Indirect Calculation	ABR 1993	13.90	ABR1996

Table 4-19 Monument 1

Date and Time	WSE (ft BPMSL)		Q (cfs)	Observations
	Mon1	Mon 1		
5/27/06 4:45 PM	9.88			First water read on gages.
5/28/06 8:00 AM	11.91			Channel ice in reach gone, but ice present on east bank.
5/28/06 4:15 PM	12.91			Ice jam near bifurcation of Niqliq causing flow to divert.
5/29/06 9:15 AM	19.00			Significant stage increase, East Channel mostly ice free.
5/29/06 1:00 PM	19.49			Ice jam spans entire Niqliq channel upstream of Nuiqsut.
5/29/06 4:45 PM	19.66		273,000	Conduct discharge measurement.
5/30/06 7:30 AM	19.78			Intact channel ice on both east and west banks DS of ice jam.
5/30/06 10:00 AM	19.83			High water estimated the morning of 30 May.
5/30/06 11:00 AM	19.59			Ice jam begins to release, stage starts to drop.
5/30/06 12:30 PM	19.20		281,000	Conduct discharge measurement.
5/30/06 2:30 PM	19.07			Stage dropping; East Channel nearly clear of moving ice.
5/31/06 10:30 AM	14.85			Ice jam of East Channel cleared; stranded ice on banks.
5/31/06 4:15 PM	14.03		210,000	Conduct discharge measurement.
6/1/06 2:45 PM	11.41		168,000	Conduct discharge measurement.

Notes:

1. Elevations are based on Monument MON1 of 27.93 feet BPMSL, established by LCMF in 2006.
2. WSE line for Monument 9 (Mon9) included for reference.

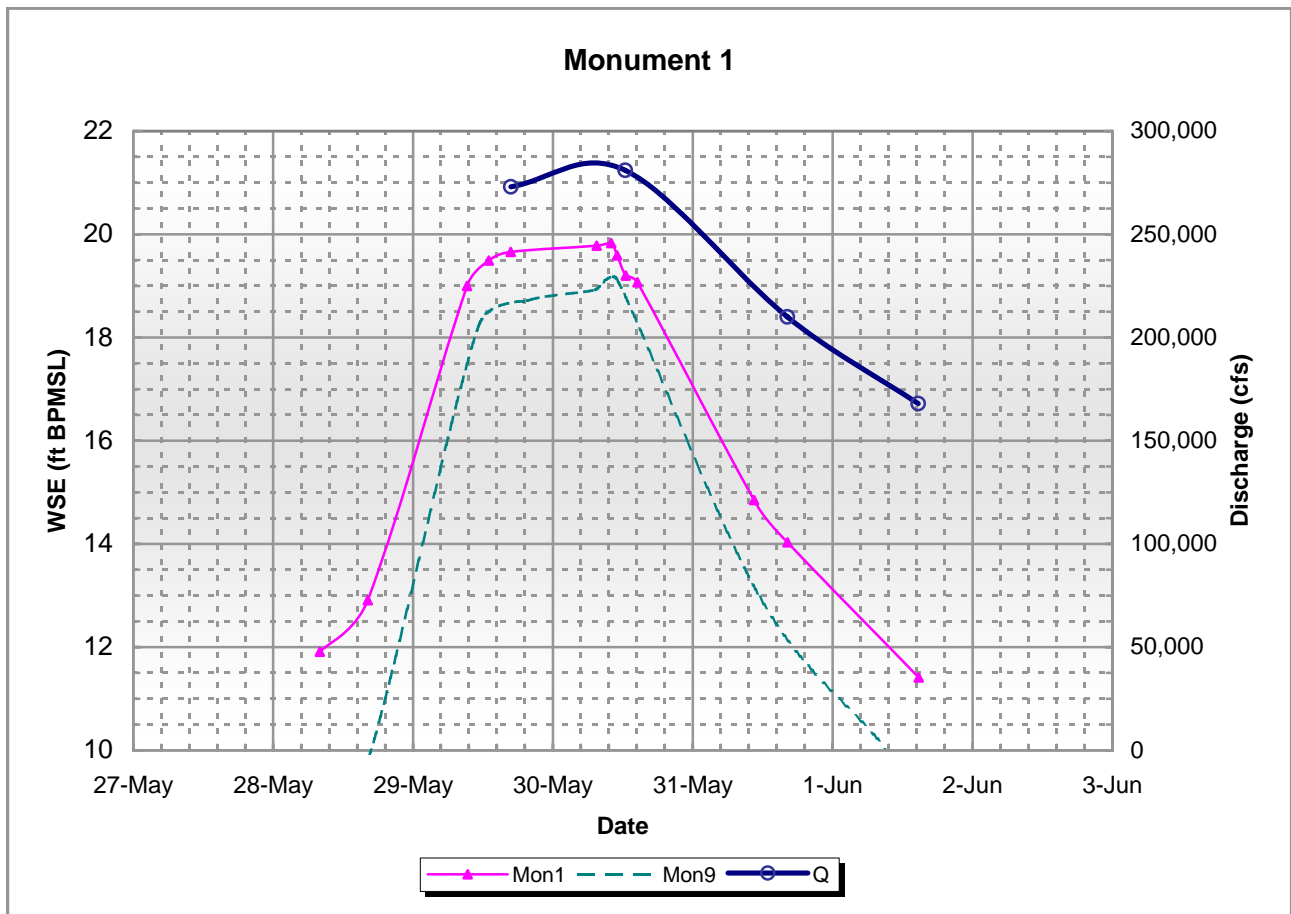


Table 4-20 Monument 1Upstream and 1Downstream

Date and Time	WSE (ft BPMSL)		Q (cfs)	Observations
	Mon1U	Mon1D	Mon 1	
5/27/06 4:45 PM	10.06			First water read on gages.
5/28/06 8:00 AM	12.14	11.78		Channel ice in reach gone, but ice present on east bank.
5/28/06 4:15 PM	13.23	12.52		Ice jam near bifurcation of Niqliq causing flow to divert.
5/29/06 9:15 AM	19.12	18.75		Significant stage increase, East Channel mostly ice free.
5/29/06 1:00 PM	19.57	19.37		Ice jam spans entire Niqliq channel upstream of Nuiqsut.
5/29/06 4:45 PM	19.78	19.53	273,000	Conduct discharge measurement.
5/30/06 7:30 AM	19.91	19.63		Intact channel ice on both east and west banks DS of ice jam.
5/30/06 10:00 AM	19.93	19.69		High water estimated the morning of 30 May.
5/30/06 11:00 AM	19.75	19.47		Ice jam begins to release, stage starts to drop.
5/30/06 12:30 PM	19.36	18.99	281,000	Conduct discharge measurement.
5/30/06 2:30 PM	19.23	18.86		Stage dropping; East Channel nearly clear of moving ice.
5/31/06 10:30 AM	15.20	14.55		Ice jam of East Channel cleared; stranded ice on banks.
5/31/06 4:15 PM	14.41	13.71	210,000	Conduct discharge measurement.
6/1/06 2:45 PM	11.65	11.08	168,000	Conduct discharge measurement.

Notes:

1. Elevations are based on Monument MON1 of 27.93 feet BPMSL, established by LCMF in 2006.
2. WSE lines based on pressure transducer data collected from Mon1U and Mon1D.
3. Tabulated values and graph data points from gage readings at Mon1U and Mon1D.

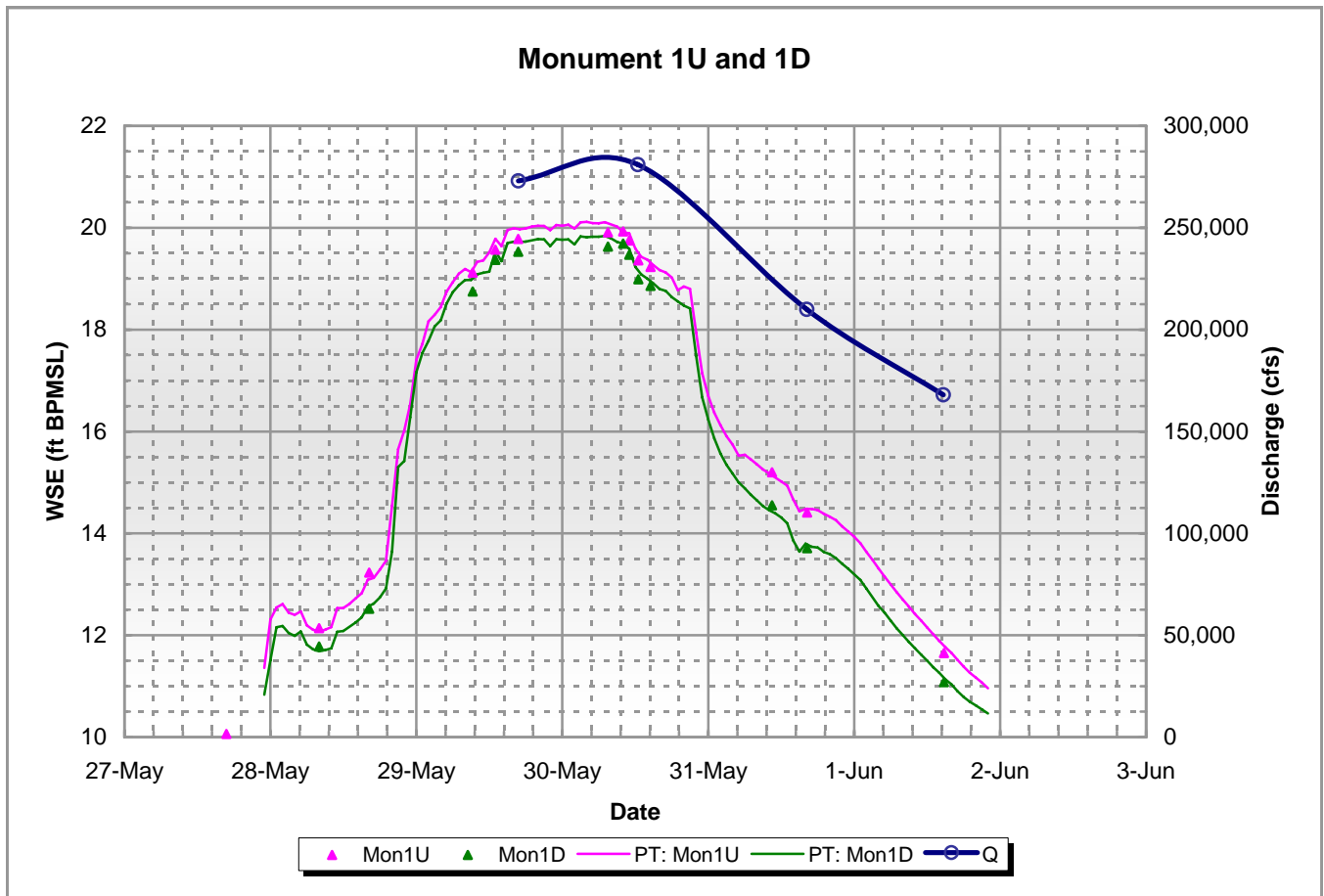


Table 4-21 Monument 9

Date and Time	WSE (feet BPMSL)	Q (cfs)	Observations
	Mon9		
5/25/06 9:15 AM	3.62		
5/26/06 2:30 PM	4.07		
5/27/06 12:30 PM	6.86		Observed flow at site.
5/28/06 8:30 AM	9.28		
5/28/06 4:15 PM	9.81		Ice bridge and jam in East channel diverting flow in Niqliq.
5/29/06 11:15 AM	18.22		Ice jam spans East and Nigliq channels.
5/29/06 7:45 PM	18.72		Flow overbank across HDD pad and thermosyphons.
5/30/06 7:15 AM	18.92		
5/30/06 10:00 AM	19.12		High water estimated morning of 30 May.
5/30/06 3:15 PM	18.82		Stage dropping; moving ice near HDD pad.
5/31/06 11:30 AM	12.97		Ice jam on East channel cleared; stranded ice on banks.
6/1/06 9:00 AM	10.05		
6/2/06 8:00 AM	7.78		

Notes:

1. Elevations are based on Monument Mon9 of 25.03 feet BPMSL, established by Lounsbury in 1996.
2. WSE lines for Mon1 and Helmricks are presented for reference.
3. No discharge measurements were collected for this site.

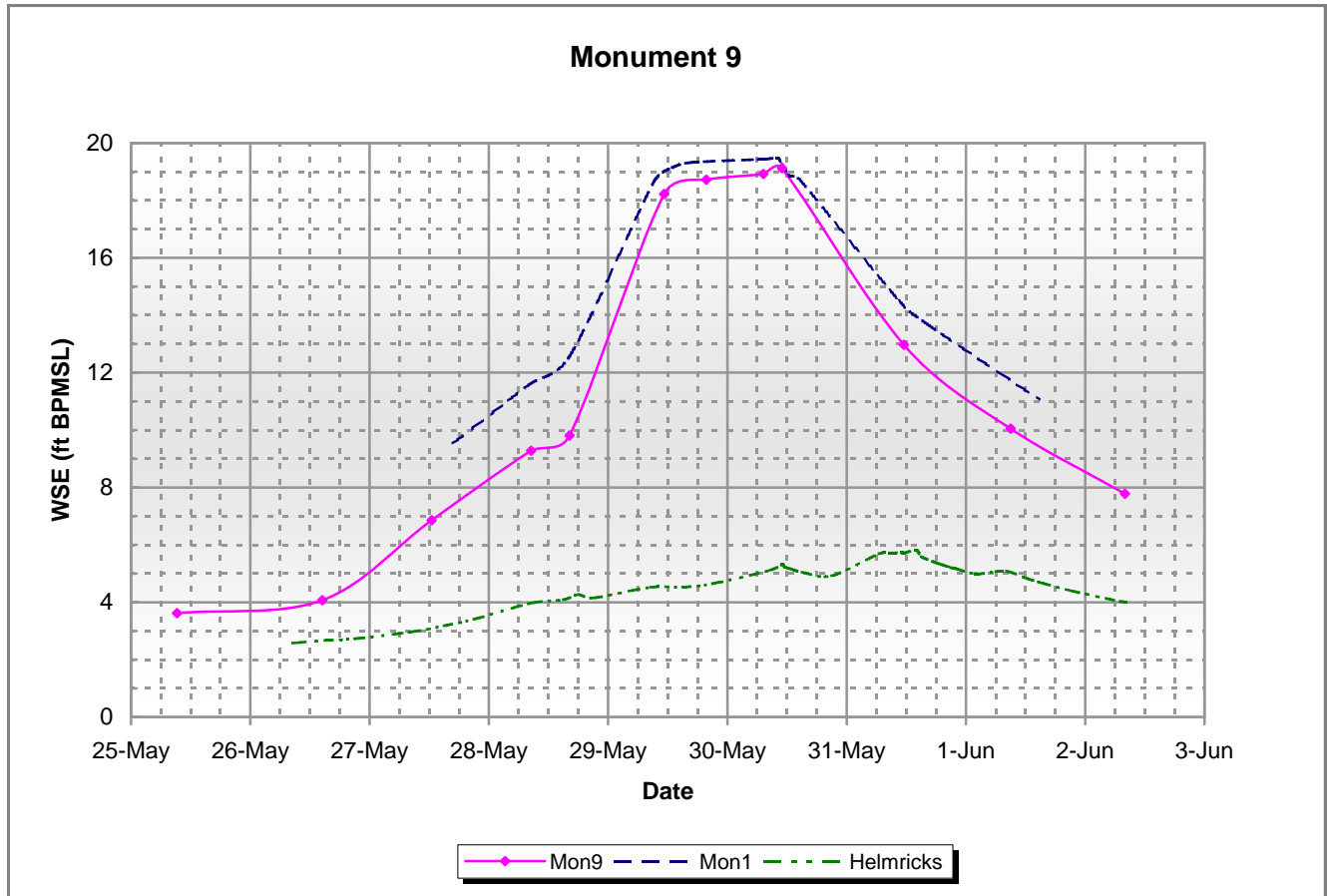


Table 4-22 Helmricks

Date and Time	WSE (feet BPMSL)	Q (cfs)	Observations
	Helmricks		
5/25/06 8:30 AM	2.32		
5/26/06 2:30 PM	2.67		
5/27/06 12:30 PM	3.18		Steady rise in flood waters.
5/28/06 8:30 AM	3.97		
5/28/06 4:15 PM	4.09		
5/29/06 11:15 AM	4.52		Ice jam in East and Nigliq channels observed near Alpine.
5/29/06 7:45 PM	4.65		
5/30/06 7:15 AM	5.11		Peaking in surges; runway half-flooded.
5/30/06 11:00 AM	5.31		
5/30/06 3:15 PM	5.05		Shore lead only, water still flowing into lake.
5/31/06 11:30 AM	5.73		Most of the runway under water; ice jam developed near Dune Island.
6/1/06 9:00 AM	5.07		
6/2/06 8:00 AM	4.01		Channel ice still present in east and main channels.

Notes:

1. Elevations based on observations conducted by James Helmricks.
2. WSE lines for Mon1 and Mon9 are presented for reference.
3. No discharge measurements were collected for this site.

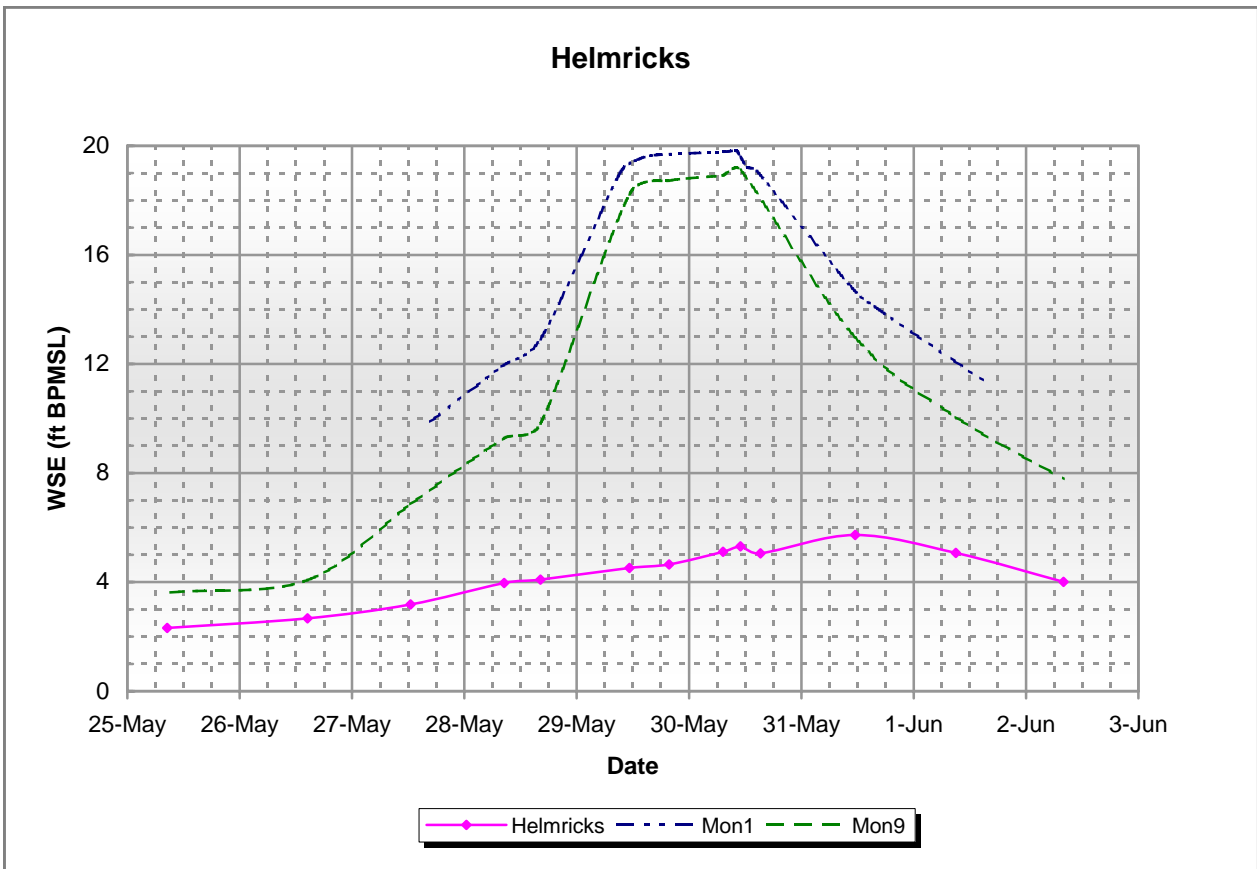


Table A-1: Summary of 2005 Vertical Control Monuments

Monument	Elevation (BPMSL - Feet)	Latitude (NAD83)	Longitude (NAD83)	Monument	Reference
05-01-18A	7.75	N 70° 19' 35.1"	W 150° 59' 37.0"	Rebar	LCMF CD4 TBM, 1-23-2005
05-01-21A	12.17	N 70° 17' 46.4"	W 150° 58' 46.5"	Rebar	LCMF CD4 TBM, 1-26-2005
05-01-21D	12.44	N 70° 17' 27.7"	W 150° 59' 37.0"	Rebar	LCMF CD4 TBM, 1-26-2005
ALMA	25.06	N 70° 16' 45.7"	W 151° 19' 53.2"	Alcap	LCMF static gps, 5-11-2005
AMYLEE	27.50	N 70° 18' 17.1"	W 151° 11' 56.8"	Alcap	LCMF static gps, 5-12-2005
BAKER	66.51	N 70° 12' 16.1"	W 151° 45' 23.0"	Alcap	LCMF static gps, 5-14-2006
BRAD	25.78	N 70° 16' 37.4"	W 151° 22' 10.5"	Alcap	LCMF static gps, 5-11-2005
C2	12.30	N 70° 18' 38.6"	W 151° 25' 31.3"	Rebar	Lounsbury 2002
CDW	30.69	N 70° 18' 41.7"	W 151° 10' 54.1"	-	LCMF, 10-2003
CHAR	24.05	N 70° 16' 54.9"	W 151° 17' 41.8"	Alcap	LCMF static gps, 5-11-2005
Clear 1951	25.50	N 70° 20' 16.1"	W 151° 06' 24.0"	BC	LCMF levels, 8-8-2002
D1A South	3.90	N 70° 22' 17.7"	W 151° 15' 17.9"	Rebar	Lounsbury 2002
FIORD 01	9.30	N 70° 24' 27.7"	W 150° 52' 40.2"	Alcap	LCMF, 11-2004
FIORD 15	6.53	N 70° 25' 06.0"	W 150° 54' 22.3"	Alcap	LCMF, 3-2005
FIORD 17	8.31	N 70° 25' 10.9"	W 150° 55' 11.7"	Alcap	LCMF, 3-2005
JACK	23.45	N 70° 16' 55.4"	W 151° 15' 52.6"	Alcap	LCMF levels, 8-2003
KELLY	27.36	N 70° 15' 49.4"	W 151° 29' 19.7"	Alcap	LCMF static gps, 5-11-2005
Line 3S1	36.62	N 70° 13' 09.7"	W 151° 50' 20.1"	Alcap	Lounsbury 2001
Line 3S2	23.37	N 70° 16' 09.7"	W 151° 52' 20.6"	Alcap	Lounsbury 2001
Line 4BW	40.87	N 70° 11' 11.9"	W 151° 57' 43.1"	Alcap	Lounsbury 2001
Line 2S	21.44	N 70° 15' 55.1"	W 151° 42' 07.6"	Rebar	Lounsbury 2001
MECKEL	70.19	N 70° 12' 00.6"	W 151° 39' 57.6"	Alcap	LCMF static gps, 5-12-2005
Mon 01	27.93	N 70° 09' 57.2"	W 150° 56' 23.8"	Alcap	LCMF 2006
Mon 09	25.03	N 70° 14' 40.6"	W 150° 51' 29.6"	Alcap	Lounsbury 1996
Mon 20	19.17	N 70° 16' 48.0"	W 151° 00' 41.7"	Alcap	Lounsbury 1996
Mon 22	10.13	N 70° 19' 05.2"	W 151° 03' 21.9"	Alcap	Lounsbury 1996
Mon 23	9.53	N 70° 20' 40.0"	W 151° 03' 40.7"	Alcap	Lounsbury 1996 (9.523 LCMF 6-26-2005)
Mon 28	3.66	N 70° 25' 31.9"	W 151° 04' 01.2"	Alcap	Lounsbury 1996
Mon 35	5.57	N 70° 25' 57.0"	W 150° 23' 00.4"	Alcap	Lounsbury 1996
NAN2	13.31	N 70° 18' 14.9"	W 150° 59' 50.6"	-	LCMF, 3-2005
NPRA 2	7.67	N 70° 20' 22.6"	W 151° 05' 41.7"	Alcap	LCMF, 3-2005
NPRA 3	16.94	N 70° 20' 04.3"	W 151° 07' 19.9"	Alcap	LCMF, 3-2005
PATTY	68.79	N 70° 12' 21.6"	W 151° 38' 29.1"	Alcap	LCMF static gps, 5-12-2005
SAK-LT	10.17	N 70° 21' 49.5"	W 150° 55' 34.0"	Alcap	LCMF, 12-2004
STM RT	10.07	N 70° 23' 37.7"	W 150° 54' 54.4"	Alcap	LCMF, 11-2004
UBN 01	12.09	N 70° 18' 11.8"	W 151° 19' 48.6"	Rebar	LCMF static gps, 7-27-2003
UBUSW	17.50	N 70° 14' 36.4"	W 151° 17' 51.7"	Alcap	Lounsbury 2001