

# **Appendix C**

## **Model Calibration**

TABLE C-1

## SURVEYED HIGHWATER MARKS AND MODEL ELEVATIONS FOR AUGUST 13 - 14, 1987 STORM EVENT

	CLUSTER ID	CHANNEL STATION	1987 HWM ELEVATION *	Damage Assessment	Cal 5A	Cal 5B
					No Str 5	With Str 5
SB Main Stem		44,750	790.24	-	792.08	792.08
	1-1	42,700	778.99	Basement and FF flooded	776.98	776.99
	1-6	42,680	779.31	yard flooding	776.91	776.92
	1-48	41,700		no flooding		
	1-9	41,270		no flooding		
	1-39	41,000	767.41	lower level of raised ranch 3-4 ft	768.03	768.03
	1-35	40,840		yard and FF		
	1-33	40,760	768.04	house was an island	767.90	767.90
	1-26	40,470		yard and basement		
	1-41	40,000		not present in 1987		
	2-42	39,450		backyard flooding		
	2-37	39,450		yard flooding		
	2-40	39,280		no flooding		
	2-48	39,280		yard, garage, small amt. In basement		
	2-51	39,190		yard flooding		
	2-49	39,050	758.02	garage 36"	755.93	755.94
	2-1	38,860	756.88	yard and crawl space	754.77	754.79
	2-3	38,880		basement?		
	2-5	38,665		no flooding		
	2-20	38,135		yard flooding, basement didn't flood		
	2-56	37,720	749.01	3-5' yard, 1-2" basement	749.12	749.13
	2-18	37,320	748.59	yard and basement	747.96	747.97
	4-1	36,490		yard flooding		
	4-2	36,440		basement flooded		
	4-4	36,120		not present, yard flooding		
	4-6	35,585		not present, yard flooding		
	4-12	35,270		yard flooding		
	4-29	33,510		yard flooding		
	4-22	33,540	726.51	3 to 5" in yard	727.89	727.59
	4-30	33,450		not present, yard flooding		
	4-23	33,520	724.50	yard and 1' in basement	727.55	727.55
	4-24	33,250	725.52	yard and driveway flooded	725.52	725.52
	4-25	33,260		no flooding		
	4-26	33,270		yard and garage		
	4-27	33,280	724.75	yard and basement	725.65	725.65
	FP	31,221	723.50	(in MG Forest Preserve)	723.55	723.55
7-9	27,750		no flooding			
7-3	27,750		not present			
FP	27,720	718.00	(Dunkin Donuts)	718.02	718.03	
7-2	27,500		8" in bldg, 2-3 ft. in lot			
FP	27,178	717.50	(Deli)	716.29	716.29	
FP	26,950	717.00	(Rosatti's)	716.32	716.32	
FP	26,640		(U/S face of Circle Ave culvert)			
7-13	26,530		basement flooded to ceiling (8')			
7-14	26,450		6' in basement			
7-11	26,390		not present in 1987			
7-12	26,505		no flooding			
7-16	26,330		yard flooding, didn't reach house			
7-23	25,900		back yard flooded to back of garage			
7-25	25,770		yard flooding			
7-57	25,100		11'-14' in underground garage			
7-31	24,970		yard flooding			
8-1	24,680		parking lot flooded			
8-2	24,500		parking lot flooded			

**TABLE C-1**

**SURVEYED HIGHWATER MARKS AND MODEL ELEVATIONS FOR AUGUST 13 - 14, 1987 STORM EVENT**

	CLUSTER ID	CHANNEL STATION	1987 HWM ELEVATION *	Damage Assessment	Cal 5A	Cal 5B
					No Str 5	With Str 5
	8-14	F116	700.80	yard flood, w/in 15" of entering basemt.	705.89	705.71
	8-27	21,400		3-4' in yard, no basement flooding		
		20,900	704.85	(HWM before Str. 5 failure)	705.11	704.07
		14,414	690.85	(D/S of Rohlwing Rd.)	691.22	689.83
		14,414	690.97	(D/S of Rohlwing Rd.)	691.22	689.83
	28 LS 12	9,880		yard flooding		
		9,450	686.69	N/A	687.21	686.30
	28 LS 10	8,910	686.50	2" on FF, 3' above ground	687.20	686.28
	28 LS 8	8,600		10" on FF		
	28 LS 7	8,520	686.48	8-10" in basement, 2-3' in yard	687.19	686.27
		7,700	687.07	N/A	687.11	686.15
	28 LS 31	6,480		N/A		
	28 LS 32	6,290		garage and 3' in yard, no water in crawl space		
	28 LS 34	6,140	683.20	N/A	682.88	682.65
	28 LS 35	5,920		yard flooding		
	24 LS 39	2,650	679.92	whole yard flooded, water streaming into basement	682.37	682.21
	24 LS 6	2,650	680.59	garage and yard and 7' in basement	682.37	682.21
	24 LS 14	2,650		2' in yard		
	24 LS 26	2,650		water surrounded house, 1" on FF		
	24 LS 3	2,650		no basement flooding		
	24 LS 23	2,650		none		
	24 LS 37	2,650		none		
	24 LS 44	2,650		none		
	24 LS 4	2,650		none		
SB		3,003	734.60		736.37	736.37
Trib 1	6-9	4,190	747.87		749.04	749.04
SB	5-6	1,180	745.71			
Trib 2	5-12	2,450	770.67			
MC Main Stem		9,100	716.72		716.84	716.84
		9,100	716.91		716.84	716.84
MC Trib 1		3,600	724.01		723.96	723.96

\* Gray shading represents highwater mark elevations that were deemed to be less reliable than the others based on the specificity of the HWM data.

Figure C-1  
Spring Brook Profile Water Surface Profile for  
Simulated August 1987 Flood with all HWM's shown

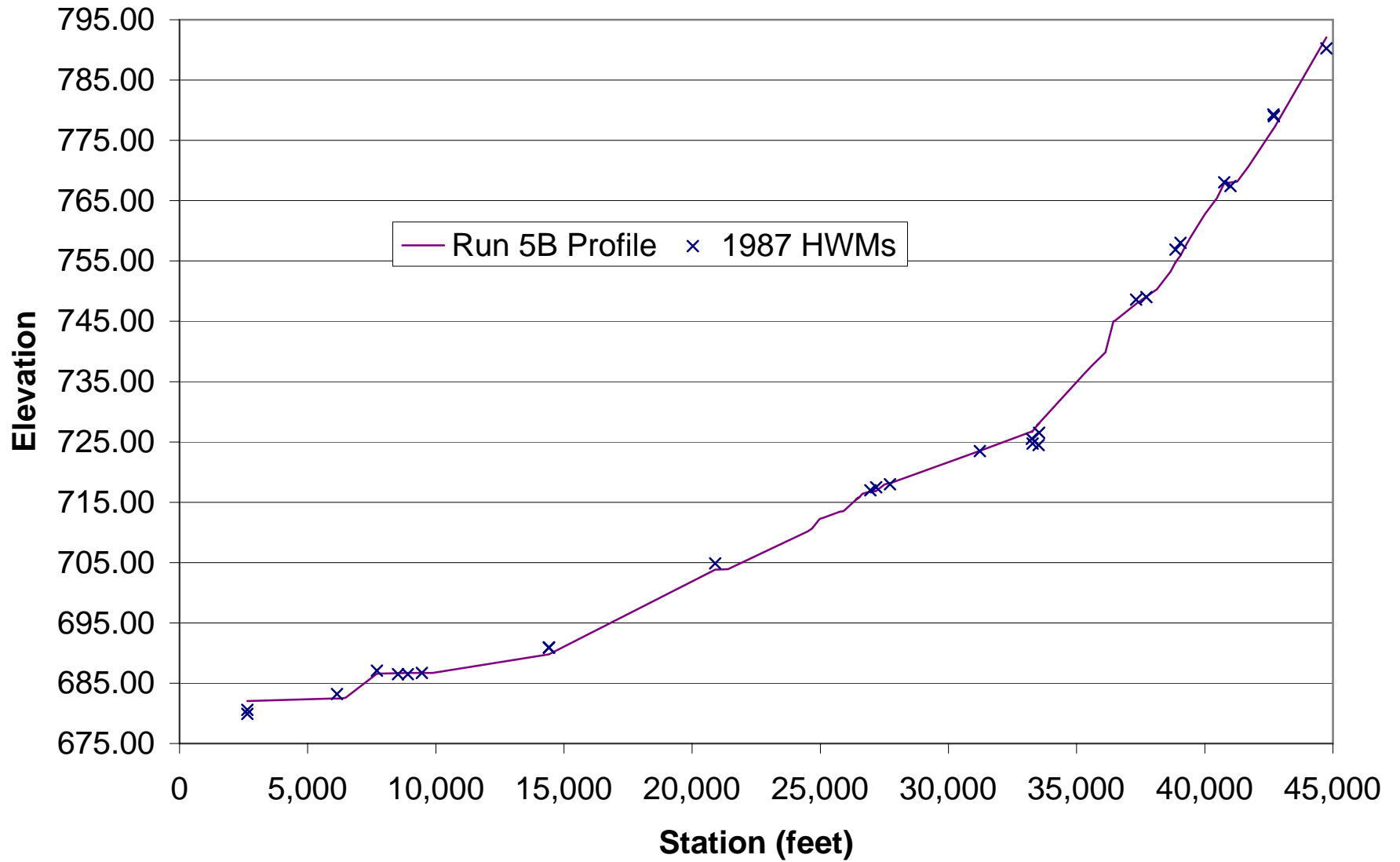
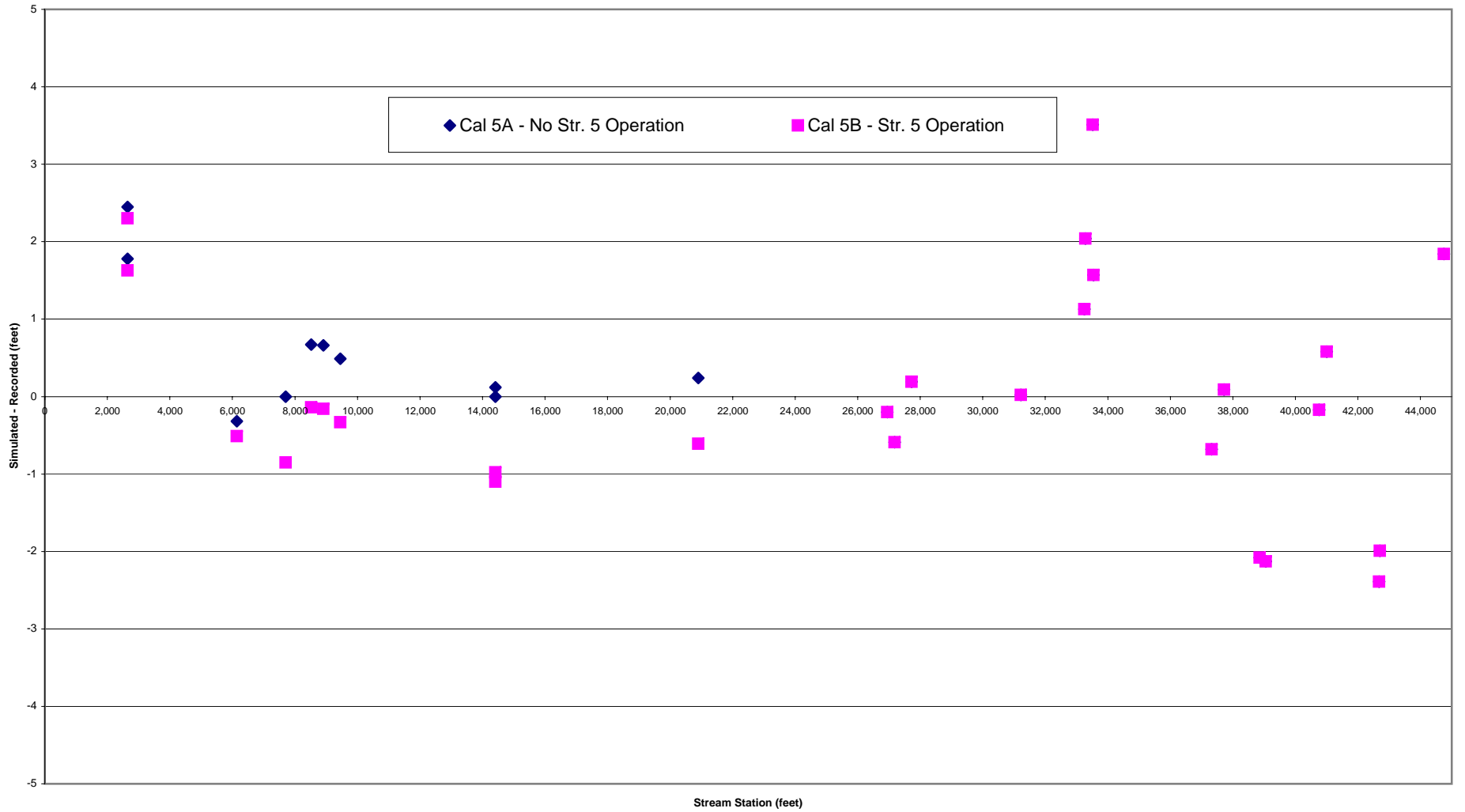


Figure C-2  
August 1987 Calibration Plot



**Figure C-3**  
**Balance Plot at the "High Confidence" 1987 High Water Mark Locations**

◆ Cal 5A - No Str. 5 Operation    ■ Cal 5B - Str. 5 Operation

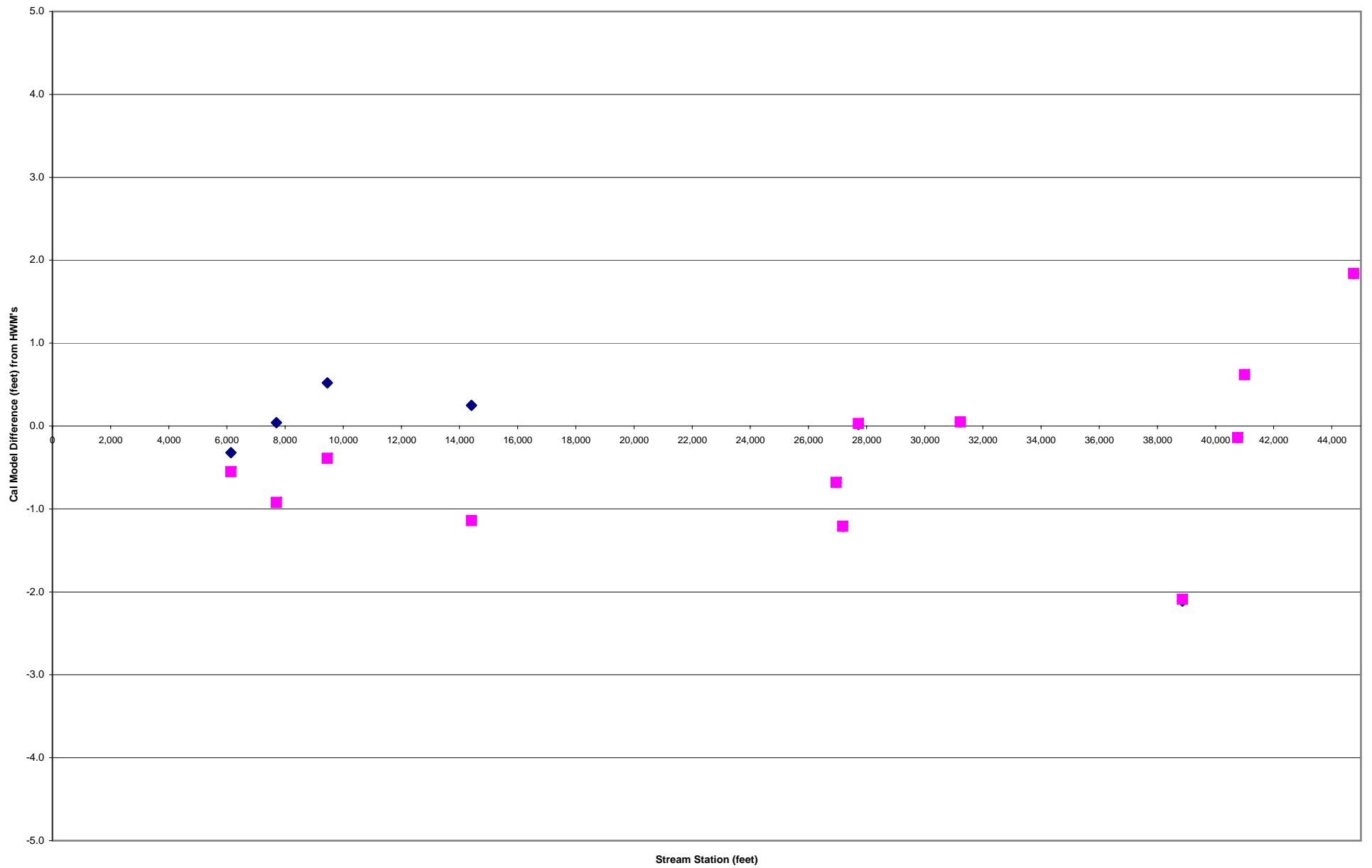


Table C-2

**SURVEYED HIGHWATER MARKS AND MODEL ELEVATIONS FOR OCTOBER 13, 2001 STORM EVENT  
SPRINGBROOK WATERSHED**

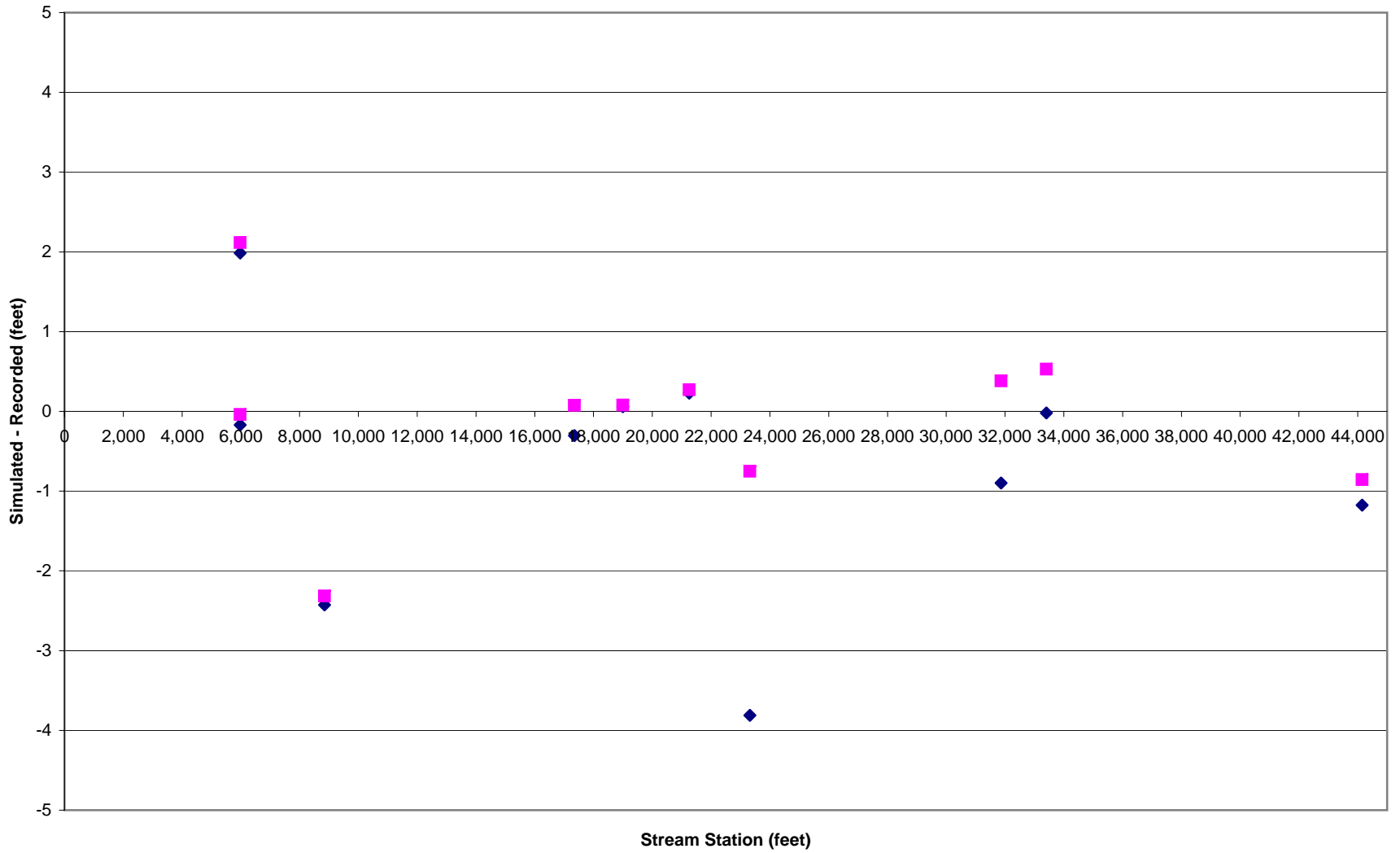
HWM Survey ID	Confidence Level	Field Location	FEQ location	Station	HWM Elevation	Cal Model Elevation
4	low	On walking path between Springbrook and pond just south of Roselle Public Works Bldg	US end of Branch 5	SB 44150	<b>782.796</b>	781.93 f 781.60 e
3	high	Front yard of house at NW corner of Foster Ave. and Springbrook	DS end of Branch 15	SB 33405	<b>724.891</b>	725.49 f 724.99 e
1	high	Meacham Grove Reservoir near outlet pipe	F106	F106 (SB 31866)	<b>710.408</b>	711.48 f 709.87 e
9		In Springcreek Reservoir (data from Ross Hill's FPD gage records)	F122	F122 (SB 23320)	<b>"full"</b> <b>(=699.44)</b>	697.50 f 694.76 e
8		Near Springcreek Reservoir (data from Ross Hill's FPD gage records at crest gate)	US end of Branch 34	SB 21256	<b>699.440</b>	699.74 f 699.68 e
10		Lake Kadijah (from Ross Hill's FPD gage records)	F128	F128 (SB 19000)	<b>699.59</b>	699.68 f 699.67 e
5	high	In yard of house at NW corner of Meacham Creek and Thorndale	DS end of Branch 143	MC 8990 (SB 17350)	<b>713.005</b>	713.08 f 712.70 e
6	?	Near the intersection of Grove and Forest just East of the Springbrook Nature Center	Middle of Branch 41	SB 8850	<b>684.405</b>	682.07 f 681.96 e
7A	?	Along south side of Center St. just east of Rush (at north end of Itasca Country Club)	Middle of Branch 45	SB 5975	<b>677.35</b> <b>(surveyed)</b>	679.44 f 679.31 e
7B		Along south side of Center St. just east of Rush (at north end of Itasca Country Club)	Middle of Branch 45	SB 5975	<b>679.5</b> <b>(photo/topo)</b>	679.44 f 679.31 e

f = model run using future land use

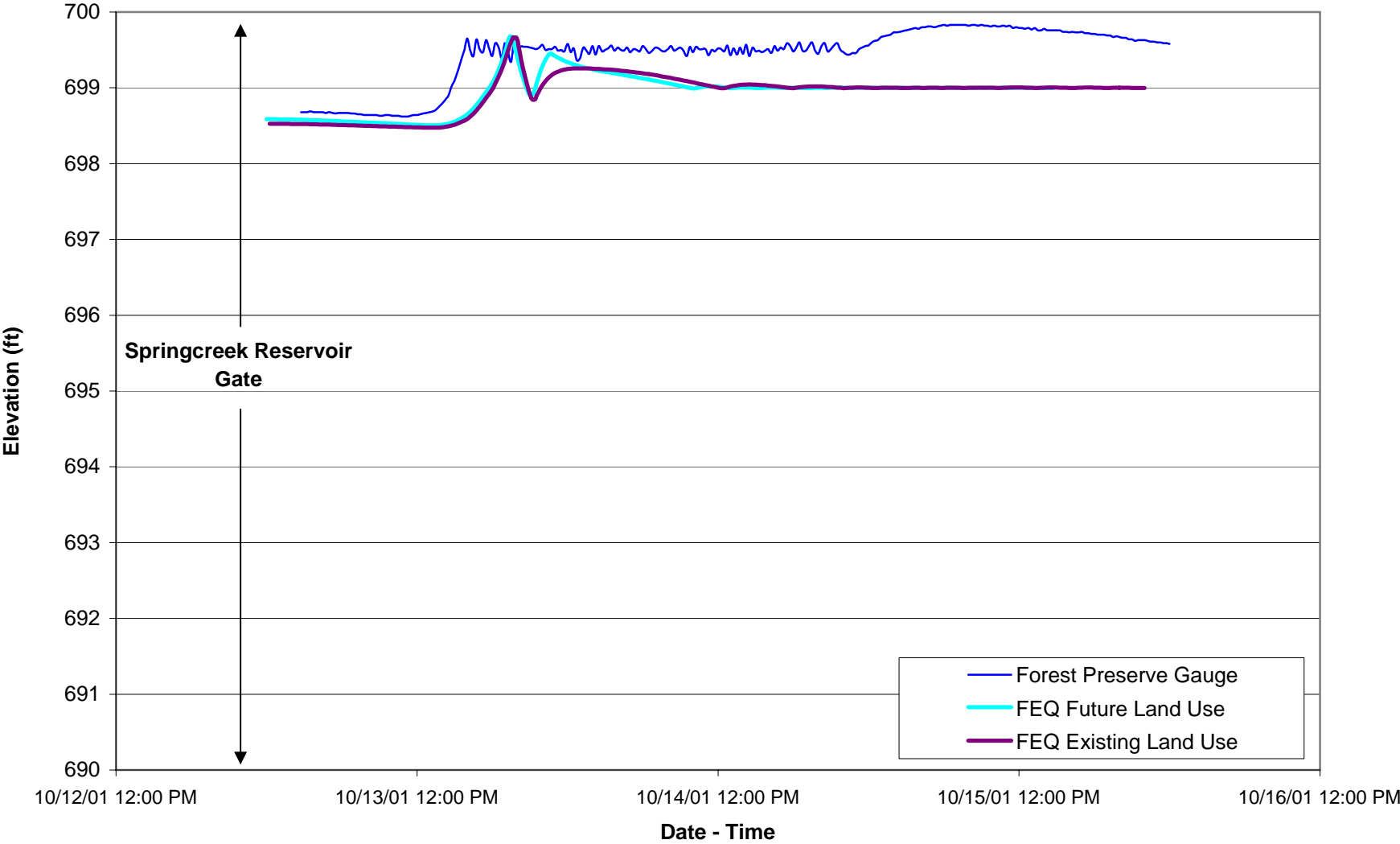
e = model run using existing (1990) land use

Figure C-4 October 2001 Calibration Plot

◆ 1990 Land Use Model    ■ Future Land Use Model



**Figure C-5  
Lake Kadijah Calibration Plot**



**Figure C-6**  
**Structures Crest Gate Calibration Plot**

