East Prong of the Roaring River at Stone Mountain State Park
Stream Restoration
Annual Monitoring Report

Monitoring Year: 2008
Measurement Year: 8
As-built Date: 2000
NCEEP Project Number: 364

Submitted to: NCDENR-Ecosystem Enhancement Program
1619 Mail Service Center
Raleigh, NC 27699-1619

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EAST PRONG OF THE ROARING RIVER at STONE MOUNTAIN STREAM RESTORATION
2008 MONITORING REPORT

CONDUCTED FOR THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Table of Contents

TABLES

Appendix A Vegetation Raw Data

1. Stem Counts by Plot
2. Vegetation Problem Areas

Appendix B Morphology Raw Data

1. Current Condition Plan View
2. Stream Problem Area Table
3. Project Photo Log/Stream Problem Area Photos
4. Qualitative Visual Stability Assessment Tables
5. Cross section and Pebble Count Plots and Raw Data Tables
6. Longitudinal Plots and Raw Data Tables
7. Slope Calculation Table
8. Pattern Data
9. GPS Coordinates

I. Executive Summary/Project Abstract

This report represents monitoring year 8 for Reach 2 and Reach 4 of the East Prong of the Roaring River restoration located in Stone Mountain State Park. The project background is summarized in Section II of this report. Overall, the majority of the restored stream is functioning well. Multiple areas of concern from previous monitoring years were addressed with significant repair work in fall 2006 and summer 2007. Several failing vanes were replaced or repaired and areas of bank erosion on the outside of meander bends were stabilized with new rock and log vane structures. These areas remained stable during the 2008 monitoring period.

No problem areas were identified in Reach 2 during the 2008 monitoring period. Two problem areas were identified in Reach 4. Problem area 18 (PA 18) has been observed in previous monitoring reports and problem area 37 (PA 37) represents a new area of concern. This problem area consists of a beaver dam located at station 19+00, which is backing up water and obstructing flow. The beaver dam has also caused erosion on the left bank in the vicinity of the dam. It is recommended that the beaver dam be removed so the stream can flow as intended.

A summary of monitoring measurement results is found in Table VII. The majority of the restored stream classifies as a C4 with rock cross vanes to establish grade control. The channel dimension for most of the restored section, as represented by the permanent cross-sections, has not changed significantly from as-built conditions and appears stable. Both reaches have well defined riffles, runs, pools and glides. These features are located in the expected plan-form locations. The invert elevations of one cross vane in Reach 2 and two cross vanes in Reach 4 are backing water up and creating long runs upstream of the vanes. However, these vanes are stable and no repairs are recommended.

Planted vegetation is not succeeding to levels required for mitigation credit. Natural regeneration was surveyed with the regular plots again this growing season. Seedlings ranging from 1 to 8 years old are abundant throughout the project area. Overall naturally regenerating stems per acre for the entire project area in 2008 is approximately 4583. Bare root survival was poor in all plots. Overall planted bare root stems per acre for the entire project area in 2008 is approximately 40. Herbaceous cover was determined in bare root plots and was again greater than 90% in all plots. No more seeding is required at present.

Invasive vegetation continues to be an issue on this project site. Maintenance is highly recommended for next season. Kudzu continues to expand throughout the floodplain, overtopping riparian vegetation. Oriental bittersweet is present in the lower section of the project.

II. Project Background

Project planning was initiated for the East Prong of the Roaring River Restoration in 1999 for the implementation of a developing watershed stream restoration project at Stone Mountain State Park in North Carolina (Figure 1 and Figure 2). Natural Channel Design techniques and procedures were employed in the restoration of the East Prong Roaring River in Wilkes County, NC.

The East Prong Roaring River stream restoration project has been a collaborative effort between the North Carolina Ecosystem Enhancement Program, North Carolina Division of Parks and Recreation, the North Carolina Stream Restoration Program at NCSU, and Buck Engineering. The project includes nearly two miles of stream restoration within the boundaries of Stone Mountain State Park in

Wilkes and Alleghany Counties. The drainage area for the section of river being restored is approximately 22 square miles. This project was constructed from July 2000 to October 2000. Floodplain and stream bank planting continued through February 2001.

Stone Mountain State Park was purchased by the State of North Carolina in the early 1960s. Prior to this purchase, all of the streams in the alluvial valley portion of the park were modified to improve agricultural production. Field observations suggest that tributary streams in the alluvial valley were straightened. A large area of the downstream portion of the restoration site was used for gravel mining. As part of this operation, the East Prong was channelized, impounded, and moved several times, resulting in destabilization of the channel. Spoil piles that were created during the mining operation created overly high bank heights and as a result were being eroded away during high flows. Aerial photos and the USGS Glade Valley Quadrangle indicate locations of the historic channels.

The project consisted of the analysis of the 22.0 square mile portion of the East Prong Roaring River watershed (located within USGS Hydrologic Unit Code 03040101, NCDWQ Sub-basin 03-07-01 of the Upper Yadkin River Basin) that contributes drainage to the project site. The restoration of these portions of the East Prong of the Roaring River Restoration, located in Stone Mountain State Park, was conducted to correct identified system deficiencies including severe bank erosion, channel widening, and the loss of aquatic habitat resulting from stream channelization, the loss of riparian vegetation, and watershed development. The goal of the project was to develop a stable stream channel with reduced bank erosion, efficient sediment transport, enhanced warm water fisheries, and improved overall stream habitat and site aesthetics. Implementation of the project was completed by October 2000.

Table I. Project Mitigation Structure and Objectives
East Prong of the Roaring River at Stone Mountain State Park/Project # 364

Project Segment or Reach ID	Mitigation Type	Approach	Linear Footage or Acreage	Stationing	Comment
Reach 2	R	P1	1,500 lf	0+00 to 15+00	
Reach 4	R	P1	3,500 lf	0+00 to 35+00	
Total Project			**5,000 lf**		

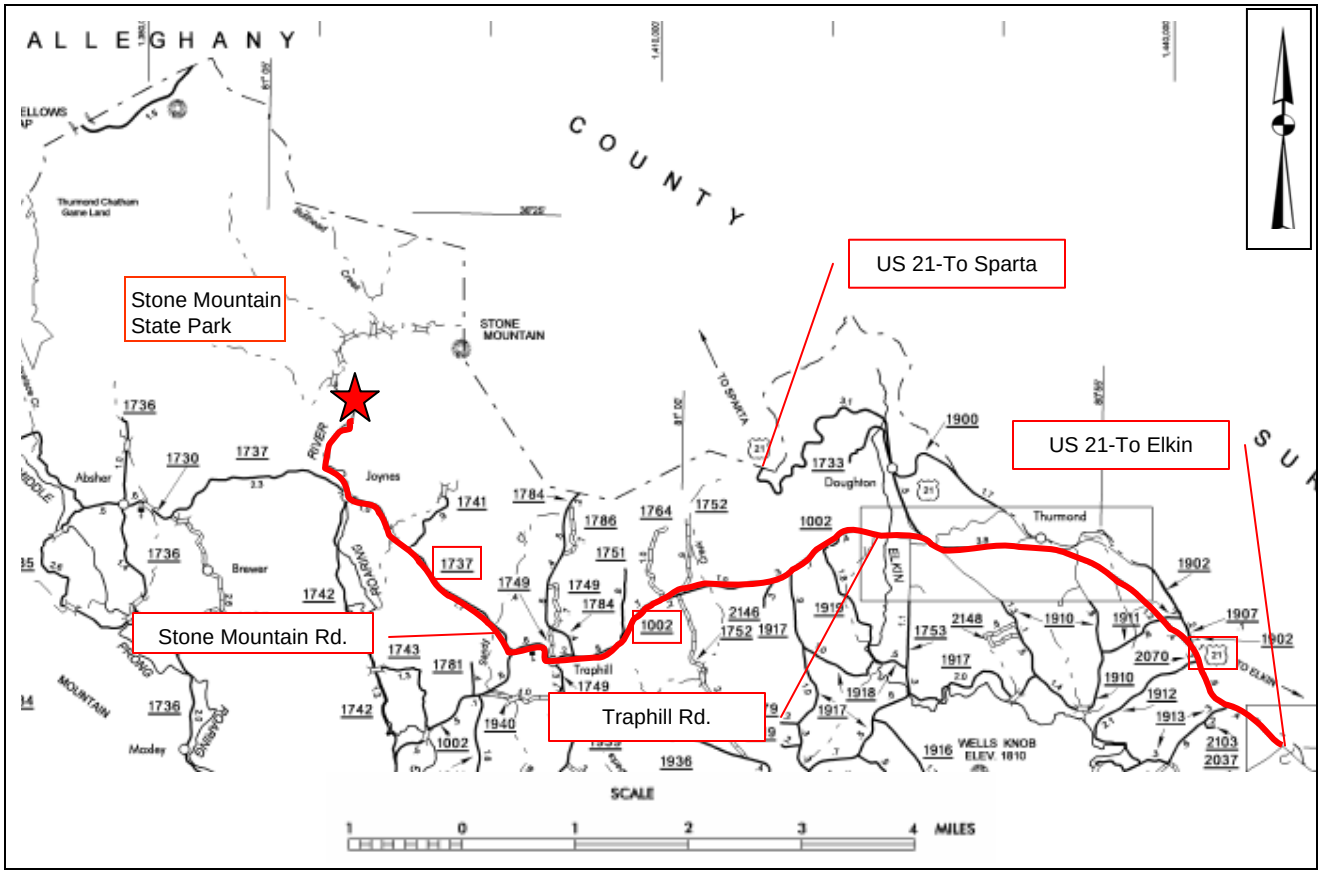
R = Restoration
EI = Enhancement I
EII = Enhancement II
S = Stabilization
P1 = Priority I
P2 = Priority II
P3 = Priority III
SS = Stream Bank stabilization

Table II. Project Activity and Reporting History East Prong of the Roaring River at Stone Mountain State Park/Project # 364			
Activity or Report	**Scheduled Completion**	**Data Collection Complete**	**Actual Completion or Delivery**
Restoration Plan	1999	1999	1999
Final Design - 90%	2000	N/A	N/A
Construction	2000	N/A	2000
Temporary S&E mix applied to entire project area	October 2000	N/A	Oct - 2000
Permanent seed mix applied to reach	Winter 2001	N/A	Winter 2001
Containerized and B&B plantings	N/A	N/A	N/A
Mitigation Plan / As-built (Year 0 Monitoring – baseline)	December 2000	Dec - 00	Dec - 00
Initial – Year 1 monitoring	June 2001	June 2001	Dec-01
Year 2 Monitoring	June 2002	June 2002	Dec-02
Structural maintenance (Bank repair and revegetation)	Summer 2002	NA	Summer 2002
Year 3 Monitoring	June 2003	June 2003	Dec-03
Year 4 Monitoring	June 2004	June 2004	Dec-04
Year 5 Monitoring	June 2005	June 2005	Dec-05
Year 6 Monitoring	June 2006	June 2006	Dec-06
Structural maintenance (Bank repair and revegetation)	Fall 2006 and Summer 2007	NA	Fall 2006 and Summer 2007
Year 7 Monitoring	July 2007	July 2007	Dec-07
Year 8 Monitoring	June 2008	June 2008	Oct-08

Table III. Project Contact Table East Prong of the Roaring River at Stone Mountain State Park/Project # 364	
Designer	Biological & Agricultural Engineering North Carolina State University Campus Box 7625 Raleigh, NC 27695
Primary project design POC	(919) 515-6771
Construction Contractor	SEI Environmental
Construction contractor POC	(704) 596-8624
Planting Contractor	SEI Environmental
Planting contractor POC	(704) 596-8624
Seeding Contractor	SEI Environmental
Seeding contractor point of contact	(704) 596-8624
Seed Mix Sources	N/A
Nursery Stock Suppliers	N/A
Monitoring Performers	Biological & Agricultural Engineering North Carolina State University Campus Box 7625 Raleigh, NC 27695
Stream Monitoring POC	Zan Price (828) 712-9194
Vegetation Monitoring POC	Zan Price (828) 712-9194

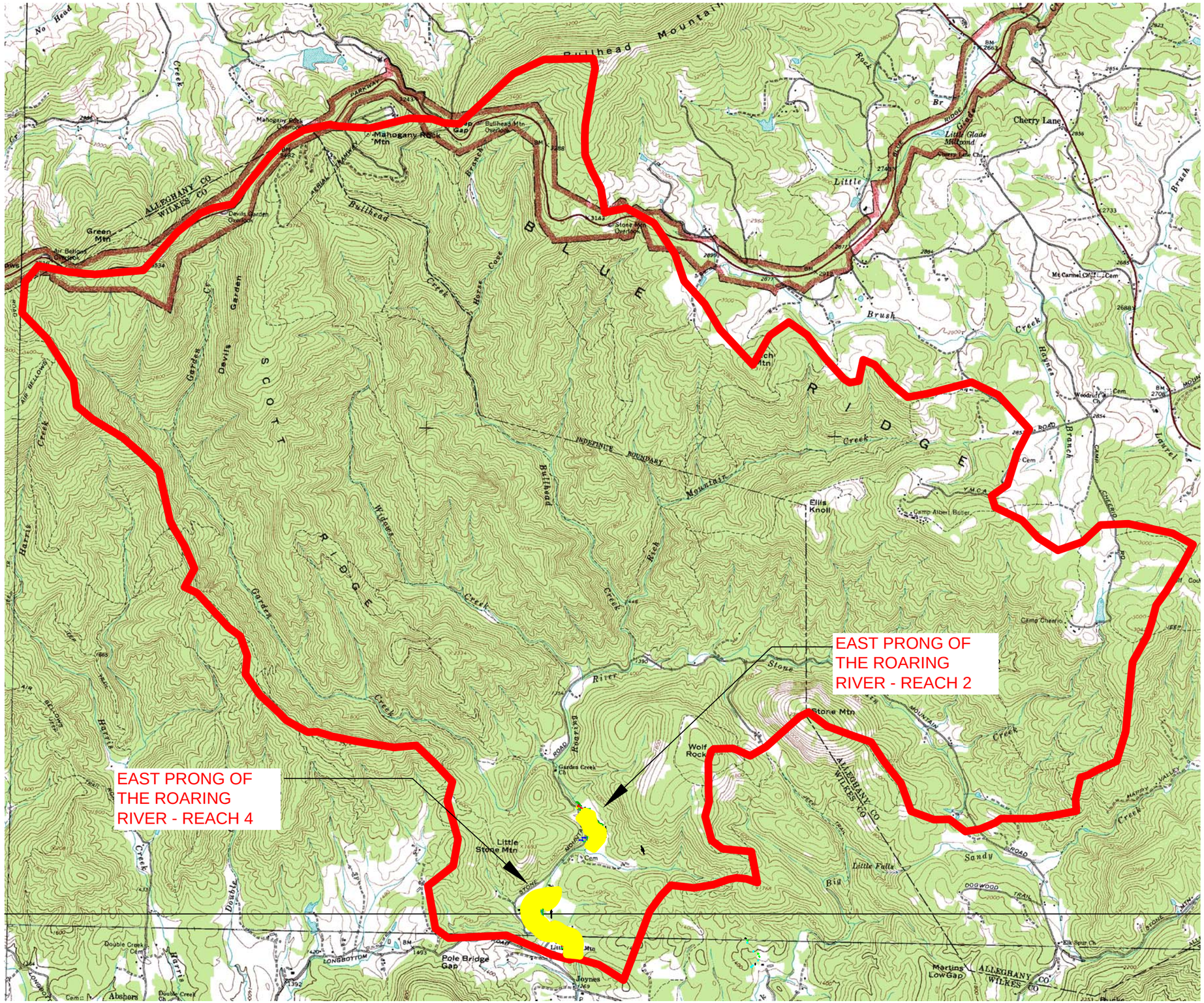
Table IV. Project Background Table East Prong of the Roaring River at Stone Mountain State Park/Project # 364	
Project County	Wilkes
Drainage Area	22.0 sq miles
Drainage impervious cover estimate (%)	Estimated at <5%
Stream Order	4th order
Physiographic Region	Piedmont
Ecoregion	Northern Inner Piedmont (45e)
Rosgen Classification of As-built	C-Stream Type
Cowardin Classification	Riverine
Dominant soil types	Enon
Reference site ID	Basin Creek, Wilkes County
USGS HUC for Project and Reference	3040101
NCDWQ Sub-basin for Project and Reference	03-07-01 – Upper Yadkin
NCDWQ classification for Project and Reference	C
Any portion of any project segment 303d listed?	No
Any portion of any project segment upstream of a 303d listed segment?	No
Reasons for 303d listing or stressor	N/A
% of project easement fenced	0%

Figure 1. Project Location



Directions from NC 421 and I-77 intersection:

Follow I-77 North to US-21 at Elkin. Follow US-21 bypass toward Sparta for 7.9 miles. Turn left onto Traphill Road (SR 1002) and follow for 5.1 miles. Turn Right onto Long Bottom Road (SR 1737) and follow for 2.9 miles to Stone Mountain Road. Turn Right on to Stone Mountain Road and follow into Stone Mountain State Park. The upstream end of Reach 4 is located at the first parking lot on the right. Reach 2 begins at the next parking lot down the road.



Note: Bold red line indicates the watershed boundary.

SCALE 1" = 3000'

1500 0 1500 3000

NO	REVISIONS	DRN	CHK	DATE
1	2005 MONITORING REPORT	DAB	DRC	02/08/06

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BIOLOGICAL & AGRICULTURAL ENGINEERING
Weaver Labs Campus Box 7625
North Carolina State University
Raleigh, NC 27695

STONE MOUNTAIN STATE PARK
EAST PRONG OF THE ROARING RIVER
WILKES COUNTY, N.C.

22 SQUARE MILES (17.5 SQMI)
WATERSHED WITH USGS QUAD

DATE	02/08/2006
PROJECT NO.	
FILENAME	STONE MTN.DWG
SHEET NO.	
DRAWING NO.	

NC GRID NAD 1983

STA: 6+94 RIFFLE
CROSS-SECTION #3

NORTH POND 0.19 AC

0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00

STA: 2+05 RIFFLE
CROSS-SECTION #1

Veg Plot #1

STA: 12+12 RIFFLE
CROSS-SECTION #4

STA: 5+75 POOL
CROSS-SECTION #2

SOUTH POND 0.29 AC

LEGEND

- ROCK CROSS VANE
- DOUBLE DROP CROSS VANE
- ROCK J-HOOK
- LOG J-HOOK
- STATION ALIGNMENT & ASBUILT THALWEG (2000)
- 2008 THALWEG
- 2008 WATER EDGE
- 2008 TOP OF BANK

Ecosystem Enhancement PROGRAM

SCALE 1" = 100'

50 0 50 100

NO	REVISIONS	DRN	CHK	DATE
1	2005 MONITORING	JMP	DRC	12/01/06
2	Review Edits	JMP	DRC	01/11/07
3	2007 MONITORING	ZP	JP	12/01/07
4	2008 MONITORING	ZP	JP	10/10/08

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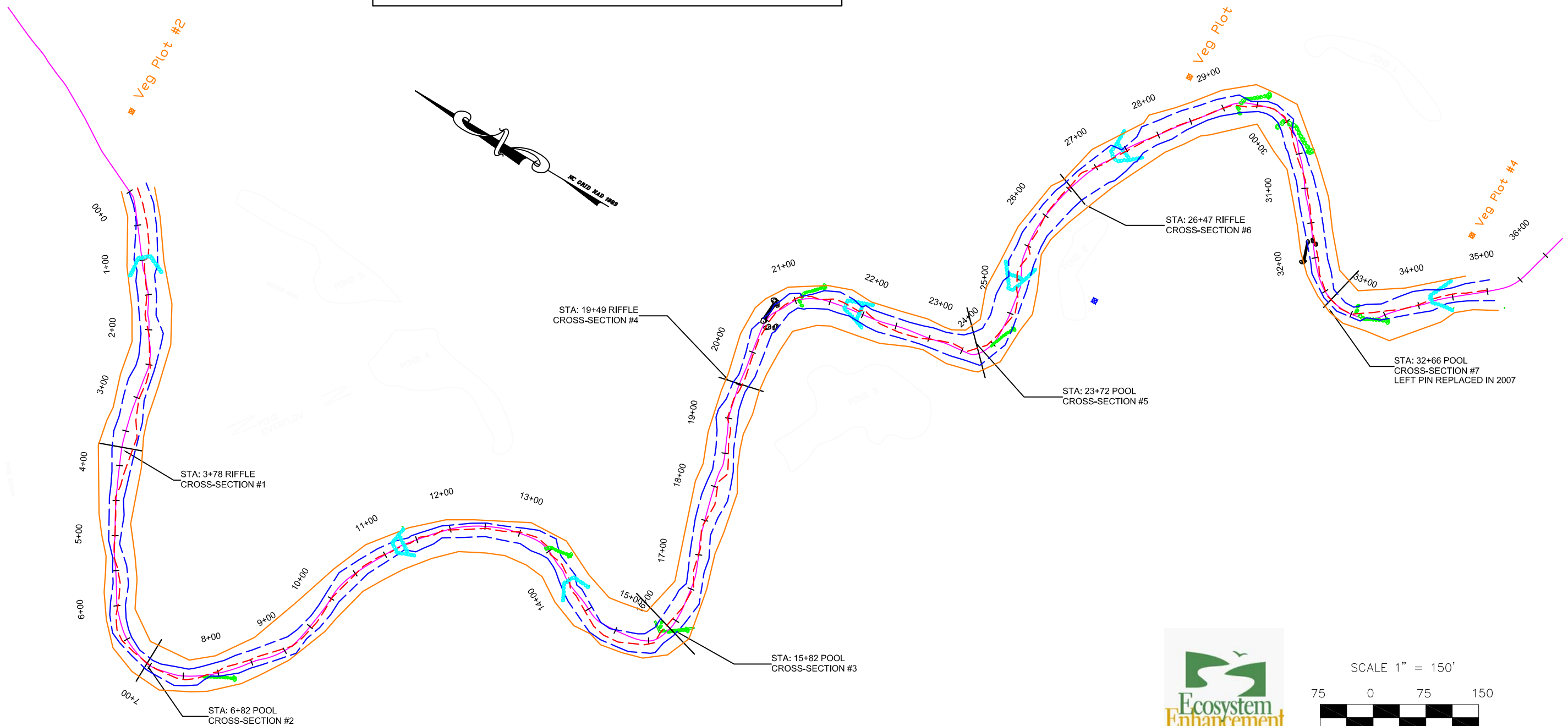
STONE MOUNTAIN STATE PARK
EAST PRONG OF THE ROARING RIVER
WILKES COUNTY, N.C.

2008 MONITORING
FIGURE 3a. PLAN VIEW REACH-2

DATE	10/10/2008
PROJECT NO.	
FILENAME	STONE MTN.DWG
SHEET NO.	
DRAWING NO.	

LEGEND

- ROCK CROSS VANE
- DOUBLE DROP CROSS VANE
- ROCK J-HOOK
- LOG J-HOOK
- STATION ALIGNMENT & ASBUILT THALWEG (2000)
- 2008 THALWEG
- 2008 WATER EDGE
- 2008 TOP OF BANK



Ecosystem Enhancement Program

SCALE 1" = 150'

75 0 75 150

NO	REVISIONS	DRN	CHK	DATE
1	2005 MONITORING	JMP	DRC	12/01/06
2	REVIEW EDITS	JMP	DRC	01/11/07
3	2007 MONITORING	ZP	JP	12/01/07
4	2008 MONITORING	ZP	JP	10/10/08

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EAST PRONG OF THE ROARING RIVER
WILKES COUNTY, N.C.

2008 MONITORING
FIGURE 3b. PLAN VIEW REACH-4

DATE 10/10/2008
PROJECT NO.
FILENAME STONE MTN.DWG
SHEET NO.
DRAWING NO.

III. Project Condition and Monitoring Results

A. Vegetation Assessment

Bare root plants planted in previous years in Reach 2 and Reach 4 had low survival rates similar to that in 2007. Deer browse continues to be a problem at this site. A very few bare root plants and live stakes have survived deer browse, but have been limited in vertical growth as a result. Browse has occurred from the top down. Only the taller planted trees performed well against the deer browse. Sycamore (Platanus occidentalis) continues to be the least browsed species. Increased beaver activity was observed again this year. Beaver dam debris was observed on several cross-vane structures in the lower reach of the river.

Natural regeneration was surveyed with the regular plots again this growing season. Seedlings ranging from 1 to 8 years old are abundant throughout the project area. The majority species is sycamore, tulip poplar (Liriodendron tulipifera), river birch (Betula nigra), Virginia pine (Pinus virginiana), sweet gum (Liquidambar styraciflua), black cherry (Prunus serotina), tag alder (Alnus serrulata), and spice bush (Lindera benzoin). Virginia pine, tag alder, and sycamore continued to have robust growth. Point bars in certain areas had high densities of natural regeneration, though these areas are prone to frequent disturbance.

Bare root survival was poor in all plots. As in 2007, only one plot had a total of 4 planted trees. These were sycamores. All other plots contained dead planted trees or no evidence of planted trees. It should be noted however that naturally regenerating sycamore in select areas continues to have heights close to that of the 4 remaining planted sycamores.

Live stake survival was again very low. Deer browse continued to be evident. As with last year, it was noted that foot traffic up and down the staked banks was often heavy in select places and that many stakes were dislodged or removed completely.

Herbaceous cover was determined in bare root plots and was again greater than 90% in all plots. Switchgrass, rushes, and sedges continue to dominate the floodplain and wetter areas. No more seeding is required at present.

Kudzu (Pueraria lobata) was observed in large patches throughout the area. Maintenance is recommended. Oriental bittersweet (Celastrus orbiculata) was noted in many areas of the lower end of the project.

Vegetation table 1 in Appendix A summarizes the stem count results for the 2008 monitoring period.

B. Stream Assessment

Both reaches of the East Prong of the Roaring River at Stone Mountain State Park have had channel stability concerns during previous monitoring years. Extensive repair work was completed on both reaches in October 2006 and again in summer 2007 by Shamrock Environmental. Problem areas identified in previous monitoring reports were repaired by installing new rock and log vane structures. Additionally, existing cross vanes that had water piping around the structure were repaired.

The following summarizes the hydrologic, bank stability, and channel morphology monitoring results of the 2008 monitoring period. Data was collected in June 2008.

Hydrologic Assessment

Peak Stage Recorders were installed in the winter of 2005. August 2006 they were inspected. Both recorders were bent over as a result of flow events and the tops were popped off. No actual elevation could be recorded but the flow was clearly greater then bankfull. New recorders were installed in November 2006. Table V lists the number of events equal to or greater then bankfull.

Table V. Verification of Bankfull Events
East Prong of the Roaring River at Stone Mountain State Park/Project # 364

Date of Data Collection	Date of Occurrence	Method	Photo # (if available)	Notes
8/1/2006	Spring/Summer 06	Crest Gauge	N/A	Peak Stage Recorders were installed in the winter of 2005. August 2006 they were inspected. Both recorders were bent over as a result of flow events and the tops were popped off. No actual elevation could be recorded but the flow was clearly greater then bankfull. New recorders were installed in November 2006.
10/7/2008	Summer/Fall 08	Crest Gauge	N/A	Crest gauge was checked during the survey in June 2008 and again in October 2008. No bankfull events were observed between the 2007 monitoring period and June 2008. At least one bankfull event occurred between June 2008 and October 2008 based on the peak stage recorded.

Note: No peak flow data was collected prior to 2006. Peak flow during the 2007 monitoring period was below the bankfull elevation.

Table VI. BEHI and Sediment Export Estimates is not included in the monitoring year 8 report.

Project Problem Areas

The problem area Table B1, plan sheet and photographs can be found in Appendix B. As mentioned earlier in the report, many of the problem areas identified in previous monitoring reports were repaired in fall 2006 and summer 2007. These areas were removed from the problem area table, photograph log, and plan sheet since they are not currently considered problem areas.

No problem areas were identified in Reach 2 during the 2008 monitoring period. Two problem areas were identified in Reach 4. Problem area 18 (PA 18) has been observed in previous monitoring reports and problem area 37 (PA 37) represents a new area of concern. This problem area consists of a beaver dam located at station 19+00, which is backing up water and obstructing flow. The beaver dam has also caused erosion on the left bank in the vicinity of the dam.

Stability Assessment Table

Table VII lists the results of a visual assessment that was conducted over each study reach. The data used to calculate the percentages listed in this table is found in Table B2 in Appendix B.

Table VII. Categorical Stream Feature Visual Stability Assessment
East Prong of the Roaring River at Stone Mountain State Park/Project # 364
Reach 2 - 1500 Feet, Reach 4 - 3500 Feet

Feature	Initial	MY-01 through MY-05	MY-06	MY-07	MY-08
A. Riffles		Data not collected			
Reach 2	100%		96%	100%	100%
Reach 4	100%		100%	96%	98%
B. Pools					
Reach 2	100%		85%	100%	100%
Reach 4	100%		90%	100%	100%
C. Thalweg					
Reach 2	100%		50%	100%	100%
Reach 4	100%		63%	100%	100%
D. Meanders					
Reach 2	100%		63%	100%	100%
Reach 4	100%		100%	100%	100%
E. Bed General					
Reach 2	100%		93%	100%	100%
Reach 4	100%		86%	100%	100%
F. Bank Condition					
Reach 2	100%			100%	100%
Reach 4	100%			98%	98%
F. Vanes / J Hooks etc.					
Reach 2	100%		96%	95%	93%
Reach 4	100%		55%	97%	97%
G. Wads and Boulders					
Reach 2	N/A		50%	100%	100%
Reach 4	N/A		33%	50%	100%

*Note: Significant repairs completed in 2006/2007 after the 2006 monitoring event and prior to the 2007 monitoring event.

Quantitative Measures Summary Tables

The tables below present all of the quantitative summary data from the survey cross-sectional surveys, longitudinal surveys, and pebble counts. The associated raw data and plots are located in Appendix B of this report.

Table VIII. Baseline Morphology and Hydraulic Summary
East Prong of the Roaring River at Stone Mountain State Park/Project # 364
Reach 2 (1500 Feet) and Reach 4 (3500 Feet)

Parameter	USGS Gage Data			Regional Curve Interval			Pre-Existing Condition			Project Reference Stream			Design			As-built		
Dimension	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
BF Width (ft)						60	48	110	75			31			60			60
Floodprone Width (ft)						300	125	300	220			90			240			240
BF Cross Sectional Area (ft^2)						180	190	400	310			57			180			180
BF Mean Depth (ft)						3	4.5	5.8	5			2			3			3
BF Max Depth (ft)							5	7.5	6.2			2.8			4			4
Width/Depth Ratio							12	28	18			16			15			15
Entrenchment Ratio							3.2	8.5	5			2.8			4			4
Bank Height Ratio																		
Wetted Perimeter(ft)							60	120	80			36			70			70
Hydraulic radius (ft)							3.5	5.6	5			1.8			3			3
Pattern																		
Channel Beltwidth (ft)							120	250	180	60	105	75			240			240
Radius of Curvature (ft)							75	200	120	40	77	60			100			100
Meander Wavelength (ft)							450	900	700			350			480			480
Meander Width ratio							2.5	5	4	2	3.5	2.5			4			4
Profile																		
Riffle length (ft)							60	180	120			55			120			120
Riffle slope (ft/ft)							0.02	0.04	0.03	0.018	0.1	0.035	0.01	0.03	0.02	0.01	0.03	0.02
Pool length (ft)							90	180	135			70	60	90	75	60	90	75
Pool spacing (ft)							150	350	250	270	330	300	120	240	180	120	240	180
Substrate																		
d50 (mm)							1	50	20			38			25			25
d84 (mm)							80	120	100			130			120			120
Additional Reach Parameters																		
Valley Length (ft)								4000			1000			4000			4000	
Channel Length (ft)								5800			1020			6000			6000	
Sinuosity								1.4			1.02			1.5			1.5	
Water Surface Slope (ft/ft)								0.005			0.014			0.005			0.005	
BF slope (ft/ft)								0.007			0.014			0.007			0.007	
Rosgen Classification								C4			C4			C4			C4	
Number of Bankfull Events								NA			NA			NA			NA	
Extent of BF floodplain (acres)								40			5			40			40	
*BEHI								Extreme to Moderate			Low			Low			Low	
*Habitat Index								NA			NA			NA			NA	
*Macrobenthos								NA			NA			NA			low	

Table IXa. Morphology and Hydraulic Monitoring Summary
East Prong of the Roaring River at Stone Mountain State Park Reach 2/Project # 364
Reach 2 - 1500 Feet

Parameter	Cross Section 1								Cross Section 2								Cross Section 3							
	Riffle								Pool								Riffle							
Dimension	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8
BF Width (ft)	61.9	62	62	61.1	61.8	61.9	62.1	62	53.9	53	53.4	53.3	53.5	60.3	51.1	55.2	60.2	59.7	58.3	60.1	60.1	60.1	59.1	54
Floodprone Width (ft)																								
BF Cross Sectional Area (ft^2)	319.8	306	297	307	319	295	310	316.9	158.4	158.7	170.3	155.6	165.8	166	176	176.6	166.2	169.5	169.6	194.5	191.7	195	194	197.8
BF Mean Depth (ft)	5.2	4.9	4.8	5	5.2	4.8	5.0	5.1	2.9	3	3.2	2.9	3.1	2.8	3.4	3.2	2.8	2.8	2.9	3.2	3.2	3.2	3.6	3.7
BF Max Depth (ft)	6.4	6.1	5.7	5.9	5.9	6	5.8	5.8	5.6	4.6	5.7	5.6	5.8	5.9	5.2	5.5	4.7	4.5	4.5	5.8	5.5	5.5	5.1	5.3
Width/Depth Ratio	12	12.6	13	12.2	12	13.0	12.4	12.1	18.3	17.7	16.7	18.3	17.3	21.9	14.8	17.3	21.8	21	20	18.6	18.8	18.5	15.2	14.7
Entrenchment Ratio	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0
Bank Height Ratio	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Wetted Perimeter(ft)	72.3	71.8	71.6	71.1	72.2	71.4	72.1	72.2	59.7	59.0	59.8	59.1	59.7	65.8	57.9	61.6	65.8	65.3	64.1	66.5	66.5	66.6	66.3	61.4
Hydraulic radius (ft)	4.4	4.3	4.1	4.3	4.4	4.1	4.3	4.4	2.7	2.7	2.8	2.6	2.8	2.5	3.0	2.9	2.5	2.6	2.6	2.9	2.9	2.9	2.9	3.2
Substrate																								
d50 (mm)				38	16	26	39	6				3.5		2.9	37	6	18	17	19	20	24	12	16	6
d84 (mm)				147	72	143	127	50				91		76	99	73	54	71	77	83	50	46	88	25

Parameter	Cross Section 4							
	Riffle							
Dimension	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8
BF Width (ft)	54	53	56.5	52.9	52.8	53.2	53	52.1
Floodprone Width (ft)								
BF Cross Sectional Area (ft^2)	136.3	124.8	156.5	130.6	135	150.1	169	163.8
BF Mean Depth (ft)	2.5	2.4	2.8	2.5	2.6	2.8	3.2	3.1
BF Max Depth (ft)	3.5	3.4	4.3	3.8	4	4.3	5.1	5.3
Width/Depth Ratio	21.4	22.5	20.4	21.4	20.7	18.9	16.7	16.6
Entrenchment Ratio	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0
Bank Height Ratio	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Wetted Perimeter(ft)	59.0	57.8	62.1	57.9	58.0	58.8	59.4	58.3
Hydraulic radius (ft)	2.3	2.2	2.5	2.3	2.3	2.6	2.8	2.8
Substrate								
d50 (mm)	15		14	36	17	11	12	9
d84 (mm)	64		71	82	53	50	37	50

Note: Missing data not collected or not reported.

Parameter	MY-01 (2001)			MY-02 (2002)			MY-03 (2003)			MY-04 (2004)			MY-05 (2005)			MY6 (2006)			MY7 (2007)			MY8 (2008)		
Pattern	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)										162	328	177	162	332	178	177	343	260	163	333	177	163	333	177
Radius of Curvature (ft)										145	196	166	145	198	166	144	157	145	144	157	145	144	157	145
Meander Wavelength (ft)										507	614	559	505	616	559			614	557	588	586	557	588	586
Meander Width ratio										3.2	6.6	3.5	3.2	6.6	3.6	3.4	6.6	5.0	3.1	6.4	3.4	3.1	6.4	3.4
Profile																								
Riffle length (ft)										35	104	61	35	85	52	33	161	86	39	72	63	34	80	59
Riffle slope (ft/ft)										0.004	0.024	0.013	0.004	0.025	0.013	0.008	0.028	0.016	0.009	0.024	0.012	0.006	0.014	0.008
Pool length (ft)										45	77	66	52	81	65	62	209	189	60	191	156	70	161	132
Pool spacing (ft)										83	391	163	83	285	158	117	367	218	101	372	234	96	371	243
Additional Reach Parameters																								
Valley Length (ft)	1160																							
Channel Length (ft)													1500						1500			1500		
Sinuosity													1.3						1.3			1.3		
Water Surface Slope (ft/ft)													0.0058			0.0051			0.0061			0.0062		
BF slope (ft/ft)													0.0066						0.006			0.006		
Rosgen Classification													C4						C4			C4		
Habitat Index*																								
Macrobenthos*																								

Table XIIIb. Morphology and Hydraulic Monitoring Summary
East Prong of the Roaring River at Stone Mountain State Park /Project # 364
Reach 4 - 3500 Feet

Parameter	Cross Section 1								Cross Section 2								Cross Section 3								Cross Section 4							
	Riffle								Pool								Pool								Riffle							
Dimension	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8
BF Width (ft)	57	58.2	59.3	57.7	58.3	62.6	57.7	58.1	43	42.1	41.5	42.5	41.3	42.7	43.3	42.5	66	65	61.3	58	50.7	53.8	52.8	52.9	46	45.9	45.5	46.5	46.4	45.5	44.2	44
Floodprone Width (ft)																																
BF Cross Sectional Area (ft^2)	206.6	202.5	215.8	196.1	195.9	187.3	198.5	201.8	179.6	182.8	210.6	224.4	223.7	220.3	208.6	205.7	170	181.3	173	162.2	161.8	161.1	151.2	140.1	139.7	140.7	139.1	140.4	154.7	141.2	143.9	140.9
BF Mean Depth (ft)	3.6	3.5	3.6	3.4	3.4	3.0	3.4	3.5	4.2	4.3	5.1	5.3	5.4	5.2	4.8	4.8	2.6	2.8	2.8	2.8	3.2	3.0	2.9	2.6	3	3.1	3.1	3	3.3	3.1	3.3	3.2
BF Max Depth (ft)	4.7	4.9	5.6	5.9	4.9	4.8	4.9	4.9	6.8	6.9	7.8	8.1	8.1	7.8	7.3	7.2	5.7	5.4	5.6	5.5	5.5	5.9	6	5.7	3.9	4	4.5	5	4.9	4.9	4.7	4.6
Width/Depth Ratio	15.7	16.7	16.3	16.9	17.3	20.9	16.8	16.7	10.3	9.7	8.2	8.1	7.6	8.3	9.0	8.8	25.6	23.3	21.7	20.7	15.9	18.0	18.5	20.0	15.1	15	14.9	15.4	13.9	14.7	13.6	13.7
Entrenchment Ratio	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0
Bank Height Ratio	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Wetted Perimeter(ft)	64.2	65.2	66.5	64.5	65.1	68.6	64.5	65.1	51.4	50.7	51.7	53.1	52.1	53.0	52.9	52.1	71.2	70.6	66.9	63.6	57.1	59.8	58.6	58.1	52.0	52.1	51.7	52.5	53.0	51.7	50.8	50.4
Hydraulic radius (ft)	3.2	3.1	3.2	3.0	3.0	2.7	3.1	3.1	3.5	3.6	4.1	4.2	4.3	4.2	3.9	3.9	2.4	2.6	2.6	2.6	2.8	2.7	2.6	2.4	2.7	2.7	2.7	2.7	2.9	2.7	2.8	2.8
Substrate																																
d50 (mm)					14	27	55	14						14	18	11						0.5	10	12	15		14	36	11	29	36	15
d84 (mm)					46	54	125	47						61	92	64						8.7	38	25	64		71	81	57	63	92	37

Parameter	MY-01 (2001)			MY-02 (2002)			MY-03 (2003)			MY-04 (2004)			MY-05 (2005)			MY6 (2006)			MY7 (2007)			MY8 (2008)		
Pattern	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)										222	503	301	222	503	301	222	515	301	222	503	301	222	503	301
Radius of Curvature (ft)										78	296	122	85	296	122	69	207	107	69	207	107	69	207	107
Meander Wavelength (ft)										534	767	596	536	767	596	533	766	595	534	766	595	534	766	595
Meander Width ratio										4.5	10.1	6	4.6	10.1	6	4.9	11.3	6.6	4.6	10.4	6.2	4.6	10.4	6.2
Profile																								
Riffle length (ft)										35	170	80	35	145	75	69	173	76	45	145	82	29	84	63
Riffle slope (ft/ft)										0.004	0.007	0.005	0.006	0.007	0.005	0.004	0.021	0.006	0.003	0.018	0.005	0.004	0.018	0.010
Pool length (ft)										60	130	85	60	130	85	35	233	79	35	142	116	46	142	98.5
Pool spacing (ft)										175	335	255	175	335	255	212	465	223	112	398	222	121	388	218
Additional Reach Parameters																								
Valley Length (ft)	2190																							
Channel Length (ft)													3500							3500			3500	
Sinuosity													1.6							1.6			1.6	
Water Surface Slope (ft/ft)													0.0055			0.0058				0.0059			0.0058	
BF slope (ft/ft)													0.005							0.0055			0.0057	
Rosgen Classification													C4			C4				C4			C4	
Habitat Index*													NA			NA				NA			NA	
Macrobenthos*													NA			NA				NA			NA	

Table XIIIc. Morphology and Hydraulic Monitoring Summary
East Prong of the Roaring River at Stone Mountain State Park /Project # 364
Reach 4 - 3500 Feet

Parameter	Cross Section 5								Cross Section 6								Cross Section 7							
	Pool								Riffle								Pool							
Dimension	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8	MY1	MY2	MY3	MY4	MY5	MY6	MY7	MY8
BF Width (ft)	60	54.2	56	54.2	64	54.5	59.8	56.6	46.3	43.7	45.2	45.6	45.1	44.7	42.6	43.2	64.5	66.5		71.3	79	73.9	67.0	65.0
Floodprone Width (ft)																								
BF Cross Sectional Area (ft^2)	183.6	183.9	175.1	180.7	184.6	202.1	200	184.9	210.1	207.3	223.1	215.6	210.3	212.1	225	209.7	188.6	221.1		201.7	210.1	214.6	202.0	199.7
BF Mean Depth (ft)	3.1	3.4	3.1	3.3	2.9	3.7	3.4	3.3	4.5	4.7	4.9	4.7	4.7	4.7	5.3	4.9	2.9	3.3		2.8	2.7	2.9	3.0	3.1
BF Max Depth (ft)	4.8	5.8	5.8	5.8	5.8	6.6	5.3	4.8	6	7.4	7.3	7.4	7.4	7.3	8.5	7.2	7.5	8.2		7.4	7.3	7.4	6.3	6.2
Width/Depth Ratio	19.6	16.0	17.9	16.3	22.2	14.7	17.8	17.3	10.2	9.2	9.2	9.6	9.7	9.4	8.1	8.9	22.1	20.0		25.2	29.7	25.4	22.3	21.2
Entrenchment Ratio	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0	>5.0		>5.0	>5.0	>5.0	>5.0	>5.0
Wetted Perimeter(ft)	66.1	61.0	62.3	60.9	69.8	61.9	66.6	63.2	55.4	53.2	55.1	55.1	54.4	54.2	53.2	53.0	70.3	73.1		77.0	84.3	79.7	73.0	71.2
Hydraulic radius (ft)	2.8	3.0	2.8	3.0	2.6	3.3	3.0	2.9	3.8	3.9	4.1	3.9	3.9	3.9	4.2	4.0	2.7	3.0		2.6	2.5	2.7	2.8	2.8
Substrate																								
d50 (mm)						48	0.3	0.1	19	17	19		8	47	0.2	0.8						23	38.0	43
d84 (mm)						99	19	0.5	53	71	106		68	109	13	4.4						76	91.0	72

Note: Missing data not collected or not reported.

IV. Methodology Section

Monitoring methods used are based on US Army Corps of Engineering and NC Division of Water Quality Guides as referenced below.

The taxonomic standard for vegetation used in this report was based on "Manual of the Vascular Flora of the Carolinas", by Albert E. Radford et al. The vegetation monitoring protocol used for collecting vegetation data was established for this project in 2000 by the Wetland Restoration Program (WRP) and Karen Hall with NCSU.

References:

Radford, Albert E., Harry E. Ahles, and C. Ritchie Bell. 1968. *Manual of the Vascular Flora of the Carolinas*. University of North Carolina Press: Chapel Hill, North Carolina.

Rosgen, D L. (1996) *Applied River Morphology*. Wildland Hydrology Books, Pagosa Springs, CO.

USACOE (2003) *Stream Mitigation Guidelines*. USACOE, USEPA, NCWRC, NCDENR-DWQ

WRP 2000 Stem Counting Protocol

APPENDIX A

Vegetation Data Tables

1. Stem Counts by Plot
2. Vegetation Problem Areas

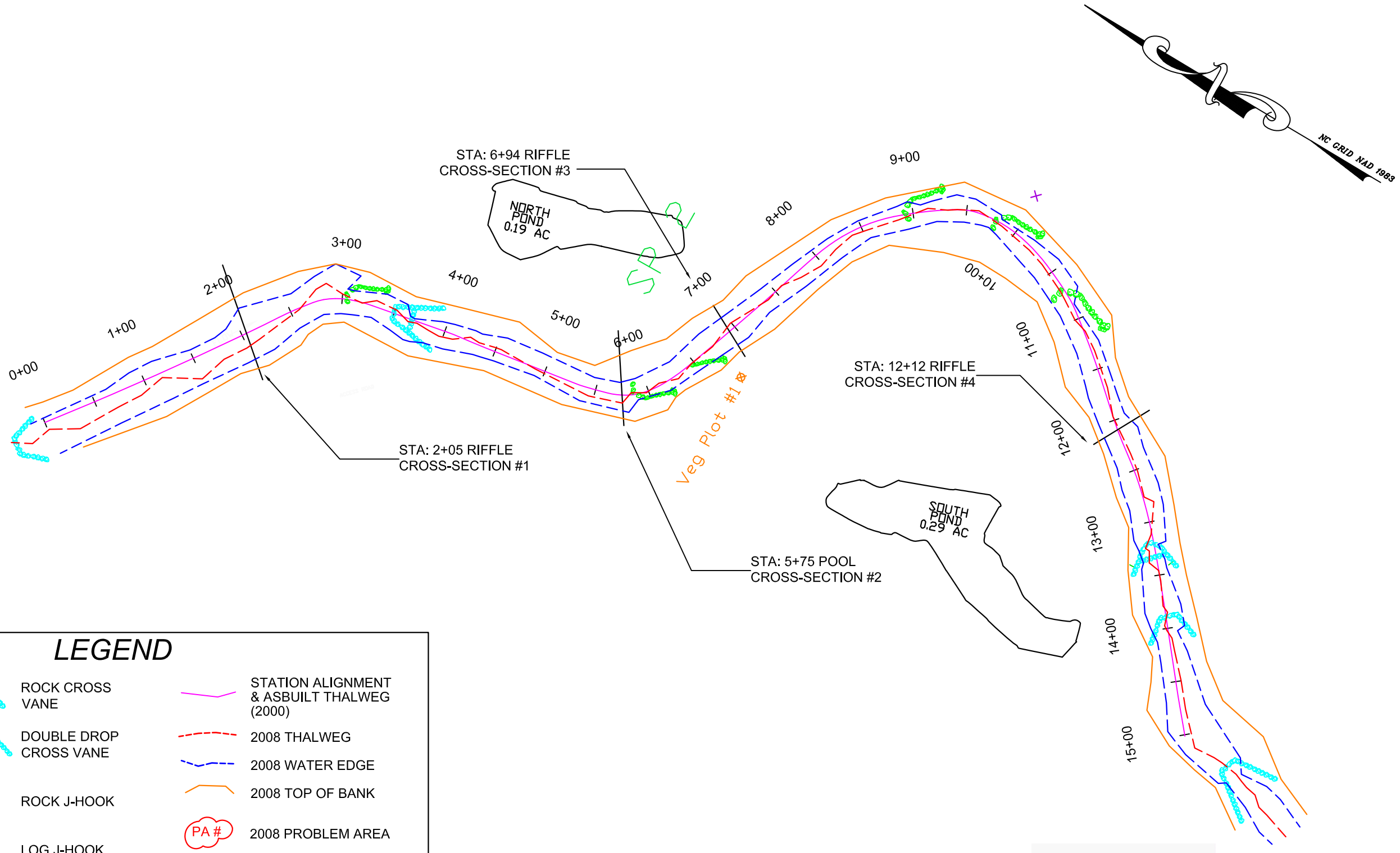
Table VII -2008 Stem Counts by Plot East Prong of the Roaring River at Stone Mountain State Park/Project # 364			
Bare Root Plants Plots	Stems from Planted Bare Roots	Stems from Natural Regeneration	% Herbaceous Cover
Reach 2 Plot #1)	0	10	>90%
Reach 4 (Plot #2)	4	>100	>90%
Reach 4 (Plot #3)	0	43	>90%
Reach 4	0	>300	>90%
Plot Totals	**4**	**>453**	**>90%**
Overall Total Plot Average	**1**	**113**	**>90%**
Overall Project Stems/Acre	**40**	**4583**	
Live Stake Plots			
Reach 2	0	5	
Reach 2	4	17	
Reach 2	2	16	
Reach 4	0	6	
Reach 4	0	0	
Reach 4	0	29	
Reach 4	4	0	
Reach 4	0	0	
Live Stake Totals	**10**	**73**	
Overall Total Live Stake Plot Average	**1.25**	**9**	
Overall Project Live Stake Stems/Acre	**51**	**369**	

Exhibit Table 2 Vegetative Problem Areas East Prong of the Roaring River at Stone Mountain State Park/Project # 364			
Feature/Issue	**Station #/Range**	**Probable Cause**	**Photo #**
Invasive/Exotic Populations	Various Locations	Existing or upland seed source	No photo taken

APPENDIX B

Morphology Raw Data

1. Current Condition Plan View
2. Stream Problem Area Table
3. Stream Problem Area Photos
4. Qualitative Visual Stability Assessment Tables
5. Cross section and Pebble Count Plots and Raw Data Tables
6. Longitudinal Plots and Raw Data Tables
7. Slope Calculation Table
8. Pattern Data
9. GPS Coordinates



LEGEND

- ROCK CROSS VANE
- DOUBLE DROP CROSS VANE
- ROCK J-HOOK
- LOG J-HOOK
- STATION ALIGNMENT & ASBUILT THALWEG (2000)
- 2008 THALWEG
- 2008 WATER EDGE
- 2008 TOP OF BANK
- PA # — 2008 PROBLEM AREA

Ecosystem Enhancement PROGRAM

SCALE 1" = 100'

50 0 50 100

NO	REVISIONS	DRN	CHK	DATE
1	2005 MONITORING	JMP	DRC	12/01/06
2	2007 MONITORING	ZP	JP	12/01/07
3	2008 MONITORING	ZP	JP	10/10/08

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STONE MOUNTAIN STATE PARK
EAST PRONG OF THE ROARING RIVER
WILKES COUNTY, N.C.

2008 CURRENT CONDITION PLAN VIEW REACH-2

DATE	10/10/2008
PROJECT NO.	
FILENAME	STONE MTN.DWG
SHEET NO.	
DRAWING NO.	

LEGEND

- ROCK CROSS VANE
- DOUBLE DROP CROSS VANE
- ROCK J-HOOK
- LOG J-HOOK
- STATION ALIGNMENT & ASBUILT THALWEG (2000)
- 2008 THALWEG
- 2008 WATER EDGE
- 2008 TOP OF BANK
- PA # — 2008 PROBLEM AREA

NC GRID NAD 1983

Veg Plot #2

Veg Plot #3

Veg Plot #4

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00

8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00

PA18

STA: 3+78 RIFFLE
CROSS-SECTION #1

STA: 6+82 POOL
CROSS-SECTION #2

STA: 15+82 POOL
CROSS-SECTION #3

STA: 19+49 RIFFLE
CROSS-SECTION #4

PA 37
2008 Beaverdam

STA: 23+72 POOL
CROSS-SECTION #5

STA: 26+47 RIFFLE
CROSS-SECTION #6

STA: 32+66 POOL
CROSS-SECTION #7
LEFT PIN REPLACED IN 2007

Ecosystem Enhancement PROGRAM

SCALE 1" = 150'

75 0 75 150

NO	REVISIONS	DRN	CHK	DATE
1	2005 MONITORING	JMP	DRC	12/01/06
2	2007 MONITORING	ZP	JP	12/01/07
3	2008 MONITORING	ZP	JP	10/10/08

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STONE MOUNTAIN STATE PARK
EAST PRONG OF THE ROARING RIVER
WILKES COUNTY, N.C.

2008 CURRENT CONDITION
PLAN VIEW REACH-4

DATE	10/10/2008
PROJECT NO.	
FILENAME	STONE MTN.DWG
SHEET NO.	
DRAWING NO.	

Table B1. Stream Problem Areas

East Prong of the Roaring River at Stone Mountain State Park/Project # 364

Reach 2 and Reach 4

Problem Number	Feature Issue	Station numbers	Suspected Cause
PA 18	Bank Slump on left bank	3+25 to 3+75 R4	Lack of deep rooting vegetation and steep bank slope
PA 37	Beaver dam backing up water and left bank erosion	19+00 to 19+30 R4	Beaver activity

2007 **2008**

PA 18 Looking Downstream STA 3+50 Left Bank Erosion

June 10, 2008

October 7, 2008

PA 37 Left Bank Erosion and Beaver Dam STA 19+00

Table B2a. Visual Morphological Stability Assessment

East Prong of the Roaring River at Stone Mountain State Park/Project # 364

Reach 2 - 1500 Feet

Feature Category	Metric (per As-built and reference baselines)	(# Stable) Number Performing as Intended	Total number per As-built	Total Number / feet in unstable state[1]	% Perform in Stable Condition[2]	Feature Perform. Mean or Total[3]
A. Riffles	1. Present?[4]	5	5	0/0	100	
	2. Armor stable (e.g. no displacement)?	5	5	0/0	100	
	3. Facet grade appears stable?	5	5	0/0	100	
	4. Minimal evidence of embedding/fining?	5	5	0/0	100	
	5. Length appropriate?	5	5	0/0	100	**100%**
B. Pools	1. Present? (e.g not subject to severe aggrad. or migrat.?)[4]	5	5	0/0	100	
	2. Sufficiently deep (Max Pool D:Mean Bkf >1.6?)	5	5	0/0	100	
	3. Length appropriate?	5	5	0/0	100	**100%**
C. Thalweg	1. Upstream of meander bend (run/inflection) centering?[5]	3	3	0/0	100	
	2. Downstream of meander (glide/inflection) centering?[5]	3	3	0/0	100	**100%**
D. Meanders	1. Outer bend in state of limited/controlled erosion?	3	3	0/0	100	
	2. Of those eroding, # w/concomitant point bar formation?	NA	NA	NA	NA	
	3. Apparent Rc within spec?	3	3	NA	100	
	4. Sufficient floodplain access and relief?[6]	3	3	NA	100	**100%**
E. Bed General	1. General channel bed aggradation areas (bar formation)	NA	NA	0/0	100	
	2. Channel bed degradation – areas of increasing down-cutting or head cutting?	NA	NA	0/0	100	**100%**
F. Bank	1. Actively eroding, wasting, or slumping bank	NA	NA	0/0	100	**100%**
F. Vanes	1. Free of back or arm scour?	10	10	NA	100	
	2. Height appropriate?	9	10	NA	90	
	3. Angle and geometry appear appropriate?	9	10	NA	90	
	4. Free of piping or other structural failures?	9	10	NA	90	**93%**
G. Wads/ Boulders	1. Free of scour?	0	0	0/0	100	
	2. Footing stable?	0	0	0/0	100	**100%**

Footnotes:

The above table should be completed using the visual assessment data form for each project reach/segment

It is recognized that the various metrics within a feature category may not have equal influence on the overall stability of that feature and that this does not incorporate weighting or scoring; however, at this time, EEP requires documentation of the relevant observations for these feature categories.

1 Metrics that are spatial estimates should be entered as: The number of locales over the reach for which the failing condition is observed / followed by the total linear distance (feet) or area for which the failing or unstable condition is observed.

2 In the case of categorical metrics for which a feature count is involved, this is simply calculated as the number of functional features that are in a state of stability as a percentage of the total. In the case of those metrics based on footage or aerial extent it is that amount in a state of failure or instability expressed as a proportion of the total amount of that feature. The resulting proportion is then subtracted from 1 and then multiplied by 100 to give a percentage that represents the proportion of that feature category in a state of apparent stability.

3 The mean of the metrics for a given feature category.

4 Was the feature actually present as compared to the As-built or has the feature been completely obscured (aggraded) or removed (degraded).

5 Is the Thalweg centering up on the channel in between meander bends?

6 Is the meander bend in a state of constriction?

Documents referenced in the construct of the above assessment table

USDA-NRCS (1998) *Stream Visual Assessment Protocol* National Water and Climate Center (Technical Note 99–1)

Rosgen, D L. (1996) *Applied River Morphology* . Wildland Hydrology Books, Pagosa Springs, CO.

Phankuch, D.J. (1975) Stream reach inventory and channel stability evaluation. USDA Forest Service, R1-75-002. GPO #696-260/200

Table B2b. Visual Morphological Stability Assessment
East Prong of the Roaring River at Stone Mountain State Park/Project # 364
Reach 4 - 3500 Feet

Feature Category	Metric (per As-built and reference baselines)	(# Stable) Number Performing as Intended	Total number per As-built	Total Number / feet in unstable state[1]	% Perform in Stable Condition[2]	Feature Perform. Mean or Total[3]
A. Riffles	1. Present?[4]	9	9	0/0	100	
	2. Armor stable (e.g. no displacement)?	9	9	0/0	100	
	3. Facet grade appears stable?	9	9	0/0	100	
	4. Minimal evidence of embedding/fining?	8	9	1/30	89	
	5. Length appropriate?	9	9	0/0	100	**98%**
B. Pools	1. Present? (e.g not subject to severe aggrad. or migrat.?)[4]	15	15	0/0	100	
	2. Sufficiently deep (Max Pool D:Mean Bkf >1.6?)	15	15	0/0	100	
	3. Length appropriate?	15	15	0/0	100	**100%**
C. Thalweg	1. Upstream of meander bend (run/inflection) centering?[5]	7	7	0/0	100	
	2. Downstream of meander (glide/inflection) centering?[5]	7	7	0/0	100	**100%**
D. Meanders	1. Outer bend in state of limited/controlled erosion?	7	7	0/0	100	
	2. Of those eroding, # w/concomitant point bar formation?	7	7	NA	100	
	3. Apparent Rc within spec?	7	7	0/0	100	
	4. Sufficient floodplain access and relief?[6]	7	7	0/0	100	**100%**
E. Bed General	1. General channel bed aggradation areas (bar formation)	NA	NA	0/0	100	
	2. Channel bed degradation – areas of increasing down-cutting or head cutting?	NA	NA	0/0	100	**100%**
F. Bank	1. Actively eroding, wasting, or slumping bank	NA	NA	2/70	98	**98%**
G. Vanes	1. Free of back or arm scour?	15	15	NA	100	
	2. Height appropriate?	13	15	NA	87	
	3. Angle and geometry appear appropriate?	15	15	NA	100	
	4. Free of piping or other structural failures?	15	15	NA	100	**97%**
H. Wads/ Boulders	1. Free of scour?	4	4	NA	100	
	2. Footing stable?	4	4	NA	100	**100%**

Footnotes:

The above table should be completed using the visual assessment data form for each project reach/segment

It is recognized that the various metrics within a feature category may not have equal influence on the overall stability of that feature and that this does not incorporate weighting or scoring; however, at this time, EEP requires documentation of the relevant observations for these feature categories.

1 Metrics that are spatial estimates should be entered as: The number of locales over the reach for which the failing condition is observed / followed

2 In the case of categorical metrics for which a feature count is involved, this is simply calculated as the number of functional features that are in a state of stability as a percentage of the total. In the case of those metrics based on footage or aerial extent it is that amount in a state of failure or instability expressed as a proportion of the total amount of that feature. The resulting proportion is then subtracted from 1 and then multiplied by 100 to give a percentage that represents the proportion of that feature category in a state of apparent stability.

3 The mean of the metrics for a given feature category.

4 Was the feature actually present as compared to the As-built or has the feature been completely obscured (aggraded) or removed (degraded).

5 Is the Thalweg centering up on the channel in between meander bends?

6 Is the meander bend in a state of constriction?

Documents referenced in the construct of the above assessment table

USDA-NRCS (1998) *Stream Visual Assessment Protocol* National Water and Climate Center (Technical Note 99–1)

Rosgen, D L. (1996) *Applied River Morphology* . Wildland Hydrology Books, Pagosa Springs, CO.

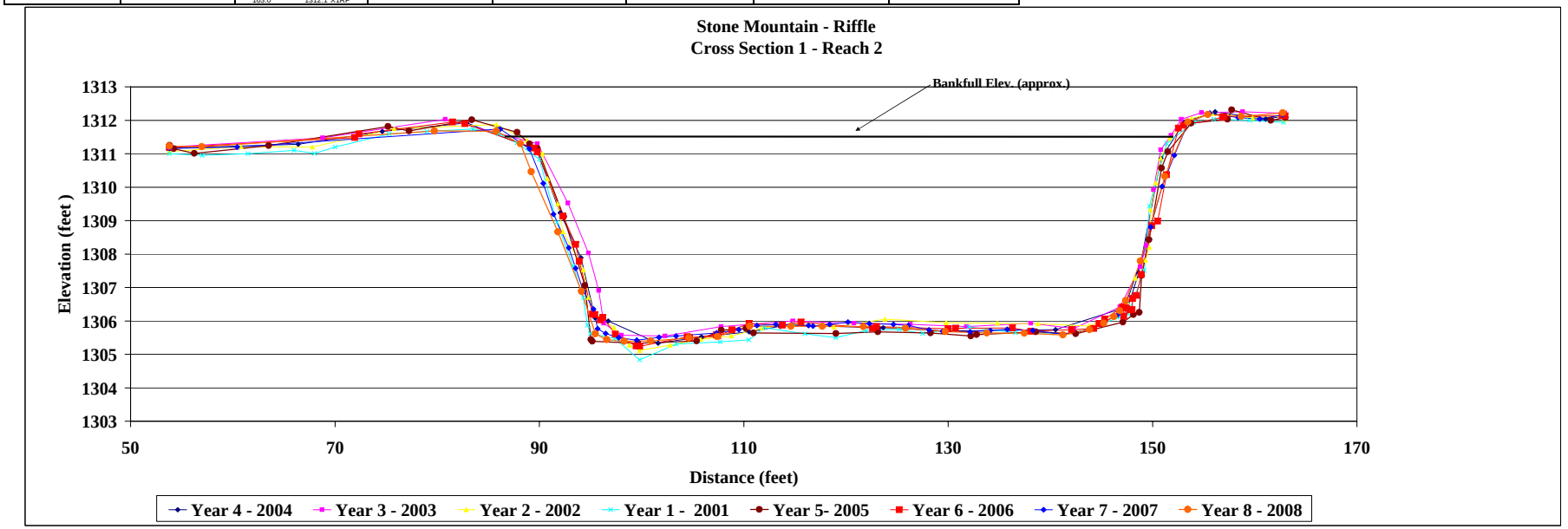
Phankuch, D.J. (1975) Stream reach inventory and channel stability evaluation. USDA Forest Service, R1-75-002. GPO #696-260/200

Project Name Stone Mountain
Cross Section Reach 2 Cross-Section 1
Feature Riffle
Date 6/11/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2004 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
53.8	1311.22	XS1LP08	53.8	1311.16	X1LP	53.8	1311.2	X1LP	53.8	1311.3	Lpin1	53.8	1311.2	Lpin1	53.8	1311.2		53.8	1311.2	LPIN	53.8	1311.0	
56.98	1311.21		60.42	1311.2		71.9	1311.5		54.2	1311.2		54.0	1311.2		68.8	1311.5		53.8	1311.1	GRND	57.0	1311.0	
79.74	1311.68		86.18	1311.74		72.3	1311.6		56.3	1311.0		66.4	1311.3		80.8	1312.0		60.8	1311.2		61.5	1311.0	
85.78	1311.67		89.01	1311.15		81.5	1312.0		63.5	1311.2		74.6	1311.7		89.8	1311.3		67.8	1311.2		66.0	1311.1	
88.16	1311.3		90.38	1310.11		82.7	1311.9		75.2	1311.8		82.9	1311.9		92.8	1309.5		75.8	1311.8		68.0	1311.0	
89.2	1310.46		91.39	1309.19		89.5	1311.2		77.3	1311.7		89.8	1311.1		94.8	1308.0		85.8	1311.9		70.0	1311.2	
91.82	1308.66		92.88	1308.19		89.8	1311.1		83.4	1312.0		92.0	1309.2		95.8	1306.9		88.8	1311.4		75.3	1311.6	
94.14	1306.88		93.57	1307.57		92.3	1309.1		87.8	1311.6		94.1	1307.9		96.3	1305.9		89.8	1311.2		79.0	1311.7	
95.48	1305.61	XS1W	94.33	1306.88		93.6	1308.3		89.0	1311.3	LBKF	95.5	1306.1		98.0	1305.6		90.3	1311.0		83.5	1311.7	
96.59	1305.44		95.29	1306.35		93.9	1307.8		89.8	1311.2		96.7	1306.0		102.3	1305.6		90.8	1310.3		86.0	1311.6	
98.3	1305.39		95.69	1305.76		95.2	1306.2		92.4	1309.1		101.6	1305.3		107.8	1305.8		91.8	1309.5		87.8	1311.3	LBKF
100.88	1305.4		96.48	1305.62		95.4	1306.2		94.5	1307.1		105.9	1305.5		114.8	1306.0		92.3	1308.7		90.0	1310.8	
104.63	1305.49		97.77	1305.5		96.0	1306.0		95.1	1305.4		110.5	1305.7		120.8	1305.9		93.8	1307.8		91.7	1309.0	
107.43	1305.53		99.53	1305.42		96.2	1306.1	X1W	95.2	1305.4		113.5	1305.8		126.3	1305.9		94.3	1307.5		93.3	1307.6	
110.58	1305.84		101.7	1305.51		97.4	1305.6		99.7	1305.3		113.6	1305.8		131.8	1305.8		94.8	1306.7		94.3	1306.7	
114.62	1305.84		103.39	1305.55		99.5	1305.3		105.4	1305.4		113.7	1305.9		138.1	1305.9		95.4	1306.3		94.7	1305.9	
117.7	1305.84		107.36	1305.64		99.8	1305.2		107.8	1305.7		123.2	1305.8		142.3	1305.8		97.3	1305.8		95.0	1305.6	
121.72	1305.83		109.53	1305.74		104.5	1305.5		110.2	1305.8		123.2	1305.8		146.8	1306.4		98.8	1305.3		97.4	1305.5	
125.84	1305.78		111.29	1305.86		104.7	1305.5		111.0	1305.6		123.7	1305.8		148.8	1307.6		99.8	1305.1		99.8	1304.8	
129.74	1305.68		113.15	1305.9		107.3	1305.6		119.0	1305.6		129.8	1305.7		149.4	1308.3		102.8	1305.3		103.4	1305.3	
133.79	1305.64		114.7	1305.88		107.5	1305.6		123.1	1305.7		140.5	1305.7		150.1	1309.9		105.8	1305.5		107.7	1305.4	
137.47	1305.63		116.34	1305.86		108.9	1305.7		128.3	1305.6		147.6	1306.4		150.8	1311.1		108.8	1305.6		110.5	1305.4	
141.25	1305.58		116.78	1305.85		110.5	1305.9		132.2	1305.6		148.7	1307.4		151.8	1311.6		111.8	1305.8		112.0	1305.8	
143.85	1305.74		118.41	1305.9		113.8	1305.9		132.8	1305.6		150.8	1310.9		152.8	1312.0		114.8	1305.9		116.0	1305.6	
145.24	1305.93		120.2	1305.96		115.6	1306.0		138.6	1305.7		153.1	1312.0		154.8	1312.2		118.8	1305.8		119.0	1305.5	
146.24	1306.13	XS1W	122.3	1305.92		122.6	1305.8		142.5	1305.6		156.1	1312.3		158.8	1312.3		123.8	1306.1		122.0	1305.7	
146.77	1306.3		124.65	1305.9		123.0	1305.8		147.1	1306.0		161.1	1312.0		162.9	1312.2		129.8	1306.0		125.2	1305.8	
147.38	1306.6		126.13	1305.86		130.0	1305.8		148.1	1306.2		163.0	1312.13	Rpin1	162.9	1312.1		134.8	1305.9		127.5	1305.6	
148.82	1307.79		128.12	1305.73		130.7	1305.8		148.7	1306.3		163.0	1312.1					138.8	1305.9		132.0	1305.8	
151.22	1310.32		129.45	1305.69		136.3	1305.8		148.9	1307.4								143.8	1305.9		136.6	1305.7	
153.47	1311.95		132.15	1305.67		138.1	1305.7		149.7	1308.4								146.8	1306.2		142.5	1305.6	
155.43	1312.17		134.12	1305.71		142.1	1305.7		150.9	1310.6								147.5	1306.6		146.8	1306.1	
158.68	1312.11		135.79	1305.75		144.3	1305.8		151.5	1311.1								148.3	1307.3		147.6	1306.2	
162.75	1312.22	XS1RP08	138.29	1305.71		144.8	1305.9		153.8	1311.9								149.3	1307.8		149.2	1307.5	
			141.3	1305.6		144.9	1305.9		157.3	1312.0								149.7	1308.2		149.7	1309.4	
			143.84	1305.75		145.3	1306.1		157.8	1312.3								149.8	1309.3		151.4	1311.3	RBKF
			146.58	1306.19		147.1	1306.4		161.6	1312.0								150.3	1310.1		154.0	1311.9	
			147.48	1306.59		147.2	1306.1		163.0	1312.1								150.8	1310.9		156.0	1312.0	
			148.85	1307.76		147.4	1306.4	X1W										151.7	1311.5		159.5	1312.0	
			149.82	1308.81		147.8	1306.3											152.8	1311.9		162.8	1311.9	
			150.93	1310.02		148.0	1306.3											153.8	1312.1				
			152.14	1310.95		148.1	1306.7											155.8	1312.2				
			153.48	1311.93		148.4	1306.8											159.8	1312.1				
			155.62	1312.21		148.9	1307.4											162.9	1312.1				
			158.39	1312.08		149.9	1308.8											162.9	1312.0				
			160.5	1312.04		150.5	1309.0																
			162.72	1312.16	X1RP	151.4	1310.4																
						152.5	1311.8																
						153.0	1311.9																
						156.9	1312.1																
						157.0	1312.1																
						162.7	1312.1																
						163.0	1312.1	X1RP															

Photo of Cross-Section 1 - Reach 2 - Looking Downstream @ STA 2+00

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001
Area	316.88	309.9	310.1	318.5	307.0	296.5	306.0	319.8
Width	62.0	62.1	61.9	61.8	61.1	62.0	62.0	61.9
Mean Depth	5.1	5.0	5.0	5.2	5.0	4.8	4.9	5.2
Max Depth	4.0	5.8	6.0	5.9	5.9	5.7	6.1	6.4
W/D	12.1	12.4	12.4	12.0	12.2	13.0	12.6	12.0

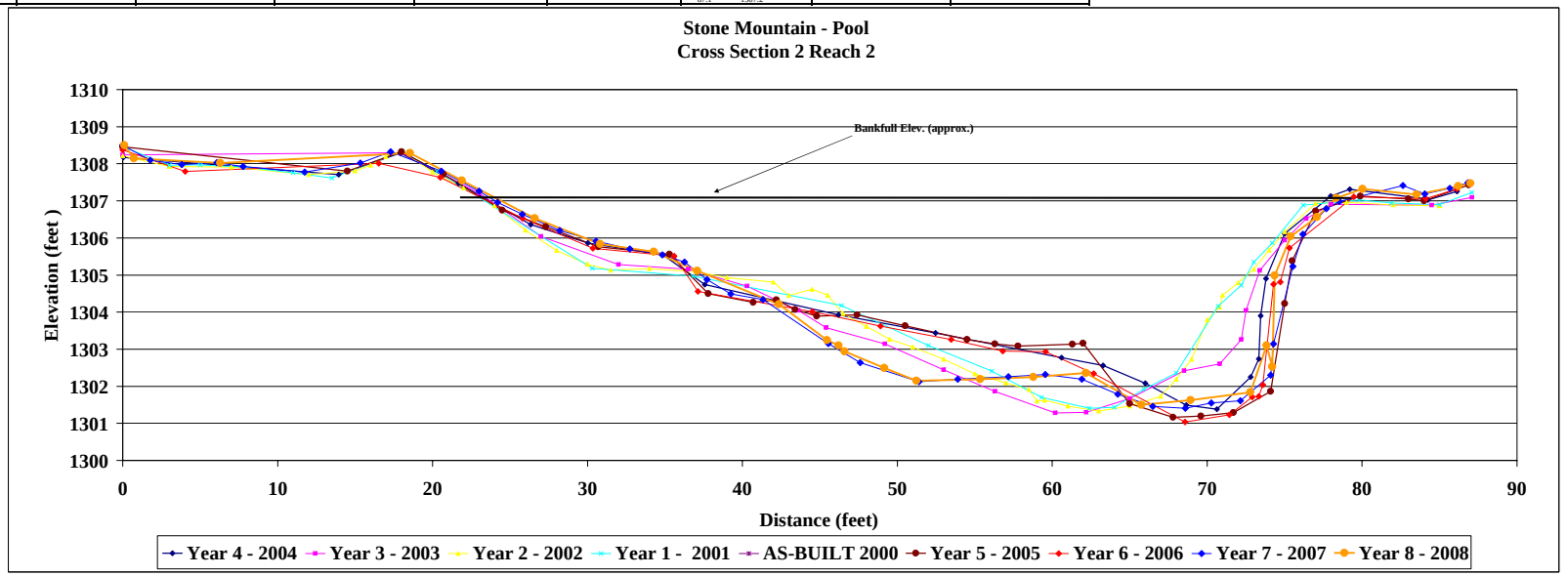


Project Name Stone Mountain
Cross Section Reach 2 Cross-Section 2
Feature Pool
Date 6/11/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2004 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
0.1	1308.5	XS2LP08	0	1308.5	X2LP	0	1308.37	X2LP	0.0	1308.5	LPIN	0.0	1308.5	LPIN	0.0	1308.5	LPIN	0.0	1308.5		0.0	1308.5	LPIN			
0.73	1308.15	XS2	1.77	1308.1		4.04	1307.79	X2	14.5	1307.8	1308.0	0.0	1308.2		0.0	1308.2	GRND	0.0	1308.2		3.0	1308.0				
6.29	1308.02	XS2	3.81	1307.98		16.53	1308.01	X2	18.0	1308.3	1307.4	14.0	1307.7		18.0	1308.3		3.0	1307.9		5.0	1308.0				
18.54	1308.29	XS2	6.07	1308.03		20.5	1307.63	X2	20.7	1307.7	1307.6	17.9	1308.3		23.0	1307.2		7.0	1307.9		7.8	1307.9				
21.89	1307.55	XS2	7.77	1307.93		25.8	1306.53	X2	24.5	1306.8	1307.2	21.7	1307.5		27.0	1306.0		12.0	1307.7		11.0	1307.8				
26.59	1306.53	XS2	11.74	1307.78		30.35	1305.72	X2	27.3	1306.3	1306.1	26.3	1306.4		32.0	1305.3		15.0	1307.8		13.5	1307.6				
30.82	1305.84	XS2	15.33	1308.02		35.59	1305.51	X2	30.7	1305.8	1305.3	30.0	1305.9		36.5	1305.2		16.0	1308.0		18.0	1308.3	LBKF			
34.28	1305.63	XS2	17.29	1308.32		37.14	1304.56	X2	35.3	1305.6	1305.1	34.9	1305.5		40.3	1304.7		17.0	1308.2		20.3	1307.8				
37.09	1305.11	XS2	20.56	1307.8		44.52	1304.01	X2	37.8	1304.5	1304.1	37.6	1304.7		43.6	1304.0	LEW	18.0	1308.4		30.3	1305.2				
42.36	1304.21	XS2	23	1307.26		48.91	1303.62	X2	40.7	1304.3	1303.6	46.2	1303.9		45.4	1303.6		20.0	1307.8		36.8	1305.0				
45.46	1303.24	XS2	24.19	1306.96		53.47	1303.26	X2	42.2	1304.3	1303.2	52.5	1303.4		49.2	1303.1		22.0	1307.4		46.4	1304.2				
46.22	1303.1	XS2W	25.79	1306.64		56.81	1302.95	X2	43.4	1304.1	1302.8	60.6	1302.8		53.0	1302.4		24.0	1306.9		52.0	1303.1				
46.6	1302.94	XS2	28.21	1306.2		59.57	1302.93	X2	44.8	1303.9	1302.5	63.3	1302.6		56.3	1301.9		26.0	1306.2		56.1	1302.4				
49.15	1302.49	XS2	30.55	1305.91		62.67	1302.34	X2	47.4	1303.9	1302.5	66.0	1302.1		60.2	1301.3		28.0	1305.7		59.3	1301.7				
51.24	1302.15	XS2	32.73	1305.7		68.57	1301.04	X2	50.5	1303.6	1301.9	68.7	1301.5		62.2	1301.3		30.0	1305.3		62.4	1301.4				
55.35	1302.19	XS2	34.83	1305.54		71.43	1301.23	X2	54.5	1303.3	1300.6	70.6	1301.4		65.0	1301.7		31.5	1305.1		64.0	1301.4				
58.78	1302.25	XS2	36.26	1305.35		72.9	1301.71	X2	56.3	1303.1	1300.8	72.8	1302.3		68.5	1302.4		34.0	1305.2		65.9	1301.9				
62.17	1302.36	XS2	37.71	1304.88		73.33	1301.73	X2	57.8	1303.1	1301.3	73.3	1302.7		70.8	1302.6		37.0	1305.1		68.0	1302.4				
65.74	1301.5	XS2	39.24	1304.49		73.6	1302.04	X2	61.3	1303.1	1301.3	73.5	1303.9		72.2	1303.3	REW	39.0	1304.9		70.7	1304.2				
68.93	1301.63	XS2	41.32	1304.34		74.28	1304.75	X2	62.0	1303.2	1301.6	73.8	1304.9		72.5	1304.0		42.0	1304.8		72.2	1304.7				
72.78	1301.84	XS2	45.55	1303.15		74.73	1304.81	X2	65.0	1301.5	1304.3	75.0	1306.1		73.4	1305.1		43.0	1304.5		73.0	1305.4				
73.84	1303.1	XS2W	47.61	1302.64		75.3	1305.73	X2	67.8	1301.2	1304.4	78.0	1307.1		75.0	1305.9		44.5	1304.6		74.2	1305.9	RBKF			
74.19	1302.53	XS2	51.39	1302.12		79.46	1307.11	X2	69.6	1301.2	1305.3	79.2	1307.3		76.4	1306.5		45.5	1304.5		76.2	1306.9				
74.36	1304.99	XS2	53.89	1302.19		84.1	1307.06	X2	71.7	1301.3	1306.7	84.0	1307.1		78.0	1306.9		46.5	1304.0		79.8	1307.0				
75.39	1306.04	XS2	57.16	1302.26		86.12	1307.32	X2RP	74.1	1301.9	1306.6	84.3	1307.0		84.5	1306.9		48.0	1303.6		81.9	1306.9				
77.09	1306.56	XS2	59.55	1302.32					75.0	1304.2	1306.9	86.1	1307.3		87.1	1307.1		49.5	1303.3		85.0	1306.9				
78.33	1307.08	XS2	61.91	1302.19					75.5	1305.4	-0.4							51.0	1303.1		87.1	1307.2				
80.04	1307.32	XS2	64.24	1301.79					77.0	1306.7	-0.4							53.0	1302.7							
83.53	1307.17	XS2	66.5	1301.46					79.9	1307.1	-0.4							55.0	1302.3							
86.2	1307.4	XS2	68.59	1301.41					83	1307.1	-0.4							57	1302.1							
86.99	1307.47	XS2RP08	70.27	1301.55					84	1307.0	-0.4							58.5	1301.9							
			72.14	1301.61					86.9	1307.4	-0.4							59	1301.6							
			74.09	1302.3														59.5	1301.6							
			74.28	1303.14														61	1301.5							
			75.54	1305.23		down 0.42 feet												63	1301.3							
			76.17	1306.1														65	1301.5							
			77.69	1306.79														67	1301.7							
			78.53	1306.98														68	1302.2							
			82.64	1307.41														69	1302.7							
			84.05	1307.19														70	1303.8							
			85.67	1307.34														70.8	1304.1							
			86.83	1307.49	X2RP													71	1304.5							
																		72	1304.8							
																		73	1305.2							
																		74	1305.7							
																		75	1306.2							
																		77	1306.9							
																		79	1307.0							
																		82	1306.9							
																		85	1306.9							
																		87.1	1307.4							
																		87.1	1307.2							
down 0.23 feet			down 0.22 feet																							

Photo of Cross-Section 2 - Reach 2 - Looking Downstream @ STA 5+75

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 6 - 2006	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001
Area	176.55	176.0	166.0	166.1	155.6	170.3	158.7	158.4
Width	55.2	51.1	60.3	56.3	53.3	53.4	53.0	53.9
Mean Depth	3.2	3.4	2.8	3.0	2.9	3.2	3.0	2.9
Max Depth	5.5	5.2	5.9	5.8	5.6	5.7	4.6	5.6
W/D	17.3	14.8	21.9	19.1	18.3	16.7	17.7	18.3

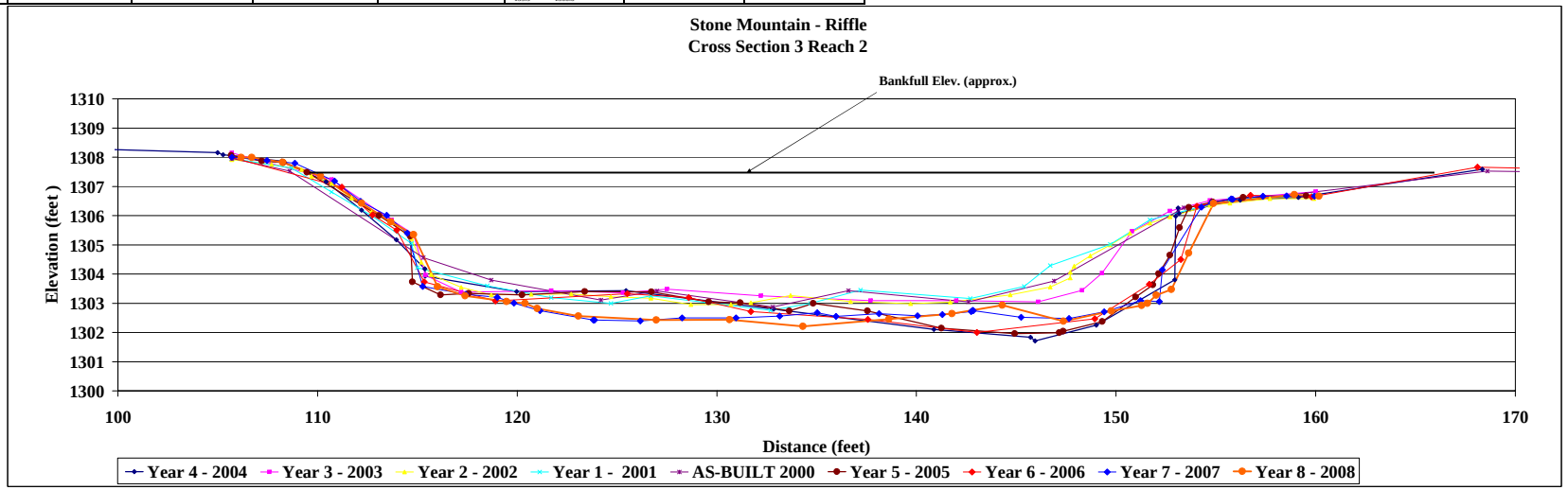


Project Name Stone Mountain
Cross Section Reach 2 Cross-Section 3
Feature Riffle
Date 6/11/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
106.17	1307.99	XS3LPO8	105.7	1308	X3LP	105.7	1307.99	X3LP	105.7	1308.1	Lpin	97.2	1308.3		105.7	1308.1		105.7	1307.9		105.7	1308.0		105.7	1308.0	
106.71	1307.99	XS3	107.46	1307.89		111.21	1306.97	X3	107.2	1307.9	1307.6	105.0	1308.2	Lpin	110.7	1307.2		105.7	1307.9		108.7	1307.6		108.6	1307.5	LBKF
108.25	1307.82	XS3	108.87	1307.79		112.75	1306.02	X3	108.3	1307.8	1306.6	105.3	1308.1		113.7	1305.8		107.7	1307.8		110.7	1306.8		115.3	1304.6	
110.16	1307.35	XS3	110.85	1307.18		113.97	1305.5	X3	109.5	1307.5	1305.6	108.2	1307.9		114.8	1305.4		109.2	1307.6		112.7	1306.0		118.7	1303.8	
112.2	1306.43	XS3	112.15	1306.49		115.35	1303.73	X3	113.1	1306.0	1305.1	110.4	1307.2		115.4	1304.0		109.7	1307.4		114.7	1305.1		124.2	1303.1	
113.68	1305.78	XS3	113.47	1306.01		118.91	1303.08	X3	114.6	1305.3	1303.3	112.2	1306.2		117.2	1303.4		110.7	1307.1		115.0	1304.2		127.0	1303.4	
114.81	1305.35	XS3	114.49	1305.4		125.51	1303.33	X3	114.8	1303.7	1302.7	114.0	1305.2		121.7	1303.4		111.7	1306.6		118.5	1303.6		132.8	1302.9	
116.01	1303.56	XS3	115.27	1303.58		128.6	1303.19	X3	116.2	1303.3	1302.9	115.4	1304.2		125.3	1303.4		112.7	1306.1		121.7	1303.2		136.6	1303.4	
117.4	1303.25	XS3	117.43	1303.31		131.71	1302.72	X3	117.6	1303.3	1302.8	115.4	1303.9		127.5	1303.5		113.7	1305.8		124.7	1303.0		142.6	1303.1	
119.47	1303.06	XS3	119	1303.2		137.56	1302.45	X3	120.2	1303.3	1302.3	120.0	1303.4		132.2	1303.3		114.7	1305.2		126.7	1303.3		146.9	1303.8	
120.4	1302.99	XS3W	119.84	1303.01		143.03	1302	X3	123.4	1303.4	1302	125.5	1303.4		137.7	1303.1		115.2	1304.4		132.7	1302.8		153.4	1306.3	
121	1302.82	XS3	121.15	1302.75		148.93	1302.47	X3	126.7	1303.4	1301.6	132.8	1302.8		142.0	1303.1		115.7	1304.0		134.7	1303.0		168.6	1307.5	RBKF
123.07	1302.56	XS3	123.82	1302.42		151.67	1303.65	X3W	129.6	1303.1	1302.1	140.9	1302.1		146.1	1303.1		117.2	1303.5		137.2	1303.5		184.0	1307.4	
126.97	1302.43	XS3	123.87	1302.43		153.25	1304.5	X3	131.2	1303.0	1303.2	145.7	1301.8		148.3	1303.4		118.7	1303.3		142.7	1303.2				
130.65	1302.44	XS3	126.17	1302.39		154.05	1306.32	X3	133.6	1302.7	1304.1	146.0	1301.7		149.3	1304.0		120.7	1303.3		145.4	1303.6				
134.32	1302.21	XS3	128.26	1302.5		156.73	1306.69	X3	134.8	1303.0	1305.9	149.0	1302.3		150.8	1305.5		122.7	1303.3		146.7	1304.3				
138.62	1302.46	XS3	130.97	1302.5		159.79	1306.64	X3RP	137.6	1302.7	1306.3	152.9	1303.8		152.7	1306.2		124.7	1303.2		149.7	1305.0				
141.78	1302.64	XS3	133.15	1302.56		168.1	1307.66	X3	141.3	1302.2	1306.2	153.0	1306.0		154.7	1306.5		126.7	1303.2		151.7	1305.9				
144.31	1302.93	XS3	135.03	1302.67		180.02	1307.48	X3	144.9	1302.0	1307.2	153.1	1306.3		160.0	1306.8		128.7	1303.0		155.7	1306.6				
147.37	1302.38	XS3	135.97	1302.55					147.2	1302.0	1307.1	153.2	1306.1		160.0	1306.8		130.7	1303.0		159.9	1306.7				
149.77	1302.74	XS3	138.13	1302.64					147.4	1302.0		155.8	1306.5					131.7	1303.0							
151.29	1302.92	XS3	140.05	1302.57					149.3	1302.4		156.2	1306.5					133.7	1303.3							
151.58	1302.99	XS3W	141.3	1302.61		down 0.42 feet			151.0	1303.2		159.1	1306.6	Rpin				136.7	1303.1							
152.02	1303.27	XS3	142.74	1302.72					151.8	1303.6		168.4	1307.6					139.7	1303.0							
152.78	1303.47	XS3	142.82	1302.76					152.1	1304.0								141.7	1303.0							
153.64	1304.71	XS3	142.84	1302.75					152.7	1304.6								144.7	1303.3							
154.88	1306.41	XS3	145.24	1302.52					153.2	1305.6								146.7	1303.6							
158.93	1306.71	XS3	147.65	1302.48					153.7	1306.3								147.7	1303.9							
160.16	1306.66	XS3RP08	149.41	1302.7					154.8	1306.5								147.7	1304.1							
			151.22	1303.09					156.4	1306.6								147.9	1304.27							
			152.16	1303.06					159.5	1306.7								148.7	1304.62							
			152.32	1304.15					168.4	1307.6								149.7	1305.0							
			154.28	1306.29														150.7	1305.4							
			154.77	1306.44														151.7	1305.7							
			155.76	1306.57														152.7	1306.0							
			155.84	1306.56														154.7	1306.4							
			157.35	1306.66														155.7	1306.4							
			158.54	1306.67														157.7	1306.6							
			159.94	1306.66	X3RP													159.9	1306.6							
down 0.3 feet			down 0.3 feet																							

Photo of Cross-Section 3 - Reach 2 - Looking Downstream @ STA 7+00

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	197.79	193.5	195.0	191.7	194.5	169.6	169.5	166.2	165.5
Width	54.0	59.1	60.1	60.1	60.1	58.3	59.7	60.2	60.0
Mean Depth	3.7	3.3	3.2	3.2	3.2	2.9	2.8	2.8	2.8
Max Depth	5.3	5.1	5.5	5.5	5.8	4.5	4.5	4.7	4.6
W/D	14.7	18.1	18.5	18.8	18.6	20.0	21.0	21.8	21.7



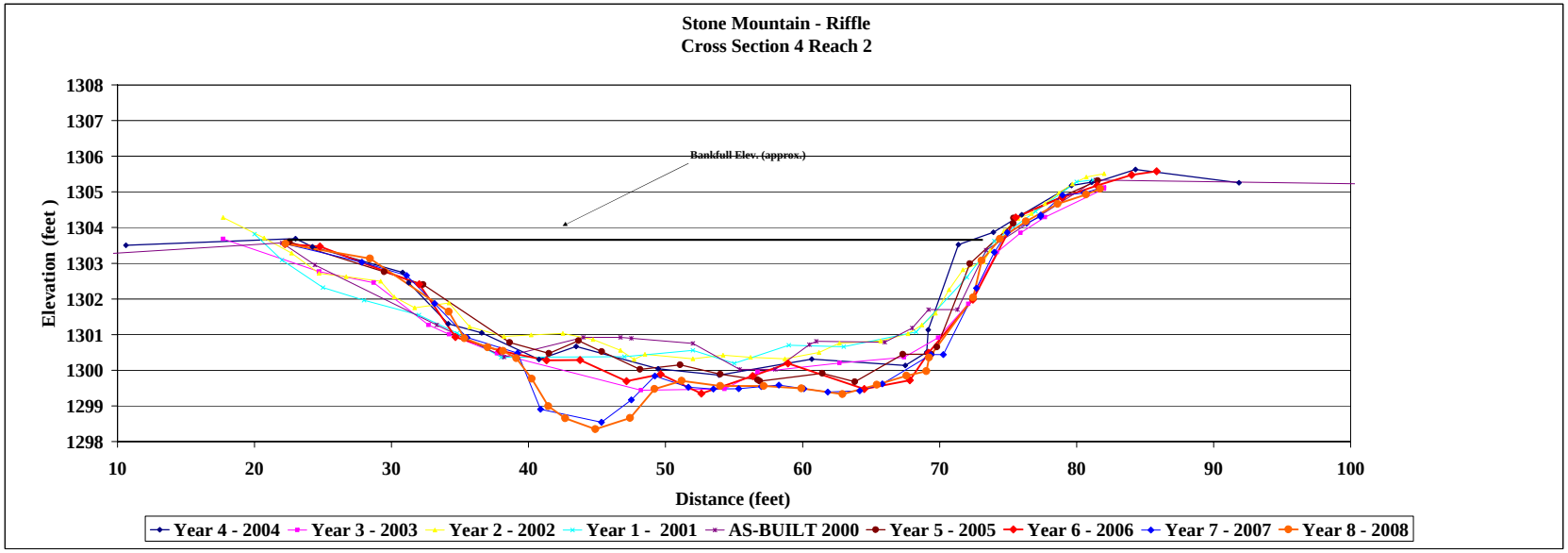
Project Name	Stone Mountain
Cross Section	Reach 2 Cross-Section 4
Feature	Riffle
Date	6/11/08
Crew	Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
22.27	1303.55	XS4LP08	22.23	1303.55	X4LP	22.23	1303.5	X4LP	22.6	1303.6	1303.1	10.6	1303.5		17.7	1303.7		17.7	1304.3		20.0	1303.8		0.0	1303.1	
28.43	1303.13	XS4	27.83	1303.03		24.77	1303.5	X4	29.5	1302.8	1303.1	23.0	1303.7	Lpin	24.7	1302.8		20.7	1303.7		22.0	1303.1	LPIN	22.0	1303.6	LBKF
34.18	1301.64	XS4	31.09	1302.66		32.02	1302.4	X4	32.3	1302.4	1302.0	24.2	1303.5		28.7	1302.5		22.7	1303.3		25.0	1302.3		24.4	1303.0	
35.32	1300.9	XS4W	33.14	1301.87		34.66	1300.9	X4	38.6	1300.8	1300.5	30.8	1302.7		32.7	1301.3		24.7	1302.7		28.0	1302.0		33.3	1301.3	
37.02	1300.64	XS4W	35.49	1300.92		37.91	1300.6	X4	41.5	1300.5	1300.1	31.3	1302.5		34.2	1301.0		26.7	1302.6		32.0	1301.6		38.2	1300.4	
38.14	1300.54	XS4W	39.21	1300.48		41.32	1300.3	X4	43.6	1300.8	1299.9	34.1	1301.3		37.7	1300.5		29.2	1302.5		34.8	1301.0		44.0	1300.9	
39.11	1300.34	XS4W	40.87	1298.91		43.75	1300.3	X4	45.3	1300.5	1299.9	36.6	1301.1		48.2	1299.4		30.2	1302.1		38.0	1300.4		46.7	1300.9	
40.23	1299.76	XS4	45.33	1298.54		47.16	1299.7	X4	48.1	1300.0	1299.3	40.8	1300.3		54.3	1299.5		31.7	1301.8		47.0	1300.4		47.5	1300.9	
41.45	1298.99	XS4	47.5	1299.17		49.63	1299.9	X4	51.1	1300.2	1299.5	43.5	1300.7		56.7	1300.0		34.2	1301.9		52.0	1300.6		52.0	1300.8	
42.67	1298.65	XS4	49.21	1299.84		52.6	1299.4	X4	54.0	1299.9	1298.9	49.5	1300.0		62.7	1300.2		35.7	1301.2		55.0	1300.2		55.4	1300.0	
44.88	1298.35	XS4	51.67	1299.52		56.35	1299.8	X4	56.7	1299.7	1299.4	53.9	1299.9		67.4	1300.4		38.2	1301.0		59.0	1300.7		58.0	1300.0	
47.42	1298.66	XS4	53.49	1299.47		58.93	1300.2	X4	56.9	1299.7	1299.8	60.7	1300.3		69.9	1300.9		40.2	1301.0		63.0	1300.7		60.5	1300.7	
49.2	1299.47	XS4	55.35	1299.48		64.5	1299.5	X4	61.4	1299.9	1299.1	67.5	1300.1		72.1	1301.9		42.5	1301.0		68.3	1301.1		61.0	1300.8	
51.19	1299.7	XS4	57	1299.54		67.83	1299.7	X4	63.8	1299.7	1299.3	69.1	1300.5		74.2	1303.3		44.7	1300.9		72.0	1302.6		66.0	1300.8	
54	1299.56	XS4	58.28	1299.58		69.19	1300.5	X4W	67.3	1300.5	1300.1	69.2	1301.1		75.9	1303.9		46.7	1300.6		74.0	1303.6		68.0	1301.2	
57.17	1299.56	XS4	60.1	1299.48		72.43	1302.0	X4	69.4	1300.5	1301.6	71.4	1303.5		77.7	1304.3		47.7	1300.3		77.0	1304.5		69.2	1301.7	
59.93	1299.49	XS4	61.83	1299.39		75.55	1304.3	X4	69.8	1300.7	1303.9	73.9	1303.9		82.0	1305.1		48.5	1300.5		80.0	1305.3		71.3	1301.7	
62.91	1299.33	XS4	64.18	1299.42		78.94	1304.9	X4	72.2	1303.0	1304.4	76.0	1304.4		82.0	1305.1		52.0	1300.3		81.2	1305.3	RPIN	73.4	1303.4	RBKF
65.43	1299.59	XS4	65.83	1299.62		78.95	1304.8	X4	75.4	1304.1	1304.4	79.6	1305.2					54.2	1300.4					81.4	1305.3	RPIN
67.59	1299.85	XS4	69.36	1300.44		81.5	1305.2	X4RP	75.4	1304.3	1304.8	81.1	1305.3					56.2	1300.4					143.0	1305.0	
69.03	1299.97	XS4	70.28	1300.44		84.01	1305.5	X4	81.5	1305.3	1305.1	81.5	1305.3	Rpin				58.7	1300.3							
69.23	1300.35	XS4W	72.7	1302.3		85.84	1305.6	X4			1305.2	84.3	1305.6					61.2	1300.5							
72.46	1302.04	XS4	73.99	1303.31								91.9	1305.3					62.7	1300.8							
73.06	1303.07	XS4	74.93	1303.86														65.7	1300.8							
74.41	1303.68	XS4	76.35	1304.12														67.7	1301.0							
76.31	1304.17	XS4	77.36	1304.31														68.7	1301.3							
78.62	1304.66	XS4	77.39	1304.35														69.7	1301.6							
80.68	1304.93	XS4	78.97	1304.91														70.7	1302.3							
81.73	1305.09	XS4RP08	80.55	1304.97														71.7	1302.8							
			81.7	1305.1	X4RP													73.2	1303.04							
																		73.7	1303.36							
																		74.7	1303.9							
																		75.7	1304.26							
																		76.7	1304.39							
																		77.7	1304.67							
																		78.7	1304.97							
																		79.7	1305.22							
																		80.7	1305.42							
																		82	1305.51							

down .35

Photo of Cross-Section 4 - Reach 2 - Looking Downstream @ STA 12+25

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	163.8	168.5	150.1	135.0	130.6	156.5	124.8	136.3	
Width	52.1	53.0	53.2	52.8	52.9	56.5	53.0	54.0	
Mean Depth	3.1	3.2	2.8	2.6	2.5	2.8	2.4	2.5	
Max Depth	5.3	5.2	4.3	4.0	3.8	4.3	3.4	3.5	
W/D	16.6	16.7	18.8	20.7	21.4	20.4	22.5	21.4	



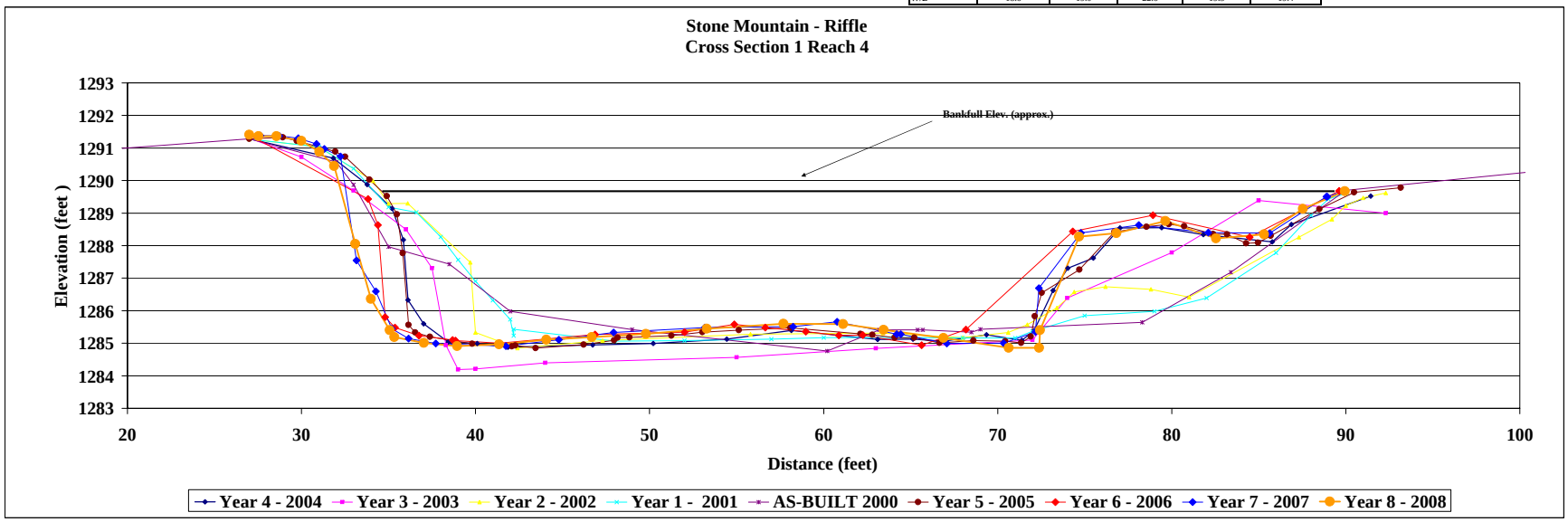
Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 1
Feature Riffle
Date 6/9/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
27.01	1291.41	xs1tp08	27	1291.38	X1LP	27	1291.4	X1LP	27.0	1291.3	Left Pin	27.0	1291.3	Left Pin	27.0	1291.3		27.0	1291.3	LPIN	27.0	1291.3		0.0	1290.2	
27.53	1291.36	xs1	27.63	1291.38		33.82	1289.43		28.9	1291.3		31.8	1290.7		30.0	1290.7		31.0	1291.0	LTOB	31.0	1291.0		27.0	1291.3	
28.56	1291.36	xs1	28.71	1291.37		34.39	1288.63		29.7	1291.2		33.8	1289.9		33.0	1289.7		34.1	1290.0		33.0	1290.4		32.0	1290.6	
29.99	1291.22	xs1	29.82	1291.3		34.8	1285.8		32.0	1290.9		35.2	1289.1		36.0	1288.5		35.0	1289.3		35.0	1289.2		33.0	1289.9	LBKF
31.03	1290.88	xs1	30.86	1291.12		35.37	1285.48	X1W	32.5	1290.7		35.9	1288.2		37.5	1287.3		36.1	1289.3		36.6	1289.0		35.0	1288.0	
31.88	1290.45	xs1	31.32	1290.97		36.76	1285.23		33.9	1290.0		36.1	1286.3		38.3	1284.9		39.7	1287.5		38.0	1288.3		38.5	1287.4	
33.09	1288.05	xs1	32.24	1290.74		38.68	1285.1		34.9	1289.5		37.0	1285.6	Water	39.0	1284.2		40.0	1285.3	LEW	39.0	1287.6		42.0	1286.0	
33.99	1286.36	xs1	33.16	1287.55		38.85	1285.08		35.5	1289.0		38.4	1285.0		40.0	1284.2		42.4	1284.9		40.0	1286.9		49.0	1285.4	
35.07	1285.4	xs1w	34.27	1286.59		41.36	1285		35.8	1287.8		40.1	1285.0		44.0	1284.4		47.3	1285.1		41.0	1286.3		60.2	1284.8	
35.34	1285.19	xs1	35.19	1285.45	X1W	46.86	1285.27		36.2	1285.6		41.9	1284.9	XST	55.0	1284.6		55.8	1285.3		42.0	1285.7		63.2	1285.4	
37.03	1285.01	xs1	36.15	1285.14		52.01	1285.34		36.5	1285.3		46.7	1285.0		63.0	1284.8		63.4	1285.3		42.2	1285.2		65.4	1285.4	
38.94	1284.91	xs1	37.71	1284.99		54.86	1285.58		37.4	1285.2		50.2	1285.0		72.0	1285.1		68.0	1285.2		42.2	1285.4		65.7	1285.4	
41.36	1284.97	xs1	41.75	1284.91		56.64	1285.48		39.8	1285.0		54.4	1285.1		74.0	1286.4		70.6	1285.3		48.0	1285.1		68.5	1285.3	
44.07	1285.11	xs1	44.78	1285.11		58.98	1285.36		42.1	1284.9		58.2	1285.4		80.0	1287.8		71.7	1285.6	REW/WS	52.0	1285.1		69.0	1285.4	
46.68	1285.19	xs1	47.93	1285.33		60.87	1285.24		42.3	1284.9		63.1	1285.1		85.0	1289.4		73.4	1286.1	BAR	57.0	1285.1		78.3	1285.6	
49.8	1285.29	xs1	53.17	1285.48		62.25	1285.25		43.5	1284.9		65.1	1285.1		92.3	1289.0		74.4	1286.6		60.0	1285.2		83.4	1287.2	
53.29	1285.45	xs1	58.25	1285.51		65.63	1284.94		46.2	1285.0		66.9	1285.1					76.2	1286.7		64.0	1285.2		90.0	1289.7	RBKF
57.69	1285.6	xs1	60.77	1285.66		68.18	1285.42	X1W	48.0	1285.1		69.4	1285.3					78.8	1286.7		68.0	1285.2		105.0	1290.5	
61.13	1285.59	xs1	64.2	1285.28		74.31	1288.44		48.2	1285.2		71.4	1285.1					81.0	1286.4		71.0	1285.2		107.0	1288.6	
63.46	1285.41	xs1	64.43	1285.28		78.93	1288.93		48.8	1285.2		72.1	1285.4					87.3	1288.3		72.0	1285.4				
66.9	1285.16	xs1	67.08	1284.99		84.48	1288.26		51.3	1285.2		73.2	1286.6					89.2	1288.8		75.0	1285.9				
70.64	1284.86	xs1	70.34	1285		89.62	1289.68	X1RP	53.0	1285.3		74.0	1287.3					90.0	1289.2	RTOB	79.0	1286.0				
72.39	1284.86	xs1	72.17	1285.35	X1W				55.1	1285.4		75.5	1287.6					91.0	1289.5		82.0	1286.4				
72.43	1285.4	xs1w	72.37	1286.69					58.1	1285.5		77.0	1288.5					92.3	1289.6		86.0	1287.8				
74.68	1288.28	xs1	74.78	1288.39		Right 26.38 feet			62.1	1285.3		79.4	1288.6								88.0	1288.9				
76.83	1288.38	xs1	78.1	1288.63					62.8	1285.3		81.8	1288.3								89.0	1289.4				
79.64	1288.76	xs1	82.1	1288.4					64.1	1285.2		85.8	1288.1								90.0	1289.6				
82.55	1288.22	xs1	85.62	1288.38					65.2	1285.2		86.9	1288.7													
85.31	1288.35	xs1	88.88	1289.5					66.7	1285.0		91.4	1289.5	Right Pin												
87.54	1289.13	xs1	88.93	1289.5					68.6	1285.08																
89.95	1289.67	xs1rp08	89.95	1289.68	X1RP				70.4	1285.06																
									71.4	1285.01																
									71.9	1285.21																
									72.1	1285.83																
									72.5	1286.55																
									74.7	1287.26																
									76.7	1288.42																
									78.6	1288.58																
									79.8	1288.66																
									80.7	1288.6																
									82.4	1288.36																
									83.2	1288.35																
									84.3	1288.07																
									85.0	1288.09																
									85.7	1288.3																
									88.5	1289.12																
									90.5	1289.64																
									93.2	1289.78																

Photo of Cross-Section 1 - Reach 4 - Looking Downstream @ STA 4+50

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	201.8	198.5	187.3	195.9	196.1	215.8	202.5	206.6	206.3
Width	58.1	57.7	62.6	58.3	57.7	59.3	58.2	57.0	57.0
Mean Depth	3.5	3.4	3.0	3.4	3.4	3.6	3.5	3.6	3.6
Max Depth	4.9	4.9	4.8	4.9	4.9	5.6	4.9	4.7	5.0
W/D	16.7	16.8	20.9	17.3	16.9	16.3	16.7	15.7	15.7

	Bench 2008	Bench 2007	Bench 2006	Bench 2005	Bench 2004
Area	153.4	150.2	137.6	127.0	132.0
Width	53.4	53.4	55.8	49.5	50.6
Mean Depth	2.9	2.8	2.5	2.6	2.6
Max Depth	4.1	4.0	3.9	3.7	3.7
W/D	18.6	19.0	22.6	19.3	19.4

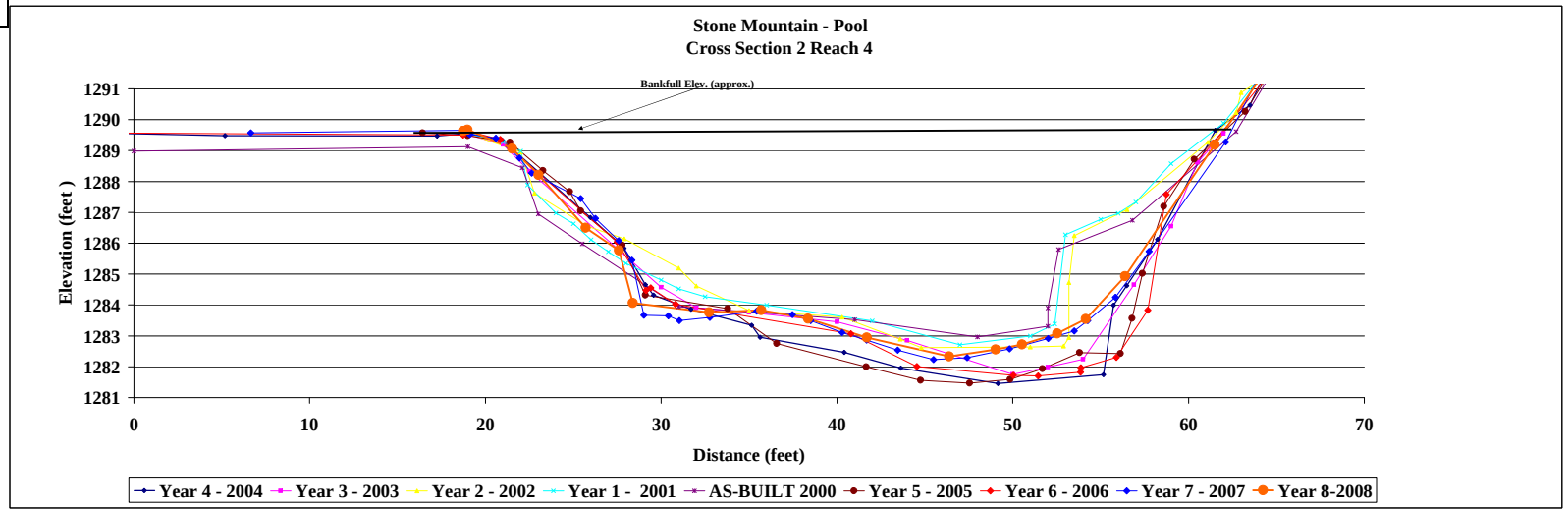


Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 2
Feature Pool
Date 6/9/08
Crew Z. Price, C. George

Year 8-2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BULT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
18.74	1289.64	xs2lp08	6.65	1289.57		-5.85	1289.58		16.4	1289.6		-8.3	1289.5		19.0	1289.6	Left Pin	19.0	1289.6	Left Pin	19.0	1289.6	Left Pin	0.0	1289.0	
18.98	1289.68	xs2	18.74	1289.66	X2LP	18.74	1289.5	X2LP	19.0	1289.5	Left Pin	-8.9	1289.7		19.0	1289.5		22.0	1289.0		21.0	1289.3		19.0	1289.1	LBKF
21.53	1289.07	xs2	19.11	1289.52		18.8	1289.63	X2LP	21.4	1289.3		5.2	1289.5		21.0	1289.2		22.8	1287.6		22.0	1289.0		22.1	1288.4	
23.02	1288.21	xs2	20.6	1289.4		18.86	1289.65		23.3	1288.4		17.3	1289.5		22.5	1288.3		25.8	1286.6		22.4	1287.9		23.0	1287.0	
25.71	1286.5	xs2	21.94	1288.76		20.84	1289.36		24.8	1287.7		19.0	1289.6	Left Pin	30.0	1284.6		27.9	1286.1		24.0	1287.0		25.5	1286.0	
27.6	1285.77	xs2	22.63	1288.27		27.49	1286.04		25.4	1287.1		21.0	1289.3		32.0	1283.9		31.0	1285.2		25.0	1286.6		31.0	1283.9	
28.39	1284.07	xs2	25.42	1287.45		29.13	1284.47		27.8	1285.9		26.0	1286.8		35.0	1283.8		32.0	1284.6		26.0	1286.1		41.0	1283.5	
32.73	1283.76	xs2	26.26	1286.8		29.41	1284.55	X2W	29.1	1284.3		27.9	1285.8		40.0	1283.5		35.0	1283.8		27.0	1285.7		48.0	1283.0	
35.69	1283.83	xs2	27.59	1286.08		30.82	1284.02		33.8	1283.9	Water	29.1	1284.7	Water	44.0	1282.9		40.3	1283.6		28.0	1285.4		52.0	1283.3	
38.36	1283.56	xs2w	28.33	1285.45		40.8	1283.07		36.6	1282.8		29.6	1284.3		50.0	1281.8		43.6	1282.9		30.0	1284.8		52.0	1283.9	
41.71	1282.95	xs2	29.01	1283.67		44.54	1282.01		41.7	1282.0		31.7	1283.9		52.0	1282.0		44.8	1282.6		31.0	1284.5		52.6	1285.8	
46.39	1282.33	xs2	30.41	1283.65		50.03	1281.72		44.8	1281.6		35.1	1283.3		54.0	1282.2		51.0	1282.6		32.5	1284.3		56.8	1286.7	
49.04	1282.56	xs2	31.04	1283.5		51.44	1281.7		47.6	1281.5		35.6	1283.0		56.9	1284.7		52.9	1282.7		36.0	1284.0		62.7	1289.6	RBKF
50.54	1282.72	xs2	32.77	1283.6		53.86	1281.82		49.9	1281.6		40.4	1282.5		59.0	1286.6		53.2	1282.9		42.0	1283.5		67.0	1293.7	
52.54	1283.08	xs2	35.43	1283.8		53.87	1281.97		51.7	1281.9		43.6	1282.0		60.5	1288.6		53.2	1284.7		47.0	1282.7		68.6	1293.9	
54.17	1283.55	xs2w	37.46	1283.69		55.9	1282.3		53.8	1282.5		49.2	1281.5		62.0	1289.6	RBKFL	53.5	1286.2		51.0	1283.0		80.0	1293.9	
56.4	1284.93	xs2	38.51	1283.49	X2W	57.69	1283.83		56.1	1282.4		55.2	1281.7		64.5	1291.4		56.5	1287.1		52.4	1283.4		100.0	1293.9	
61.5	1289.19	xs2	40.29	1283.11		58.74	1287.58		56.8	1283.6		55.7	1284.0		68.0	1294.3	RTOB	61.1	1289.3	BKF	53.0	1286.3				
66.77	1293.58	xs2	41.68	1282.86		61.41	1289.25		57.4	1285.0	Water	56.5	1284.6	Water				62.7	1290.2		55.0	1286.8				
68.05	1294.22	xs2rp08	43.45	1282.54		65.19	1291.9		58.6	1287.2		58.2	1286.1					63.0	1290.9		56.0	1287.0				
72.46	1294.51	xs2	45.49	1282.23		67.28	1294.35		60.3	1288.7		61.5	1289.7					64.1	1291.3		57.0	1287.3				
			47.4	1282.29		68.03	1294.54	X2RP	63.2	1290.3		63.5	1290.5					65.3	1292.7		59.0	1288.6				
			49.81	1282.58	X2RP	68.04	1294.38	X2RP	65.3	1292.1		65.5	1292.8					67.0	1294.0		62.0	1289.9				
			52.02	1282.91		83.15	1294.48		66.5	1293.9		67.5	1294.2					68.6	1294.4		64.0	1291.3				
			53.5	1283.16					68.0	1294.4	Right Pin	79.4	1294.4								67.0	1294.1				
			54.3	1283.5					68.2	1294.4		99.7	1294.5								68.4	1294.4				
			55.9	1284.3		ight 22.22 ft			73.0	1294.4		117.4	1294.0								68.4	1294.4				
			57.8	1285.7					78.0	1294.4		127.2	1294.1													
			62.1	1289.3								68.0	1294.4	Right Pin												
			64.51	1291.99																						
			68.06	1294.26	X2RP																					
			74.93	1294.55																						

Photo of Cross-Section 2 - Reach 4 - Looking Downstream @ STA 7+65

	Year 8-2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	205.73	208.6	220.3	223.7	224.4	210.6	182.8	179.6	189.6
Width	42.5	43.4	42.7	41.3	42.5	41.5	42.1	43.0	43.7
Mean Depth	4.8	4.8	5.2	5.4	5.3	5.1	4.3	4.2	4.3
Max Depth	7.2	7.3	7.8	8.1	8.1	7.8	6.9	6.8	6.6
W/D	8.8	9.0	8.3	7.6	8.1	8.2	9.7	10.3	10.1

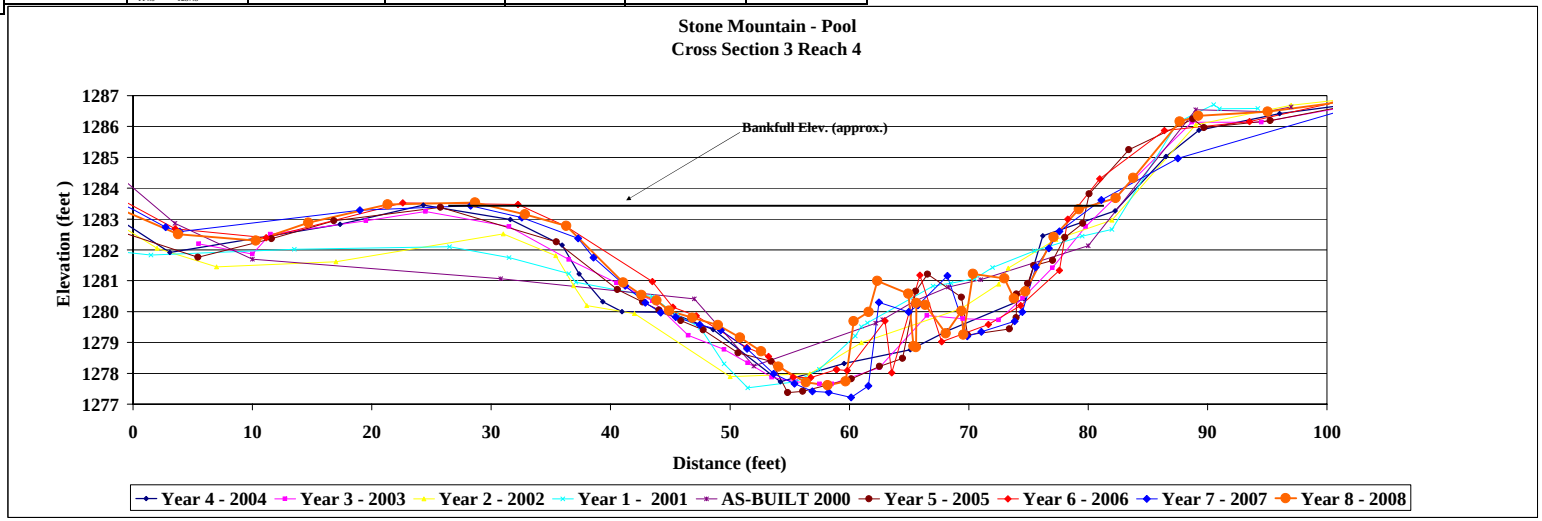


Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 3
Feature Pool
Date 6/9/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
-5.05	1284.68	xs3rp08	-5.05	1284.6	X3LP	-5.05	1284.63	X3LP	-6.9	1284.4		-6.9	1284.4		5.5	1282.2		-8.0	1284.5		-12.5	1284.5		-3.0	1285.0	
-4.58	1284.51	xs3	-3.24	1283.86	X3	-5.04	1284.48	X3	-3.3	1282.9		3.1	1281.9		10.0	1281.9		2.0	1282.1		-8.5	1283.8		3.5	1282.9	LBKF
-1.31	1283.36	xs3	-1.26	1283.55	X3	3.54	1282.68	X3	5.4	1281.8		17.3	1282.8		11.5	1282.5		7.0	1281.5		-6.5	1283.0		10.0	1281.7	
3.77	1282.51	xs3	-0.07	1283.33	X3	11.16	1282.39	X3	11.6	1282.4		24.3	1283.5		19.5	1282.9		17.0	1281.6		-2.5	1282.0		30.8	1281.1	
10.28	1282.3	xs3	2.74	1282.74	X3	22.59	1283.53	X3	16.8	1282.9		31.6	1283.0		24.5	1283.2	top bar	31.0	1282.5		1.5	1281.8		47.0	1280.4	
14.69	1282.88	xs3	3.91	1282.59	X3	32.24	1283.47	X3	25.8	1283.4		36.0	1282.2		31.5	1282.8		35.4	1281.8		13.5	1282.0		52.0	1278.2	
21.33	1283.47	xs3	19	1283.29	X3	36.29	1282.76	X3	35.5	1282.3		37.4	1281.2		36.5	1281.7		36.9	1280.8		26.5	1282.1		62.2	1279.6	
28.65	1283.54	xs3	28.28	1283.43	X3	43.49	1280.97	X3	40.6	1280.7		39.3	1280.3	Water	40.5	1280.9		38.0	1280.2		31.5	1281.8		62.8	1279.7	
32.83	1283.15	xs3	32.56	1283.05	X3W	45.22	1280.14	X3W	42.7	1280.3		41.0	1280.0		43.5	1280.4	lew	42.0	1279.9		36.5	1281.2		65.4	1280.3	
36.28	1282.78	xs3	37.28	1282.37	X3	47.16	1279.86	X3	44.1	1280.1		45.0	1280.0		46.5	1279.2		50.0	1277.9		37.1	1281.0		68.3	1280.8	
41.05	1280.94	xs3	38.56	1281.75	X3	51.4	1279.84	X3	45.9	1279.7		48.6	1279.4		49.5	1278.8		56.7	1278.0		43.5	1280.5		71.0	1281.0	
42.6	1280.54	xs3	41.23	1280.84	X3	53.23	1278.55	X3	47.8	1279.4		54.2	1277.7		51.5	1278.3		61.0	1279.0		45.5	1279.9		80.0	1282.1	
43.85	1280.36	xs3	42.91	1280.29	X3	55.29	1277.87	X3	50.7	1278.7		59.6	1278.3		53.5	1277.9		69.4	1280.1		47.5	1279.5		89.0	1286.5	RBKF
44.9	1280.03	xs3w	44.19	1279.97	X3	56.76	1277.86	X3	53.5	1278.4		65.1	1278.8		55.5	1277.7		72.5	1280.9		49.5	1278.3		95.0	1286.5	
46.85	1279.8	xs3	45.45	1279.82	X3	58.92	1278.12	X3	54.8	1277.4		68.2	1279.4		57.5	1277.7		73.3	1281.4		51.5	1277.5		97.0	1286.6	
48.99	1279.56	xs3	47.46	1279.57	X3	58.93	1278.12	X3	56.1	1277.4		74.6	1280.4	Water	58.5	1277.7		77.3	1282.3		55.5	1277.7				
50.85	1279.16	xs3	49.24	1279.4	X3	59.81	1278.09	X3	60.2	1277.8		76.2	1282.5		62.5	1278.2		82.0	1283.0		57.5	1278.1				
52.6	1278.71	xs3	51.43	1278.79	X3	62.99	1279.7	X3	62.5	1278.2		82.3	1283.3		66.5	1279.9		89.0	1286.1		60.5	1279.2				
54.06	1278.21	xs3	53.66	1277.99	X3	63.56	1278.02	X3	64.5	1278.5		86.5	1285.0		69.5	1279.8		97.0	1286.7		61.0	1279.5				
56.36	1277.71	xs3	55.39	1277.66	X3	65.9	1281.18	X3	65.6	1280.7		89.3	1285.9		72.5	1279.7		104.0	1287.0	Right Pin	61.5	1279.6				
58.18	1277.61	xs3	56.89	1277.41	X3	67.73	1279.02	X3	66.6	1281.2		96.0	1286.4		74.5	1280.4	rew	113.2	1297.8		67.0	1280.8				
59.68	1277.74	xs3	58.28	1277.38	X3	71.63	1279.58	X3	69.4	1280.5		107.2	1287.0		77.0	1281.4					68.5	1280.9				
60.36	1279.69	xs3	60.15	1277.22	X3W	74.35	1280.2	X3W	69.9	1279.2		114.0	1287.8	Right Pin	79.8	1282.8					70.5	1281.1				
61.62	1279.99	xs3	61.6	1277.59	X3	77.6	1281.34	X3	71.4	1279.4		118.3	1288.2		88.7	1286.1					72.0	1281.4				
62.35	1280.99	xs3	62.47	1280.3	X3	78.28	1283	X3	74.0	1279.8					94.5	1286.1					75.5	1282.0				
64.93	1280.58	xs3	64.98	1279.99	X3	80.96	1284.3	X3	74.0	1280.6					103.5	1286.8					79.5	1282.5				
65.36	1278.88	xs3	65.74	1280.21	X3	86.39	1285.87	X3	74.9	1280.9					114.0	1287.8	Right Pin				82.0	1282.7				
65.58	1278.85	xs3	68.22	1281.16	X3	93.51	1286.16	X3	75.5	1281.5					114.0	1287.7					87.5	1286.1				
65.61	1280.28	xs3	69.88	1279.2	X3LP	100.09	1286.73	X3LP	77.0	1281.7											90.5	1286.7				
66.37	1280.22	xs3	71.06	1279.34	X3RP	114.01	1287.96	X3RP	78.0	1282.4											91.0	1286.6				
68.08	1279.29	xs3	73.84	1279.69	X3RP	114.13	1287.96	X3RP	79.6	1282.9											94.2	1286.6				
69.4	1280.02	xs3w	74.49	1279.99					80.1	1283.8				0.0							94.2	1286.7				
69.56	1279.25	xs3	75.61	1281.44		left 8.6 feet			83.4	1285.3											94.2	1286.6				
70.36	1281.22	xs3	76.7	1282.05					88.8	1286.2																
72.97	1281.08	xs3	77.6	1282.6					89.7	1286.0																
73.8	1280.42	xs3	81.11	1283.62					95.3	1286.2																
74.76	1280.65	xs3	87.5	1284.97					107.2	1287.1																
77.12	1282.41	xs3	108.96	1287.38					114.0	1287.8																
79.23	1283.32	xs3	114.07	1287.88																						
82.3	1283.68	xs3																								
83.78	1284.33	xs3																								
87.66	1286.16	xs3																								
89.23	1286.35	xs3																								
95.03	1286.48	xs3																								
100.14	1286.74	xs3																								
104.17	1287.19	xs3																								
107.81	1287.39	xs3																								
112.52	1287.98	xs3																								
114.26	1287.99	xs3rp08																								

Photo of Cross-Section 3 - Reach 4 - Looking Downstream @ STA 16+35

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	134.4	151.2	161.1	161.8	162.2	173.0	181.3	170.0	183.9
Width	49	52.8	53.8	50.7	58.0	61.3	65.0	66.0	70.0
Mean Depth	2.7	2.9	3.0	3.2	2.8	2.8	2.8	2.6	2.6
Max Depth	5.7	6.0	5.9	5.5	5.5	5.6	5.4	5.7	5.0
W/D	17.9	18.5	18.0	15.9	20.7	21.7	23.3	25.6	26.7

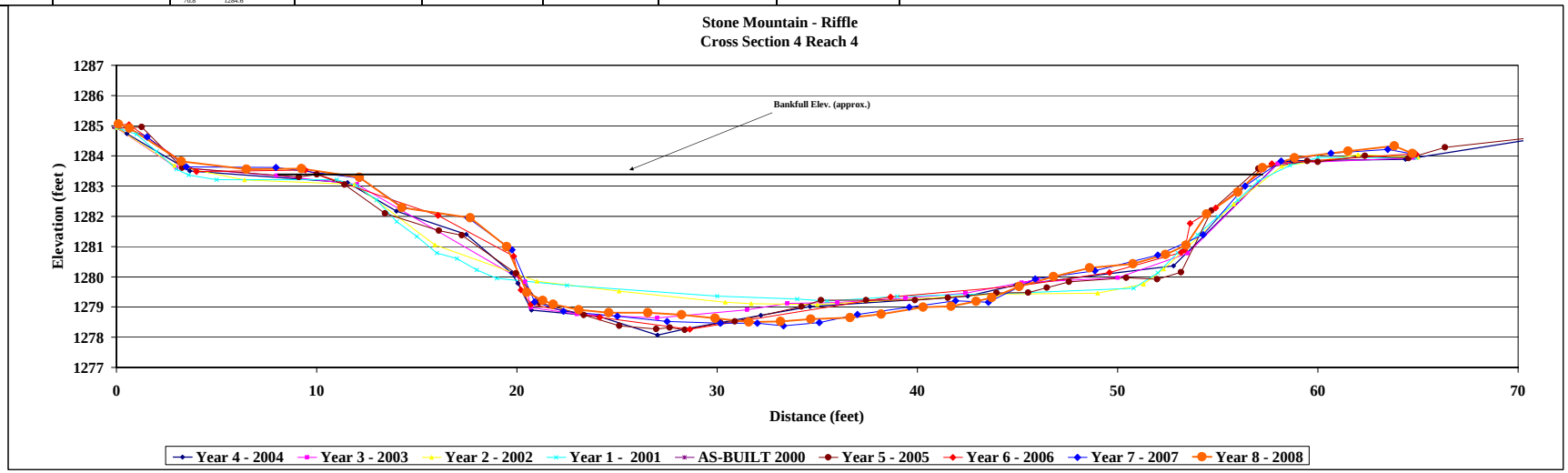


Project Name	Stone Mountain
Cross Section	Reach 4 Cross-Section 4
Feature	Riffle
Date	6/10/08
Crew	Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2004 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
			0.1	1285.05	X4LP	0.1	1285.0	X4LP	-5.0	1285.3		-47.0	1287.2		0.0	1284.9	Left Pin	0.0	1284.9	Left Pin	0.0	1284.9	Left Pin			
0.1	1285.05	xs4lp08	1.52	1284.63		0.6	1285.0	X4LP	-1.4	1285.2		-28.9	1287.3		3.0	1283.6		2.9	1283.7		1.0	1284.7				
0.65	1284.92	xs4	3.49	1283.64		4.0	1283.5	X4	-0.1	1284.9		-17.6	1285.8		8.0	1283.4		6.4	1283.2		2.0	1284.2				
3.24	1283.82	xs4	7.96	1283.62		9.4	1283.5	X4	1.3	1285.0	Left Pin	0.0	1284.9	Left Pin	12.0	1283.1		11.9	1283.1		3.0	1283.6				
6.5	1283.56	xs4	12.18	1283.26		16.1	1282.0	X4	3.3	1283.6		0.5	1284.7		20.4	1279.8		15.9	1281.1		3.6	1283.4				
9.25	1283.58	xs4	14.33	1282.29		19.8	1280.7	X4	9.1	1283.3		3.7	1283.5		20.7	1279.0		21.0	1279.9		5.0	1283.2				
12.14	1283.29	xs4	17.56	1281.95		20.2	1279.6	X4W	10.0	1283.4		11.5	1283.1		23.0	1278.8		25.1	1279.5		11.0	1283.2	LBKF			
14.26	1282.29	xs4	19.76	1280.89		20.7	1279.1	X4	11.4	1283.1		14.0	1282.2		27.0	1278.6		30.4	1279.2		12.0	1283.0				
17.68	1281.96	xs4	20.89	1279.17		24.1	1279.7	X4	13.4	1282.1		17.5	1281.4		31.5	1278.9		31.7	1279.1		13.0	1282.5				
19.49	1281	xs4	22.33	1278.86		28.6	1278.3	X4	16.1	1281.5		19.7	1280.1		33.5	1279.1		35.0	1279.1		14.0	1281.8				
20.49	1279.49	xs4	25.02	1278.7		38.7	1279.3	X4	17.3	1281.4	Water	20.1	1279.8	Water	36.0	1279.2		44.0	1279.4		15.0	1281.3				
21.3	1279.22	xs4w	27.5	1278.52		45.2	1279.7	X4W	20.0	1280.1		20.7	1278.9		39.4	1279.3		49.0	1279.5		16.0	1280.8				
21.82	1279.09	xs4	30.16	1278.46		49.6	1280.1	X4	21.1	1279.2		24.1	1278.7		42.4	1279.5		51.3	1279.8		17.0	1280.6				
23.1	1278.91	xs4	32.01	1278.46		53.2	1280.8	X4	23.3	1278.7		27.0	1278.1		46.0	1279.9		52.3	1280.3		18.0	1280.2				
24.59	1278.81	xs4	33.32	1278.38		53.4	1280.9	X4	25.1	1278.4	Thalweg	28.4	1278.3	Thalweg	45.2	1279.8		55.8	1282.4		19.0	1280.0				
26.54	1278.81	xs4	35.1	1278.48		53.6	1281.8	X4	27.0	1278.3		32.2	1278.7		50.0	1280.0		58.2	1283.7		22.5	1279.7				
28.22	1278.74	xs4	37.01	1278.75		54.9	1282.3	X4	27.6	1278.3		34.6	1279.0		53.5	1280.8		62.0	1284.0		30.0	1279.4				
29.9	1278.63	xs4	39.6	1278.99		57.7	1283.7	X4	28.4	1278.2		42.5	1279.4		58.0	1283.7		65.0	1284.0	Right Pin	34.0	1279.3				
31.58	1278.5	xs4	41.9	1279.21		64.7	1284.1	X4RP	30.2	1278.5	Water	44.9	1279.7	Water	64.8	1283.9	Right Pin				35.5	1279.2				
33.17	1278.52	xs4	43.55	1279.16		64.9	1284.1	X4	30.9	1278.5		52.8	1280.4								39.0	1279.4				
34.68	1278.6	xs4	45.89	1279.93					34.2	1279.0	Bankfull	58.0	1283.8	Bankfull							45.5	1279.5				
36.64	1278.65	xs4	48.87	1280.2					35.2	1279.2		58.7	1283.8								50.8	1279.6				
38.2	1278.76	xs4	52	1280.72					37.4	1279.2	Right Pin	64.4	1283.9	Right Pin							52.0	1280.1				
40.29	1278.99	xs4	54.27	1281.39					39.9	1279.2		71.8	1284.7								53.0	1280.8				
41.69	1279.02	xs4	56.37	1283					41.5	1279.3											54.0	1281.4				
42.94	1279.19	xs4	58.17	1283.83					44.0	1279.5											55.0	1282.0				
43.72	1279.31	xs4w	60.66	1284.09					45.5	1279.5											56.0	1282.5				
45.09	1279.68	xs4	63.49	1284.22					46.5	1279.6											57.0	1283.2	RBKF			
46.8	1280.01	xs4	64.78	1284.06	X4RP				47.6	1279.8											58.6	1283.7				
48.61	1280.29	xs4							50.4	1280.0											60.0	1284.0				
50.77	1280.43	xs4							52.0	1279.9											64.9	1283.9				
52.4	1280.74	xs4							53.2	1280.2																
53.41	1281.05	xs4							54.7	1282.2																
54.45	1282.08	xs4							57.0	1283.6																
56	1282.8	xs4							59.5	1283.8																
57.24	1283.61	xs4							60.0	1283.8																
58.83	1283.94	xs4							62.4	1284.0																
61.51	1284.16	xs4							64.5	1283.9																
63.82	1284.33	xs4							66.4	1284.3																
64.73	1284.08	xs4rp08							70.8	1284.6																

Photo of Cross-Section 4 - Reach 4 - Looking Downstream @ STA 20+00

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	140.9	143.9	141.2	147.3	141.4	139.5	140.7	139.5	
Width	44	44.2	45.5	44.7	41.3	45.5	45.9	45.0	
Mean Depth	3.2	3.3	3.1	3.3	3.4	3.1	3.1	3.1	
Max Depth	4.6	4.7	4.9	4.9	5.0	4.5	4.0	3.9	
W/D	13.7	13.6	14.6	13.6	12.0	14.8	15.0	14.5	

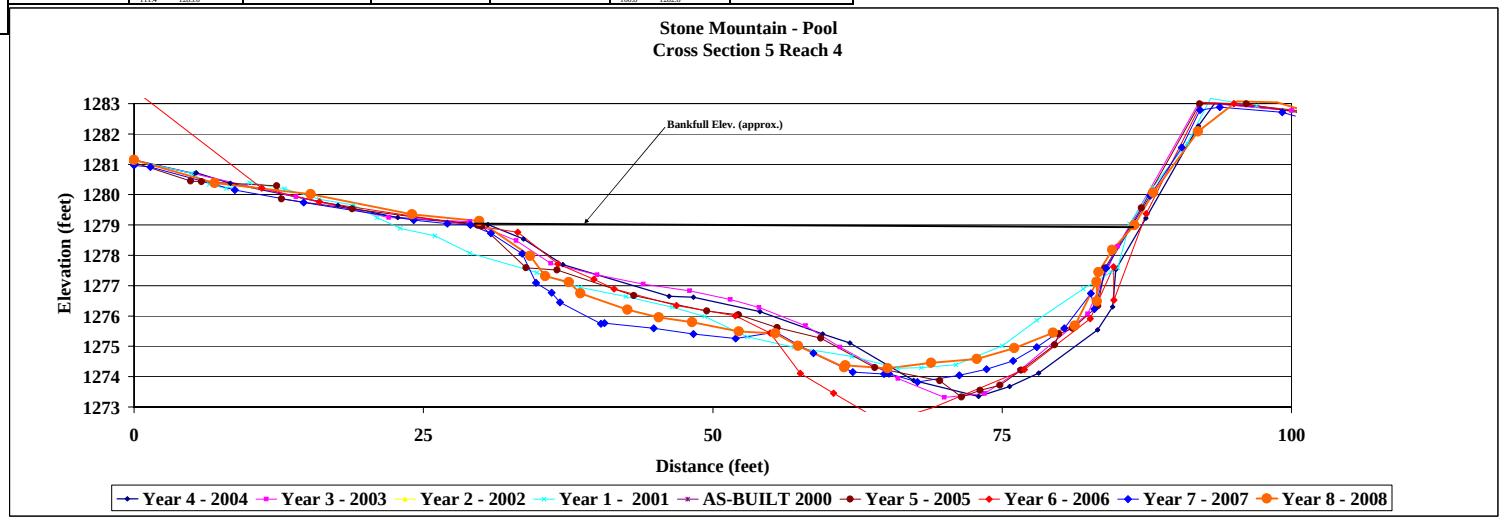


Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 5
Feature Pool
Date 6/10/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
0	1281.14	xs5ip08	0	1280.96	XSLP	0	1283.45	XSLPR4	-11.2	1281.6		-37.8	1280.7		0.0	1281.1					0.0	1281.1				
6.96	1280.98	xs5	1.42	1280.91		11.02	1280.21	XS	-1.6	1281.1		-18.3	1281.6		14.0	1279.9					5.0	1280.7				
15.27	1280.02	xs5	8.7	1280.15		16.01	1279.76	XS	0.0	1281.1	Left Pin	-7.6	1281.6		22.0	1279.2					6.5	1280.3				
24.03	1279.35	xs5	14.65	1279.74		33.16	1278.76	XS	4.9	1280.5		0.0	1281.1	Left Pin	29.0	1279.1					8.0	1280.2				
29.83	1279.13	xs5	24.16	1279.16		36.62	1277.72	XS	5.8	1280.4		5.2	1280.7		33.0	1278.5					10.0	1280.4				
34.22	1277.98	xs5	27.06	1279.04		39.74	1277.21	XS	12.3	1280.3		5.4	1280.7	Bankfull	36.0	1277.7					13.0	1280.2				
35.52	1277.31	xs5	29.06	1279		41.46	1276.89	XS	12.8	1279.9		8.3	1280.4		40.0	1277.4					16.0	1279.9				
37.56	1277.11	xs5w	30.82	1278.73		46.85	1276.34	XS	18.9	1279.5		17.6	1279.7		44.0	1277.1					19.0	1279.7				
38.56	1276.74	xs5	33.53	1278.05		51.94	1276.01	XSW	29.7	1279.0		22.8	1279.2		48.0	1276.8					21.0	1279.3	LBKF			
42.62	1276.21	xs5	34.73	1277.09		54.97	1275.44	XS	30.1	1279.0		30.6	1279.0		51.5	1276.5					23.0	1278.9				
45.35	1275.95	xs5	36.07	1276.77		57.55	1274.11	XS	33.9	1277.6		33.7	1278.5		54.0	1276.3					26.0	1278.6				
48.22	1275.8	xs5	36.81	1276.45		60.43	1273.45	XS	36.6	1277.5		37.0	1277.7		58.0	1275.7					29.0	1278.1				
52.26	1275.49	xs5	40.35	1275.74		64.83	1272.47	XS	43.2	1276.7		46.2	1276.7		61.0	1275.0					34.8	1277.4				
55.4	1275.43	xs5	40.65	1275.76		69.1	1272.99	XS	49.5	1276.2		48.3	1276.6		66.0	1273.9					38.5	1277.0				
57.36	1275.01	xs5	44.91	1275.6		76.91	1274.23	XS	52.2	1276.0		54.1	1276.1		70.0	1273.3					42.5	1276.6				
61.36	1274.31	xs5	48.33	1275.41		82.61	1275.91	XSW	55.6	1275.6		59.5	1275.4		73.5	1273.4					46.5	1276.3				
61.45	1274.37	xs5	51.99	1275.26		84.64	1277.62	XS	59.3	1275.3		61.9	1275.1		76.5	1274.2					49.3	1276.0				
65.12	1274.28	xs5	55.42	1275.47		84.65	1276.52	XS	64.0	1274.3		67.4	1273.9		82.4	1276.1	rew				53.0	1275.3				
68.86	1274.46	xs5	58.7	1274.77		87.44	1279.37	XS	69.6	1273.9		73.0	1273.4		85.0	1278.3					57.0	1275.0				
72.82	1274.58	xs5	62.09	1274.15		92.25	1283.04	XS	71.5	1273.3		75.6	1273.7		92.0	1283.0	rtob				62.0	1274.7				
76.06	1274.94	xs5	64.8	1274.09		92.46	1283.04	XS	73.1	1273.6		78.2	1274.1		100.0	1282.8	tpin				66.0	1274.3				
79.4	1275.45	xs5	65.21	1274.1		95.03	1283	XS	74.8	1273.7		83.2	1275.5								68.0	1274.3				
81.29	1275.68	xs5	67.67	1273.82		100.83	1282.76	XSRP	76.7	1274.2		84.6	1276.3								71.0	1274.4				
83.17	1277.12	xs5w	71.29	1274.04		102.71	1282.77	xSrS	79.6	1275.1		84.8	1277.5								75.0	1275.0				
83.18	1276.48	xs5	73.65	1274.25					79.9	1275.4		87.4	1279.2								78.0	1275.9				
83.32	1277.44	xs5	75.96	1274.52					81.1	1275.6		92.0	1282.3								82.0	1276.9				
84.52	1278.18	xs5	78	1274.97		up 0.3 feet			83.3	1276.3		93.4	1283.0								84.4	1277.4				
86.43	1278.99	xs5	80.37	1275.6					83.9	1277.6		100.9	1282.8								85.0	1277.6				
88.07	1280.07	xs5	82.67	1276.75					87.0	1279.6		101.2	1282.8	Right Pin							86.0	1279.0	RBKF			
91.94	1282.08	xs5	82.97	1276.23					92.1	1283.0		109.6	1283.07								88.0	1280.3				
95.27	1283.07	xs5	83.99	1277.58					96.1	1283.0		130.2	1283.14								91.0	1281.7				
98.76	1283.04	xs5	87.78	1279.96					100.5	1282.7											93.0	1283.2				
100.77	1282.81	xs5rp08	90.51	1281.55					106.1	1283.1											97.0	1282.9				
			92.08	1282.79					111.4	1283.0											100.8	1282.8				
lowered:	.4 feet		93.82	1282.88																						
			99.19	1282.72																						
			100.32	1282.59	XSRP																					

Photo of Cross-Section 5 - Reach 4 - Looking Downstream @ STA 24+10

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 3 - 2003	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	184.9	200.4	202.1	184.6	180.7	175.1	183.9	183.6	
Width	56.6	59.8	54.5	64.0	54.2	56.0	54.2	60.0	
Mean Depth	3.3	3.4	3.7	2.9	3.3	3.1	3.4	3.1	
Max Depth	4.8	5.3	6.6	5.8	5.8	5.8	5.8	4.8	
W/D	17.3	17.8	14.7	22.2	16.3	17.9	16.0	19.6	

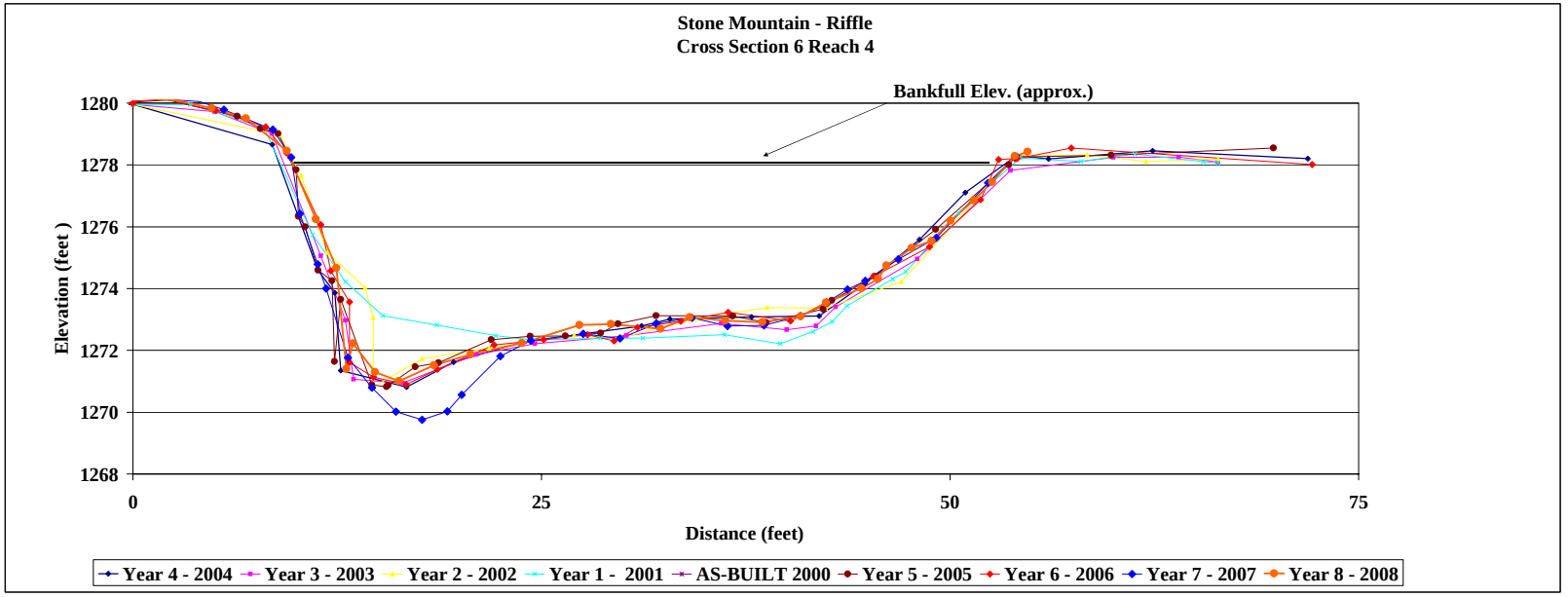


Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 6
Feature Riffle
Date 6/10/08
Crew Z. Price, C. George

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
0	1280.2	xs6lp08	0	1280.19	X6LP	-24.49	1279.99	x6	-6.6	1279.8		-25.3	1280.1		0.0	1280.0	Left Pin	0.0	1280.0	Left Pin	0.0	1280.0	Left Pin			
2.75	1280.08	xs6	4.08	1280.05		-1	1280.05	X6LP	-4.0	1279.9		-4.8	1279.9		5.0	1279.7		9.0	1279.0	LTOB	3.5	1280.0				
4.83	1279.84	xs6	5.56	1279.79		0	1279.99	x6lpr4	0.3	1280.0	Left Pin	0.0	1280.0	Left Pin	8.5	1279.0	ltob	10.3	1277.7		8.0	1279.2	LBKF			
6.92	1279.51	xs6	8.56	1279.14		0.12	1280.07	x6lp	2.1	1280.1		8.5	1278.7		11.5	1275.1		11.9	1275.2		11.0	1275.7				
9.42	1278.46	xs6	9.68	1278.25		2.74	1280.14	x6	6.4	1279.6		11.3	1274.6		13.0	1273.0	lrw	14.2	1274.0		13.0	1274.2				
11.19	1276.25	xs6	10.23	1276.42		2.79	1280.02	x6	7.8	1279.2		12.4	1273.9		13.5	1271.1		14.7	1273.1		15.3	1273.1				
12.45	1274.67	xs6w	11.3	1274.79		5.07	1279.76	x6	8.9	1279.0		12.7	1271.4		16.5	1270.9		14.7	1270.8	LEW	18.6	1272.8				
13.07	1271.4	xs6	11.82	1274		8.12	1279.23	x6	10.0	1277.8		16.7	1270.8		21.0	1271.9		17.7	1271.7		22.2	1272.5				
13.47	1272.23	xs6	13.15	1271.76		9.41	1278.39	x6	10.1	1276.3		19.6	1271.6		24.6	1272.2		21.8	1272.1		24.5	1272.3				
14.82	1271.3	xs6	14.63	1270.79		11.49	1276.07	x6	10.5	1276.0		23.8	1272.3		30.2	1272.5		27.0	1272.5		28.6	1272.4				
16.28	1271.01	xs6	16.09	1270.02		12.1	1274.57	x6	11.3	1274.6		31.1	1272.8		36.0	1272.9		29.6	1272.4		31.2	1272.4				
18.43	1271.52	xs6	17.7	1269.75		13.26	1273.57	x6	12.2	1274.3	Water	32.9	1273.0	Water	40.0	1272.7		34.4	1273.0		36.2	1272.5				
20.68	1271.87	xs6	19.25	1270.03		13.26	1271.61	x6	12.3	1271.6		37.9	1273.1		41.8	1272.8	rew	38.8	1273.4		39.6	1272.2				
23.8	1272.24	xs6	20.11	1270.56		14.72	1271.14	x6	12.7	1273.7		42.0	1273.1		43.0	1273.4		42.4	1273.4		41.6	1272.6				
27.32	1272.82	xs6	22.49	1271.81		16.72	1270.89	x6	14.6	1270.9		44.8	1274.2		48.0	1275.0		47.0	1274.2		42.8	1272.9				
29.25	1272.85	xs6	24.35	1272.32		18.64	1271.39	x6	15.5	1270.8		48.1	1275.6		53.7	1277.8	rtob	54.0	1278.3	RTOB	43.7	1273.5				
32.28	1272.7	xs6	27.55	1272.54		22.1	1272.17	x6	15.6	1270.9		50.9	1277.1		60.0	1278.3		58.4	1278.3		46.5	1274.3				
34.08	1273.07	xs6	29.8	1272.39		25.13	1272.35	x6	17.3	1271.5	Right Pin	54.1	1278.3	Right Pin	64.0	1278.3		62.0	1278.1		47.3	1274.5				
36.26	1272.96	xs6	32.02	1272.86		27.83	1272.51	x6	18.7	1271.6		56.0	1278.2		66.4	1278.1		66.4	1278.2		50.5	1276.5				
38.52	1272.91	xs6	32.04	1272.87		29.45	1272.31	x6	21.9	1272.4		62.4	1278.5								54.3	1278.2	RBKF			
40.86	1273.1	xs6	34.22	1273.05		30.88	1272.74	x6w	24.3	1272.5		71.9	1278.2								58.0	1278.1				
42.41	1273.55	xs6	36.39	1272.79		33.53	1272.94	x6	26.5	1272.5											61.3	1278.4				
44.59	1274.01	xs6	38.62	1272.81		36.42	1273.23	x6	28.6	1272.6											65.5	1278.1				
45.59	1274.31	xs6	40.85	1273.11		40.24	1272.95	x6	29.7	1272.9											66.4	1278.1				
46.11	1274.75	xs6w	42.45	1273.56		42.49	1273.51	x6	32.0	1273.1																
47.65	1275.31	xs6	43.72	1273.97		45.32	1274.39	x6	36.7	1273.1																
48.87	1275.54	xs6	44.81	1274.25		48.75	1275.35	x6	38.7	1272.9																
50.04	1276.2	xs6	46.83	1274.95		51.87	1276.87	x6	42.2	1273.3																
51.44	1276.85	xs6	49.17	1275.64		52.98	1278.17	X6RP	42.8	1273.6																
52.57	1277.45	xs6	52.32	1277.42		53.97	1278.21	x6rpe4	45.4	1274.4																
53.96	1278.29	xs6rp08	53.99	1278.28	x6rp	54.1	1278.2	x6rp	49.1	1275.9																
54.75	1278.43	xs6	lowered 0.3 feet			57.42	1278.55	x6	53.6	1278.0																
						72.15	1278.01	x6	54.0	1278.3																
lowered 0.3 feet						lowered 0.3 feet			59.9	1278.3																
									69.8	1278.6																

Photo of Cross-Section 6 - Reach 4 - Looking Downstream @ STA 26+70

	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	209.7	224.5	212.1	210.3	223.1	193.4	210.1	
Width	43.2	42.6	44.7	44.7	45.2	36.7	46.3	
Mean Depth	4.9	5.3	4.7	4.7	4.9	5.3	4.5	
Max Depth	7.2	8.5	7.3	7.4	7.3	7.4	6.0	
W/D	8.9	8.1	9.4	9.5	9.2	7.0	10.2	



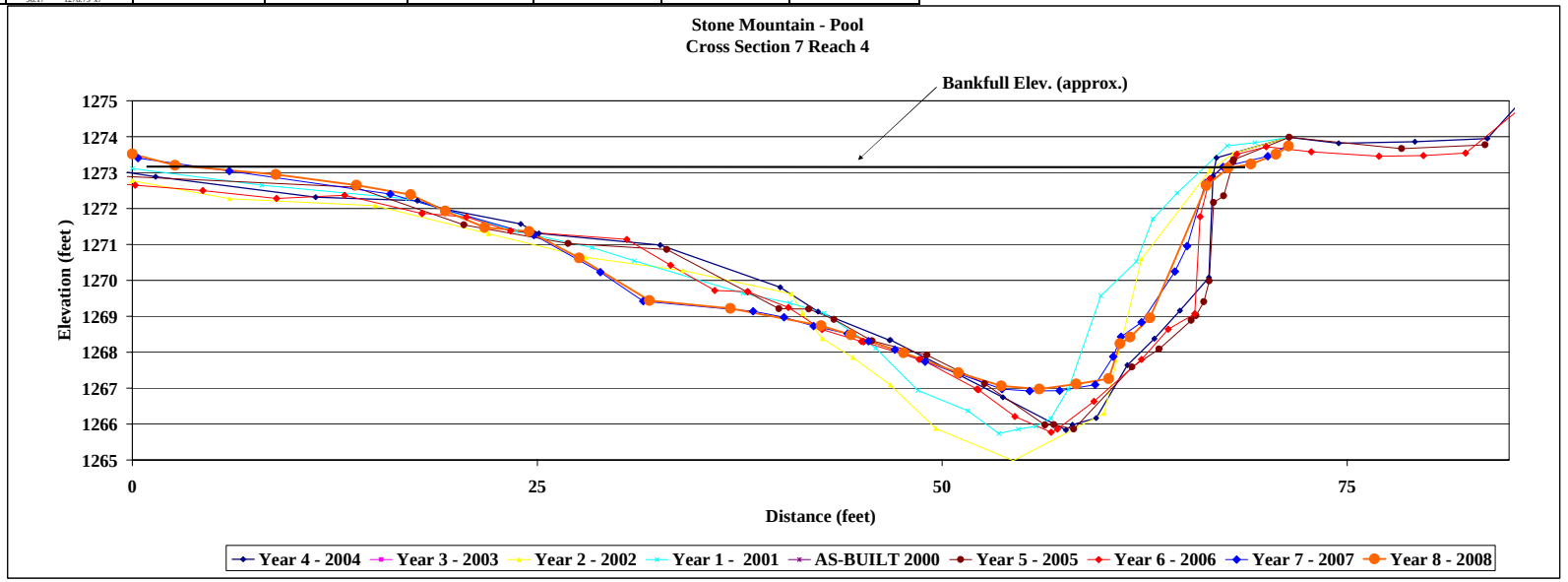
Project Name Stone Mountain
Cross Section Reach 4 Cross-Section 7
Feature Pool
Date 6/10/08
Crew Z. Price, C. George

***NOTE: The left pin was replaced in 2007 because the original pin was buried during repair work completed that year.**

Year 8 - 2008 2008 Survey			Year 7 - 2007 2007 Survey			Year 6 - 2006 2006 Survey			Year 5 - 2005 2005 Survey			Year 4 - 2004 2004 Survey			Year 3 - 2003 2003 Survey			Year 2 - 2002 2002 Survey			Year 1 - 2001 2001 Survey			AS-BUILT 2000 AS-BUILT Survey		
Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes	Station	Elev	Notes
0	1273.52	xs7lp08	0	1273.5	x7lpnew	-17.7	1273.8	x7	-19.4	1274.3		-22.6	1274.3					0.0	1272.8		0.0	1273.1	LBKF			
2.64	1273.2	xs7	0.35	1273.4		-7.3	1273.2	x7	-11.6	1273.7		-10.5	1273.7					6.0	1272.3		8.0	1272.7				
8.86	1272.95	xs7	5.98	1273.04		-1.8	1272.7	x7lp	-3.0	1273.0		1.4	1272.9					15.0	1272.1		17.0	1272.3				
13.84	1272.65	xs7	15.93	1272.4		0.2	1272.7	x7	13.7	1272.6		11.3	1272.3					22.0	1271.3		23.7	1271.4				
17.19	1272.39	xs7	24.79	1271.26		4.4	1272.5	x7	20.5	1271.5		17.6	1272.2	Bankfull				28.0	1270.6		28.4	1270.9				
19.33	1271.93	xs7	28.9	1270.23		8.9	1272.3	x7	26.9	1271.0		19.3	1272.0					34.0	1270.3		31.0	1270.5				
21.76	1271.47	xs7	31.54	1269.42		13.1	1272.4	x7	33.0	1270.9		24.0	1271.6					40.7	1269.6		37.7	1269.6				
24.5	1271.36	xs7	38.33	1269.14		17.9	1271.9	x7	39.9	1269.2		25.1	1271.3					41.4	1269.1	LEW	40.6	1269.4				
27.6	1270.62	xs7	40.23	1268.97		17.9	1271.9	x7	41.8	1269.2		32.6	1271.0					42.6	1268.4		42.7	1269.1				
31.94	1269.44	xs7	42.07	1268.73		20.6	1271.8	x7	43.3	1268.9		40.0	1269.8					44.5	1267.9		45.9	1268.1				
36.92	1269.22	xs7	44.17	1268.52		23.4	1271.4	x7bkf	45.7	1268.3		42.3	1269.1	Water				46.8	1267.1		48.5	1266.9				
42.53	1268.74	xs7	45.44	1268.31		30.5	1271.1	x7	49.1	1267.9		46.8	1268.3					49.6	1265.9		51.6	1266.4				
44.37	1268.48	xs7w	47.08	1268.07		33.2	1270.4	x7	52.6	1267.1		46.8	1268.3					54.4	1265.0		53.5	1265.7				
47.63	1267.98	xs7	48.95	1267.74		36.0	1269.7	x7	56.4	1266.0		53.7	1266.8					60.0	1266.3		54.7	1265.9				
51	1267.43	xs7	51.1	1267.39		38.0	1269.7	x7	56.9	1266.0		57.6	1265.8	Max Pool				62.3	1270.6		55.8	1265.9				
53.66	1267.06	xs7	53.7	1266.97		38.0	1269.7	x7	58.1	1265.9		58.1	1266.0					66.5	1273.1	RTOB	56.7	1266.2				
56	1266.97	xs7	55.41	1266.92		40.5	1269.3	x7	61.7	1267.6		59.5	1266.2					68.0	1273.5		57.8	1267.0				
58.28	1267.11	xs7	57.25	1266.93		42.6	1268.6	x7w	63.4	1268.1		61.4	1267.6					71.4	1274.0	RPIN	59.8	1269.6				
60.28	1267.26	xs7	59.44	1267.1		45.0	1268.3	x7	65.4	1268.9		63.1	1268.4								62.0	1270.5				
60.98	1268.24	xs7	60.55	1267.88		45.1	1268.3	x7	65.7	1269.0		64.7	1269.2	Water							63.0	1271.7				
61.61	1268.42	xs7w	61.05	1268.43		45.2	1268.3	x7	66.2	1269.4		66.5	1270.1								64.5	1272.4				
62.83	1268.96	xs7	62.3	1268.83		48.6	1267.8	x7	66.5	1270.0		66.7	1272.9								67.6	1273.8	RBKF			
66.32	1272.64	xs7	64.36	1270.25		48.7	1267.8	x7	66.8	1272.2		66.9	1273.4								69.3	1273.8				
67.66	1273.12	xs7	65.13	1270.96		52.2	1267.0	x7	67.4	1272.4		71.4	1274.0	Right Pin							71.4	1274.0				
69.07	1273.24	xs7	66.25	1272.71		52.2	1267.0	x7	68.0	1273.3		74.5	1273.8													
70.61	1273.51	xs7	67.35	1273.16		54.5	1266.2	x7	68.0	1273.4		79.2	1273.9													
71.38	1273.74	xs7rp08	70.1	1273.46		56.7	1265.8	x7	71.4	1274.0		83.7	1274.0													
			71.38	1273.77	x7rp	57.1	1265.9	x7	78.4	1273.7		93.7	1278.9													
						59.4	1266.6	x7	83.5	1273.8		113.2	1279.0													
						62.3	1267.8	x7				132.16	1279.55													
						63.96	1268.64	x7																		
						65.59	1269.07	x7																		
						65.93	1271.77	x7																		
						66.53	1272.83	x7																		
						68.17	1273.51	x7																		
						70.01	1273.72	x7rp																		
						72.78	1273.58	x7																		
						76.97	1273.46	x7																		
						79.72	1273.47	x7																		
						82.31	1273.54	x7																		
						86.09	1274.93	x7																		
						91.25	1278.5	x7																		
						92.65	1278.82	x7																		
						98.17	1278.79	x7																		

Photo of Cross-Section 7 - Reach 4 - Looking Downstream @ STA 32+70

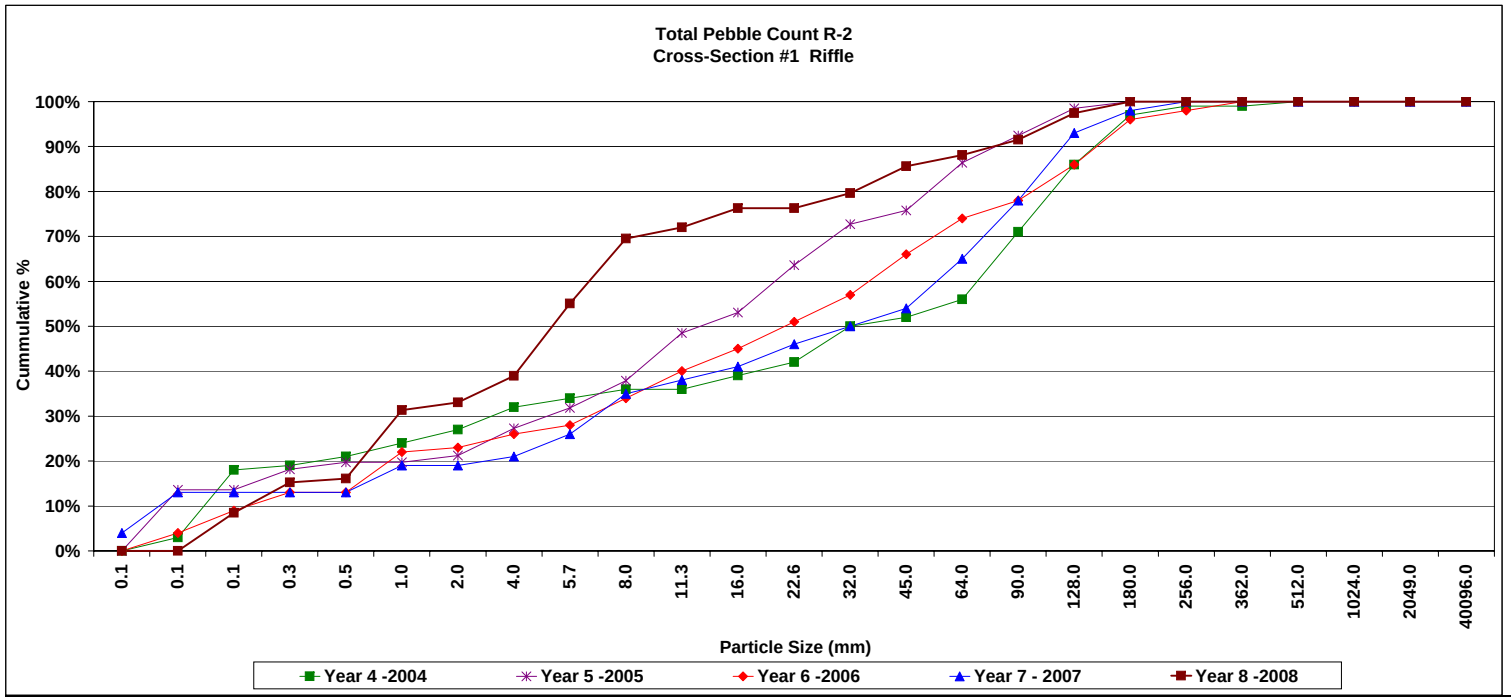
	Year 8 - 2008	Year 7 - 2007	Year 6 - 2006	Year 5 - 2005	Year 4 - 2004	Year 2 - 2002	Year 1 - 2001	AS-BUILT 2000
Area	199.7	201.7	214.6	210.1	201.7	221.1	188.6	
Width	65	67.0	73.9	79.0	71.3	66.5	64.5	
Mean Depth	3.1	3.0	2.7	2.7	2.8	3.1	2.6	
Max Depth	6.2	6.3	7.4	7.3	7.4	8.2	7.5	
W/D	21.2	22.3	25.4	25.4	25.5	23.4	27.4	



Project Name	Stone Mountain Reach 2
Cross Section	#1
Feature	Riffle
Date	6/11/08
Crew	Brim, Blake, George

			As-Built -2000			Year 4 -2004				Year 5 -2005				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	1	100.0%	100.0%	0	0	0.00	0.0	0	0	0.0%	0.0%	0	0	0.0%	0.0%	4	0	4.0%	4.0%	0	0	0.0%	0.0%
Sand	very fine sand	0.062	0	0.0%	100.0%	3	0	0.03	0.0	9	0	13.6%	13.6%	4	0	4.0%	4.0%	6	3	9.0%	13.0%	0	0	0.0%	0.0%
	fine sand	0.125	0	0.0%	100.0%	12	3	0.15	0.2	0	0	0.0%	13.6%	4	1	5.0%	9.0%	0	0	0.0%	13.0%	10	0	8.5%	8.5%
	medium sand	0.25	0	0.0%	100.0%	0	1	0.01	0.2	1	2	4.5%	18.2%	2	2	4.0%	13.0%	0	0	0.0%	13.0%	8	0	6.8%	15.3%
	course sand	0.50	0	0.0%	100.0%	0	2	0.02	0.2	0	1	1.5%	19.7%	0	0	0.0%	13.0%	0	0	0.0%	13.0%	0	1	0.8%	16.1%
	very course sand	1.0	0	0.0%	100.0%	0	3	0.03	0.2	0	0	0.0%	19.7%	0	9	9.0%	22.0%	0	6	6.0%	19.0%	0	18	15.3%	31.4%
G r a v e l	very fine gravel	2.0	0	0.0%	100.0%	0	3	0.03	0.3	0	1	1.5%	21.2%	0	1	1.0%	23.0%	0	0	0.0%	19.0%	0	2	1.7%	33.1%
	fine gravel	4.0	0	0.0%	100.0%	0	5	0.05	0.3	0	4	6.1%	27.3%	0	3	3.0%	26.0%	0	2	2.0%	21.0%	0	7	5.9%	39.0%
	fine gravel	5.7	0	0.0%	100.0%	0	2	0.02	0.3	0	3	4.5%	31.8%	0	2	2.0%	28.0%	0	5	5.0%	26.0%	0	19	16.1%	55.1%
	medium gravel	8.0	0	0.0%	100.0%	0	2	0.02	0.4	0	4	6.1%	37.9%	0	6	6.0%	34.0%	0	9	9.0%	35.0%	0	17	14.4%	69.5%
	medium gravel	11.3	0	0.0%	100.0%	0	0	0.00	0.4	0	7	10.6%	48.5%	0	6	6.0%	40.0%	0	3	3.0%	38.0%	0	3	2.5%	72.0%
	course gravel	16.0	0	0.0%	100.0%	0	3	0.03	0.4	0	3	4.5%	53.0%	0	5	5.0%	45.0%	0	3	3.0%	41.0%	0	5	4.2%	76.3%
	course gravel	22.6	0	0.0%	100.0%	0	3	0.03	0.4	0	7	10.6%	63.6%	0	6	6.0%	51.0%	0	5	5.0%	46.0%	0	0	0.0%	76.3%
	very course gravel	32	0	0.0%	100.0%	0	8	0.08	0.5	0	6	9.1%	72.7%	0	6	6.0%	57.0%	0	4	4.0%	50.0%	1	3	3.4%	79.7%
	very course gravel	45	0	0.0%	100.0%	0	2	0.02	0.5	0	2	3.0%	75.8%	0	9	9.0%	66.0%	0	4	4.0%	54.0%	0	7	5.9%	85.6%
Cobble	small cobble	64	0	0.0%	100.0%	0	4	0.04	0.6	0	7	10.6%	86.4%	0	8	8.0%	74.0%	0	11	11.0%	65.0%	1	2	2.5%	88.1%
	medium cobble	90	0	0.0%	100.0%	0	15	0.15	0.7	0	4	6.1%	92.4%	0	4	4.0%	78.0%	0	13	13.0%	78.0%	0	4	3.4%	91.5%
	large cobble	128	0	0.0%	100.0%	0	15	0.15	0.9	0	4	6.1%	98.5%	0	8	8.0%	86.0%	0	15	15.0%	93.0%	1	6	5.9%	97.5%
	very large cobble	180	0	0.0%	100.0%	0	11	0.11	1.0	0	1	1.5%	100.0%	0	10	10.0%	96.0%	0	5	5.0%	98.0%	1	2	2.5%	100.0%
Boulder	small boulder	256	0	0.0%	100.0%	0	2	0.02	1.0	0	0	0.0%	100.0%	0	2	2.0%	98.0%	0	2	2.0%	100.0%	0	0	0.0%	100.0%
	small boulder	362	0	0.0%	100.0%	0	0	0.00	1.0	0	0	0.0%	100.0%	0	2	2.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	1	0.01	1.0	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0	0.00	1.0	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0	0.00	1.0	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0	0.00	1.0	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			1	100.0%		15	85	100.0%		10	56	100.0%		10	90	100.0%		10	90	100.0%		22	96	100.0%	

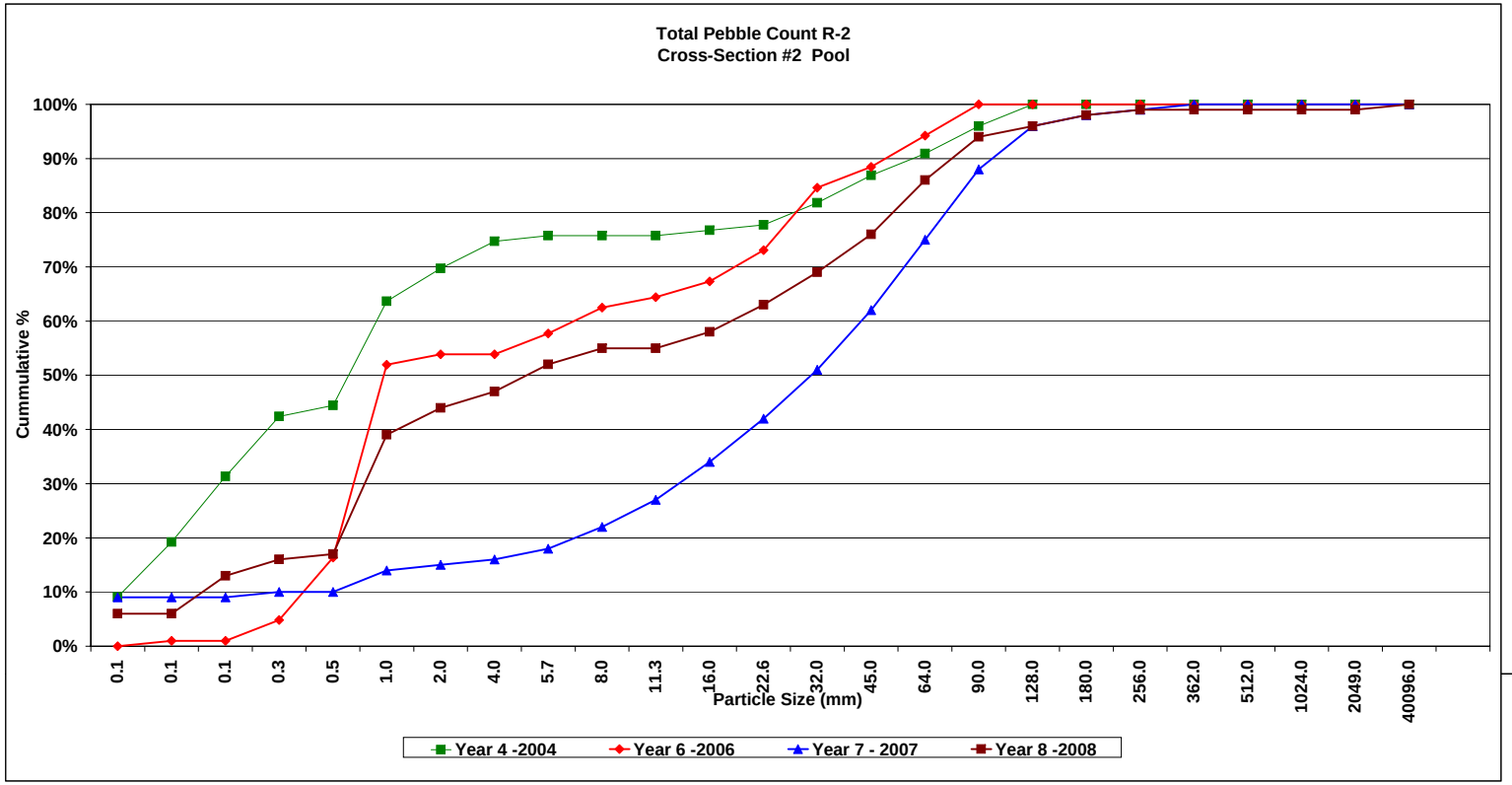
	d16	d35	d50	d84	d95
Year 4 -2004	0.17	8.25	38.50	148.00	206.36
Year 5 -2005	0.29	8.32	15.53	71.99	128.13
Year 6 -2006	1.00	10.32	25.97	142.75	211.60
Year 7 -2007	1.13	9.65	38.50	127.00	179.60
Year 8 -2008	0.71	3.61	6.22	50.20	135.36



Project Name	Stone Mountain Reach 2
Cross Section	#2
Feature	Pool
Date	6/12/08
Crew	Brim, Blake, George

			As-Built -2000			Year 4 -2004				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**- Bank**	**- Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	1	100.0%	100.0%	9	0	9.1%	9.1%	0	0	0.0%	0.0%	9	0	9.0%	9.0%	0	6	6.0%	6.0%
Sand	very fine sand	0.062	0	0.0%	100.0%	10	0	10.1%	19.2%	1	0	1.0%	1.0%	0	0	0.0%	9.0%	0	0	0.0%	6.0%
	fine sand	0.125	0	0.0%	100.0%	10	2	12.1%	31.3%	0	0	0.0%	1.0%	0	0	0.0%	9.0%	7	0	7.0%	13.0%
	medium sand	0.25	0	0.0%	100.0%	10	1	11.1%	42.4%	2	2	3.8%	4.8%	1	0	1.0%	10.0%	3	0	3.0%	16.0%
	course sand	0.50	0	0.0%	100.0%	0	2	2.0%	44.4%	2	10	11.5%	16.3%	0	0	0.0%	10.0%	1	0	1.0%	17.0%
	very course sand	1.0	0	0.0%	100.0%	0	19	19.2%	63.6%	16	21	35.6%	51.9%	0	4	4.0%	14.0%	2	20	22.0%	39.0%
G r a v e l	very fine gravel	2.0	0	0.0%	100.0%	0	6	6.1%	69.7%	2	0	1.9%	53.8%	0	1	1.0%	15.0%	0	5	5.0%	44.0%
	fine gravel	4.0	0	0.0%	100.0%	0	5	5.1%	74.7%	0	0	0.0%	53.8%	0	1	1.0%	16.0%	0	3	3.0%	47.0%
	fine gravel	5.7	0	0.0%	100.0%	0	1	1.0%	75.8%	0	4	3.8%	57.7%	0	2	2.0%	18.0%	0	5	5.0%	52.0%
	medium gravel	8.0	0	0.0%	100.0%	0	0	0.0%	75.8%	1	4	4.8%	62.5%	0	4	4.0%	22.0%	0	3	3.0%	55.0%
	medium gravel	11.3	0	0.0%	100.0%	0	0	0.0%	75.8%	0	2	1.9%	64.4%	0	5	5.0%	27.0%	0	0	0.0%	55.0%
	course gravel	16.0	0	0.0%	100.0%	0	1	1.0%	76.8%	1	2	2.9%	67.3%	0	7	7.0%	34.0%	1	2	3.0%	58.0%
	course gravel	22.6	0	0.0%	100.0%	0	1	1.0%	77.8%	2	4	5.8%	73.1%	0	8	8.0%	42.0%	1	4	5.0%	63.0%
	very course gravel	32	0	0.0%	100.0%	0	4	4.0%	81.8%	2	10	11.5%	84.6%	0	9	9.0%	51.0%	1	5	6.0%	69.0%
	very course gravel	45	0	0.0%	100.0%	0	5	5.1%	86.9%	0	4	3.8%	88.5%	0	11	11.0%	62.0%	1	6	7.0%	76.0%
Cobble	small cobble	64	0	0.0%	100.0%	0	4	4.0%	90.9%	2	4	5.8%	94.2%	0	13	13.0%	75.0%	1	9	10.0%	86.0%
	medium cobble	90	0	0.0%	100.0%	0	5	5.1%	96.0%	1	5	5.8%	100.0%	0	13	13.0%	88.0%	1	7	8.0%	94.0%
	large cobble	128	0	0.0%	100.0%	0	4	4.0%	100.0%	0	0	0.0%	100.0%	0	8	8.0%	96.0%	0	2	2.0%	96.0%
	very large cobble	180	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	2	2.0%	98.0%	0	2	2.0%	98.0%
Boulder	small boulder	256	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	1	1.0%	99.0%	1	0	1.0%	99.0%
	small boulder	362	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	1	1.0%	100.0%	0	0	0.0%	99.0%
	medium boulder	512	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	99.0%
	large boulder	1024	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	99.0%
	very large boulder	2049	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	99.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	1	1.0%	100.0%
TOTAL / %of whole count			1	100.0%		39	60	100.0%		32	72	100.0%		10	90	100.0%		20	80	100.0%	

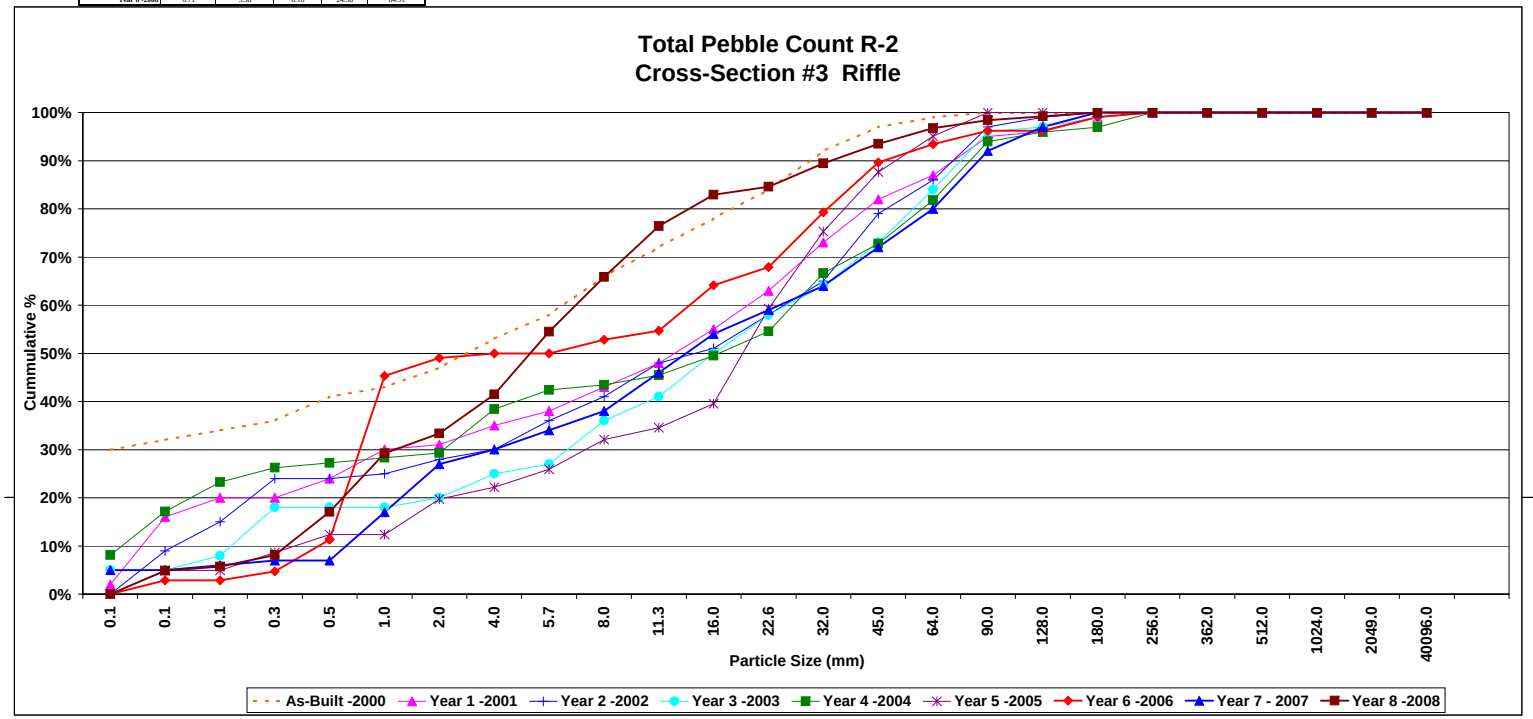
	d16	d35	d50	d84	d95
Year 4 -2004	0.32	1.00	3.54	90.82	205.84
Year 6 -2006	1.48	2.29	2.92	75.80	162.53
Year 7 -2007	4.85	20.30	37.26	99.15	148.38
Year 8 -2008	0.38	1.36	6.05	72.50	131.50



Project Name	Stone Mountain Reach 2
Cross Section	#3
Feature	Riffle
Date	6/12/08
Crew	Brim, Blake, George

			As-Built -2000			Year 1 -2001			Year 2 -2002			Year 3 -2003			Year 4 -2004				Year 5 -2005				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle**	**%**	**Cum %**	**Riffle**	**%**	**Cum %**	**Riffle**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**- Bank**	**- Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	30	30.0%	30.0%	0	0.0%	0.0%	0	0.0%	0.0%	5	5.00%	5.0%	8	0	8.1%	8.1%	0	0	0.0%	0.0%	0	0	0.0%	0.0%	5	0	5.0%	5.0%	0	0	0.0%	0.0%
	very fine sand	0.062	2	2.0%	32.0%	4	4.0%	4.0%	9	9.0%	9.0%	0	0.00%	5.0%	9	0	9.1%	17.2%	4	0	4.9%	4.9%	1	2	2.8%	2.8%	0	0	0.0%	5.0%	6	0	4.9%	4.9%
Sand	fine sand	0.125	2	2.0%	34.0%	7	7.0%	11.0%	6	6.0%	15.0%	3	3.00%	8.0%	4	2	6.1%	23.2%	0	0	0.0%	4.9%	0	0	0.0%	2.8%	1	0	1.0%	6.0%	0	1	0.8%	5.7%
	medium sand	0.25	2	2.0%	36.0%	4	4.0%	15.0%	9	9.0%	24.0%	10	10.00%	18.0%	0	3	3.0%	26.3%	2	1	3.7%	8.6%	2	0	1.9%	4.7%	1	0	1.0%	7.0%	3	0	2.4%	8.1%
	course sand	0.50	5	5.0%	41.0%	2	2.0%	17.0%	0	0.0%	24.0%	0	0.00%	18.0%	0	1	1.0%	27.3%	0	3	3.7%	12.3%	2	5	6.6%	11.3%	0	0	0.0%	7.0%	4	7	8.9%	17.1%
	very course sand	1.0	2	2.0%	43.0%	0	0.0%	17.0%	1	1.0%	25.0%	0	0.00%	18.0%	0	1	1.0%	28.3%	0	0	0.0%	12.3%	16	20	34.0%	45.3%	3	7	10.0%	17.0%	0	15	12.2%	29.3%
	very fine gravel	2.0	4	4.0%	47.0%	3	3.0%	20.0%	3	3.0%	28.0%	2	2.00%	20.0%	0	1	1.0%	29.3%	0	6	7.4%	19.8%	2	2	3.8%	49.1%	0	10	10.0%	27.0%	0	5	4.1%	33.3%
G	fine gravel	4.0	6	6.0%	53.0%	5	5.0%	25.0%	2	2.0%	30.0%	5	5.00%	25.0%	0	9	9.1%	38.4%	0	2	2.5%	22.2%	0	1	0.9%	50.0%	0	3	3.0%	30.0%	0	10	8.1%	41.5%
r	fine gravel	5.7	5	5.0%	58.0%	7	7.0%	32.0%	6	6.0%	36.0%	2	2.00%	27.0%	0	4	4.0%	42.4%	2	1	3.7%	25.9%	0	0	0.0%	50.0%	0	4	4.0%	34.0%	0	16	13.0%	54.5%
a	medium gravel	8.0	8	8.0%	66.0%	7	7.0%	39.0%	5	5.0%	41.0%	9	9.00%	36.0%	0	1	1.0%	43.4%	1	4	6.2%	32.1%	1	2	2.8%	52.8%	0	4	4.0%	38.0%	0	14	11.4%	65.9%
v	medium gravel	11.3	6	6.0%	72.0%	5	5.0%	44.0%	7	7.0%	48.0%	5	5.00%	41.0%	0	2	2.0%	45.5%	0	2	2.5%	34.6%	0	2	1.9%	54.7%	0	8	8.0%	46.0%	0	13	10.6%	76.4%
e	course gravel	16.0	6	6.0%	78.0%	7	7.0%	51.0%	3	3.0%	51.0%	9	9.00%	50.0%	0	4	4.0%	49.5%	0	4	4.9%	39.5%	1	9	9.4%	64.2%	0	8	8.0%	54.0%	1	7	6.5%	82.9%
l	course gravel	22.6	6	6.0%	84.0%	8	8.0%	59.0%	7	7.0%	58.0%	8	8.00%	58.0%	0	5	5.1%	54.5%	1	15	19.8%	59.3%	2	2	3.8%	67.9%	0	5	5.0%	59.0%	0	2	1.6%	84.6%
	very course gravel	32	8	8.0%	92.0%	10	10.0%	69.0%	7	7.0%	65.0%	6	6.00%	64.0%	0	12	12.1%	66.7%	1	12	16.0%	75.3%	2	10	11.3%	79.2%	0	5	5.0%	64.0%	3	3	4.9%	89.4%
	very course gravel	45	5	5.0%	97.0%	16	16.0%	85.0%	14	14.0%	79.0%	9	9.00%	73.0%	0	6	6.1%	72.7%	1	9	12.3%	87.7%	0	11	10.4%	89.6%	0	8	8.0%	72.0%	1	4	4.1%	93.5%
Cobble	small cobble	64	2	2.0%	99.0%	7	7.0%	92.0%	7	7.0%	86.0%	11	11.00%	84.0%	0	9	9.1%	81.8%	0	6	7.4%	95.1%	2	2	3.8%	93.4%	0	8	8.0%	80.0%	1	3	3.3%	96.7%
	medium cobble	90	1	1.0%	100.0%	5	5.0%	97.0%	11	11.0%	97.0%	12	12.00%	96.0%	0	12	12.1%	93.9%	0	4	4.9%	100.0%	1	2	2.8%	96.2%	0	12	12.0%	92.0%	0	2	1.6%	98.4%
	large cobble	128	0	0.0%	100.0%	3	3.0%	100.0%	2	2.0%	99.0%	1	1.00%	97.0%	0	2	2.0%	96.0%	0	0	0.0%	100.0%	0	0	0.0%	96.2%	0	5	5.0%	97.0%	0	1	0.8%	99.2%
	very large cobble	180	0	0.0%	100.0%	0	0.0%	100.0%	1	1.0%	100.0%	2	2.00%	99.0%	0	1	1.0%	97.0%	0	0	0.0%	100.0%	0	3	2.8%	99.1%	0	3	3.0%	100.0%	1	0	0.8%	100.0%
	small boulder	256	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	1	1.00%	100.0%	0	3	3.0%	100.0%	0	0	0.0%	100.0%	0	1	0.9%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Boulder	small boulder	362	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.00%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.00%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.00%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.00%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.00%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			100	100.0%		100	100.0%		100	100%		100	100.0%		21	78	100.0%		12	69	100.0%		32	74	100.0%		10	90	100.0%		20	103	100.0%	

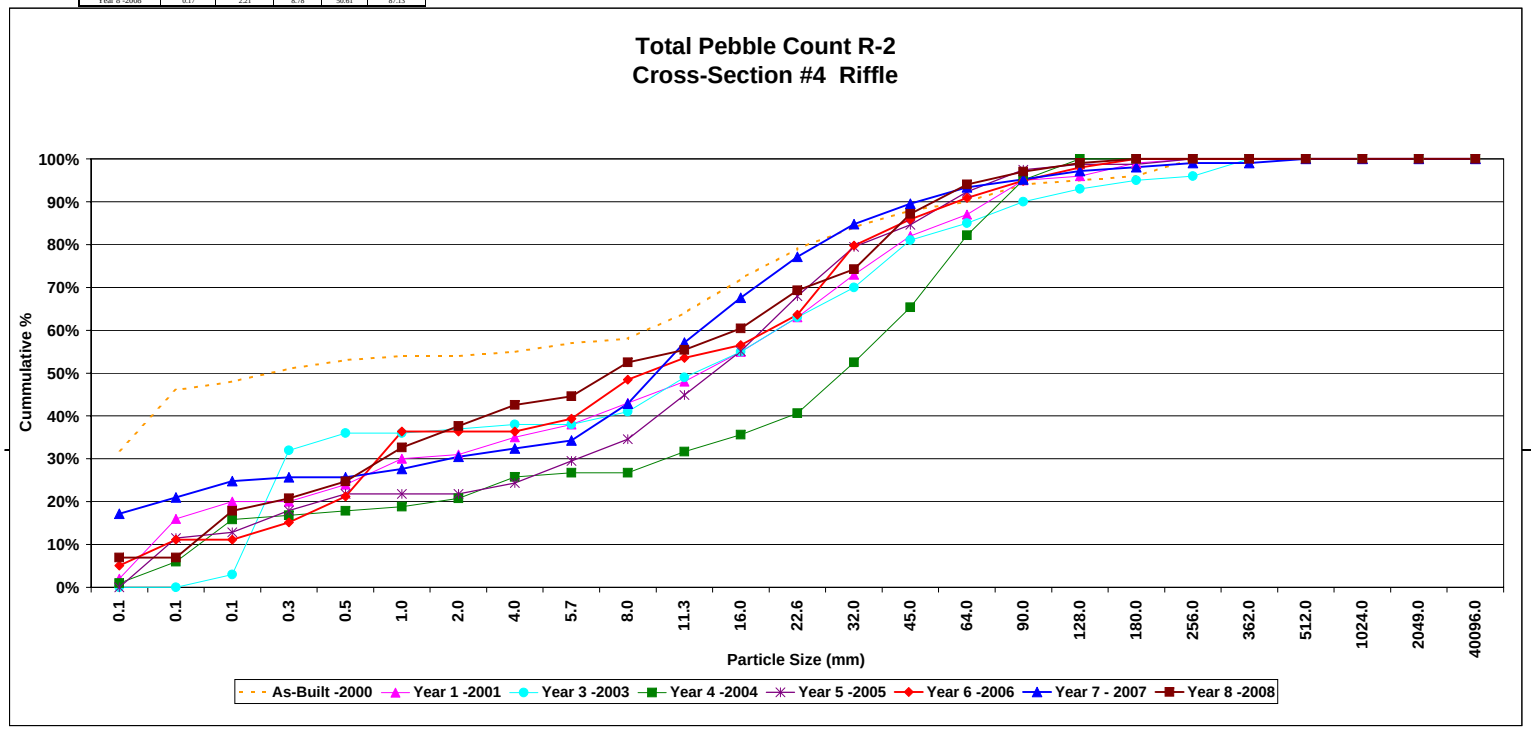
	d16	d35	d50	d84	d95
As-Built -2000	0.00	0.28	3.93	27.30	48.10
Year 1 -2001	0.56	8.05	18.49	53.50	96.20
Year 2 -2002	0.21	6.52	17.42	70.57	103.18
Year 3 -2003	0.34	9.34	19.30	77.00	106.33
Year 4 -2004	0.09	4.16	20.10	82.76	132.62
Year 5 -2005	2.24	14.14	23.55	49.76	76.81
Year 6 -2006	0.85	1.27	11.70	45.83	95.13
Year 7 -2007	1.43	7.55	16.48	87.67	136.00
Year 8 -2008	0.71	3.38	6.16	24.58	64.91



Project Name	Stone Mountain Reach 2
Cross Section	#4
Feature	Riffle
Date	6/12/08
Crew	Brim, Blake, George

			As-Built -2000			Year 1 -2001			Year 3 -2003			Year 4 -2004			Year 5 -2005			Year 6 -2006			Year 7 -2007			Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	32	32.0%	32.0%	2	2.0%	2.0%	0	0.0%	0.0%	1	0	1.0%	1.0%	0	0	0.0%	0.0%	5	0.0	5.1%	5.1%	14	4.0	17.1%	17.1%	3	4	6.9%	6.9%
Sand	very fine sand	0.062	14	14.0%	46.0%	14	14.0%	16.0%	0	0.0%	0.0%	5	0	5.0%	5.9%	7	2	11.5%	11.5%	6	0.0	6.1%	11.1%	2	2.0	3.8%	21.0%	0	0	0.0%	6.9%
	fine sand	0.125	2	2.0%	48.0%	4	4.0%	20.0%	3	3.0%	3.0%	10	0	9.9%	15.8%	0	1	1.3%	12.8%	0	0.0	0.0%	11.1%	4	0.0	3.8%	24.8%	8	3	10.9%	17.8%
	medium sand	0.25	3	3.0%	51.0%	0	0.0%	20.0%	29	29.0%	32.0%	1	0	1.0%	16.8%	3	1	5.1%	17.9%	2	2.0	4.0%	15.2%	0	1.0	1.0%	25.7%	2	1	3.0%	20.8%
	course sand	0.50	2	2.0%	53.0%	4	4.0%	24.0%	4	4.0%	36.0%	1	0	1.0%	17.8%	0	3	3.8%	21.8%	6	0.0	6.1%	21.2%	0	0.0	0.0%	25.7%	0	4	4.0%	24.8%
	very course sand	1.0	1	1.0%	54.0%	6	6.0%	30.0%	0	0.0%	36.0%	0	1	1.0%	18.8%	0	0	0.0%	21.8%	4	11.0	15.2%	36.4%	0	2.0	1.9%	27.6%	0	8	7.9%	32.7%
G r a v e l	very fine gravel	2.0	0	0.0%	54.0%	1	1.0%	31.0%	1	1.0%	37.0%	0	2	2.0%	20.8%	0	0	0.0%	21.8%	0	0.0	0.0%	36.4%	0	3.0	2.9%	30.5%	0	5	5.0%	37.6%
	fine gravel	4.0	1	1.0%	55.0%	4	4.0%	35.0%	1	1.0%	38.0%	0	5	5.0%	25.7%	0	2	2.6%	24.4%	0	0.0	0.0%	36.4%	0	2.0	1.9%	32.4%	0	5	5.0%	42.6%
	fine gravel	5.7	2	2.0%	57.0%	3	3.0%	38.0%	0	0.0%	38.0%	0	1	1.0%	26.7%	0	4	5.1%	29.5%	0	3.0	3.0%	39.4%	0	2.0	1.9%	34.3%	0	2	2.0%	44.6%
	medium gravel	8.0	1	1.0%	58.0%	5	5.0%	43.0%	3	3.0%	41.0%	0	0	0.0%	26.7%	0	4	5.1%	34.6%	0	9.0	9.1%	48.5%	0	9.0	8.6%	42.9%	1	7	7.9%	52.5%
	medium gravel	11.3	6	6.0%	64.0%	5	5.0%	48.0%	8	8.0%	49.0%	0	5	5.0%	31.7%	0	8	10.3%	44.9%	0	5.0	5.1%	53.5%	0	15.0	14.3%	57.1%	0	3	3.0%	55.4%
	course gravel	16.0	8	8.0%	72.0%	7	7.0%	55.0%	6	6.0%	55.0%	1	3	4.0%	35.6%	0	8	10.3%	55.1%	0	3.0	3.0%	56.6%	0	11.0	10.5%	67.6%	0	5	5.0%	60.4%
	course gravel	22.6	7	7.0%	79.0%	8	8.0%	63.0%	8	8.0%	63.0%	1	4	5.0%	40.6%	0	10	12.8%	67.9%	0	7.0	7.1%	63.6%	0	10.0	9.5%	77.1%	0	9	8.9%	69.3%
	very course gravel	32	5	5.0%	84.0%	10	10.0%	73.0%	7	7.0%	70.0%	0	12	11.9%	52.5%	0	9	11.5%	79.5%	0	16.0	16.2%	79.8%	0	8.0	7.6%	84.8%	1	4	5.0%	74.3%
	very course gravel	45	4	4.0%	88.0%	9	9.0%	82.0%	11	11.0%	81.0%	0	13	12.9%	65.3%	0	4	5.1%	84.6%	0	6.0	6.1%	85.9%	0	5.0	4.8%	89.5%	4	9	12.9%	87.1%
Cobble	small cobble	64	2	2.0%	90.0%	5	5.0%	87.0%	4	4.0%	85.0%	0	17	16.8%	82.2%	0	6	7.7%	92.3%	0	5.0	5.1%	90.9%	0	4.0	3.8%	93.3%	1	6	6.9%	94.1%
	medium cobble	90	4	4.0%	94.0%	8	8.0%	95.0%	5	5.0%	90.0%	0	13	12.9%	95.0%	0	4	5.1%	97.4%	0	4.0	4.0%	94.9%	0	2.0	1.9%	95.2%	0	3	3.0%	97.0%
	large cobble	128	1	1.0%	95.0%	1	1.0%	96.0%	3	3.0%	93.0%	0	5	5.0%	100.0%	0	1	1.3%	98.7%	0	3.0	3.0%	98.0%	0	2.0	1.9%	97.1%	0	2	2.0%	99.0%
	very large cobble	180	1	1.0%	96.0%	3	3.0%	99.0%	2	2.0%	95.0%	0	0	0.0%	100.0%	0	0	0.0%	98.7%	0	2.0	2.0%	100.0%	0	1.0	1.0%	98.1%	0	1	1.0%	100.0%
Boulder	small boulder	256	4	4.0%	100.0%	1	1.0%	100.0%	1	1.0%	96.0%	0	0	0.0%	100.0%	1	0	1.3%	100.0%	0	0.0	0.0%	100.0%	0	1.0	1.0%	99.0%	0	0	0.0%	100.0%
	small boulder	362	0	0.0%	100.0%	0	0.0%	100.0%	4	4.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	99.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	1.0	1.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%	0	0.0	0.0%	100.0%
TOTAL / %of whole count			100	100.0%		100	100.0%		100	100.0%		20	81	100.0%		11	67	100.0%		23	76	100.0%		20	85	100.0%		20	81	100.0%	

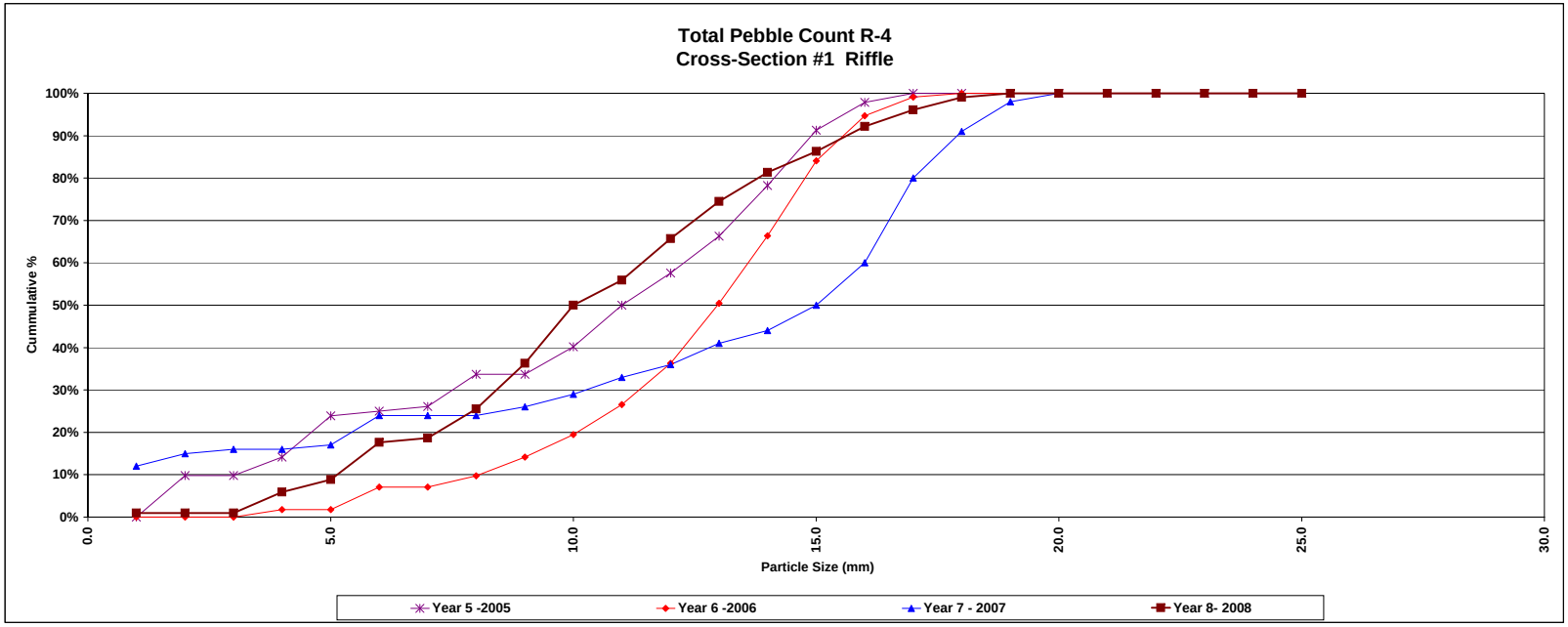
	d16	d35	d50	d84	d95
As-Built -2000	0.00	0.07	0.31	38.50	154.00
Year 1 -2001	0.09	4.85	15.26	63.50	109.00
Year 3 -2003	0.27	0.66	14.59	71.37	218.00
Year 4 -2004	0.22	18.38	36.17	81.53	108.88
Year 5 -2005	0.30	9.80	16.48	52.58	93.80
Year 6 -2006	0.43	1.43	10.85	49.59	109.75
Year 7 -2007	0.00	7.08	11.65	37.38	105.00
Year 8 -2008	0.17	2.21	8.78	50.61	87.13



Project Name	Stone Mountain Reach 4
Cross Section	#1
Feature	Riffle
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			As-Built -2000			Year 5 -2005				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**- Bank**	**- Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	1	100.0%	100.0%	0	0	0.0%	0.0%	0	0	0.0%	0.0%	8	4	12.0%	12.0%	1	0	1.0%	1.0%
Sand	very fine sand	0.062	0	0.0%	100.0%	9	0	9.8%	9.8%	0	0	0.0%	0.0%	2	1	3.0%	15.0%	0	0	0.0%	1.0%
	fine sand	0.125	0	0.0%	100.0%	0	0	0.0%	9.8%	0	0	0.0%	0.0%	0	1	1.0%	16.0%	0	0	0.0%	1.0%
	medium sand	0.25	0	0.0%	100.0%	3	1	4.3%	14.1%	0	2	1.8%	1.8%	0	0	0.0%	16.0%	4	1	4.9%	5.9%
	course sand	0.50	0	0.0%	100.0%	4	5	9.8%	23.9%	0	0	0.0%	1.8%	0	1	1.0%	17.0%	2	1	2.9%	8.8%
	very course sand	1.0	0	0.0%	100.0%	0	1	1.1%	25.0%	0	6	5.3%	7.1%	0	7	7.0%	24.0%	2	7	8.8%	17.6%
G r a v e l	very fine gravel	2.0	0	0.0%	100.0%	0	1	1.1%	26.1%	0	0	0.0%	7.1%	0	0	0.0%	24.0%	0	1	1.0%	18.6%
	fine gravel	4.0	0	0.0%	100.0%	1	6	7.6%	33.7%	0	3	2.7%	9.7%	0	0	0.0%	24.0%	0	7	6.9%	25.5%
	fine gravel	5.7	0	0.0%	100.0%	0	0	0.0%	33.7%	0	5	4.4%	14.2%	0	2	2.0%	26.0%	1	10	10.8%	36.3%
	medium gravel	8.0	0	0.0%	100.0%	0	6	6.5%	40.2%	0	6	5.3%	19.5%	0	3	3.0%	29.0%	1	13	13.7%	50.0%
	medium gravel	11.3	0	0.0%	100.0%	0	9	9.8%	50.0%	0	8	7.1%	26.5%	0	4	4.0%	33.0%	1	5	5.9%	55.9%
	course gravel	16.0	0	0.0%	100.0%	0	7	7.6%	57.6%	1	10	9.7%	36.3%	0	3	3.0%	36.0%	0	10	9.8%	65.7%
	course gravel	22.6	0	0.0%	100.0%	0	8	8.7%	66.3%	6	10	14.2%	50.4%	0	5	5.0%	41.0%	6	3	8.8%	74.5%
	very course gravel	32	0	0.0%	100.0%	0	11	12.0%	78.3%	8	10	15.9%	66.4%	0	3	3.0%	44.0%	0	7	6.9%	81.4%
	very course gravel	45	0	0.0%	100.0%	0	12	13.0%	91.3%	10	10	17.7%	84.1%	0	6	6.0%	50.0%	1	4	4.9%	86.3%
Cobble	small cobble	64	0	0.0%	100.0%	0	6	6.5%	97.8%	2	10	10.6%	94.7%	0	10	10.0%	60.0%	1	5	5.9%	92.2%
	medium cobble	90	0	0.0%	100.0%	0	2	2.2%	100.0%	0	5	4.4%	99.1%	0	20	20.0%	80.0%	0	4	3.9%	96.1%
	large cobble	128	0	0.0%	100.0%	0	0	0.0%	100.0%	0	1	0.9%	100.0%	0	11	11.0%	91.0%	0	3	2.9%	99.0%
	very large cobble	180	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	7	7.0%	98.0%	0	1	1.0%	100.0%
Boulder	small boulder	256	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	2	2.0%	100.0%	0	0	0.0%	100.0%
	small boulder	362	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			1	100.0%		17	75	100.0%		27	86	100.0%		10	90	100.0%		20	82	100.0%	

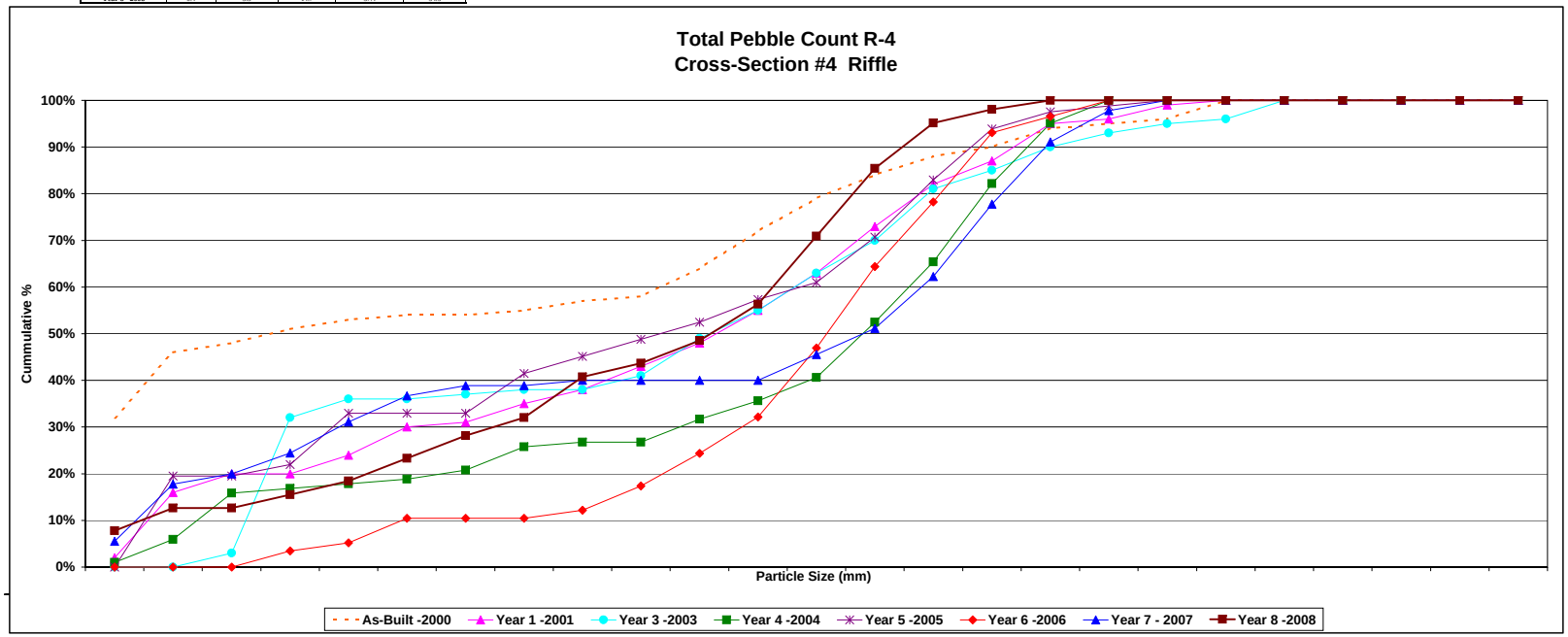
	d16	d35	d50	d84	d95
Year 5 -2005	0.4	7.4	13.7	45.5	67.2
Year 6 -2006	7.8	18.6	27.1	54.4	79.2
Year 7 -2007	0.28	17.42	54.50	125.36	190.57
Year 8 -2008	1.36	6.61	13.65	47.08	100.20



Project Name	Stone Mountain Reach 4
Cross Section	#4
Feature	Riffle
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			As-Built -2000			Year 1 -2001			Year 3 -2003			Year 4 -2004				Year 5 -2005				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	32	32.0%	32.0%	2	2.0%	2.0%	0	0.0%	0.0%	1	0	1.0%	1.0%	0	0	0.0%	0.0%	0	0	0.0%	0.0%	5	0	5.6%	5.6%	7	1	7.8%	7.8%
Sand	very fine sand	0.062	14	14.0%	46.0%	14	14.0%	16.0%	0	0.0%	0.0%	5	0	5.0%	5.9%	10	6	19.5%	19.5%	0	0	0.0%	0.0%	10	1	12.2%	17.8%	3	2	4.9%	12.6%
	fine sand	0.125	2	2.0%	48.0%	4	4.0%	20.0%	3	3.0%	3.0%	10	0	9.9%	15.8%	0	0	0.0%	19.5%	0	0	0.0%	0.0%	0	2	2.2%	20.0%	0	0	0.0%	12.6%
	medium sand	0.25	3	3.0%	51.0%	0	0.0%	20.0%	29	29.0%	32.0%	1	0	1.0%	16.8%	2	0	2.4%	22.0%	0	4	3.5%	3.5%	0	4	4.4%	24.4%	3	0	2.9%	15.5%
	course sand	0.50	2	2.0%	53.0%	4	4.0%	24.0%	4	4.0%	36.0%	1	0	1.0%	17.8%	2	7	11.0%	32.9%	0	2	1.7%	5.2%	0	6	6.7%	31.1%	0	3	2.9%	18.4%
	very course sand	1.0	1	1.0%	54.0%	6	6.0%	30.0%	0	0.0%	36.0%	0	1	1.0%	18.8%	0	0	0.0%	32.9%	0	6	5.2%	10.4%	0	5	5.6%	36.7%	0	5	4.9%	23.3%
G r a v e l	very fine gravel	2.0	0	0.0%	54.0%	1	1.0%	31.0%	1	1.0%	37.0%	0	2	2.0%	20.8%	0	0	0.0%	32.9%	0	0	0.0%	10.4%	0	2	2.2%	38.9%	0	5	4.9%	28.2%
	fine gravel	4.0	1	1.0%	55.0%	4	4.0%	35.0%	1	1.0%	38.0%	0	5	5.0%	25.7%	1	6	8.5%	41.5%	0	0	0.0%	10.4%	0	0	0.0%	38.9%	1	3	3.9%	32.0%
	fine gravel	5.7	2	2.0%	57.0%	3	3.0%	38.0%	0	0.0%	38.0%	0	1	1.0%	26.7%	0	3	3.7%	45.1%	0	2	1.7%	12.2%	0	1	1.1%	40.0%	0	9	8.7%	40.8%
	medium gravel	8.0	1	1.0%	58.0%	5	5.0%	43.0%	3	3.0%	41.0%	0	0	0.0%	26.7%	0	3	3.7%	48.8%	0	6	5.2%	17.4%	0	0	0.0%	40.0%	0	3	2.9%	43.7%
	medium gravel	11.3	6	6.0%	64.0%	5	5.0%	48.0%	8	8.0%	49.0%	0	5	5.0%	31.7%	0	3	3.7%	52.4%	0	8	7.0%	24.3%	0	0	0.0%	40.0%	1	4	4.9%	48.5%
	course gravel	16.0	8	8.0%	72.0%	7	7.0%	55.0%	6	6.0%	55.0%	1	3	4.0%	35.6%	0	4	4.9%	57.3%	0	9	7.8%	32.2%	0	0	0.0%	40.0%	2	6	7.8%	56.3%
	course gravel	22.6	7	7.0%	79.0%	8	8.0%	63.0%	8	8.0%	63.0%	1	4	5.0%	40.6%	0	3	3.7%	61.0%	7	10	14.8%	47.0%	0	5	5.6%	45.6%	1	14	14.6%	70.9%
	very course gravel	32	5	5.0%	84.0%	10	10.0%	73.0%	7	7.0%	70.0%	0	12	11.9%	52.5%	0	8	9.8%	70.7%	10	10	17.4%	64.3%	0	5	5.6%	51.1%	1	14	14.6%	85.4%
	very course gravel	45	4	4.0%	88.0%	9	9.0%	82.0%	11	11.0%	81.0%	0	13	12.9%	65.3%	0	10	12.2%	82.9%	6	10	13.9%	78.3%	0	10	11.1%	62.2%	1	9	9.7%	95.1%
Cobble	small cobble	64	2	2.0%	90.0%	5	5.0%	87.0%	4	4.0%	85.0%	0	17	16.8%	82.2%	0	9	11.0%	93.9%	7	10	14.8%	93.0%	0	14	15.6%	77.8%	2	1	2.9%	98.1%
	medium cobble	90	4	4.0%	94.0%	8	8.0%	95.0%	5	5.0%	90.0%	0	13	12.9%	95.0%	0	3	3.7%	97.6%	0	4	3.5%	96.5%	0	12	13.3%	91.1%	0	2	1.9%	100.0%
	large cobble	128	1	1.0%	95.0%	1	1.0%	96.0%	3	3.0%	93.0%	0	5	5.0%	100.0%	0	1	1.2%	98.8%	0	4	3.5%	100.0%	0	6	6.7%	97.8%	0	0	0.0%	100.0%
	very large cobble	180	1	1.0%	96.0%	3	3.0%	99.0%	2	2.0%	95.0%	0	0	0.0%	100.0%	0	1	1.2%	100.0%	0	0	0.0%	100.0%	0	2	2.2%	100.0%	0	0	0.0%	100.0%
Boulder	small boulder	256	4	4.0%	100.0%	1	1.0%	100.0%	1	1.0%	96.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	small boulder	362	0	0.0%	100.0%	0	0.0%	100.0%	4	4.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			100	100.0%		100	100.0%		100	100.0%		20	81	100.0%		15	67	100.0%		30	85	100.0%		15	75	100.0%		22	81	100.0%	

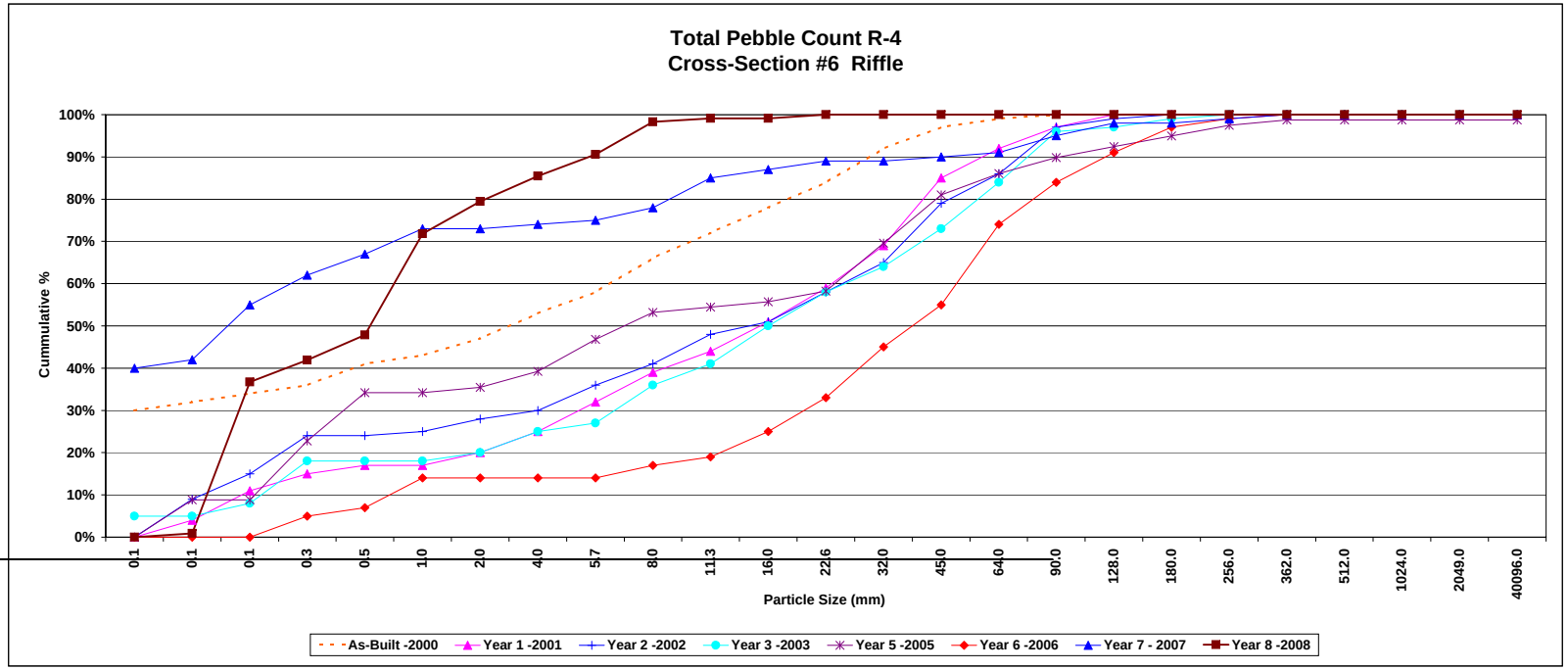
	d16	d35	d50	d84	d95
As-Built -2000	0.0	0.1	0.3	38.5	154.0
Year 1 -2001	0.1	4.9	15.3	63.5	109.0
Year 3 -2003	0.3	0.7	14.6	71.4	218.0
Year 4 -2004	0.2	18.4	36.2	81.5	108.9
Year 5 -2005	0.1	3.4	11.0	56.7	86.6
Year 6 -2006	8.9	20.8	29.3	63.2	95.0
Year 7 -2007	0.1	1.3	36.3	91.9	135.3
Year 8 - 2008	0.4	5.5	14.7	37.4	54.3



Project Name	Stone Mountain Reach 4
Cross Section	#6
Feature	Riffle
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			As-Built -2000			Year 1 -2001			Year 2 -2002			Year 3 -2003			Year 5 -2005				Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**	**Riffle - Bank**	**Riffle - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	30	30.0%	30.0%	0	0.0%	0.0%	0	0.0%	0.0%	5	5.0%	5.0%	1	0	0.0%	0.0%	0	0	0.0%	0.0%	25	15	40.0%	40.0%	0	0	0.0%	0.0%
Sand	very fine sand	0.062	2	2.0%	32.0%	4	4.0%	4.0%	9	9.0%	9.0%	0	0.0%	5.0%	7	0	8.9%	8.9%	0	0	0.0%	0.0%	0	2	2.0%	42.0%	0	1	0.9%	0.9%
	fine sand	0.125	2	2.0%	34.0%	7	7.0%	11.0%	6	6.0%	15.0%	3	3.0%	8.0%	0	0	0.0%	8.9%	0	0	0.0%	0.0%	0	13	13.0%	55.0%	18	24	35.9%	36.8%
	medium sand	0.25	2	2.0%	36.0%	4	4.0%	15.0%	9	9.0%	24.0%	10	10.0%	18.0%	5	6	13.9%	22.8%	1	4	5.0%	5.0%	0	7	7.0%	62.0%	2	4	5.1%	41.9%
	course sand	0.50	5	5.0%	41.0%	2	2.0%	17.0%	0	0.0%	24.0%	0	0.0%	18.0%	2	7	11.4%	34.2%	0	2	2.0%	7.0%	0	5	5.0%	67.0%	0	7	6.0%	47.9%
	very course sand	1.0	2	2.0%	43.0%	0	0.0%	17.0%	1	1.0%	25.0%	0	0.0%	18.0%	0	0	0.0%	34.2%	0	7	7.0%	14.0%	0	6	6.0%	73.0%	0	28	23.9%	71.8%
G r a v e l	very fine gravel	2.0	4	4.0%	47.0%	3	3.0%	20.0%	3	3.0%	28.0%	2	2.0%	20.0%	0	1	1.3%	35.4%	0	0	0.0%	14.0%	0	0	0.0%	73.0%	0	9	7.7%	79.5%
	fine gravel	4.0	6	6.0%	53.0%	5	5.0%	25.0%	2	2.0%	30.0%	5	5.0%	25.0%	0	3	3.8%	39.2%	0	0	0.0%	14.0%	0	1	1.0%	74.0%	1	6	6.0%	85.5%
	fine gravel	5.7	5	5.0%	58.0%	7	7.0%	32.0%	6	6.0%	36.0%	2	2.0%	27.0%	0	6	7.6%	46.8%	0	0	0.0%	14.0%	0	1	1.0%	75.0%	0	6	5.1%	90.6%
	medium gravel	8.0	8	8.0%	66.0%	7	7.0%	39.0%	5	5.0%	41.0%	9	9.0%	36.0%	0	5	6.3%	53.2%	2	1	3.0%	17.0%	0	3	3.0%	78.0%	0	9	7.7%	98.3%
	medium gravel	11.3	6	6.0%	72.0%	5	5.0%	44.0%	7	7.0%	48.0%	5	5.0%	41.0%	0	1	1.3%	54.4%	2	0	2.0%	19.0%	0	7	7.0%	85.0%	0	1	0.9%	99.1%
	course gravel	16.0	6	6.0%	78.0%	7	7.0%	51.0%	3	3.0%	51.0%	9	9.0%	50.0%	0	1	1.3%	55.7%	2	4	6.0%	25.0%	0	2	2.0%	87.0%	0	0	0.0%	99.1%
	course gravel	22.6	6	6.0%	84.0%	8	8.0%	59.0%	7	7.0%	58.0%	8	8.0%	58.0%	0	2	2.5%	58.2%	3	5	8.0%	33.0%	0	2	2.0%	89.0%	0	1	0.9%	100.0%
	very course gravel	32	8	8.0%	92.0%	10	10.0%	69.0%	7	7.0%	65.0%	6	6.0%	64.0%	0	9	11.4%	69.6%	3	9	12.0%	45.0%	0	0	0.0%	89.0%	0	0	0.0%	100.0%
	very course gravel	45	5	5.0%	97.0%	16	16.0%	85.0%	14	14.0%	79.0%	9	9.0%	73.0%	0	9	11.4%	81.0%	1	9	10.0%	55.0%	0	1	1.0%	90.0%	0	0	0.0%	100.0%
Cobble	small cobble	64	2	2.0%	99.0%	7	7.0%	92.0%	7	7.0%	86.0%	11	11.0%	84.0%	0	4	5.1%	86.1%	3	16	19.0%	74.0%	0	1	1.0%	91.0%	0	0	0.0%	100.0%
	medium cobble	90	1	1.0%	100.0%	5	5.0%	97.0%	11	11.0%	97.0%	12	12.0%	96.0%	0	3	3.8%	89.9%	4	6	10.0%	84.0%	0	4	4.0%	95.0%	0	0	0.0%	100.0%
	large cobble	128	0	0.0%	100.0%	3	3.0%	100.0%	2	2.0%	99.0%	1	1.0%	97.0%	0	2	2.5%	92.4%	1	6	7.0%	91.0%	0	3	3.0%	98.0%	0	0	0.0%	100.0%
	very large cobble	180	0	0.0%	100.0%	0	0.0%	100.0%	1	1.0%	100.0%	2	2.0%	99.0%	0	2	2.5%	94.9%	1	5	6.0%	97.0%	0	0	0.0%	98.0%	0	0	0.0%	100.0%
Boulder	small boulder	256	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	1	1.0%	100.0%	0	2	2.5%	97.5%	1	1	2.0%	99.0%	0	1	1.0%	99.0%	0	0	0.0%	100.0%
	small boulder	362	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	1	1.3%	98.7%	1	0	1.0%	100.0%	0	1	1.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	98.7%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	98.7%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	98.7%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0.0%	100.0%	0	0	0.0%	98.7%	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			100	100.0%		100	100.0%		100	100.0%		100	100.0%		15	64	100.0%		25	75	100.0%		25	75	100.0%		21	96	100.0%	

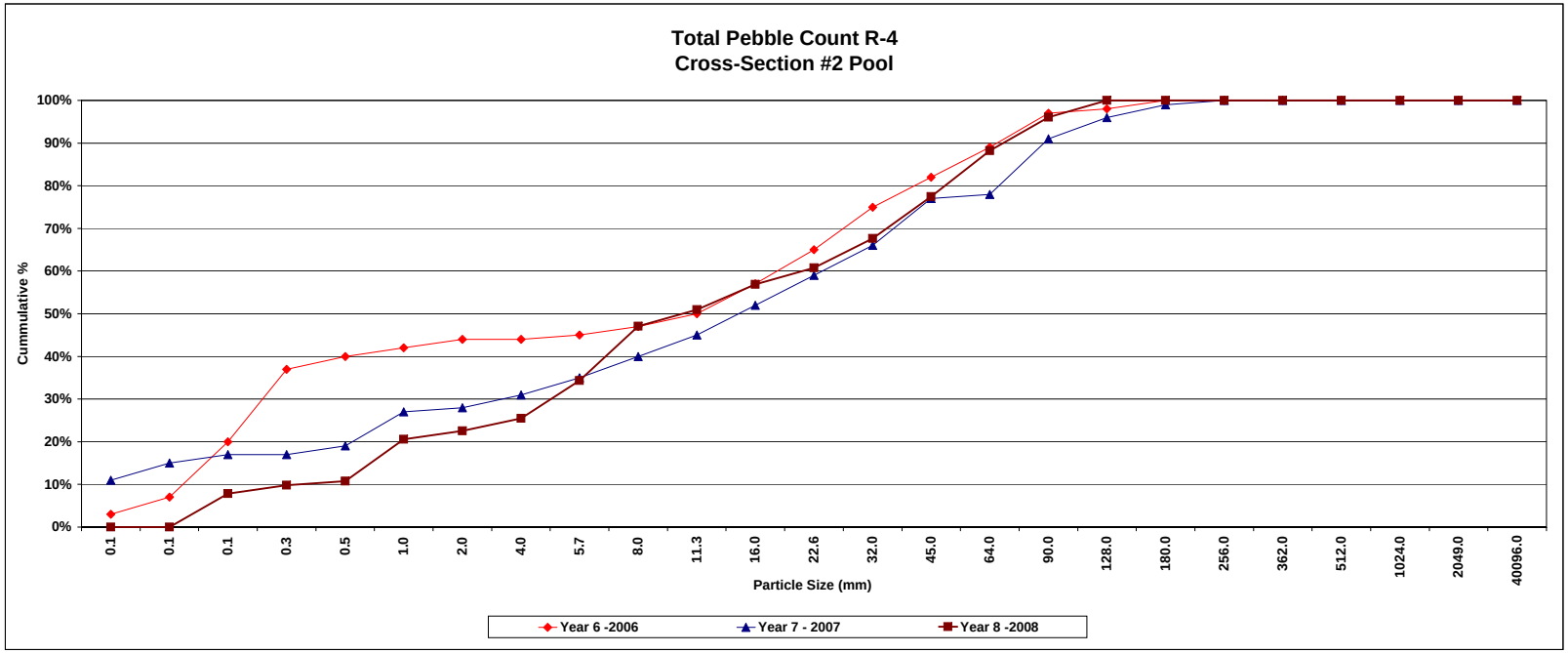
	d16	d35	d50	d84	d95
As-Built -2000	0.0	0.3	3.9	27.3	48.1
Year 1 -2001	0.6	8.1	18.5	53.5	96.2
Year 2 -2002	0.2	6.5	17.4	70.6	103.2
Year 3 -2003	0.3	9.3	19.3	106.3	106.3
Year 5 -2005	0.3	2.5	8.2	67.8	220.3
Year 6 -2006	8.7	29.2	46.5	109.0	196.7
Year 7 -2007	0.0	0.0	0.2	13.1	109.0
Year8 -2008	0.1	0.2	0.8	4.4	8.5



Project Name	Stone Mountain Reach 4
Cross Section	#2
Feature	Pool
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	0	3	3.0%	3.0%	8	3	11.0%	11.0%	0	0	0.0%	0.0%
Sand	very fine sand	0.062	0	4	4.0%	7.0%	2	2	4.0%	15.0%	0	0	0.0%	0.0%
	fine sand	0.125	3	10	13.0%	20.0%	0	2	2.0%	17.0%	8	0	7.8%	7.8%
	medium sand	0.25	7	10	17.0%	37.0%	0	0	0.0%	17.0%	2	0	2.0%	9.8%
	course sand	0.50	0	3	3.0%	40.0%	0	2	2.0%	19.0%	0	1	1.0%	10.8%
	very course sand	1.0	0	2	2.0%	42.0%	0	8	8.0%	27.0%	2	8	9.8%	20.6%
G r a v e l	very fine gravel	2.0	0	2	2.0%	44.0%	0	1	1.0%	28.0%	0	2	2.0%	22.5%
	fine gravel	4.0	0	0	0.0%	44.0%	0	3	3.0%	31.0%	0	3	2.9%	25.5%
	fine gravel	5.7	0	1	1.0%	45.0%	0	4	4.0%	35.0%	1	8	8.8%	34.3%
	medium gravel	8.0	0	2	2.0%	47.0%	0	5	5.0%	40.0%	1	12	12.7%	47.1%
	medium gravel	11.3	0	3	3.0%	50.0%	0	5	5.0%	45.0%	0	4	3.9%	51.0%
	coarse gravel	16.0	0	7	7.0%	57.0%	0	7	7.0%	52.0%	0	6	5.9%	56.9%
	coarse gravel	22.6	0	8	8.0%	65.0%	0	7	7.0%	59.0%	0	4	3.9%	60.8%
	very course gravel	32	0	10	10.0%	75.0%	0	7	7.0%	66.0%	0	7	6.9%	67.6%
	very course gravel	45	0	7	7.0%	82.0%	0	11	11.0%	77.0%	2	8	9.8%	77.5%
Cobble	small cobble	64	0	7	7.0%	89.0%	0	1	1.0%	78.0%	3	8	10.8%	88.2%
	medium cobble	90	0	8	8.0%	97.0%	0	13	13.0%	91.0%	0	8	7.8%	96.1%
	large cobble	128	0	1	1.0%	98.0%	0	5	5.0%	96.0%	1	3	3.9%	100.0%
	very large cobble	180	0	2	2.0%	100.0%	0	3	3.0%	99.0%	0	0	0.0%	100.0%
Boulder	small boulder	256	0	0	0.0%	100.0%	0	1	1.0%	100.0%	0	0	0.0%	100.0%
	small boulder	362	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			10	90	100.0%		10	90	100.0%		20	82	100.0%	

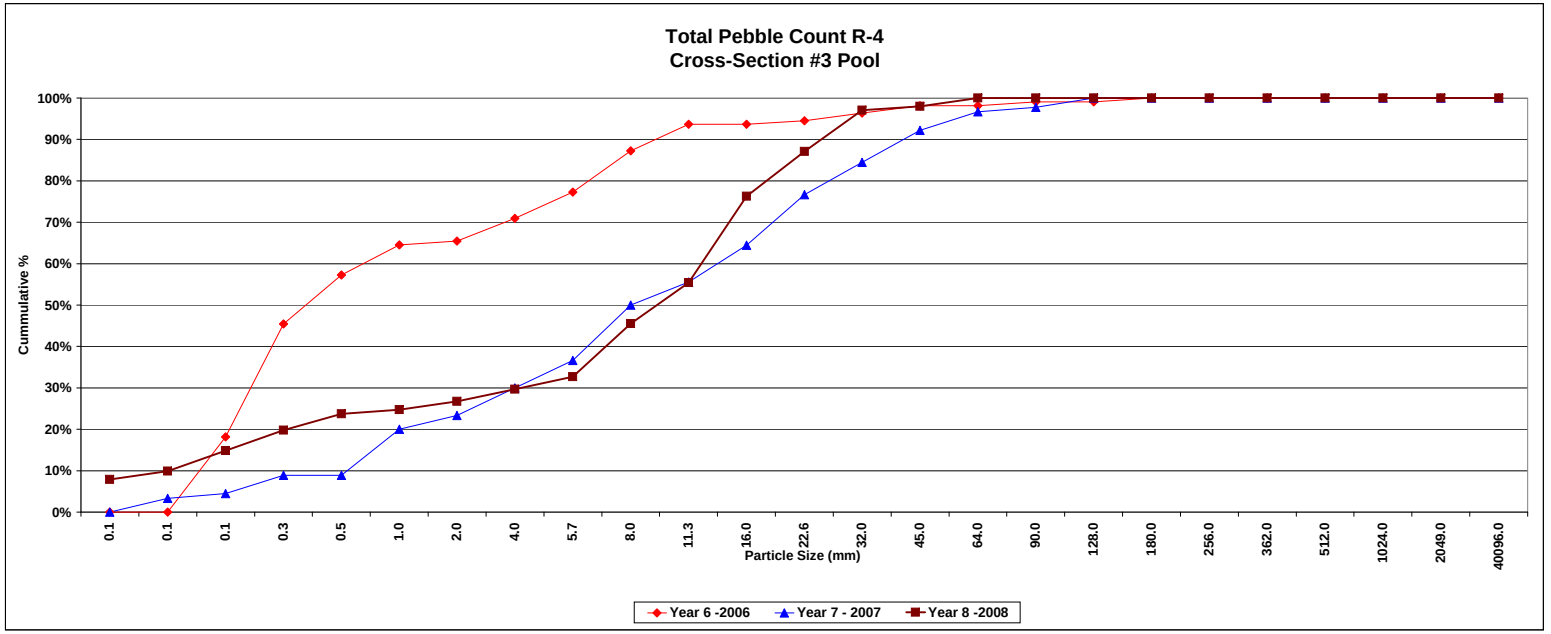
	d16	**d35**	**d50**	**d84**	**d95**
Year 6 -2006	0.09	0.60	13.65	61.09	101.35
Year 7 -2007	0.14	6.85	17.69	91.77	145.00
Year 8 -2008	0.75	6.85	11.30	64.90	90.00



Project Name	Stone Mountain Reach 4
Cross Section	#3
Feature	Pool
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	0	0	0.0%	0.0%	0	0	0.0%	0.0%	8	0	7.9%	7.9%
Sand	very fine sand	0.062	0	0	0.0%	0.0%	3	0	3.3%	3.3%	2	0	2.0%	9.9%
	fine sand	0.125	10	10	18.2%	18.2%	1	0	1.1%	4.4%	4	1	5.0%	14.9%
	medium sand	0.25	10	20	27.3%	45.5%	4	0	4.4%	8.9%	4	1	5.0%	19.8%
	course sand	0.50	0	13	11.8%	57.3%	0	0	0.0%	8.9%	2	2	4.0%	23.8%
	very course sand	1.0	0	8	7.3%	64.5%	2	8	11.1%	20.0%	0	1	1.0%	24.8%
G r a v e l	very fine gravel	2.0	0	1	0.9%	65.5%	0	3	3.3%	23.3%	0	2	2.0%	26.7%
	fine gravel	4.0	0	6	5.5%	70.9%	0	6	6.7%	30.0%	0	3	3.0%	29.7%
	fine gravel	5.7	0	7	6.4%	77.3%	0	6	6.7%	36.7%	0	3	3.0%	32.7%
	medium gravel	8.0	0	11	10.0%	87.3%	0	12	13.3%	50.0%	0	13	12.9%	45.5%
	medium gravel	11.3	0	7	6.4%	93.6%	0	5	5.6%	55.6%	0	10	9.9%	55.4%
	course gravel	16.0	0	0	0.0%	93.6%	0	8	8.9%	64.4%	0	21	20.8%	76.2%
	course gravel	22.6	0	1	0.9%	94.5%	0	11	12.2%	76.7%	0	11	10.9%	87.1%
	very course gravel	32	0	2	1.8%	96.4%	0	7	7.8%	84.4%	0	10	9.9%	97.0%
	very course gravel	45	0	2	1.8%	98.2%	0	7	7.8%	92.2%	0	1	1.0%	98.0%
Cobble	small cobble	64	0	0	0.0%	98.2%	0	4	4.4%	96.7%	0	2	2.0%	100.0%
	medium cobble	90	0	1	0.9%	99.1%	0	1	1.1%	97.8%	0	0	0.0%	100.0%
	large cobble	128	0	0	0.0%	99.1%	0	2	2.2%	100.0%	0	0	0.0%	100.0%
	very large cobble	180	0	1	0.9%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Boulder	small boulder	256	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	small boulder	362	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			20	90	100.0%		10	80	100.0%		20	81	100.0%	

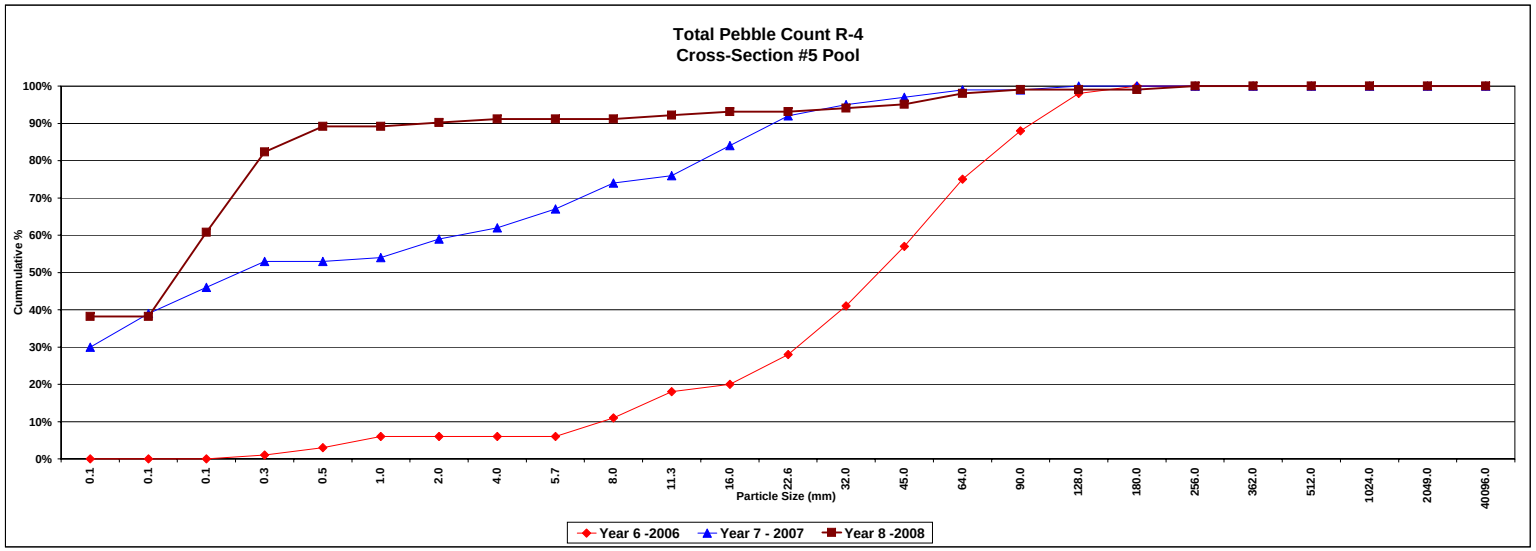
	d16	d35	d50	d84	d95
Year 6 -2006	0.2	0.3	0.5	8.7	30.1
Year 7 -2007	1.2	6.4	9.7	37.9	68.6
Year 8 -2008	0.2	7.4	11.5	25.0	35.2



Project Name	Stone Mountain Reach 4
Cross Section	#5
Feature	Pool
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	0	0	0.0%	0.0%	15	15	30.0%	30.0%	11	28	38.2%	38.2%
Sand	very fine sand	0.062	0	0	0.0%	0.0%	0	9	9.0%	39.0%	0	0	0.0%	38.2%
	fine sand	0.125	0	0	0.0%	0.0%	0	7	7.0%	46.0%	4	19	22.5%	60.8%
	medium sand	0.25	0	1	1.0%	1.0%	0	7	7.0%	53.0%	4	18	21.6%	82.4%
	course sand	0.50	1	1	2.0%	3.0%	0	0	0.0%	53.0%	2	5	6.9%	89.2%
	very course sand	1.0	0	3	3.0%	6.0%	0	1	1.0%	54.0%	0	0	0.0%	89.2%
G r a v e l	very fine gravel	2.0	0	0	0.0%	6.0%	0	5	5.0%	59.0%	0	1	1.0%	90.2%
	fine gravel	4.0	0	0	0.0%	6.0%	0	3	3.0%	62.0%	0	1	1.0%	91.2%
	fine gravel	5.7	0	0	0.0%	6.0%	0	5	5.0%	67.0%	0	0	0.0%	91.2%
	medium gravel	8.0	0	5	5.0%	11.0%	0	7	7.0%	74.0%	0	0	0.0%	91.2%
	medium gravel	11.3	2	5	7.0%	18.0%	0	2	2.0%	76.0%	0	1	1.0%	92.2%
	course gravel	16.0	0	2	2.0%	20.0%	0	8	8.0%	84.0%	0	1	1.0%	93.1%
	course gravel	22.6	1	7	8.0%	28.0%	0	8	8.0%	92.0%	0	0	0.0%	93.1%
	very course gravel	32	2	11	13.0%	41.0%	0	3	3.0%	95.0%	0	1	1.0%	94.1%
	very course gravel	45	2	14	16.0%	57.0%	0	2	2.0%	97.0%	0	1	1.0%	95.1%
Cobble	small cobble	64	3	15	18.0%	75.0%	0	2	2.0%	99.0%	0	3	2.9%	98.0%
	medium cobble	90	3	10	13.0%	88.0%	0	0	0.0%	99.0%	0	1	1.0%	99.0%
	large cobble	128	1	9	10.0%	98.0%	0	1	1.0%	100.0%	0	0	0.0%	99.0%
	very large cobble	180	0	2	2.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	99.0%
Boulder	small boulder	256	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	1	1.0%	100.0%
	small boulder	362	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	medium boulder	512	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	0	0.0%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			15	85	100.0%		15	85	100.0%		21	81	100.0%	

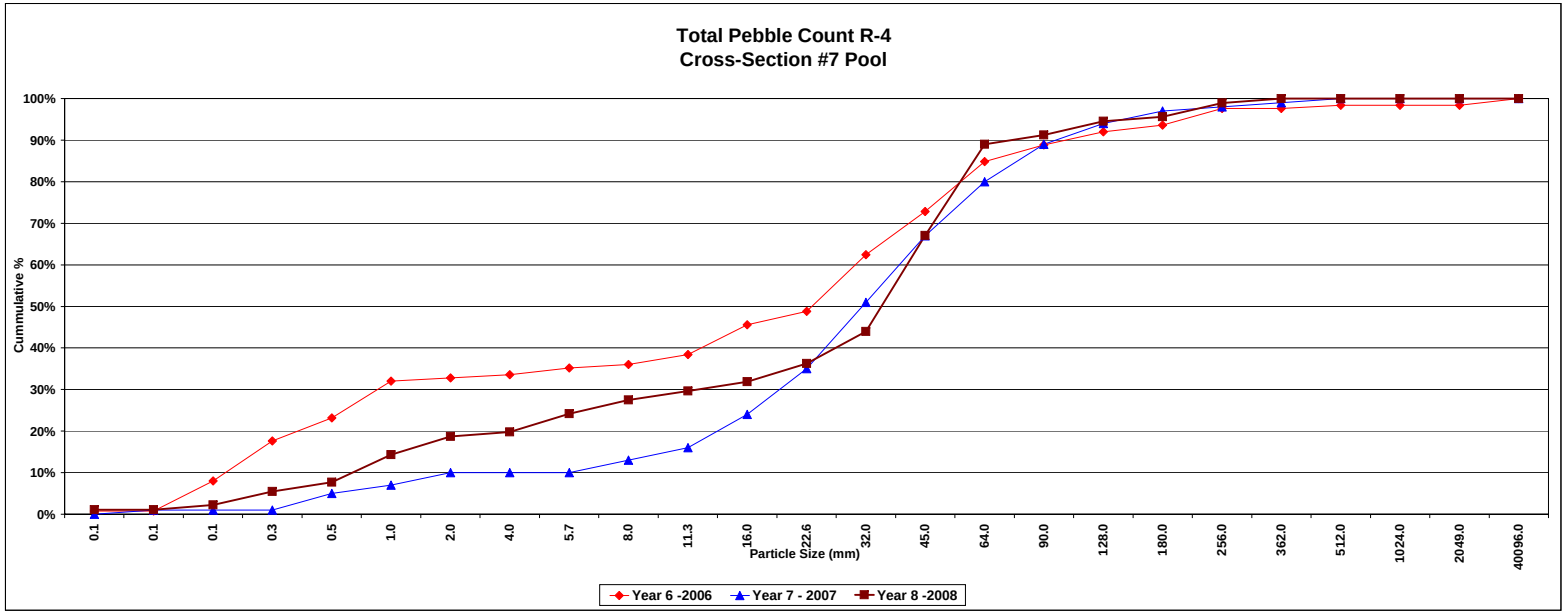
	d16	d35	d50	d84	d95
Year 6 -2006	12.5	33.3	47.5	99.2	140.5
Year 7 -2007	0.0	0.1	0.3	19.3	38.5
Year 8 -2008	0.0	0.0	0.1	0.5	52.9



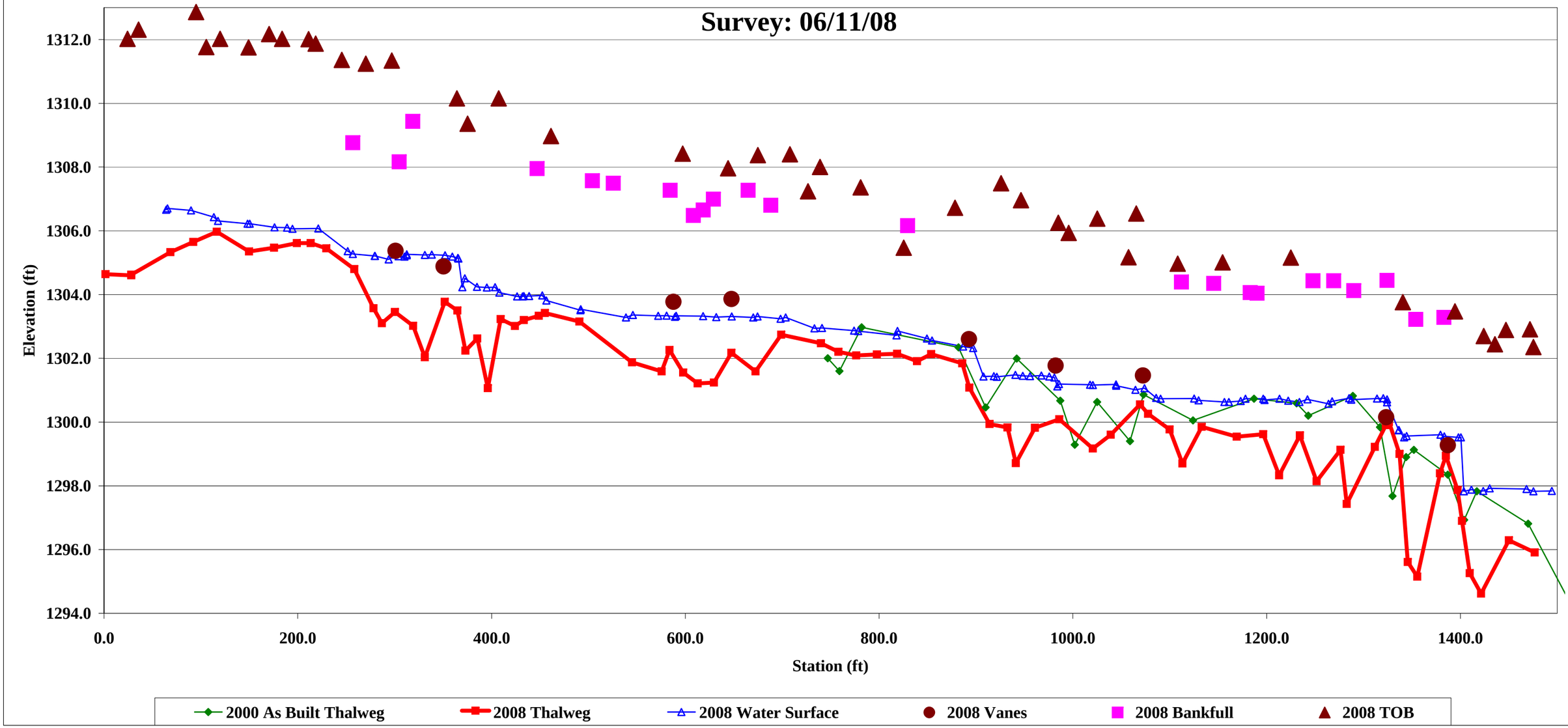
Project Name	Stone Mountain Reach 4
Cross Section	#7
Feature	Pool
Date	6/10/08
Crew	R. Brim, J.Blake, C. George

			Year 6 -2006				Year 7 -2007				Year 8 -2008			
Description	**Material**	**Size (mm)**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**	**Pool - Bank**	**Pool - Bed**	**%**	**Cum %**
Silt/Clay	silt/clay	0.061	1	0	0.8%	0.8%	0	0	0.0%	0.0%	1	0	1.1%	1.1%
Sand	very fine sand	0.062	0	0	0.0%	0.8%	1	0	1.0%	1.0%	0	0	0.0%	1.1%
	fine sand	0.125	0	9	7.2%	8.0%	0	0	0.0%	1.0%	1	0	1.1%	2.2%
	medium sand	0.25	3	9	9.6%	17.6%	0	0	0.0%	1.0%	0	3	3.3%	5.5%
	course sand	0.50	3	4	5.6%	23.2%	4	0	4.0%	5.0%	0	2	2.2%	7.7%
	very course sand	1.0	3	8	8.8%	32.0%	2	0	2.0%	7.0%	2	4	6.6%	14.3%
G r a v e l	very fine gravel	2.0	0	1	0.8%	32.8%	3	0	3.0%	10.0%	2	2	4.4%	18.7%
	fine gravel	4.0	0	1	0.8%	33.6%	0	0	0.0%	10.0%	0	1	1.1%	19.8%
	fine gravel	5.7	0	2	1.6%	35.2%	0	0	0.0%	10.0%	2	2	4.4%	24.2%
	medium gravel	8.0	0	1	0.8%	36.0%	0	3	3.0%	13.0%	1	2	3.3%	27.5%
	medium gravel	11.3	2	1	2.4%	38.4%	0	3	3.0%	16.0%	1	1	2.2%	29.7%
	course gravel	16.0	2	7	7.2%	45.6%	0	8	8.0%	24.0%	1	1	2.2%	31.9%
	course gravel	22.6	0	4	3.2%	48.8%	0	11	11.0%	35.0%	2	2	4.4%	36.3%
	very course gravel	32	3	14	13.6%	62.4%	0	16	16.0%	51.0%	2	5	7.7%	44.0%
	very course gravel	45	3	10	10.4%	72.8%	0	16	16.0%	67.0%	7	14	23.1%	67.0%
Cobble	small cobble	64	2	13	12.0%	84.8%	0	13	13.0%	80.0%	7	13	22.0%	89.0%
	medium cobble	90	2	3	4.0%	88.8%	0	9	9.0%	89.0%	1	1	2.2%	91.2%
	large cobble	128	0	4	3.2%	92.0%	0	5	5.0%	94.0%	0	3	3.3%	94.5%
	very large cobble	180	0	2	1.6%	93.6%	0	3	3.0%	97.0%	0	1	1.1%	95.6%
Boulder	small boulder	256	1	4	4.0%	97.6%	0	1	1.0%	98.0%	0	3	3.3%	98.9%
	small boulder	362	0	0	0.0%	97.6%	0	1	1.0%	99.0%	0	1	1.1%	100.0%
	medium boulder	512	0	1	0.8%	98.4%	0	1	1.0%	100.0%	0	0	0.0%	100.0%
	large boulder	1024	0	0	0.0%	98.4%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
	very large boulder	2049	0	0	0.0%	98.4%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
Bedrock	bedrock	40096	0	2	1.6%	100.0%	0	0	0.0%	100.0%	0	0	0.0%	100.0%
TOTAL / %of whole count			25	100	100.0%		10	90	100.0%		30	61	100.0%	

	d16	**d35**	**d50**	**d84**	**d95**
Year 6 -2006	0.3	6.6	28.3	75.5	249.9
Year 7 -2007	13.7	27.3	37.8	91.2	175.3
Year 8 -2008	2.1	25.0	42.7	71.9	182.8



Stone Mountain Longitudinal Profile
Reach 2 - 2008
Survey: 06/11/08



2008 Survey Data Stone Mountain- Reach 2

Point	Station	Elevation	Description
1510	1.49	1304.64	T
1513	28.13	1304.6	T
1515	28.24	1304.62	T
30029	68.66	1305.33	T
30032	92.23	1305.65	T
30033	116.47	1305.97	THR
30036	149.66	1305.35	TER
30039	175.55	1305.47	T
30043	199.06	1305.61	THR
30046	213.39	1305.61	T
30081	229.52	1305.45	TLV
30083	258.4	1304.8	TER
30087	278.26	1303.57	T
30090	286.79	1303.1	TMP
30098	300.35	1303.45	T
30102	319.03	1303.02	T
30105	331.15	1302.03	TMP
30110	351.76	1303.77	T
30114	364.77	1303.5	T
30118	373.03	1302.24	T
30120	385.26	1302.62	T
30123	396.26	1301.06	TMP
30124	409.34	1303.23	THR
30126	424.12	1303.01	T
30129	433.43	1303.2	TER
30132	448.72	1303.33	T
30135	455.06	1303.42	THR
30138	490.7	1303.15	T
30141	545.11	1301.87	TER
30144	575.58	1301.59	TMP
30147	583.8	1302.26	T
30184	597.77	1301.55	T
30186	612.78	1301.21	TMP
30218	629.52	1301.24	T
30219	647.63	1302.17	T
30221	672.52	1301.59	T
30227	699.06	1302.74	THR
30230	740.02	1302.47	TER
30232	758.02	1302.2	T
30234	776.38	1302.09	T
30236	797.71	1302.12	T
30238	818.59	1302.14	T
30248	839.17	1301.91	THR
30241	853.76	1302.13	T
30297	885.95	1301.84	T
30304	893.13	1301.08	T
30307	914.09	1299.94	T
30309	932.49	1299.83	T
30311	941.24	1298.71	TMP
30313	960.94	1299.82	T
30320	986.1	1300.09	T
30322	1020.64	1299.17	TMP
30325	1039.15	1299.6	T
30327	1069.35	1300.55	T
30336	1077.62	1300.26	T
30338	1099.89	1299.77	T
30340	1113.14	1298.7	T
30342	1132.96	1299.85	T
30344	1169.11	1299.54	T
30346	1196.49	1299.62	T
30380	1212.89	1298.33	TMP
30382	1234.38	1299.58	T
30388	1251.72	1298.14	T
30390	1276.34	1299.13	T
30391	1282.78	1297.43	TMP
30394	1311.73	1299.22	T
30396	1323.19	1299.9	T
30429	1326.31	1300	T
30430	1337.28	1299	T
30435	1345.7	1295.61	T
30436	1355.47	1295.15	T
30437	1379.03	1298.39	T
30446	1385.16	1298.94	T
30447	1397.18	1297.87	T
30448	1401.75	1296.9	T
30450	1409.62	1295.26	T
30451	1421.36	1294.62	T
30455	1450.16	1296.29	T
30456	1476.75	1295.91	T

Point	Station	Elevation	Description
30028	64.11	1306.66	W
30030	65.46	1306.7	W
30031	89.85	1306.64	W
30034	113.43	1306.43	W
30035	117.61	1306.31	W
30038	148.16	1306.22	W
30037	150.46	1306.22	W
30040	176.1	1306.11	W
30041	188.95	1306.1	W
30042	194.45	1306.06	W
30045	221.21	1306.07	W
30084	251.55	1305.36	W
30085	256.79	1305.27	W
30088	279.36	1305.21	W
30086	279.74	1305.21	W
30091	293.89	1305.1	W
30089	299.78	1305.25	W
30097	304.07	1305.2	W
30099	310.09	1305.19	W
30096	312.41	1305.23	W
30092	312.49	1305.26	W
30100	331.24	1305.24	W
30101	338.37	1305.25	W
30103	351.96	1305.23	W
30104	359.56	1305.19	W
30113	365.24	1305.15	W
30115	365.84	1305.13	W
30116	369.84	1304.23	W
30117	372.34	1304.51	W
30119	384.96	1304.24	W
30122	395.16	1304.22	W
30121	403.56	1304.23	W
30125	408.09	1304.06	W
30128	426.43	1303.94	W
30127	432.07	1303.94	W
30131	433.3	1303.95	W
30130	438.74	1303.95	W
30133	452.34	1303.97	W
30134	456.56	1303.81	W
30136	491.76	1303.51	W
30137	492.06	1303.54	W
30140	538.7	1303.28	W
30139	545.92	1303.36	W
30142	571.96	1303.33	W
30143	580.75	1303.34	W
30185	589.35	1303.3	W
30187	590.56	1303.33	W
30217	618.36	1303.32	W
30220	632	1303.29	W
30224	647.95	1303.31	W
30222	670.2	1303.28	W
30226	674.5	1303.31	W
30229	698.36	1303.24	W
30228	703.51	1303.28	W
30233	733.22	1302.94	W
30231	741.05	1302.95	W
30235	774.25	1302.87	W
30237	778.35	1302.85	W
30239	817.99	1302.72	W
30240	819.04	1302.86	W
30243	849.46	1302.62	W
30242	854.73	1302.56	W
30244	886.74	1302.37	W
30299	897.06	1302.32	W
30301	907.7	1301.43	W
30303	918.53	1301.44	W
30305	921.5	1301.42	W
30316	940.75	1301.48	W
30306	948.32	1301.45	W
30314	955.83	1301.44	W
30308	967.47	1301.46	W
30310	975.69	1301.43	W
30312	980.98	1301.4	W
30319	983.97	1301.12	W
30323	985.73	1301.19	W
30321	1017.74	1301.17	W
30324	1020.6	1301.16	W
30328	1044.52	1301.18	W
30326	1044.8	1301.14	W
30332	1064.68	1301.01	W
30330	1074.02	1301.06	W
30335	1085.94	1300.76	W
30334	1090.66	1300.73	W
30337	1125.18	1300.74	W
30339	1129.83	1300.68	W
30343	1156.38	1300.63	W
30341	1161.04	1300.63	W
30347	1173.17	1300.66	W
30345	1178.17	1300.73	W
30351	1196.51	1300.73	W
30349	1197.9	1300.69	W
30379	1213.36	1300.73	W
30383	1222.22	1300.67	W
30381	1233.79	1300.63	W
30385	1242.09	1300.71	W
30387	1263.93	1300.57	W
30389	1267.61	1300.65	W

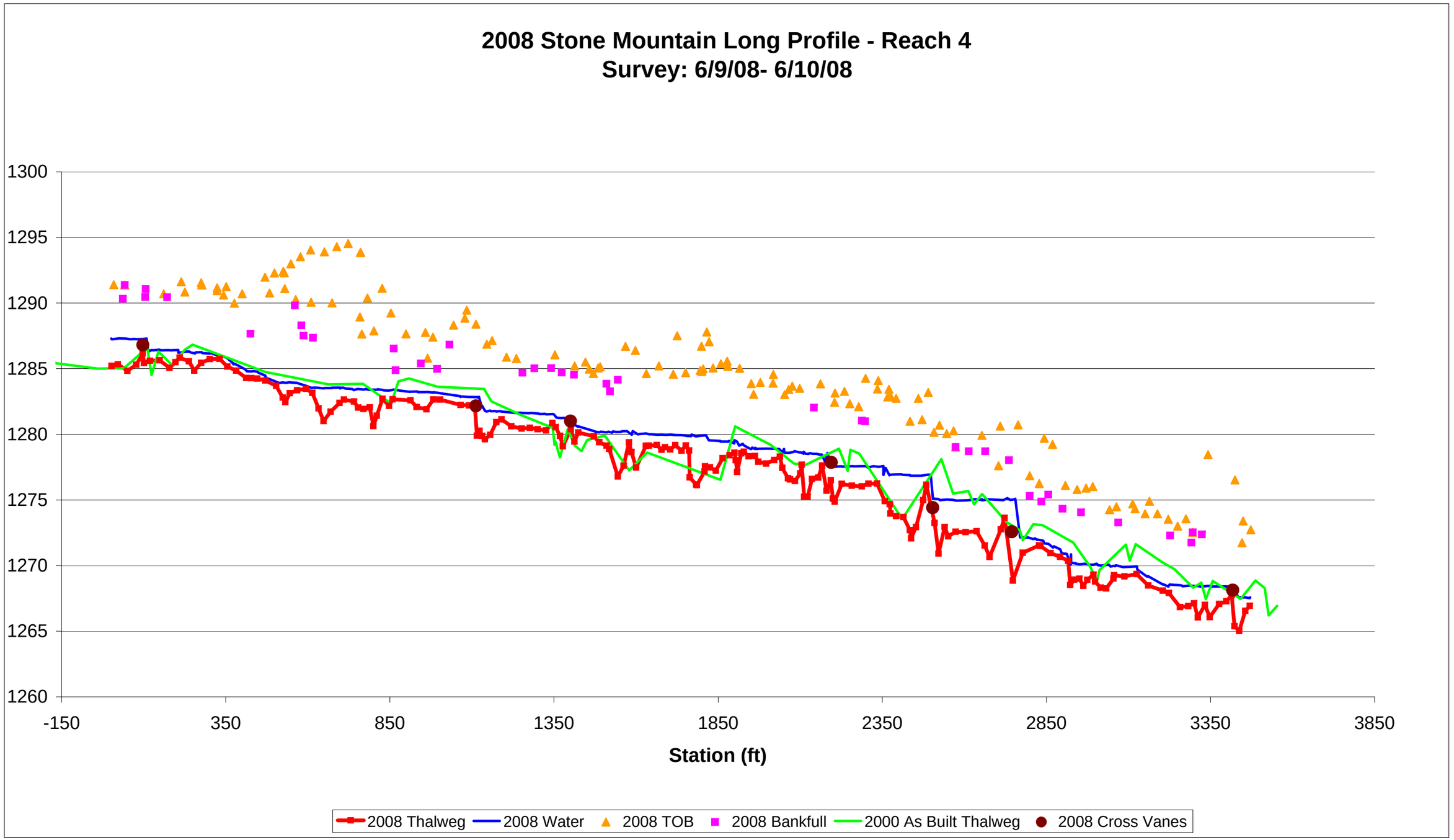
Point	Station	Elevation	Description
30393	1285.16	1300.75	W
30392	1287.36	1300.7	W
30395	1313.94	1300.74	W
30397	1320.33	1300.75	W
30428	1324.39	1300.71	W
30427	1324.4	1300.62	W
30432	1336.35	1299.74	W
30431	1336.6	1299.75	W
30434	1341.99	1299.52	W
30433	1344.57	1299.56	W
30438	1379.49	1299.6	W
30439	1383.33	1299.55	W
30440	1397.92	1299.52	W
30445	1400.53	1299.52	W
30449	1403.52	1297.83	W
30454	1411.45	1297.88	W
30452	1423.55	1297.84	W
30453	1430.32	1297.92	W
30458	1468.21	1297.9	W
30457	1475.4	1297.83	W
30459	1494.38	1297.84	W

Point	Station	Elevation	Description
30175	5.55	1314.91	TOB
30173	24.29	1312.02	TOB
30174	35.7	1312.31	TOB
30172	95.11	1312.86	TOB
30171	105.6	1311.76	TOB
30170	119.92	1312.02	TOB
30169	149.18	1311.75	TOB
30168	170.47	1312.17	TOB
30167	183.86	1312.02	TOB
30165	211.18	1312.01	TOB
30166	218.51	1311.87	TOB
30163	245.52	1311.36	TOB
30164	270.2	1311.24	TOB
30162	297.07	1311.34	TOB
30158	364.27	1310.15	TOB
30155	375.23	1309.36	TOB
30156	407.43	1310.15	TOB
30154	461.38	1308.97	TOB
30263	597.35	1308.42	TOB
30262	644.09	1307.96	TOB
30261	674.97	1308.37	TOB
30260	707.91	1308.4	TOB
30254	726.66	1307.24	TOB
30257	739.08	1308	TOB
30252	780.98	1307.36	TOB
30250	825.43	1305.47	TOB
30251	878.33	1306.72	TOB
30415	925.99	1307.49	TOB
30416	946.44	1306.96	TOB
30413	984.96	1306.25	TOB
30414	995.71	1305.93	TOB
30411	1025.2	1306.38	TOB
30412	1057.57	1305.17	TOB
30409	1065.41	1306.54	TOB
30410	1108.32	1304.97	TOB
30405	1154.59	1305.01	TOB
30402	1225.03	1305.16	TOB
30492	1340.67	1303.76	TOB
30490	1394.42	1303.47	TOB
30496	1424.09	1302.7	TOB
30489	1435.71	1302.44	TOB
30497	1447.08	1302.89	TOB
30498	1471.74	1302.91	TOB
30488	1475.38	1302.35	TOB
8488	960.02	1304.85	TOB
8493	960.17	1306.65	TOB
8485	1004.62	1304.6	TOB
8480	1043.68	1306.16	TOB
8479	1063.11	1306.52	TOB
8477	1129.12	1304.49	TOB
8484	1153.23	1303.97	TOB
8471	1253.26	1305.55	TOB
8616	1258.63	1304.45	TOB
8572	1258.63	1304.45	TOB
8469	1282.83	1304.75	TOB
8472	1304.55	1303.84	TOB
8468	1317.32	1304.35	TOB
8613	1332.34	1304.37	TOB
8569	1332.34	1304.37	TOB
8614	1355.19	1303.65	TOB
8570	1355.19	1303.65	TOB
8567	1369.31	1303.79	TOB
8612	1380.26	1303.96	TOB
8610	1399.27	1304.89	TOB
8566	1399.27	1304.89	TOB
8607	1425.32	1303.86	TOB
8563	1425.32	1303.86	TOB
8606	1430.89	1303.34	TOB
8562	1430.89	1303.34	TOB
8605	1463.75	1303.73	TOB
8561	1463.75	1303.73	TOB
8560	1474.74	1302.48	TOB

Point	Station	Elevation	Description
30161	256.86	1308.76	BNKF
30157	304.6	1308.16	BNKF
30160	318.74	1309.43	BNKF
30153	447.07	1307.95	BNKF
30152	504.13	1307.57	BNKF
30151	525.72	1307.49	BNKF
30149	584.46	1307.27	BNKF
30148	608.43	1306.48	BNKF
30259	618.55	1306.65	BNKF
30258	629	1306.99	BNKF
30256	664.84	1307.27	BNKF
30255	688.24	1306.8	BNKF
30253	829.53	1306.16	BNKF
30407	1112.16	1304.39	BNKF
30408	1145.39	1304.35	BNKF
30406	1183.1	1304.06	BNKF
30404	1190.2	1304.04	BNKF
30403	1247.97	1304.43	BNKF
30400	1269.3	1304.43	BNKF
30401	1290	1304.12	BNKF
30399	1324.38	1304.44	BNKF
30491	1354.07	1303.22	BNKF
30493	1383.02	1303.28	BNKF

Point	Station	Elevation	Description
30093	300.94	1305.37	RV
30107	350.48	1304.88	RV
30146	587.86	1303.77	RV
30225	647.77	1303.86	RV
30300	892.87	1302.6	RV
30317	982.36	1301.77	RV
30331	1072.36	1301.46	RV
30424	1323.53	1300.15	RV
30443	1387.16	1299.27	RV

2008 Stone Mountain Long Profile - Reach 4
Survey: 6/9/08- 6/10/08



2008 Stone Mountain Reach 4 Survey Data

Point	Station	Elev	Desc	Point	Station	Elev	Desc
60033	2.05	1285.22	t	60477	1810.02	1277.56	t
60036	21.2	1285.34	t	60534	1824.93	1277.48	t
60039	50.12	1284.84	t	60536	1842.9	1277.23	t
60043	77.65	1285.3	t	60538	1863.44	1278.18	t
60045	97.02	1286.16	t	60540	1884.92	1278.41	t
60053	101.14	1285.43	t	60543	1899.86	1278.6	t
60055	118.86	1285.6	t	60550	1903.6	1278.02	t
60058	148.63	1285.64	t	60552	1907.86	1277.13	t
60061	178.45	1285.06	t	60555	1920.4	1278.55	thr
60064	196.9	1285.49	t	60556	1928.62	1278.67	t
60066	209.89	1285.84	thr	60559	1942.75	1278.32	t
60069	237.85	1285.56	ter	60562	1962.47	1278.35	ter
60073	254.06	1284.85	t	60602	1972.39	1277.91	t
60076	275	1285.45	t	60605	1996.03	1277.78	t
60079	301.16	1285.73	t	60608	2020.94	1278.04	t
60082	331.36	1285.75	thr	60611	2038.18	1278.3	t
60085	354.92	1285.16	t	60619	2045.51	1277.44	t
60088	381.86	1284.85	t	60622	2062.77	1276.65	t
60091	412.64	1284.29	ter	60624	2068.5	1276.56	tmp
60094	427.92	1284.28	t	60627	2084.02	1276.44	t
60097	445.84	1284.24	thr	60630	2100.16	1277.02	t
60100	470.76	1284.1	t	60633	2104.44	1277.68	t
60103	503.71	1283.69	ter	60646	2112.08	1275.24	t
60106	523.65	1282.8	t	60649	2122.81	1275.25	tmp
60108	531.89	1282.45	tmp	60650	2135.95	1276.59	t
60142	545.17	1283.13	t	60652	2154.84	1276.7	t
60145	567.45	1283.36	thr	60654	2167.21	1277.62	t
60148	594.24	1283.46	t	60660	2180.22	1275.7	t
60151	613.94	1283.16	ter	60663	2193.41	1276.5	t
60154	632.9	1281.97	t	60666	2199.34	1275.1	t
60157	648.12	1281.01	tmp	60669	2205.21	1274.87	tmp
60160	669.7	1281.72	t	60672	2226.72	1276.22	t
60163	696.96	1282.39	t	60675	2257.13	1276.08	t
60185	709.99	1282.64	t	60677	2287.85	1276.03	t
60188	740.65	1282.5	t	60681	2307.86	1276.24	t
60191	752.85	1282.03	tmp	60684	2333.9	1276.25	t
60213	769.9	1281.93	t	60687	2357.92	1274.91	t
60220	788.93	1282.04	t	60690	2372.87	1274.67	tmp
60223	799.95	1280.63	tmp	60733	2375.06	1273.96	t
60225	810.12	1281.41	t	60735	2392.16	1273.77	t
60228	827.47	1282.7	t	60738	2414.52	1273.7	t
60231	847.56	1282.17	t	60741	2434.22	1272.69	t
60234	858.24	1282.67	thr	60744	2438.19	1272.07	tmp
60237	912.83	1282.59	ter	60748	2452.76	1272.93	t
60239	931.38	1282.08	t	60751	2474.75	1274.98	t
60246	961.62	1281.9	tmp	60753	2484	1276.15	t
60249	982.51	1282.66	t	60757	2509.68	1273.24	t
60252	1002.81	1282.64	thr	60761	2521.53	1270.91	t
60254	1065.6	1282.24	ter	60755	2540.14	1272.93	t
60257	1090.7	1282.2	t	60758	2550.79	1272.23	t
60260	1109.62	1281.96	t	60763	2573.27	1272.57	t
60263	1115.14	1279.9	t	60765	2604.03	1272.55	t
60272	1123.03	1280.27	t	60767	2637.51	1272.61	t
60273	1131.25	1279.88	t	60770	2662.23	1271.52	t
60276	1139.57	1279.63	tmp	60772	2676.76	1270.65	t
60280	1155.69	1279.96	t	60779	2711.08	1272.76	t
60311	1174.27	1280.92	t	60781	2722.95	1273.64	t
60314	1189.81	1281.14	thr	60785	2748.01	1268.85	t
60316	1219.78	1280.62	ter	60786	2777.99	1270.98	t
60319	1251.51	1280.44	t	60887	2827.54	1271.54	t
60323	1276.22	1280.49	t	60890	2831.78	1271.49	thr
60325	1300.18	1280.39	t	60893	2862.69	1270.95	t
60328	1325.63	1280.29	tmp	60895	2891.74	1270.67	t
60331	1344.86	1280.86	t	60898	2916.3	1270.36	ter
60336	1355.17	1280.54	t	60905	2922.44	1268.52	t
60339	1368.38	1279.87	t	60907	2935.05	1268.92	t
60341	1377.07	1279.09	tmp	60910	2950.21	1268.99	t
60346	1401.13	1280.39	t	60913	2962.66	1268.46	tmp
60354	1412.14	1279.45	t	60916	2974.52	1268.91	t
60356	1423.98	1280.14	thr	60919	2993.05	1269.3	t
60358	1471.66	1279.85	t	60922	2998.59	1268.78	t
60361	1487.71	1279.4	ter	60927	3015	1268.32	t
60364	1510.15	1279.14	t	60929	3032.29	1268.26	t
60389	1518.19	1278.89	t	60971	3054.3	1269.01	t
60393	1544.52	1276.79	tmp	60934	3056.31	1269.26	t
60396	1562.2	1277.61	t	60976	3087.8	1269.17	t
60399	1578.56	1279.39	t	60977	3124.67	1269.35	thr
60403	1586.06	1278.65	t	60982	3160.19	1268.48	t
60453	1600.17	1277.47	tmp	60983	3204.53	1268.09	ter
60456	1629.78	1279.12	t	60988	3223.35	1267.91	t
60512	1639.12	1279.13	t	60993	3256.98	1266.84	tmp
60459	1663.35	1279.18	t	60994	3282.21	1266.91	tmp
60514	1677.36	1278.83	t	61023	3300.05	1267.12	t
60462	1688.17	1279.01	t	61031	3311.23	1266.05	tmp
60516	1704.37	1278.85	t	61033	3332.83	1267	t
60465	1719.75	1279.17	t	61035	3347.58	1266.07	t
60519	1738.83	1278.75	t	61037	3376.09	1267.08	t
60467	1751.28	1279.15	t	61040	3398.38	1267.28	t
60471	1761.43	1278.76	t	61043	3414.6	1267.73	t
60522	1763.2	1276.71	t	61048	3422.85	1265.38	t
60525	1783.12	1276.18	t	61052	3437.52	1265.01	t
60474	1785.41	1276.13	t	61054	3456.11	1266.55	t
60527	1808.84	1277.17	t	61057	3469.58	1266.93	thr

Point	Station	Elev	Desc	Point	Station	Elev	Desc	Point	Station	Elev	Desc	Point	Station	Elev	Desc
60035	1.13	1287.3	w	60247	957.57	1283.22	w	60553	1907.52	1279.45	w	60783	2770.09	1272	w
60034	3.12	1287.24	w	60245	962.67	1283.23	w	60551	1914.21	1279.13	w	60787	2771.14	1272	w
60037	20.74	1287.3	w	60250	981.56	1283.18	w	60558	1925.35	1279.28	w	60881	2782.34	1272	w
60038	22.1	1287.31	w	60248	982.3	1283.2	w	60557	1927.54	1279.17	w	60883	2793.6	1272	w
60040	45.66	1287.29	w	60253	1001.57	1283.14	w	60560	1942.41	1278.97	w	60884	2810.32	1272	w
60041	56.38	1287.25	w	60251	1002.7	1283.13	w	60561	1950.15	1278.87	w	60882	2815.46	1272	w
60042	72.56	1287.26	w	60259	1065.1	1282.91	w	60592	1951.88	1278.9	xs4w	60886	2821.09	1272	w
60044	77.46	1287.25	w	60255	1065.16	1282.85	w	60577	1953.98	1278.99	xs4w	60885	2822.55	1272	w
60046	97.94	1287.26	w	60256	1065.41	1282.88	w	60563	1962.57	1278.87	w	60888	2840.8	1272	w
60047	108.94	1287.3	w	60258	1092.46	1282.85	w	60564	1962.93	1278.97	w	60892	2843.46	1272	w
60052	112.68	1286.46	w	60262	1094.86	1282.84	w	60604	1969.12	1278.87	w	60889	2856.4	1272	w
60054	118.05	1286.33	w	60264	1116.68	1282.83	w	60603	1969.39	1278.9	w	60894	2870.38	1271	w
60056	123.76	1286.42	w	60261	1116.7	1282.81	w	60606	1996.61	1278.91	w	60891	2872.45	1271	w
60057	129.19	1286.4	w	60265	1121.49	1282.86	w	60607	1997.09	1278.91	w	60896	2892.06	1271	w
60060	147.59	1286.45	w	60275	1128.51	1282.17	w	60610	2023.29	1278.9	w	60897	2896.67	1271	w
60059	152.54	1286.4	w	60274	1130.79	1282.18	w	60609	2029.72	1278.89	w	60899	2911.98	1271	w
60063	176.34	1286.41	w	60279	1140.1	1281.77	w	60612	2035.95	1278.88	w	60906	2923.99	1270	w
60062	181.92	1286.4	w	60278	1142.72	1281.77	w	60617	2041.11	1278.75	w	60900	2924.9	1271	w
60067	205.22	1286.42	w	60277	1144.73	1281.73	w	60618	2044.36	1278.57	w	60904	2925.41	1270	w
60065	205.33	1286.21	w	60282	1155.9	1281.81	w	60613	2050.74	1278.89	w	60908	2939.38	1270	w
60068	221.21	1286.26	w	60281	1157.14	1281.76	w	60620	2051.48	1278.61	w	60909	2939.96	1270	w
60070	225.39	1286.31	w	60312	1170.83	1281.77	w	60621	2062.34	1278.59	w	60911	2949.7	1270	w
60072	238.94	1286.31	w	60283	1174.82	1281.74	w	60623	2070.46	1278.61	w	60912	2953.55	1270	w
60071	243.77	1286.23	w	60315	1185.43	1281.77	w	60626	2080.87	1278.66	w	60914	2963.65	1270	w
60075	256.38	1286.16	w	60313	1189.21	1281.74	w	60625	2082.33	1278.72	w	60915	2965.22	1270	w
60074	258.24	1286.24	w	60318	1218.88	1281.66	w	60629	2096.97	1278.62	w	60917	2975.83	1270	w
60078	276.47	1286.26	w	60317	1230.53	1281.63	w	60628	2099.7	1278.62	w	60918	2978.83	1270	w
60077	278.78	1286.18	w	60320	1250.63	1281.64	w	60632	2108.22	1278.59	w	60920	2992.78	1270	w
60081	300.19	1286.15	w	60321	1251.39	1281.63	w	60638	2110.05	1278.51	w	60921	3003.07	1270	w
60080	305.13	1286.19	w	60324	1274.64	1281.6	w	60631	2110.83	1278.67	w	60926	3007.03	1270	w
60084	331.56	1285.93	w	60322	1278.9	1281.63	w	60637	2115.55	1278.53	w	60928	3016.08	1270	w
60083	332.68	1286.03	w	60327	1303.41	1281.58	w	60641	2125.61	1278.5	w	60930	3037.73	1270	w
60086	353.66	1285.82	w	60326	1305.73	1281.54	w	60640	2129.04	1278.56	w	60932	3040.29	1270	w
60009	372.74	1285.4	xs1w	60330	1323.51	1281.56	w	60644	2138.96	1278.52	w	60972	3045.26	1270	w
60087	373.16	1285.33	w	60329	1326	1281.52	w	60642	2150.05	1278.51	w	60936	3056.22	1270	w
60024	373.45	1285.4	xs1w	60332	1347.24	1281.54	w	60648	2158.91	1278.46	w	60973	3059.18	1270	w
60089	377.61	1285.36	w	60334	1350.94	1281.48	w	60645	2166.04	1278.45	w	60935	3061.93	1270	w
60090	388.6	1285.23	w	60335	1357.55	1281.27	w	60661	2178.79	1277.72	w	60974	3084.37	1270	w
60092	409.52	1284.95	w	60340	1365.3	1281.25	w	60653	2180.33	1278.47	w	60975	3088.64	1270	w
60093	414.2	1284.8	w	60338	1371.11	1281.24	w	60662	2180.45	1277.69	w	60979	3125.73	1270	w
60095	430.86	1284.79	w	60342	1377.33	1281.25	w	60647	2182.67	1278.58	w	60978	3126.81	1270	w
60096	433.19	1284.83	w	60343	1380.6	1281.25	w	60665	2192.68	1277.78	w	60980	3156.32	1269	w
60098	446.07	1284.76	w	60344	1395.65	1281.24	w	60664	2194.42	1277.68	w	60981	3159.16	1269	w
60099	448.71	1284.71	w	60345	1399.2	1281.26	w	60667	2199.37	1277.56	w	60985	3205.17	1269	w
60102	470.46	1284.47	w	60347	1406.84	1281.26	w	60668	2201.44	1277.56	w	60984	3205.31	1269	w
60101	471.79	1284.32	w	60348	1409.97	1280.66	w	60670	2209.56	1277.52	w	60989	3221.7	1268	w
60104	508.31	1283.96	w	60350	1412.89	1280.73	w	60671	2211.71	1277.55	w	60990	3224.94	1269	w
60105	511.27	1283.91	w	60355	1422.31	1280.58	w	60674	2226.96	1277.56	w	60991	3255.22	1269	w
60107	524.38	1283.96	w	60357	1422.93	1280.62	w	60673	2227.26	1277.54	w	60992	3256.69	1269	w
60109	532.39	1283.92	w	60360	1471.76	1280.24	w	60676	2257.75	1277.57	w	61008	3262.42	1268	xs7w
60143	544.44	1283.97	w	60359	1476.26	1280.2	w	60678	2266.59	1277.56	w	61016	3264.75	1268	xs7w
60144	544.48	1283.96	w	60363	1487.6	1280.15	w	60680	2285.38	1277.57	w	60995	3281.07	1268	w
60147	567.94	1283.92	w	60362	1491.81	1280.2	w	60679	2289.83	1277.57	w	60996	3283.8	1268	w
60146	570.33	1283.88	w	60365	1511.09	1280.15	w	60683	2301.95	1277.57	w	61025	3299.7	1268	w
60150	593.38	1283.7	w	60391	1515.4	1280.2	w	60682	2305.83	1277.47	w	61024	3314.91	1268	w
60149	600.36	1283.65	w	60366	1527.34	1280.12	w	60686	2323.1	1277.57	w	61030	3319.2	1268	w
60152	610.33	1283.54	w	60390	1529.72	1280.22	w	60685	2338.59	1277.53	w	61029	3322.22	1268	w
60153	621.03	1283.56	w	60392	1536.72	1280.19	w	60689	2343.48	1277.54	w	61034	3341.57	1268	w
60156	634.66	1283.54	w	60394	1542.59	1280.17	w	60691	2353.53	1277.58	w	61036	3347.65	1268	w
60155	637.15	1283.53	w	60395	1552.9	1280.18	w	60832	2353.74	1276.91	xs5w	61032	3351.65	1268	w
60159	648.99	1283.5	w	60397	1558.36	1280.23	w	60688	2360.15	1277.44	w	61039	3374.8	1268	w
60158	650.63	1283.53	w	60400	1572.09	1280.24	w	60730	2371.68	1276.88	w	61038	3377.07	1268	w
60162	673.13	1283.53	w	60398	1578.49	1280.13	w	60815	2372.17	1276.92	xs5w	61041	3395.51	1268	w
60161	673.2	1283.55	w	60404	1587.08	1279.97	w	60732	2386.56	1276.94	w	61042	3399.48	1268	w
60176	695.56	1283.56	xs2w	60402	1589.93	1280.24	w	60731	2408.25	1276.95	w	61045	3415.7	1268	w
60170	697.92	1283.55	xs2w	60454	1605.29	1280	w	60736	2412.01	1276.92	w	61044	3417.87	1268	w
60164	698.76	1283.49	w	60421	1609.58	1280.02	xs3w	60740	2434.55	1276.89	w	61051	3434.44	1268	w
60165	698.77	1283.55	w	60455	1611.56	1280.03	w	60739	2435.53	1276.85	w	61053	3440.28	1268	w
60186	709.19	1283.55	w	60439	1616.39	1280.03	xs3w	60742	2468.59	1276.85	w	61056	3451.93	1268	w
60187	713.95	1283.49	w	60458	1629.67	1280.06	w	60743	2489.26	1276.93	w	61055	3456.04	1268	w
60190	735.17	1283.45	w	60457	1641.6	1280	w	60745	2497.6	1276.92	w	61059	3469.99	1268	w
60189	740.13	1283.37	w	60461	1643.11	1280.01	w	60754	2504.12	1275.1	w	61058	3470.77	1268	w
60192	751.13	1283.45	w	60460	1665.41	1279.97	w	60752	2521.64	1275.07	w				
60193	757.86	1283.44	w	60464	1676.89	1279.98	w	60756	2525.74	1274.98	w				
60215	767.03	1283.42	w	60463	1690.94	1279.96	w	60759	2545.74	1275.03	w				
60214	769.28	1283.41	w	60468	1706.32	1279.98	w	60760	2556.83	1275.02	w				
60219	778.14	1283.45	w	60466	1718.25	1279.95	w	60762	2563.85	1275.01	w				
60218	778.67	1283.43	w	60470	1741.34	1279.93	w	60764	2576.27	1274.95	w				
60221	788.69	1283.38	w	60469	1755.58	1279.88	w	60766	2610.76	1274.97	w				
60224	799.47	1283.4	w	60472	1768.18	1279.86	w	60768	2632.89	1275.06	w				
60222	800.67	1283.39	w	60473	1769.37	1279.98	w	60769	2636.37	1275.04	w				
60226	812.98	1283.4	w	60475	1782.2	1279.84	w	60771	2650	1275.01	w				
60227	813.29	1283.43	w	60476	1791.23	1279.88	w	60860	2653.72	1275.05	xs6w				
60230	828.15	1283.38	w	60479	1812.03	1279.92	w	60879	2654.15	1274.97	xs6w				
60229	831.48	1283.35	w	60478	1812.85	1279.92	w	60774	2674.72	1275.04	w				
60233	846.04	1283.33	w	60533	1821.49	1279.54	w	60773	2703.65	1275.01	w				
60232	856.78	1283.37	w	60535	1830.51	1279.53	w	60956	2718.4	1274.98	w				
60235	860.96	1283.4	w	60539	1856.76	1279.49	w	60958	2731.37	1275.14	w				
60238	889.36	1283.3	w	60537	1856.81	1279.45	w	60957	2734.32	1275.04	w				
60241	910.9	1283.24	w	60542	1881.65	1279.44	w	60777	2735.71	1275.08	w				
60236	916.09	1283.25	w	60541	1882.84	1279.49	w	60959	2739.96	1275	w				
60244	933.78	1283.26	w	60549	1899.04	1279.3	w	60778	2752.04	1275.04	w				
60240	935.18	1283.21	w	60548	1899.26	1279.55	w	60960	2755.25	1275.09	w				

Point	Station	Elev	Desc
60125	36.53	1290.32	bnkf
60129	42.28	1291.38	bnkf
60126	104.54	1290.46	bnkf
60124	106.2	1291.07	bnkf
60122	171.53	1290.44	bnkf
60137	425.4	1287.67	bnkf
60205	560.41	1289.81	bnkf
60206	580.27	1288.3	bnkf
60207	586.93	1287.52	bnkf
60208	615.57	1287.36	bnkf
60297	861.79	1286.53	bnkf
60296	867.5	1284.89	bnkf
60293	944.46	1285.4	bnkf
60291	993.96	1284.98	bnkf
60289	1031.71	1286.83	bnkf
60377	1254.16	1284.69	bnkf
60376	1290.01	1285.03	bnkf
60375	1341.3	1285.04	bnkf
60373	1373.82	1284.71	bnkf
60368	1410.77	1284.54	bnkf
60491	1509.41	1283.85	bnkf
60367	1520.53	1283.27	bnkf
60489	1544.36	1284.16	bnkf
60703	2141.93	1282.03	bnkf
60697	2287.99	1281.04	bnkf
60700	2297.79	1280.99	bnkf
60793	2573.57	1279.03	bnkf
60791	2613.33	1278.7	bnkf
60790	2663.4	1278.71	bnkf
60954	2735.94	1278.02	bnkf
60953	2799.21	1275.3	bnkf
60951	2835.01	1274.88	bnkf
60947	2855.86	1275.4	bnkf
60941	2899.4	1274.33	bnkf
60939	2955.6	1274.05	bnkf
61083	3069.17	1273.28	bnkf
61075	3226.84	1272.29	bnkf
61071	3292	1271.75	bnkf
61072	3295.46	1272.53	bnkf
61073	3323.86	1272.37	bnkf

Point	Station	Elev	Desc	Point	Station	Elev	Desc
60130	9.05	1291.4	tob	60804	2375.42	1282.89	tob
60129	42.28	1291.38	tob	60802	2392.08	1282.74	tob
60123	161.12	1290.71	tob	60801	2434.58	1281	tob
60121	214.23	1291.62	tob	60799	2460.09	1282.74	tob
60120	225.22	1290.84	tob	60803	2471.23	1281.12	tob
60118	275.08	1291.54	tob	60797	2490.01	1283.19	tob
60119	277.02	1291.38	tob	60795	2507.78	1280.15	tob
60116	323.5	1291.16	tob	60800	2524.09	1280.7	tob
60117	323.53	1290.95	tob	60794	2546.34	1280.05	tob
60115	343.28	1290.61	tob	60798	2567.14	1280.27	tob
60114	351.41	1291.25	tob	60793	2573.57	1279.03	tob
60113	375.99	1289.99	tob	60796	2653.74	1279.92	tob
60112	399.88	1290.71	tob	60955	2704.3	1277.61	tob
60139	469.72	1291.97	tob	60792	2709.2	1280.63	tob
60138	483.53	1290.77	tob	60952	2763.58	1280.72	tob
60111	498.29	1292.29	tob	60950	2799.26	1276.84	tob
60141	525.08	1292.41	tob	60948	2828.03	1276.25	tob
60110	528.39	1292.3	tob	60945	2843.56	1279.7	tob
60140	529.68	1291.1	tob	60943	2868.83	1279.23	tob
60204	548.6	1292.99	tob	60946	2907.62	1276.11	tob
60201	562.99	1290.27	tob	60944	2943.56	1275.79	tob
60203	577.65	1293.53	tob	60942	2970.9	1275.9	tob
60202	608.55	1294.05	tob	60940	2991.25	1276.02	tob
60199	609.94	1290.06	tob	60938	3042.52	1274.25	tob
60200	650.56	1293.9	tob	60937	3063.57	1274.48	tob
60197	673.88	1290.02	tob	61081	3112.99	1274.7	tob
60198	688.06	1294.3	tob	61082	3120.12	1274.33	tob
60196	723.18	1294.54	tob	61080	3150.52	1273.95	tob
60301	758.85	1288.94	tob	61078	3163.81	1274.9	tob
60303	760.25	1293.86	tob	61079	3188.21	1273.94	tob
60194	761.26	1293.84	tob	61077	3221.17	1273.53	tob
60195	764.29	1287.64	tob	61076	3249.72	1273	tob
60302	781.59	1290.38	tob	61074	3275.1	1273.56	tob
60299	801.4	1287.88	tob	61072	3295.46	1272.53	tob
60300	826.27	1291.13	tob	61070	3342.41	1278.46	tob
60298	853.33	1289.24	tob	61068	3424.3	1276.52	tob
60295	899.05	1287.65	tob	61067	3445.78	1271.74	tob
60292	958.06	1287.76	tob	61066	3449.07	1273.4	tob
60294	965.05	1285.8	tob	61064	3472.63	1272.73	tob
60290	981.23	1287.4	tob				
60288	1043.81	1288.32	tob				
60287	1078.24	1288.85	tob				
60286	1083.9	1289.46	tob				
60285	1112.26	1288.39	tob				
60284	1145.36	1286.87	tob		97.45	1286.8	(RV)
60380	1161.54	1287.14	tob				
60379	1205.17	1285.87	tob		1112.47	1282.17	(RV)
60378	1235.19	1285.78	tob		1400.54	1281.01	(RV)
60372	1352.61	1286.05	tob				
60371	1413.01	1285.21	tob				
60492	1445.55	1285.51	tob				
60370	1457.64	1284.97	tob				
60493	1470.11	1284.63	tob				
60490	1484.25	1285.05	tob				
60369	1490.68	1285.15	tob				
60487	1567.62	1286.7	tob		2194.44	1277.86	(RV)
60486	1597.7	1286.39	tob		2194.44	1277.86	(RV)
60488	1631.41	1284.62	tob				
60485	1669.35	1285.21	tob				
60483	1713.2	1284.57	tob				
60484	1725.03	1287.51	tob				
60482	1751.13	1284.7	tob		2503.96	1274.41	(RV)
60480	1795.6	1284.86	tob		2503.96	1274.41	(RV)
60723	1799.42	1286.71	tob		2744.84	1272.57	(RV)
60724	1800.46	1284.79	tob		2744.84	1272.57	(RV)
60722	1804.29	1284.98	tob				
60481	1815.34	1287.8	tob				
60721	1822.46	1287.06	tob				
60720	1834.62	1285.05	tob				
60718	1858.43	1285.37	tob				
60719	1877.34	1285.56	tob				
60717	1879.86	1285.18	tob		3417.68	1268.13	(RV)
60715	1915.66	1285.03	tob		3417.68	1268.13	(RV)
60714	1951.02	1283.86	tob				
60716	1958.13	1283.05	tob				
60712	1978.61	1283.96	tob				
60711	2017.39	1283.9	tob				
60713	2018.01	1284.56	tob				
60710	2052.54	1283.03	tob				
60708	2064.96	1283.42	tob				
60709	2076.08	1283.67	tob				
60705	2098.31	1283.5	tob				
60707	2161.66	1283.85	tob				
60701	2204.78	1282.44	tob				
60706	2205.96	1283.14	tob				
60704	2234.83	1283.28	tob				
60699	2251.19	1282.33	tob				
60702	2278.25	1282.11	tob				
60698	2299.2	1284.27	tob				
60807	2335.2	1283.45	tob				
60696	2337.61	1284.1	tob				
60805	2366.58	1282.84	tob				
60693	2370.23	1283.43	tob				

Project Name	Stone Mountain
Task	Feature Slope and Length Calculations
Date	June 9-11,2008
Crew	Price, George, Brim, Blake

Reach 2 - 2008

Riffle Station	Change	Water Elev	change	slope	Pool Station	length	p-p spacing
116		1306.43			256		
150	34	1306.22	0.21	0.62%	350	94	
199		1306.07			364		
258	59	1305.27	0.8	1.36%	434	70	96
455		1303.81			538		
535	80	1303.28	0.53	0.66%	698	160	219
699		1303.28			908		
740	41	1302.95	0.33	0.80%	1069	161	370.5
819		1302.86			1190		
886	67	1302.32	0.54	0.81%	1322	132	267.5
	281						
	5						
						617	
						5	

	min	max	median
Length	34	80	59
Slope	0.62%	1.36%	0.80%

	min	max	median
Length	70	161	132
Spacing	96	370.5	243.25

Reach 4 - 2008

Riffle Station	Change	Water Elev	change	slope	Pool Station	length	p-p spacing
209		1286.4			2		
238	29	1286.31	0.11	0.38%	99	97	
331		1285.93			232		
412	81	1284.8	1.13	1.40%	305	73	218
445		1284.76			604		
503	58	1283.96	0.8	1.38%	709	105	388
567		1283.92			740		
614	47	1283.54	0.38	0.81%	828	88	127.5
1002		1283.13			912		
1065	63	1282.85	0.28	0.44%	982	70	163
1424		1280.62			1129		
1488	64	1280.15	0.47	0.73%	1190	61	212.5
1920		1279.28			1355		
1962	42	1278.87	0.41	0.98%	1401	46	218.5
2832		1271.89			1529		
2916	84	1270.89	1	1.19%	1629	100	201
3125		1269.94			1749		
3204	79	1268.55	1.39	1.76%	1880	131	235.5
					2049		
					2158	109	289
					2185		
					2263	78	120.5
					2360		
					2489	129	200.5
					2585		
					2714	129	225
					2950		
	547				3092	142	371.5
n:	9				3300		
					3415	115	336.5
					3512		
					3560	48	178.5
						1424	
					n:	15	

	min	max	median
Length	29.0	84.0	63.0
Slope	0.38%	1.76%	0.98%

	min	max	median
Length	46.0	142.0	98.5
Spacing	121	388	218

Project Name	East Prong of the Roaring River @ Stone Mountain
Task	Channel Pattern Measurements
Date	June 9-11,2008
Crew	Price, George, Brim, Blake

Reach 2 2008				**Reach 4** 2008		
Radius of Curvature	**Meander Wavelength**	**Channel Beltwidth**		**Radius of Curvature**	**Meander Wavelength**	**Channel Beltwidth**
157	557	163		140	766	503
144	586	177		207	534	222
145	588	333		75	595	326
				124	712	275
				69	547	225
				107		368
				96		
144	557	163	***min***	69	534	222
157	588	333	***max***	207	766	503
145	586	177	***median***	107	595	301

GPS Coordinates

Stone Mountain State Park

	NAD 1983 State Plane North Carolina		
Reach - Field number	Location	Northern	Easting
R2	X1LP	965688.6900	1391798.7100
	X1RP	965604.8168	1391728.8033
	X2LP	965295.1823	1391863.1564
	X2RP	965343.1217	1391934.6939
	X3LP	965278.9577	1392000.3779
	X3RP	965231.1556	1391975.0301
	X4LP	964880.2011	1392120.0650
	X4RP	964907.3310	1392067.3695
R4	X1LP	962776.1743	1390145.2360
	X1RP	962834.9718	1390122.9670
	X2LP	962613.7084	1389917.1320
	X2RP	962614.9065	1389887.7780
	X3LP	961968.5762	1390302.5390
	X3RP	961954.3593	1390301.1240
	X4LP	962126.5572	1390656.2580
	X4RP	962064.4786	1390672.3770
	X5LP	961877.0900	1390922.9100
	X5RP	961805.3300	1390851.9900
	X6LP	961860.5515	1391152.8720
	X6RP	961809.4108	1391135.8120
	X7LP	961429.6593	1391254.9960
	X7RP	961441.0453	1391184.4540