

SR85:DISCHARGE TREATED BY V. K. SYSTEM ABOVE V.K.1

| | | | | | | | | | | | | | | |
|----------|-------|-----|-----|-------|------|-----|------|--------|-------|----|---|---|-----|------|
| Min. | 1.00 | 2.9 | 0.0 | 11.2 | 5.3 | 1.3 | 10.4 | 310.00 | 2.00 | 1 | 0 | 0 | 11 | -248 |
| Max. | 21.00 | 3.1 | 0.0 | 248.0 | 20.4 | 2.5 | 24.3 | 624.00 | 12.00 | 42 | 2 | 4 | 248 | -11 |
| Range | 20.00 | 0.2 | 0.0 | 236.8 | 15.1 | 1.2 | 13.9 | 314.00 | 10.00 | 41 | 2 | 3 | 237 | 237 |
| AVERAGE | 9 | 3.0 | 0.0 | 191.3 | 10.9 | 1.9 | 15.2 | 444 | 3 | 20 | 1 | 2 | | |
| 75% tile | 12 | | | 216.0 | | | | | | 33 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.s. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Acid Net mg/L | Alk. Net mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 12/28/94 | 12 | 3.1 | 0.0 | 244.0 | 16.4 | 2.5 | 24.3 | 549 | 2 | 35 | 2 | 4 | 244 | -244 |
| 03/01/95 | 12 | 3.1 | 0.0 | 246.0 | 16.8 | 2.0 | 21.8 | 429 | 3 | 35 | 2 | 3 | 246 | -246 |
| 03/30/95 | 10 | 3.0 | 0.0 | 248.0 | 13.3 | 2.0 | 19.9 | 571 | 3 | 30 | 2 | 2 | 248 | -248 |
| 05/25/95 | 12 | 3.0 | 0.0 | 172.0 | 7.8 | 1.6 | 13.2 | 339 | 3 | 25 | 1 | 2 | 172 | -172 |
| 07/27/95 | 3 | 2.9 | 0.0 | 192.0 | 9.0 | 1.6 | 11.5 | 459 | 3 | 7 | 0 | 0 | 192 | -192 |
| 08/30/95 | 2 | 2.9 | 0.0 | 212.0 | 20.4 | 2.0 | 10.4 | 310 | 2 | 5 | 0 | 0 | 212 | -212 |
| 09/21/95 | 1 | 2.9 | 0.0 | 206.0 | 17.3 | 2.2 | 12.2 | 413 | 3 | 2 | 0 | 0 | 206 | -206 |
| 10/12/95 | 3 | 2.9 | 0.0 | 220.0 | 13.1 | 2.2 | 11.9 | 338 | 12 | 8 | 0 | 0 | 220 | -220 |
| 11/02/95 | 3 | 3.0 | 0.0 | 174.0 | 8.2 | 2.3 | 10.7 | 433 | 3 | 6 | 0 | 0 | 174 | -174 |
| 01/10/96 | 5 | 3.0 | 0.0 | 192.0 | 8.5 | 1.5 | 12.2 | 437 | 3 | 12 | 1 | 1 | 192 | -192 |
| 02/22/96 | 12 | 3.0 | 0.0 | 202.0 | 7.9 | 1.9 | 16.6 | 505 | 3 | 29 | 1 | 2 | 202 | -202 |
| 03/19/96 | 15 | 3.1 | 0.0 | 206.0 | 8.2 | 1.7 | 15.6 | 403 | 3 | 37 | 1 | 3 | 206 | -206 |
| 04/16/96 | 10 | 3.0 | 0.0 | 178.0 | 5.8 | 1.6 | 15.2 | 624 | 3 | 21 | 1 | 2 | 178 | -178 |
| 05/23/96 | 21 | 3.0 | 0.0 | 166.0 | 5.3 | 1.3 | 12.2 | 340 | 3 | 42 | 1 | 3 | 166 | -166 |
| 06/26/96 | 8 | 3.0 | 0.0 | 11.2 | 5.9 | 2.0 | 19.6 | 510 | 3 | 1 | 1 | 2 | 11 | -11 |

DISCHARGE STATION MARIETTA BRANCH SLIPPERY ROCK

SR86 DISCHARGE TREATED BY V.K. SYSTEM

| | | | | | | | | | | | | | | |
|----------|-----|------|------|--------|-----|-----|-----|-----|-------|-----|----|----|-----|------|
| Min. | 50 | 3.10 | 0.00 | 10.20 | 1.0 | 0.9 | 2.4 | 214 | 2.00 | 13 | 1 | 2 | 10 | -130 |
| Max. | 248 | 3.50 | 0.00 | 130.00 | 7.8 | 2.3 | 7.9 | 470 | 12.00 | 322 | 14 | 19 | 130 | -10 |
| Range | 198 | 0.40 | 0.00 | 119.80 | 6.8 | 1.4 | 5.6 | 256 | 10.00 | 309 | 14 | 17 | 120 | 120 |
| AVERAGE | 98 | 3.3 | 0.0 | 93.9 | 4.1 | 1.5 | 4.9 | 328 | 6 | 115 | 5 | 6 | | |
| 75% tile | 122 | | | 106 | | | | | | 147 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. s. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Acid net mg/L | alk.net mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 12/28/94 | 100 | 3.3 | 0 | 102 | 6.6 | 2.1 | 7.9 | 429 | 2 | 123 | 8 | 10 | 102 | -102 |
| 03/01/95 | 99 | 3.3 | 0 | 104 | 6.8 | 1.3 | 5.7 | 273 | <3 | 124 | 8 | 7 | 104 | -104 |
| 03/30/95 | 114 | 3.3 | 0 | 108 | 7.8 | 1.4 | 6.0 | 346 | <3 | 145 | 11 | 8 | 106 | -106 |
| 05/25/95 | 140 | 3.3 | 0 | 94 | 6.2 | 1.4 | 5.4 | 243 | <3 | 158 | 10 | 9 | 94 | -94 |
| 07/27/95 | 122 | 3.2 | 0 | 92 | 5.0 | 1.0 | 4.3 | 258 | <3 | 135 | 7 | 6 | 92 | -92 |
| 08/30/95 | 55 | 3.2 | 0 | 88 | 5.1 | 1.2 | 4.3 | 214 | 2 | 58 | 3 | 3 | 88 | -88 |
| 09/21/95 | 55 | 3.3 | 0 | 108 | 5.9 | 1.7 | 5.6 | 325 | <3 | 71 | 4 | 4 | 108 | -108 |
| 10/12/95 | 55 | 3.2 | 0 | 124 | 5.1 | 1.9 | 6.0 | 311 | 6 | 82 | 3 | 4 | 124 | -124 |
| 11/02/95 | 55 | 3.2 | 0 | 106 | 4.4 | 2.0 | 6.7 | 438 | <3 | 70 | 3 | 4 | 106 | -106 |
| 12/13/95 | 91 | 3.2 | 0 | 110 | 3.2 | 2.0 | 6.1 | 470 | <3 | 120 | 4 | 7 | 110 | -110 |
| 01/10/96 | 72 | 3.2 | 0 | 102 | 2.7 | 1.9 | 5.9 | 451 | <3 | 88 | 2 | 5 | 102 | -102 |
| 02/22/96 | 130 | 3.1 | 0 | 124 | 4.3 | 1.7 | 5.9 | 380 | <3 | 194 | 7 | 9 | 124 | -124 |
| 03/19/96 | 158 | 3.2 | 0 | 130 | 4.3 | 1.5 | 5.7 | 312 | <3 | 247 | 8 | 11 | 130 | -130 |
| 04/16/96 | 130 | 3.2 | 0 | 100 | 3.2 | 1.1 | 4.2 | 318 | <3 | 156 | 5 | 7 | 100 | -100 |
| 05/23/96 | 189 | 3.2 | 0 | 104 | 3.5 | 1.1 | 4.8 | 253 | <3 | 236 | 8 | 11 | 104 | -104 |
| 06/26/96 | 106 | 3.3 | 0 | 10.2 | 4.4 | 1.1 | 4.4 | 247 | <3 | 13 | 6 | 6 | 10 | -10 |
| 07/24/96 | 84 | 3.3 | 0 | 94 | 5.9 | 1.0 | 4.6 | 273 | <3 | 95 | 6 | 5 | 94 | -94 |
| 08/13/96 | 72 | 3.2 | 0 | 104 | 6.0 | 1.2 | 5.4 | 261 | <3 | 90 | 5 | 5 | 104 | -104 |
| 09/18/96 | 85 | 3.2 | 0 | 104 | 4.2 | 1.3 | 4.6 | 309 | <3 | 106 | 4 | 5 | 104 | -104 |
| 10/29/96 | 106 | 3.2 | 0 | 116 | 5.0 | 1.7 | 6.0 | 423 | <3 | 148 | 6 | 8 | 116 | -116 |
| 12/19/96 | 248 | 3.2 | 0 | 108 | 4.8 | 1.5 | 6.3 | 349 | <3 | 322 | 14 | 19 | 108 | -108 |
| 02/19/97 | 140 | 3.3 | 0 | 128 | 5.1 | 1.1 | 5.2 | 288 | <3 | 215 | 9 | 9 | 128 | -128 |
| 03/20/97 | 223 | 3.3 | 0 | 90 | 2.6 | 1.0 | 4.3 | 261 | 12 | 241 | 7 | 12 | 90 | -90 |
| 04/15/97 | 122 | 3.4 | 0 | 76 | 3.0 | 1.0 | 4.3 | 280 | <3 | 111 | 4 | 6 | 76 | -76 |
| 06/25/97 | 91 | 3.3 | 0 | 64 | 1.1 | 0.9 | 2.5 | 242 | <3 | 70 | 1 | 3 | 64 | -64 |
| 07/10/97 | 78 | 3.3 | 0 | 70 | 1.0 | 0.9 | 2.4 | 223 | <3 | 66 | 1 | 2 | 70 | -70 |
| 08/19/97 | 60 | 3.5 | 0 | 70 | 4.1 | 1.4 | 3.5 | 240 | <3 | 50 | 3 | 3 | 70 | -70 |
| 08/20/97 | 50 | 3.5 | 0 | 80 | 1.3 | 1.2 | 2.5 | 265 | <3 | 48 | 1 | 2 | 80 | -80 |
| 09/17/97 | 60 | 3.4 | 0 | 78 | 1.9 | 1.5 | 3.2 | 289 | <3 | 56 | 1 | 2 | 78 | -78 |
| 09/29/97 | 60 | 3.4 | 0 | 76 | 2.0 | 1.7 | 3.6 | 344 | <3 | 55 | 1 | 3 | 76 | -76 |
| 10/08/97 | 60 | 3.4 | 0 | 98 | 2.6 | 1.8 | 4.2 | 422 | <3 | 71 | 2 | 3 | 98 | -98 |

DISCHARGE STATION M/ BRANCH SLIPPERY ROCK

SR86 DISCHARGE TREATED BY V.K. SYSTEM

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Acid net mg/L | alk.net mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 10/31/97 | 65 | 3.4 | 0 | 86 | 3.6 | 2.1 | 5.1 | 455 | <3 | 67 | 3 | 4 | 86 | -86 |
| 11/18/97 | 60 | 3.4 | 0 | 82 | 3.1 | 2.3 | 5.5 | 431 | <3 | 59 | 2 | 4 | 82 | -82 |
| 12/04/97 | 60 | 3.5 | 0 | 84 | 3.8 | 2.2 | 5.6 | 429 | <3 | 61 | 3 | 4 | 84 | -84 |
| 12/17/97 | 65 | 3.4 | 0 | 76 | 3.2 | 2.1 | 5.3 | 398 | <3 | 59 | 2 | 4 | 76 | -76 |

DISCHARGE STATION M. BRANCH SLIPPERY ROCK

SR87 DISCHARGE TREATED BY J.P. SYSTEM NORTH DISCHARGE

| | | | | | | | | | | | | | | |
|----------|----|------|------|-------|-----|-----|-----|-----|-------|----|---|---|-----|------|
| Min. | 1 | 3.10 | 0.00 | 34.0 | 0.8 | 0.8 | 2.5 | 105 | 3.00 | 1 | 0 | 0 | 34 | -240 |
| Max. | 32 | 3.70 | 0.00 | 240.0 | 6.7 | 3.2 | 8.3 | 276 | 10.00 | 29 | 0 | 1 | 240 | -34 |
| Range | 31 | 0.60 | 0.00 | 206.0 | 5.8 | 2.4 | 5.9 | 171 | 7.00 | 28 | 0 | 1 | 206 | 206 |
| AVERAGE | 12 | 3.4 | 0.0 | 83.1 | 2.4 | 1.8 | 5.2 | 183 | 4 | 10 | 0 | 1 | | |
| 75% tile | 17 | | | 94 | | | | | | 14 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 01/25/96 | | 3.5 | 0 | 64.0 | 1.2 | 1.2 | 5.9 | 147 | 3 | | | | 64 | -64 |
| 02/22/96 | | 3.3 | 0 | 104.0 | 2.7 | 1.7 | 8.0 | 243 | 3 | | | | 104 | -104 |
| 04/16/96 | 9 | 3.4 | 0 | 58.0 | 1.6 | 1.3 | 4.2 | 159 | 3 | 6 | 0 | 0 | 58 | -58 |
| 05/23/96 | 22 | 3.5 | 0 | 52.0 | 0.9 | 0.9 | 3.3 | 124 | 3 | 14 | 0 | 1 | 52 | -52 |
| 06/26/96 | 10 | 3.3 | 0 | 240.0 | 1.9 | 1.5 | 5.3 | 148 | 3 | 29 | 0 | 1 | 240 | -240 |
| 07/24/96 | 1 | 3.2 | 0 | 98.0 | 2.3 | 2.2 | 6.5 | 216 | <3 | 1 | 0 | 0 | 98 | -98 |
| 08/13/96 | 1 | 3.1 | 0 | 120.0 | 3.5 | 3.1 | 8.3 | 276 | <3 | 1 | 0 | 0 | 120 | -120 |
| 09/18/96 | 17 | 3.2 | 0 | 88.0 | 2.3 | 1.4 | 4.8 | 165 | <3 | 18 | 0 | 1 | 88 | -88 |
| 10/29/96 | 8 | 3.3 | 0 | 76.0 | 1.6 | 1.8 | 6.0 | 183 | <3 | 7 | 0 | 1 | 76 | -76 |
| 12/19/96 | 26 | 3.7 | 0 | 46.0 | 1.1 | 1.0 | 3.2 | 148 | <3 | 14 | 0 | 1 | 46 | -46 |
| 02/19/97 | 17 | 3.5 | 0 | 68.0 | 1.9 | 1.5 | 4.6 | 154 | <3 | 14 | 0 | 1 | 68 | -68 |
| 03/20/97 | 32 | 3.7 | 0 | 34.0 | 0.8 | 0.8 | 2.5 | 105 | 10 | 13 | 0 | 1 | 34 | -34 |
| 04/15/97 | 16 | 3.6 | 0 | 42.0 | 1.3 | 1.1 | 3.2 | 135 | <3 | 8 | 0 | 1 | 42 | -42 |
| 06/25/97 | 5 | 3.3 | 0 | 60.0 | 1.7 | 1.5 | 3.1 | 196 | <3 | 4 | 0 | 0 | 60 | -60 |
| 07/15/97 | 5 | 3.2 | 0 | 80.0 | 3.9 | 2.5 | 4.2 | 276 | <3 | 5 | 0 | 0 | 80 | -80 |
| 08/20/97 | 4 | 3.2 | 0 | 106.0 | 3.6 | 2.7 | 5.9 | 237 | <3 | 5 | 0 | 0 | 106 | -106 |
| 09/17/97 | | 3.4 | 0 | 86.0 | 4.4 | 3.2 | 3.7 | 179 | <3 | | | | 86 | -86 |
| 10/08/97 | | 3.3 | 0 | 94.0 | 6.7 | 3.0 | 5.5 | 273 | <3 | | | | 94 | -94 |
| 11/18/97 | | 3.4 | 0 | 90.0 | 3.8 | 2.8 | 7.5 | 274 | <3 | | | | 90 | -90 |
| 12/04/97 | | 3.5 | 0 | 78.0 | 2.8 | 2.2 | 7.3 | 229 | <3 | | | | 78 | -78 |
| 12/17/97 | | 3.5 | 0 | 62.0 | 1.5 | 1.6 | 5.4 | 195 | <3 | | | | 62 | -62 |

SR88 DISCHARGE TREATED BY J.P. SYSTEM, SOUTH DISCHARGE

| | | | | | | | | | | | | | | |
|----------|----|------|------|--------|------|-----|------|-----|-------|----|---|---|-----|------|
| Min. | 1 | 3.10 | 0.00 | 46.00 | 1.0 | 0.8 | 2.9 | 162 | 2.00 | 1 | 0 | 0 | 46 | -344 |
| Max. | 40 | 3.60 | 0.00 | 344.00 | 13.3 | 3.2 | 12.9 | 549 | 12.00 | 58 | 1 | 2 | 344 | -46 |
| Range | 39 | 0.50 | 0.00 | 298.00 | 12.3 | 2.4 | 10.0 | 387 | 10.00 | 57 | 1 | 2 | 298 | 298 |
| AVERAGE | 13 | 3.4 | 0.0 | 107.9 | 4.5 | 1.8 | 7.9 | 310 | 4 | 15 | 0 | 1 | | |
| 75% tile | 15 | | | 127 | | | | | | 18 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 12/28/94 | 12 | 3.4 | 0 | 124 | 5.0 | 2.5 | 12.9 | 397 | 2 | 18 | 1 | 2 | 124 | -124 |
| 03/01/95 | 15 | 3.4 | 0 | 78 | 2.7 | 1.4 | 6.2 | 209 | 3 | 14 | 0 | 1 | 78 | -78 |
| 03/30/95 | 15 | 3.4 | 0 | 76 | 2.2 | 1.3 | 5.3 | 248 | 3 | 14 | 0 | 1 | 76 | -76 |
| 05/25/95 | 28 | 3.5 | 0 | 70 | 2.1 | 1.4 | 5.8 | 265 | 3 | 24 | 1 | 2 | 70 | -70 |
| 07/27/95 | 8 | 3.2 | 0 | 92 | 2.1 | 1.6 | 6.3 | 267 | 3 | 9 | 0 | 1 | 92 | -92 |
| 08/30/95 | 5 | 3.1 | 0 | 124 | 4.8 | 2.2 | 9.2 | 275 | 2 | 7 | 0 | 1 | 124 | -124 |
| 09/21/95 | 3 | 3.2 | 0 | 122 | 6.4 | 2.5 | 10.6 | 421 | 3 | 4 | 0 | 0 | 122 | -122 |
| 10/12/95 | 4 | 3.2 | 0 | 152 | 7.4 | 2.8 | 11.1 | 339 | 12 | 7 | 0 | 1 | 152 | -152 |
| 11/02/95 | 6 | 3.3 | 0 | 118 | 5.5 | 3.2 | 10.6 | 382 | 3 | 9 | 0 | 1 | 118 | -118 |
| 01/25/96 | 16 | 3.5 | 0 | 112 | 3.7 | 2.4 | 8.9 | 283 | 3 | 22 | 1 | 2 | 112 | -112 |
| 02/22/96 | 12 | 3.3 | 0 | 114 | 3.3 | 2.1 | 8.9 | 345 | 3 | 16 | 0 | 1 | 114 | -114 |
| 03/19/96 | 18 | 3.4 | 0 | 96 | 2.2 | 1.4 | 6.2 | 234 | 3 | 21 | 0 | 1 | 96 | -96 |
| 04/16/96 | | 3.4 | 0 | 68 | 1.5 | 1.3 | 5.1 | 224 | 3 | | | | 68 | -68 |
| 05/23/96 | 40 | 3.5 | 0 | 50 | 1.1 | 0.8 | 3.4 | 162 | 3 | 24 | 1 | 2 | 50 | -50 |
| 06/26/96 | 14 | 3.3 | 0 | 344 | 2.3 | 1.7 | 7.4 | 277 | 3 | 58 | 0 | 1 | 344 | -344 |
| 07/24/96 | 9 | 3.3 | 0 | 116 | 3.3 | 2.0 | 9.8 | 348 | <3 | 13 | 0 | 1 | 116 | -116 |
| 08/13/96 | 8 | 3.1 | 0 | 136 | 3.9 | 2.2 | 11.1 | 285 | 6 | 13 | 0 | 1 | 136 | -136 |
| 09/18/96 | 6 | 3.2 | 0 | 140 | 5.0 | 2.4 | 10.3 | 387 | <3 | 10 | 0 | 1 | 140 | -140 |
| 10/29/96 | 8 | 3.2 | 0 | 138 | 6.4 | 2.9 | 12.9 | 549 | <3 | 13 | 1 | 1 | 138 | -138 |
| 12/19/96 | 20 | 3.5 | 0 | 78 | 2.6 | 1.3 | 6.4 | 313 | <3 | 19 | 1 | 2 | 78 | -78 |
| 02/19/97 | 15 | 3.5 | 0 | 68 | 3.9 | 1.2 | 6.1 | 226 | <3 | 12 | 1 | 1 | 68 | -68 |
| 03/20/97 | 30 | 3.6 | 0 | 46 | 1.0 | 0.8 | 2.9 | 174 | 12 | 17 | 0 | 1 | 46 | -46 |
| 04/15/97 | 12 | 3.6 | 0 | 58 | 1.4 | 1.1 | 4.9 | 249 | <3 | 8 | 0 | 1 | 58 | -58 |
| 06/25/97 | 10 | 3.3 | 0 | 72 | 1.6 | 1.2 | 4.9 | 279 | <3 | 9 | 0 | 1 | 72 | -72 |
| 07/15/97 | 5 | 3.3 | 0 | 78 | 2.0 | 1.3 | 5.8 | 259 | <3 | 5 | 0 | 0 | 78 | -78 |
| 08/20/97 | 1 | 3.3 | 0 | 102 | 2.4 | 1.4 | 7.0 | 330 | <3 | 1 | 0 | 0 | 102 | -102 |
| 09/17/97 | | 3.5 | 0 | 98 | 7.9 | 1.9 | 7.5 | 345 | <3 | | | | 98 | -98 |
| 10/08/97 | | 3.4 | 0 | 130 | 10.1 | 1.9 | 7.8 | 407 | <3 | | | | 130 | -130 |
| 11/18/97 | | 3.5 | 0 | 126 | 10.5 | 2.5 | 10.6 | 419 | <3 | | | | 126 | -126 |
| 12/04/97 | | 3.5 | 0 | 134 | 12.1 | 2.5 | 10.4 | 398 | <3 | | | | 134 | -134 |

DISCHARGE STATION MA 3RANCH SLIPPERY ROCK

SR88 DISCHARGE TREATED BY J.P. SYSTEM, SOUTH DISCHARGE

| | | | | | | | | | | | | | | | | | | |
|---------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sampled (gpm) | pH | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| 12/17/97 | 3.4 | 0 | 132 | 13.3 | 2.8 | 10.3 | 368 | <3 | | | | | | | | 132 | | -132 |

DISCHARGE STATION M BRANCH SLIPPERY ROCK

SR 89 DISCHARGE, MANGNUM

| | | | | | | | | | | | | | | |
|----------|----|------|-------|-------|------|-----|------|-----|-------|-----|----|---|-----|------|
| Min. | 29 | 2.80 | 0.00 | 2.2 | 0.8 | 0.8 | 6.3 | 97 | 3.00 | 2 | 1 | 3 | -11 | -368 |
| Max. | 78 | 6.00 | 13.40 | 368.0 | 94.1 | 6.2 | 11.9 | 962 | 26.00 | 244 | 45 | 9 | 368 | 11 |
| Range | 49 | 3.20 | 13.40 | 365.8 | 93.3 | 5.3 | 5.6 | 866 | 23.00 | 242 | 45 | 6 | 379 | 379 |
| AVERAGE | 49 | 3.2 | 0.6 | 248.0 | 56.2 | 5.0 | 8.5 | 568 | 10 | 131 | 31 | 5 | | |
| 75% tile | 60 | | | 292 | | | | | | 151 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 07/27/95 | 30 | 2.9 | 0 | 314.0 | 48.4 | 5.1 | 8.4 | 640 | 3 | 113 | 17 | 3 | 314 | -314 |
| 09/14/95 | 60 | 2.8 | 0 | 338.0 | 56.0 | 5.3 | 11.9 | 558 | 10 | 244 | 40 | 9 | 338 | -338 |
| 10/12/95 | | 2.8 | 0 | 366.0 | 53.3 | 5.5 | 10.7 | 532 | 14 | | | | 366 | -366 |
| 11/02/95 | | 2.9 | 0 | 286.0 | 46.9 | 6.1 | 10.3 | 640 | 3 | | | | 286 | -286 |
| 12/13/95 | | 3 | 0 | 368.0 | 90.4 | 5.5 | 10.8 | 814 | 4 | | | | 368 | -368 |
| 01/10/96 | | 3.1 | 0 | 308.0 | 94.1 | 6.2 | 9.8 | 962 | 26 | | | | 308 | -308 |
| 02/22/96 | | 3 | 0 | 206.0 | 30.4 | 5.2 | 6.9 | 449 | 3 | | | | 206 | -206 |
| 03/19/96 | | 3.1 | 0 | 268.0 | 61.4 | 4.8 | 9.3 | 507 | 16 | | | | 268 | -268 |
| 04/16/96 | | 3.1 | 0 | 232.0 | 50.8 | 4.6 | 8.2 | 551 | 3 | | | | 232 | -232 |
| 05/16/96 | | 3.1 | 0 | 246.0 | 43.8 | 4.0 | 9.0 | 445 | 3 | | | | 246 | -246 |
| 06/26/96 | 40 | 3 | 0 | 88.0 | 56.6 | 5.8 | 8.8 | 429 | 14 | | | | 88 | -88 |
| 07/24/96 | 50 | 3.2 | 0 | 254.0 | 70.0 | 5.5 | 7.8 | 711 | 6 | 153 | 42 | 5 | 254 | -254 |
| 08/15/96 | 45 | 3.1 | 0 | 266.0 | 84.0 | 5.2 | 7.8 | 586 | 8 | 144 | 45 | 4 | 266 | -266 |
| 09/18/96 | 50 | 3.1 | 0 | 228.0 | 50.7 | 5.4 | 7.2 | 552 | <3 | 137 | 30 | 4 | 228 | -228 |
| 10/24/96 | 45 | 3.2 | 0 | 226.0 | 74.4 | 5.7 | 7.6 | 626 | 16 | 122 | 40 | 4 | 226 | -226 |
| 12/11/96 | 60 | 3.3 | 0 | 214.0 | 45.7 | 4.6 | 6.3 | 462 | <3 | 154 | 33 | 5 | 214 | -214 |
| 02/25/97 | 60 | 3.2 | 0 | 202.0 | 57.9 | 4.8 | 6.3 | 557 | 22 | 146 | 42 | 5 | 202 | -202 |
| 03/19/97 | 78 | 6 | 13.4 | 2.2 | 0.8 | 0.8 | <.50 | 97 | <3 | 2 | 1 | 7 | -11 | 11 |
| 04/15/97 | 66 | 3.4 | 0 | 188.0 | 53.5 | 4.9 | 8.3 | 527 | 8 | 149 | 42 | 7 | 188 | -188 |
| 06/25/97 | 55 | 3.1 | 0 | 240.0 | 51.7 | 4.9 | 7.6 | 578 | 8 | 159 | 34 | 5 | 240 | -240 |
| 07/15/97 | 50 | 3 | 0 | 226.0 | 48.7 | 4.7 | 7.4 | 616 | <3 | 136 | 29 | 4 | 226 | -226 |
| 08/20/97 | 29 | 3.1 | 0 | 282.0 | 61.5 | 5.3 | 8.2 | 615 | <3 | 97 | 21 | 3 | 282 | -282 |
| 09/17/97 | 29 | 2.9 | 0 | 344.0 | 70.8 | 5.4 | 10.1 | 714 | <3 | 120 | 25 | 4 | 344 | -344 |
| 12/11/97 | 36 | 3.2 | 0 | 212.0 | 44.0 | 5.2 | 7.6 | 451 | <3 | 92 | 19 | 3 | 212 | -212 |

SR 91 DISCHARGE UPSTREAM OF FERRIS BRIDGE ALONG RAIL ROAD GRADE.

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|------|-----|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 5.0 | 11.2 | 190.0 | 67.6 | 4.0 | 0.5 | 723 | 23.00 | 0 | 0 | 0 | 174 | -199 |
| Max. | 0 | 5.5 | 16.0 | 210.0 | 90.7 | 4.4 | 0.5 | 786 | 64.00 | 0 | 0 | 0 | 199 | -174 |
| Range | 0 | 0.5 | 4.8 | 20.0 | 23.1 | 0.5 | 0.0 | 63 | 41.00 | 0 | 0 | 0 | 25 | 25 |
| AVERAGE | | 5.3 | 13.6 | 200 | 79.2 | 4.2 | 0.5 | 755 | 44 | | | | 186 | -186 |
| 75% tile | | | | 205.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 01/25/96 | | 5.5 | 16 | 190 | 67.6 | 3.99 | 0.5 | 723 | 64 | | | | 174 | -174 |
| 02/22/96 | | 5 | 11.2 | 210 | 90.7 | 4.44 | 0.5 | 786 | 23 | | | | 199 | -199 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR94 RAW DISCHARGE, BIG BERTHA

| | | | | | | | | | | | | | | |
|----------|----|------|-------|--------|-------|-----|-----|------|-------|----|----|---|-----|------|
| Min. | 12 | 5.80 | 46.00 | 280.00 | 134.0 | 3.5 | 0.0 | 980 | 2.00 | 47 | 20 | 0 | 234 | -410 |
| Max. | 15 | 5.80 | 52.00 | 460.00 | 195.0 | 5.0 | 0.0 | 1434 | 36.00 | 63 | 33 | 0 | 410 | -234 |
| Range | 3 | 0.00 | 6.00 | 180.00 | 61.0 | 1.5 | 0.0 | 454 | 34.00 | 16 | 12 | 0 | 176 | 176 |
| AVERAGE | 14 | 5.8 | 49.0 | 337.0 | 157.2 | 4.0 | | 1138 | 9 | 52 | 25 | | | |
| 75% tile | 14 | | | 344 | | | | | | 55 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|---------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 11/01/94 | | 5.8 | 50 | 460 | 195.0 | 5.0 | <.50 | 1270 | 4 | | | | 410 | -410 |
| 11/21/94 | 15 | 5.8 | 52 | 350 | 181.0 | 4.2 | <.50 | 1434 | 2 | 63 | 33 | | 298 | -298 |
| 07/27/95 | 12 | 5.8 | 48 | 324 | 140.0 | 3.6 | <.50 | 1064 | 3 | 47 | 20 | | 276 | -276 |
| 12/13/95 | | 5.8 | 50 | 296 | 149.0 | 3.7 | <.50 | 980 | 8 | | | | 246 | -246 |
| 01/10/96 | 14 | 5.8 | 46 | 280 | 134.0 | 3.5 | <.50 | 1044 | 36 | 47 | 23 | | 234 | -234 |
| 02/22/96 | 14 | 5.8 | 48 | 312 | 144.0 | 3.8 | <.50 | 1034 | 3 | 53 | 24 | | 264 | -264 |

SR94.2 DISCHARGE UPWELLING NEXT TO SR 94

| | | | | | | | | | | | | | | |
|----------|----|------|-------|--------|-------|-----|------|------|---------|-----|----|---|-----|------|
| Min. | 10 | 5.20 | 17.40 | 100.00 | 51.1 | 4.8 | 1.2 | 576 | 3.00 | 30 | 18 | 0 | 83 | -386 |
| Max. | 29 | 5.40 | 24.00 | 410.00 | 225.0 | 6.8 | 24.5 | 1047 | 1048.00 | 113 | 52 | 4 | 386 | -83 |
| Range | 19 | 0.20 | 6.60 | 310.00 | 173.9 | 2.0 | 23.4 | 471 | 1045.00 | 83 | 34 | 4 | 303 | 303 |
| AVERAGE | 18 | 5.3 | 20.9 | 329.6 | 153.1 | 5.5 | 3.1 | 862 | 116 | 70 | 35 | 1 | | |
| 75% tile | 21 | | | 374 | | | | | | 77 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|---------------|
| 11/21/94 | 15 | 5.3 | 24 | 384 | 225.0 | 6.8 | 24.5 | 972 | 1048 | 69 | 41 | 4 | 360 | -360 |
| 07/27/95 | 15 | 5.2 | 20 | 348 | 132.0 | 4.8 | 1.2 | 849 | 4 | 62 | 24 | 0 | 326 | -326 |
| 12/13/95 | | 5.3 | 19.2 | 354 | 163.0 | 5.9 | 1.3 | 842 | 4 | | | | 335 | -335 |
| 12/13/95 | | 5.3 | 20 | 180 | 51.1 | 4.9 | 5.7 | 576 | 124 | | | | 160 | -160 |
| 01/10/96 | | 5.2 | 18.6 | 370 | 145.0 | 5.4 | 1.3 | 872 | 16 | | | | 351 | -351 |
| 02/22/96 | | 5.2 | 18.8 | 392 | 175.0 | 6.0 | 1.5 | 845 | 40 | | | | 373 | -373 |
| 04/16/96 | 10 | 5.2 | 20 | 360 | 146.0 | 5.4 | 1.3 | 873 | 3 | 43 | 18 | 0 | 340 | -340 |
| 05/16/96 | 17 | 5.2 | 22 | 394 | 158.0 | 5.7 | 2.8 | 926 | 21 | 81 | 32 | 1 | 372 | -372 |
| 06/26/96 | 25 | 5.2 | 17.4 | 100 | 173.0 | 6.2 | 1.6 | 925 | 3 | 30 | 52 | 0 | 83 | -83 |
| 07/24/96 | 16 | 5.3 | 20 | 348 | 159.0 | 5.7 | 1.4 | 1047 | <3 | 67 | 31 | 0 | 328 | -328 |
| 08/15/96 | | 5.2 | 18.8 | 332 | 163.0 | 5.5 | 1.4 | 818 | <3 | | | 0 | 313 | -313 |
| 10/24/96 | 15 | 5.3 | 24 | 336 | 160.0 | 5.5 | 1.3 | 908 | 4 | 61 | 29 | 0 | 312 | -312 |
| 12/11/96 | 22 | 5.4 | 24 | 410 | 145.0 | 4.9 | 1.2 | 805 | <3 | 110 | 39 | 0 | 386 | -386 |
| 02/25/97 | 16 | 5.2 | 22 | 324 | 155.0 | 5.5 | 1.3 | 794 | 6 | 62 | 30 | 0 | 302 | -302 |
| 03/19/97 | 29 | 5.3 | 24 | 324 | 146.0 | 5.2 | 1.3 | 950 | <3 | 113 | 51 | 0 | 300 | -300 |
| 04/15/97 | 19 | 5.4 | 22 | 320 | 154.0 | 5.4 | 1.4 | 788 | <3 | 73 | 35 | 0 | 298 | -298 |

SR96 DISCHARGE SOUTHSIDE OF HILLIARDS TRIB. FROM BIG BERTHA

| | | | | | | | | | | | | | | |
|----------|----|------|-------|--------|------|------|-----|-----|-------|----|---|---|-----|------|
| Min. | 9 | 3.40 | 0.00 | 3.80 | 0.4 | 0.2 | 0.6 | 29 | 2.00 | 1 | 0 | 0 | -11 | -100 |
| Max. | 45 | 6.10 | 26.00 | 100.00 | 25.3 | 11.0 | 1.1 | 338 | 36.00 | 15 | 3 | 0 | 100 | 11 |
| Range | 36 | 2.70 | 26.00 | 96.20 | 24.9 | 10.9 | 0.5 | 309 | 34.00 | 14 | 3 | 0 | 111 | 111 |
| AVERAGE | 18 | 4.5 | 7.0 | 44.4 | 11.8 | 4.3 | 0.8 | 152 | 10 | 7 | 2 | 0 | | |
| 75% tile | 21 | | | 70 | | | | | | 9 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 11/01/84 | | 3.5 | 0 | 100 | 12.0 | 1.6 | <.50 | 150 | 2 | | | | 100 | -100 |
| 12/28/84 | 17 | 4.5 | 7.8 | 32 | 17.0 | 5.3 | 0.6 | 228 | 4 | 7 | 3 | 0 | 24 | -24 |
| 03/01/85 | 45 | 4.8 | 9.2 | 28 | 5.2 | 1.8 | <.50 | 61 | 3 | 15 | 3 | | 19 | -19 |
| 03/30/85 | 12 | 4.2 | 5.8 | 52 | 13.0 | 5.4 | <.50 | 207 | 3 | 8 | 2 | | 46 | -46 |
| 05/25/85 | | 5.9 | 14 | 5.6 | 1.5 | 0.2 | 0.6 | 36 | 9 | | | | -8 | 8 |
| 07/27/85 | 10 | 6.1 | 26 | 15 | 8.6 | 1.4 | <.50 | 45 | 14 | 2 | 1 | | -11 | 11 |
| 08/14/85 | 10 | 3.5 | 0 | 86 | 25.3 | 10.1 | <.50 | 262 | 8 | 10 | 3 | | 86 | -86 |
| 10/12/85 | 11 | 3.5 | 0 | 92 | 24.6 | 11.0 | <.50 | 275 | 24 | 12 | 3 | | 92 | -92 |
| 11/02/85 | 9 | 3.4 | 0 | 74 | 17.5 | 10.2 | <.50 | 338 | 3 | 8 | 2 | | 74 | -74 |
| 05/23/86 | 30 | 4.8 | 7.4 | 13.2 | 6.3 | 0.4 | 1.1 | 31 | 36 | 5 | 2 | 0 | 6 | -6 |
| 07/24/86 | 12 | 4.2 | 5.4 | 54 | 15.3 | 5.7 | <.50 | 227 | <3 | 8 | 2 | | 49 | -49 |
| 08/15/86 | 12 | 4.3 | 5 | 58 | 17.8 | 6.9 | <.50 | 210 | <3 | 8 | 3 | | 53 | -53 |
| 10/29/86 | 18 | 5.2 | 7.8 | 8.6 | 0.4 | 0.2 | <.50 | 29 | 4 | 2 | 0 | | 1 | -1 |
| 04/16/87 | 30 | 5.6 | 9.2 | 3.8 | 0.9 | 0.2 | <.50 | 34 | <3 | 1 | 0 | | -5 | 5 |

SR 98 DISCHARGE ON EAST SIDE OF HIGGINS TRIB. ON CISCO PROPERTY

| | | | | | | | | | | | | | | |
|----------|-----|-----|-----|------|-----|-----|-----|-----|-------|----|---|---|----|-----|
| Min. | 100 | 4.4 | 6.8 | 12.4 | 0.4 | 1.6 | 0.7 | 187 | 2.00 | 15 | 0 | 1 | 5 | -15 |
| Max. | 170 | 4.6 | 9.0 | 24.0 | 1.5 | 1.7 | 0.9 | 242 | 10.00 | 34 | 2 | 1 | 15 | -5 |
| Range | 70 | 0.2 | 2.2 | 11.6 | 1.1 | 0.1 | 0.3 | 55 | 8.00 | 19 | 2 | 0 | 10 | 10 |
| AVERAGE | 123 | 4.5 | 7.6 | 18 | 1.0 | 1.6 | 0.8 | 206 | 5 | 26 | 1 | 1 | 10 | -10 |
| 75% tile | 135 | | | 20.3 | | | | | | 31 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| Sampled | | | | | | | | | | | | | | |
| 12/22/94 | 100 | 4.4 | 7 | 12.4 | 1.45 | 1.59 | 0.93 | 242 | 2 | 15 | 2 | 1 | 5 | -5 |
| 03/01/95 | 100 | 4.6 | 9 | 24 | 0.37 | 1.61 | 0.75 | 189 | 4 | 29 | 0 | 1 | 15 | -15 |
| 06/06/95 | 170 | 4.5 | 6.8 | 16.6 | 1.05 | 1.73 | 0.68 | 187 | 10 | 34 | 2 | 1 | 10 | -10 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR100 FIRST DISCHARGE EAST OF HIGGINS

| | | | | | | | | | | | | | | |
|----------|----|-----|-----|-------|-----|-----|-----|-----|------|----|---|---|-----|------|
| Min. | 2 | 2.9 | 0.0 | 102.0 | 3.4 | 0.2 | 5.3 | 124 | 2.00 | 3 | 0 | 0 | 102 | -152 |
| Max. | 30 | 3.1 | 0.0 | 152.0 | 8.6 | 0.3 | 7.3 | 196 | 3.00 | 38 | 2 | 2 | 152 | -102 |
| Range | 28 | 0.2 | 0.0 | 50.0 | 5.2 | 0.1 | 2.0 | 72 | 1.00 | 35 | 2 | 2 | 50 | 50 |
| AVERAGE | 16 | 3.0 | 0.0 | 125 | 5.4 | 0.3 | 6.1 | 154 | 3 | 23 | 1 | 1 | 125 | -125 |
| 75% tile | 23 | | | 131.0 | | | | | | 37 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | AL. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 12/22/94 | 21 | 2.9 | 0 | 152 | 8.57 | 0.24 | 7.3 | 135 | 2 | 38 | 2 | 2 | 152 | -152 |
| 03/01/95 | 9 | 3 | 0 | 122 | 4.57 | 0.23 | 5.3 | 124 | 3 | 13 | 0 | 1 | 122 | -122 |
| 05/25/95 | 30 | 3.1 | 0 | 102 | 3.37 | 0.2 | 5.28 | 161 | 3 | 37 | 1 | 2 | 102 | -102 |
| 07/27/95 | 2 | 3 | 0 | 124 | 5.28 | 0.34 | 6.32 | 196 | 3 | 3 | 0 | 0 | 124 | -124 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR101A DISCHARGE SOUTHSIDE OF HIGGINS ROAD, EAST OF HIGGINS CORNERS

| Min. | 6 | 3.20 | 0.00 | 13.40 | 51.1 | 1.6 | 0.0 | 419 | 3.00 | 2 | 6 | 0 | 3 | -224 |
|----------|----|------|-------|--------|-------|-----|-----|-----|--------|-----|----|---|-----|------|
| Max. | 60 | 6.00 | 54.00 | 224.00 | 106.0 | 2.6 | 0.0 | 750 | 118.00 | 123 | 60 | 0 | 224 | -3 |
| Range | 54 | 2.80 | 54.00 | 210.60 | 54.9 | 1.0 | 0.0 | 331 | 115.00 | 121 | 54 | 0 | 221 | 221 |
| AVERAGE | 23 | 4.9 | 21.3 | 156.4 | 78.5 | 2.1 | | 558 | 22 | 41 | 21 | | | |
| 75% tile | 29 | | | 178 | | | | | | 52 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|---------------|
| 12/22/94 | 18 | 5.7 | 26 | 194 | 106.0 | 2.6 | <.50 | 630 | 30 | 42 | 23 | | 168 | -168 |
| 03/01/95 | 9 | 3.7 | 0 | 160 | 72.7 | 2.2 | <.50 | 596 | 3 | 17 | 8 | | 160 | -160 |
| 03/23/95 | 11 | 3.8 | 0 | 162 | 83.3 | 2.4 | <.50 | 533 | 10 | 21 | 11 | | 162 | -162 |
| 04/11/95 | 9 | 3.4 | 0 | 160 | 59.1 | 2.4 | <.50 | 536 | 28 | 17 | 8 | | 160 | -160 |
| 05/25/95 | 26 | 3.8 | 0 | 150 | 78.2 | 2.2 | <.50 | 512 | 50 | 47 | 24 | | 150 | -150 |
| 07/27/95 | 40 | 3.5 | 0 | 180 | 75.3 | 2.1 | <.50 | 500 | 54 | 87 | 36 | | 180 | -180 |
| 09/21/95 | 6 | 3.6 | 0 | 154 | 79.8 | 2.5 | <.50 | 558 | 44 | 11 | 6 | | 154 | -154 |
| 10/18/95 | 6 | 3.5 | 0 | 204 | 80.4 | 2.5 | <.50 | 632 | 80 | 15 | 6 | | 204 | -204 |
| 11/02/95 | 12 | 3.2 | 0 | 162 | 51.1 | 2.1 | <.50 | 419 | 3 | 23 | 7 | | 162 | -162 |
| 12/13/95 | | 6 | 54 | 180 | 106.0 | 2.4 | <.50 | 750 | 12 | | | | 126 | -126 |
| 01/25/96 | 10 | 3.6 | 0 | 146 | 56.2 | 2.0 | <.50 | 522 | 36 | 18 | 7 | | 146 | -146 |
| 02/22/96 | 12 | 3.7 | 0 | 162 | 104.0 | 2.0 | <.50 | 423 | 118 | 23 | 15 | | 162 | -162 |
| 03/19/96 | 12 | 3.6 | 0 | 224 | 83.2 | 2.3 | <.50 | 563 | 10 | 32 | 12 | | 224 | -224 |
| 04/16/96 | | 3.7 | 0 | 178 | 69.5 | 2.0 | <.50 | 494 | 3 | | | | 178 | -178 |
| 05/16/96 | 18 | 5.7 | 28 | 178 | 86.4 | 2.1 | <.50 | 519 | 3 | 39 | 19 | | 150 | -150 |
| 06/28/96 | 12 | 4.9 | 10 | 13.4 | 97.2 | 2.4 | <.50 | 591 | 3 | 2 | 14 | | 3 | -3 |
| 07/24/96 | 12 | 5.7 | 17 | 182 | 90.4 | 2.3 | <.50 | 681 | 10 | 26 | 13 | | 165 | -165 |
| 08/13/96 | 11 | 5 | 9 | 172 | 87.2 | 2.3 | <.50 | 645 | 14 | 23 | 12 | | 163 | -163 |
| 09/18/96 | 60 | 5.7 | 38 | 170 | 82.8 | 1.9 | <.50 | 657 | 16 | 123 | 60 | | 132 | -132 |
| 10/23/96 | 30 | 5.9 | 40 | 158 | 84.2 | 2.0 | <.50 | 592 | <3 | 57 | 30 | | 118 | -118 |
| 12/11/96 | 28 | 6 | 44 | 150 | 78.9 | 1.9 | <.50 | 644 | 10 | 50 | 27 | | 106 | -106 |
| 02/19/97 | | 5.9 | 44 | 146 | 70.0 | 1.6 | <.50 | 495 | <3 | | | | 102 | -102 |
| 03/19/97 | 36 | 5.9 | 42 | 122 | 67.1 | 1.7 | <.50 | 618 | <3 | 53 | 29 | | 80 | -80 |
| 04/16/97 | 58 | 6 | 42 | 120 | 69.9 | 1.7 | <.50 | 484 | 4 | 84 | 49 | | 78 | -78 |
| 05/21/97 | 26 | 6 | 40 | 134 | 62.6 | 1.6 | <.50 | 509 | 12 | 42 | 20 | | 94 | -94 |
| 06/25/97 | 26 | 5.9 | 40 | 122 | 68.1 | 1.7 | <.50 | 494 | 4 | 38 | 21 | | 82 | -82 |
| 07/15/97 | 24 | 5.9 | 42 | 126 | 67.6 | 1.7 | <.50 | 523 | 4 | 36 | 20 | | 84 | -84 |
| 08/20/97 | 32 | 5.9 | 38 | 160 | 78.4 | 2.1 | <.50 | 523 | <3 | 62 | 30 | | 122 | -122 |
| 10/08/97 | 24 | 5.8 | 40 | 180 | 80.5 | 2.0 | <.50 | 569 | <3 | 52 | 23 | | 140 | -140 |
| 12/11/97 | 45 | 5.9 | 44 | 144 | 79.1 | 1.8 | <.50 | 523 | 4 | 78 | 43 | | 100 | -100 |

DISCHARGE STATION MA... BRANCH SLIPPERY ROCK

SR102A DISCHARGE SOUTHSIDE OF HIGGINS ROAD 100 YARDS WEST OF PISOR ROAD

| | | | | | | | | | | | | | | |
|----------|----|------|-------|--------|-------|-----|-----|-----|-------|----|----|---|-----|------|
| Min. | 15 | 4.70 | 10.40 | 180.00 | 71.9 | 2.3 | 1.6 | 457 | 2.00 | 39 | 15 | 0 | 167 | -235 |
| Max. | 30 | 5.10 | 16.00 | 250.00 | 121.0 | 3.6 | 5.0 | 740 | 22.00 | 90 | 44 | 1 | 235 | -167 |
| Range | 15 | 0.40 | 5.60 | 70.00 | 49.1 | 1.3 | 3.4 | 283 | 20.00 | 51 | 29 | 1 | 67 | 67 |
| AVERAGE | 21 | 4.8 | 12.5 | 210.2 | 86.5 | 2.7 | 2.5 | 545 | 5 | 54 | 22 | 1 | | |
| 75% tile | 24 | | | 228 | | | | | | 57 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 12/22/94 | | 4.8 | 13.4 | 246 | 115.0 | 3.3 | 5.0 | 552 | 2 | | | | 233 | -233 |
| 03/01/95 | 30 | 5.1 | 15.2 | 250 | 121.0 | 3.6 | 2.2 | 740 | 3 | 90 | 44 | 1 | 235 | -235 |
| 07/27/95 | | 4.8 | 11.8 | 192 | 81.1 | 2.5 | 2.4 | 500 | 3 | | | | 180 | -180 |
| 09/21/95 | 25 | 4.8 | 12.6 | 186 | 90.9 | 2.7 | 2.8 | 519 | 3 | 56 | 27 | 1 | 173 | -173 |
| 10/18/95 | 18 | 4.7 | 10.4 | 232 | 91.9 | 2.7 | 2.8 | 539 | 22 | 50 | 20 | 1 | 222 | -222 |
| 11/02/95 | 15 | 5 | 16 | 228 | 106.0 | 3.2 | 1.6 | 675 | 10 | 41 | 19 | 0 | 212 | -212 |
| 12/13/95 | 15 | 4.8 | 11.4 | 216 | 86.2 | 2.6 | 2.6 | 535 | 6 | 39 | 16 | 0 | 205 | -205 |
| 01/25/96 | 20 | 4.8 | 11.4 | 220 | 89.9 | 2.8 | 3.0 | 565 | 3 | 53 | 22 | 1 | 209 | -209 |
| 02/22/96 | 15 | 4.8 | 11.8 | 240 | 92.6 | 2.9 | 3.0 | 582 | 3 | 43 | 17 | 1 | 228 | -228 |
| 03/19/96 | 21 | 4.9 | 11.6 | 228 | 88.9 | 2.7 | 2.8 | 492 | 4 | 58 | 22 | 1 | 216 | -216 |
| 04/16/96 | 15 | 4.7 | 11.4 | 240 | 82.3 | 2.6 | 2.5 | 488 | 3 | 43 | 15 | 0 | 229 | -229 |
| 05/16/96 | 24 | 4.8 | 12.4 | 210 | 80.4 | 2.5 | 2.4 | 457 | 3 | 61 | 23 | 1 | 198 | -198 |
| 06/26/96 | 23 | 4.9 | 12.4 | 200 | 82.1 | 2.6 | 2.3 | 486 | 3 | 55 | 23 | 1 | 188 | -188 |
| 07/24/96 | 24 | 4.9 | 12.2 | 186 | 76.7 | 2.4 | 2.0 | 542 | <3 | 54 | 22 | 1 | 174 | -174 |
| 08/13/96 | 21 | 4.8 | 10.8 | 200 | 77.1 | 2.5 | 2.1 | 474 | <3 | 50 | 19 | 1 | 189 | -189 |
| 09/18/96 | 30 | 4.7 | 12.6 | 204 | 84.0 | 2.7 | 2.4 | 627 | <3 | 74 | 30 | 1 | 191 | -191 |
| 10/23/96 | 21 | 4.9 | 13.8 | 198 | 86.1 | 2.6 | 2.5 | 545 | <3 | 50 | 22 | 1 | 184 | -184 |
| 02/19/97 | 25 | 4.9 | 13.4 | 204 | 74.1 | 2.3 | 2.0 | 541 | <3 | 61 | 22 | 1 | 191 | -191 |
| 03/19/97 | 22 | 4.8 | 13.2 | 182 | 75.0 | 2.4 | 2.0 | 584 | 8 | 48 | 20 | 1 | 169 | -169 |
| 04/16/97 | 22 | 4.9 | 12.6 | 180 | 76.4 | 2.4 | 2.0 | 520 | 6 | 48 | 20 | 1 | 167 | -167 |
| 05/21/97 | | 4.9 | 11.8 | 200 | 71.9 | 2.3 | 1.9 | 525 | <3 | | | | 188 | -188 |
| 06/25/97 | 20 | 4.8 | 12.8 | 182 | 73.8 | 2.3 | 1.9 | 515 | <3 | 44 | 18 | 0 | 169 | -169 |

SR109 DISCHARGE 1/4 MILE NORTH OF SR114

| | | | | | | | | | | | | | | |
|----------|----|------|-------|-------|-----|-----|-----|-----|-------|----|---|---|----|-----|
| Min. | 8 | 4.20 | 4.40 | 11.20 | 0.7 | 0.9 | 0.7 | 91 | 3.00 | 1 | 0 | 1 | 2 | -34 |
| Max. | 27 | 5.10 | 10.20 | 40.00 | 4.7 | 2.5 | 3.1 | 169 | 88.00 | 10 | 1 | 1 | 34 | -2 |
| Range | 21 | 0.90 | 5.80 | 28.80 | 4.1 | 1.5 | 2.4 | 78 | 85.00 | 9 | 1 | 0 | 31 | 31 |
| AVERAGE | 14 | 4.6 | 7.4 | 22.2 | 2.1 | 1.6 | 1.9 | 127 | 9 | 4 | 0 | 1 | | |
| 75% tile | 18 | | | 25 | | | | | | 4 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|---------------|
| 10/27/94 | | 4.3 | 5.6 | 22 | 4.7 | 2.5 | 0.7 | 159 | 3 | | | | 16 | -16 |
| 12/21/94 | 16 | 4.2 | 5.8 | 38 | 4.0 | 1.9 | 3.1 | 135 | 88 | 7 | 1 | 1 | 32 | -32 |
| 02/23/95 | 11 | 4.7 | 7.8 | 19 | 2.4 | 1.6 | <.50 | 145 | 3 | 3 | 0 | | 11 | -11 |
| 03/30/95 | 14 | 4.7 | 9.2 | 34 | 1.8 | 1.6 | <.50 | 130 | 3 | 6 | 0 | | 25 | -25 |
| 05/25/95 | 18 | 4.7 | 8 | 17 | 1.5 | 1.4 | <.50 | 113 | 3 | 4 | 0 | | 9 | -9 |
| 07/27/95 | 10 | 4.7 | 7.8 | 18.8 | 2.3 | 1.6 | <.50 | 133 | 3 | 2 | 0 | | 11 | -11 |
| 09/21/95 | 9 | 5 | 9.6 | 24 | 4.6 | 2.3 | <.50 | 133 | 3 | 3 | 0 | | 14 | -14 |
| 10/18/95 | 6 | 4.9 | 8.2 | 28 | 4.6 | 2.2 | <.50 | 169 | 8 | 2 | 0 | | 20 | -20 |
| 11/02/95 | 9 | 4.8 | 8.6 | 24 | 3.9 | 2.0 | <.50 | 127 | 3 | 3 | 0 | | 15 | -15 |
| 12/13/95 | 9 | 4.7 | 7.4 | 26 | 2.4 | 1.9 | <.50 | 156 | 8 | 3 | 0 | | 19 | -19 |
| 02/21/96 | 12 | 4.5 | 6 | 15.2 | 1.8 | 1.4 | <.50 | 118 | 3 | 2 | 0 | | 9 | -9 |
| 03/13/96 | 15 | 4.5 | 6.4 | 40 | 1.0 | 1.3 | <.50 | 120 | 3 | 7 | 0 | | 34 | -34 |
| 04/16/96 | 12 | 4.6 | 6.6 | 24 | 1.0 | 1.3 | <.50 | 125 | 3 | 3 | 0 | | 17 | -17 |
| 05/16/96 | 24 | 4.5 | 6.8 | 36 | 0.8 | 1.2 | <.50 | 109 | 3 | 10 | 0 | | 29 | -29 |
| 06/26/96 | 18 | 4.4 | 4.8 | 15 | 1.3 | 1.5 | <.50 | 91 | 3 | 3 | 0 | | 10 | -10 |
| 07/24/96 | | 4.7 | 7.4 | 18.2 | 1.8 | 1.6 | <.50 | 120 | <3 | | | | 11 | -11 |
| 08/13/96 | 10 | 4.3 | 4.4 | 22 | 2.2 | 1.8 | <.50 | 140 | <3 | 3 | 0 | | 18 | -18 |
| 09/18/96 | 12 | 4.5 | 6.2 | 24 | 1.6 | 1.4 | <.50 | 130 | <3 | 3 | 0 | | 18 | -18 |
| 10/23/96 | 18 | 4.6 | 7.8 | 22 | 1.4 | 1.4 | <.50 | 112 | <3 | 5 | 0 | | 14 | -14 |
| 12/11/96 | 27 | 4.7 | 10.2 | 12.6 | 1.5 | 1.0 | <.50 | 104 | 18 | 4 | 0 | | 2 | -2 |
| 03/19/97 | 24 | 4.6 | 7.6 | 17.6 | 0.7 | 0.9 | <.50 | 100 | <3 | 5 | 0 | | 10 | -10 |
| 04/09/97 | 18 | 4.7 | 7.6 | 11.2 | 0.8 | 1.1 | <.50 | 113 | 8 | 2 | 0 | | 4 | -4 |
| 05/21/97 | 12 | 4.7 | 7.4 | 16.4 | 1.0 | 1.1 | <.50 | 112 | 4 | 2 | 0 | | 9 | -9 |
| 06/19/97 | 12 | 4.6 | 5.8 | 16.2 | 1.2 | 1.1 | <.50 | 108 | <3 | 2 | 0 | | 10 | -10 |
| 09/09/97 | 6 | 5.1 | 8.4 | 20 | 3.3 | 1.9 | <.50 | 161 | <3 | 1 | 0 | | 12 | -12 |
| 10/08/97 | 10 | 4.9 | 9 | 30 | 2.8 | 1.8 | <.50 | 152 | <3 | 4 | 0 | | 21 | -21 |
| 11/18/97 | 12 | 4.6 | 8.8 | 17.8 | 1.8 | 1.7 | <.50 | 149 | <3 | 3 | 0 | | 9 | -9 |
| 01/21/98 | 18 | 4.7 | 7.6 | 12 | 1.5 | 1.1 | <.50 | 107 | <3 | 3 | 0 | | 4 | -4 |

DISCHARGE STATION M.

BRANCH SLIPPERY ROCK

SR109 DISCHARGE 1/4 MILE NORTH OF SR114

| | | | | | | | | | | | | | | |
|----------|----|------|-------|-------|-----|-----|-----|-----|-------|----|---|---|----|-----|
| Min. | 8 | 4.20 | 4.40 | 11.20 | 0.7 | 0.9 | 0.7 | 91 | 3.00 | 1 | 0 | 1 | 2 | -34 |
| Max. | 27 | 5.10 | 10.20 | 40.00 | 4.7 | 2.5 | 3.1 | 169 | 88.00 | 10 | 1 | 1 | 34 | -2 |
| Range | 21 | 0.90 | 5.80 | 28.80 | 4.1 | 1.5 | 2.4 | 78 | 85.00 | 9 | 1 | 0 | 31 | 31 |
| AVERAGE | 14 | 4.6 | 7.4 | 22.2 | 2.1 | 1.6 | 1.9 | 127 | 9 | 4 | 0 | 1 | | |
| 75% tile | 18 | | | 25 | | | | | | 4 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|---------------|
| 10/27/94 | | 4.3 | 5.6 | 22 | 4.7 | 2.5 | 0.7 | 159 | 3 | 7 | 1 | 1 | 16 | -16 |
| 12/21/94 | 16 | 4.2 | 5.8 | 38 | 4.0 | 1.9 | 3.1 | 135 | 88 | 7 | 1 | 1 | 32 | -32 |
| 02/23/95 | 11 | 4.7 | 7.8 | 19 | 2.4 | 1.6 | <.50 | 145 | 3 | 3 | 0 | | 11 | -11 |
| 03/30/95 | 14 | 4.7 | 9.2 | 34 | 1.8 | 1.6 | <.50 | 130 | 3 | 6 | 0 | | 25 | -25 |
| 05/25/95 | 18 | 4.7 | 8 | 17 | 1.5 | 1.4 | <.50 | 113 | 3 | 4 | 0 | | 9 | -9 |
| 07/27/95 | 10 | 4.7 | 7.8 | 18.8 | 2.3 | 1.6 | <.50 | 133 | 3 | 2 | 0 | | 11 | -11 |
| 09/21/95 | 9 | 5 | 9.6 | 24 | 4.6 | 2.3 | <.50 | 133 | 3 | 3 | 0 | | 14 | -14 |
| 10/18/95 | 6 | 4.9 | 8.2 | 28 | 4.6 | 2.2 | <.50 | 169 | 8 | 2 | 0 | | 20 | -20 |
| 11/02/95 | 9 | 4.8 | 8.6 | 24 | 3.9 | 2.0 | <.50 | 127 | 3 | 3 | 0 | | 15 | -15 |
| 12/13/95 | 9 | 4.7 | 7.4 | 26 | 2.4 | 1.9 | <.50 | 156 | 8 | 3 | 0 | | 19 | -19 |
| 02/21/96 | 12 | 4.5 | 6 | 15.2 | 1.8 | 1.4 | <.50 | 118 | 3 | 2 | 0 | | 9 | -9 |
| 03/13/96 | 15 | 4.5 | 6.4 | 40 | 1.0 | 1.3 | <.50 | 120 | 3 | 7 | 0 | | 34 | -34 |
| 04/16/96 | 12 | 4.6 | 6.6 | 24 | 1.0 | 1.3 | <.50 | 125 | 3 | 3 | 0 | | 17 | -17 |
| 05/16/96 | 24 | 4.5 | 6.8 | 36 | 0.8 | 1.2 | <.50 | 109 | 3 | 10 | 0 | | 29 | -29 |
| 06/26/96 | 18 | 4.4 | 4.8 | 15 | 1.3 | 1.5 | <.50 | 91 | 3 | 3 | 0 | | 10 | -10 |
| 07/24/96 | | 4.7 | 7.4 | 18.2 | 1.8 | 1.6 | <.50 | 120 | <3 | | | | 11 | -11 |
| 08/13/96 | 10 | 4.3 | 4.4 | 22 | 2.2 | 1.8 | <.50 | 140 | <3 | 3 | 0 | | 18 | -18 |
| 09/18/96 | 12 | 4.5 | 6.2 | 24 | 1.6 | 1.4 | <.50 | 130 | <3 | 3 | 0 | | 18 | -18 |
| 10/23/96 | 18 | 4.6 | 7.8 | 22 | 1.4 | 1.4 | <.50 | 112 | <3 | 5 | 0 | | 14 | -14 |
| 12/11/96 | 27 | 4.7 | 10.2 | 12.6 | 1.5 | 1.0 | <.50 | 104 | 18 | 4 | 0 | | 2 | -2 |
| 03/19/97 | 24 | 4.6 | 7.6 | 17.6 | 0.7 | 0.9 | <.50 | 100 | <3 | 5 | 0 | | 10 | -10 |
| 04/09/97 | 18 | 4.7 | 7.6 | 11.2 | 0.8 | 1.1 | <.50 | 113 | 8 | 2 | 0 | | 4 | -4 |
| 05/21/97 | 12 | 4.7 | 7.4 | 16.4 | 1.0 | 1.1 | <.50 | 112 | 4 | 2 | 0 | | 9 | -9 |
| 06/19/97 | 12 | 4.6 | 5.8 | 16.2 | 1.2 | 1.1 | <.50 | 108 | <3 | 2 | 0 | | 10 | -10 |
| 09/09/97 | 6 | 5.1 | 8.4 | 20 | 3.3 | 1.9 | <.50 | 161 | <3 | 1 | 0 | | 12 | -12 |
| 10/08/97 | 10 | 4.9 | 9 | 30 | 2.8 | 1.8 | <.50 | 152 | <3 | 4 | 0 | | 21 | -21 |
| 11/18/97 | 12 | 4.6 | 8.8 | 17.8 | 1.8 | 1.7 | <.50 | 149 | <3 | 3 | 0 | | 9 | -9 |
| 01/21/98 | 18 | 4.7 | 7.6 | 12 | 1.5 | 1.1 | <.50 | 107 | <3 | 3 | 0 | | 4 | -4 |

DISCHARGE STATION M. BRANCH SLIPPERY ROCK

SR 110 FIRST DISCHARGE NORTHWEST OF SR 114 AREA

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|-------|---|---|---|----|-----|
| Min. | 2 | 4.7 | 7.6 | 10.2 | 0.3 | 1.1 | 0.5 | 120 | 3.00 | 0 | 0 | 0 | -2 | -20 |
| Max. | 7 | 5.9 | 12.0 | 28.0 | 0.8 | 3.9 | 1.2 | 205 | 24.00 | 1 | 0 | 0 | 20 | 2 |
| Range | 5 | 1.2 | 4.4 | 17.8 | 0.5 | 2.9 | 0.7 | 85 | 21.00 | 1 | 0 | 0 | 22 | 22 |
| AVERAGE | 5 | 5.2 | 9.8 | 17 | 0.5 | 2.2 | 0.7 | 165 | 8 | 1 | 0 | 0 | 7 | -7 |
| 75% tile | 7 | | | 17.4 | | | | | | 1 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/27/94 | | 4.7 | 7.6 | 28 | 0.54 | 3.93 | 1.2 | 193 | 4 | | | | 20 | -20 |
| 02/23/95 | 7 | 5.9 | 12 | 10.2 | 0.3 | 1.06 | 0.5 | 120 | 24 | 1 | 0 | 0 | -2 | 2 |
| 03/30/95 | 7 | 5.5 | 11 | 14 | 0.3 | 1.36 | 0.5 | 123 | 3 | 1 | 0 | 0 | 3 | -3 |
| 09/21/95 | 3 | 5.1 | 10 | 14 | 0.78 | 2.31 | 0.52 | 205 | 3 | 1 | 0 | 0 | 4 | -4 |
| 10/18/95 | 4 | 4.9 | 8.8 | 17.8 | 0.58 | 2.39 | 0.6 | 182 | 12 | 1 | 0 | 0 | 9 | -9 |
| 11/02/95 | 2 | 5 | 9.4 | 16.2 | 0.45 | 2.18 | 0.6 | 165 | 3 | 0 | 0 | 0 | 7 | -7 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR 110A ASSOCIATED WITH SR 110

| | | | | | | | | | | | | | | |
|----------|----|-----|------|------|------|-----|-----|-----|-------|---|---|---|----|-----|
| Min. | 10 | 4.3 | 5.6 | 12.8 | 1.8 | 2.2 | 0.5 | 126 | 3.00 | 2 | 0 | 0 | 7 | -32 |
| Max. | 20 | 5.9 | 12.6 | 38.0 | 20.1 | 2.9 | 0.7 | 192 | 58.00 | 9 | 4 | 0 | 32 | -7 |
| Range | 10 | 1.6 | 7.0 | 25.2 | 18.3 | 0.7 | 0.2 | 66 | 55.00 | 7 | 4 | 0 | 26 | 26 |
| AVERAGE | 14 | 4.8 | 7.7 | 22 | 5.9 | 2.4 | 0.5 | 159 | 9 | 4 | 1 | 0 | 14 | -14 |
| 75% tile | 17 | | | 22.5 | | | | | | 4 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/27/94 | | 5.9 | 12.6 | 19.4 | 12.2 | 2.66 | 0.5 | 181 | 3 | | | | 7 | -7 |
| 02/23/95 | 18 | 5 | 8 | 22 | 20.1 | 2.48 | 0.73 | 158 | 58 | 5 | 4 | 0 | 14 | -14 |
| 03/30/95 | 10 | 5.5 | 10.6 | 24 | 4.94 | 2.54 | 0.5 | 170 | 4 | 3 | 1 | 0 | 13 | -13 |
| 05/25/95 | 18 | 5.5 | 10.2 | 17.6 | 4.96 | 2.41 | 0.5 | 142 | 3 | 4 | 1 | 0 | 7 | -7 |
| 09/21/95 | 12 | 4.3 | 5.6 | 18.4 | 6.48 | 2.87 | 0.5 | 168 | 6 | 3 | 1 | 0 | 13 | -13 |
| 10/18/95 | 12 | 4.7 | 7.4 | 20 | 5.71 | 2.65 | 0.5 | 192 | 12 | 3 | 1 | 0 | 13 | -13 |
| 11/02/95 | 12 | 4.3 | 6 | 16.4 | 4.38 | 2.42 | 0.5 | 167 | 4 | 2 | 1 | 0 | 10 | -10 |
| 12/13/95 | 12 | 4.6 | 6.6 | 16.4 | 3.06 | 2.46 | 0.5 | 184 | 4 | 2 | 0 | 0 | 10 | -10 |
| 02/21/96 | 12 | 4.7 | 6.2 | 12.8 | 2.37 | 2.32 | 0.5 | 144 | 3 | 2 | 0 | 0 | 7 | -7 |
| 03/13/96 | 15 | 4.5 | 5.8 | 38 | 2.02 | 2.16 | 0.5 | 126 | 3 | 7 | 0 | 0 | 32 | -32 |
| 04/16/96 | 15 | 4.6 | 6.4 | 22 | 2.54 | 2.22 | 0.5 | 148 | 3 | 4 | 0 | 0 | 16 | -16 |
| 05/16/96 | 20 | 4.4 | 6.4 | 38 | 1.8 | 2.2 | 0.5 | 128 | 3 | 9 | 0 | 0 | 32 | -32 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR 110B ASSOCIATED WITH SR 110

| | | | | | | | | | | | | | | |
|----------|----|-----|-----|------|-----|-----|-----|-----|-------|---|---|---|---|----|
| Min. | 8 | 4.6 | 7.0 | 13.0 | 0.3 | 1.2 | 0.5 | 99 | 3.00 | 1 | 0 | 0 | 6 | -9 |
| Max. | 12 | 4.7 | 8.2 | 17.4 | 7.5 | 1.5 | 0.8 | 106 | 26.00 | 2 | 1 | 0 | 9 | -6 |
| Range | 4 | 0.1 | 1.2 | 4.4 | 7.2 | 0.3 | 0.3 | 7 | 23.00 | 1 | 1 | 0 | 3 | 3 |
| AVERAGE | 9 | 4.6 | 7.7 | 16 | 2.8 | 1.3 | 0.6 | 103 | 11 | 2 | 0 | 0 | 8 | -8 |
| 75% tile | 10 | | | 17.1 | | | | | | 2 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 02/02/95 | 12 | 4.6 | 8 | 16.8 | 7.49 | 1.36 | 0.83 | 99 | 26 | 2 | 1 | 0 | 9 | -9 |
| 02/23/95 | 8 | 4.6 | 7 | 13 | 0.49 | 1.45 | 0.5 | 103 | 3 | 1 | 0 | 0 | 6 | -6 |
| 03/30/95 | 8 | 4.7 | 8.2 | 17.4 | 0.3 | 1.2 | 0.5 | 106 | 3 | 2 | 0 | 0 | 9 | -9 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR114B DISCHARGE TREATED BY HEDIN / C.D.S. SYSTEM , EAST

| | | | | | | | | | | | | | | |
|----------|----|------|-------|-------|------|-----|-----|-----|-------|----|----|---|----|-----|
| Min. | 53 | 5.50 | 11.40 | 24.00 | 10.6 | 1.0 | 0.0 | 158 | 3.00 | 17 | 7 | 0 | 9 | -41 |
| Max. | 60 | 6.00 | 36.00 | 54.00 | 30.7 | 2.2 | 0.0 | 234 | 20.00 | 38 | 22 | 0 | 41 | -9 |
| Range | 7 | 0.50 | 24.60 | 30.00 | 20.1 | 1.2 | 0.0 | 76 | 17.00 | 20 | 15 | 0 | 32 | 32 |
| AVERAGE | 58 | 5.8 | 19.9 | 40.6 | 16.9 | 1.6 | | 186 | 6 | 27 | 12 | | | |
| 75% tile | 60 | | | 51 | | | | | | 35 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 10/19/94 | | 5.5 | 13.2 | 54 | 16.5 | 2.2 | <.50 | 207 | 3 | | | | 41 | -41 |
| 12/21/94 | 60 | 5.7 | 24 | 50 | 17.6 | 1.7 | <.50 | 176 | 6 | 36 | 13 | | 26 | -26 |
| 02/14/95 | 60 | 5.8 | 26 | 52 | 19.1 | 1.8 | <.50 | 184 | 3 | 38 | 14 | | 26 | -26 |
| 02/23/95 | 60 | 6 | 36 | 46 | 30.7 | 1.0 | <.50 | 234 | 3 | 33 | 22 | | 10 | -10 |
| 04/11/95 | 53 | 5.8 | 11.4 | 30 | 10.6 | 1.6 | <.50 | 174 | 20 | 19 | 7 | | 19 | -19 |
| 05/25/95 | 56 | 5.8 | 14 | 28 | 12.3 | 1.6 | <.50 | 171 | 3 | 19 | 8 | | 14 | -14 |
| 07/27/95 | 60 | 5.9 | 14.8 | 24 | 11.6 | 1.5 | <.50 | 158 | 3 | 17 | 8 | | 9 | -9 |

SR114D DISCHARGE TREATED BY HEDIN / C.D.S. SYSTEM WEST

| | | | | | | | | | | | | | | |
|----------|-----|------|-------|-------|------|-----|-----|-----|-------|-----|----|---|----|-----|
| Min. | 75 | 5.80 | 13.60 | 34.00 | 12.0 | 1.1 | 0.0 | 166 | 3.00 | 31 | 11 | 0 | 2 | -20 |
| Max. | 135 | 6.20 | 56.00 | 76.00 | 50.7 | 1.6 | 0.0 | 299 | 22.00 | 123 | 82 | 0 | 20 | 0 |
| Range | 60 | 0.40 | 42.40 | 42.00 | 38.7 | 0.4 | 0.0 | 133 | 19.00 | 93 | 71 | 0 | 18 | 20 |
| AVERAGE | 111 | 6.1 | 45.6 | 54.3 | 37.7 | 1.3 | | 255 | 7 | 75 | 53 | | | |
| 75% tile | 128 | | | 58 | | | | | | 89 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 01/10/95 | 135 | 6.1 | 56 | 76 | 50.7 | 1.3 | <.50 | 299 | 4 | 123 | 82 | | 20 | -20 |
| 02/14/95 | 130 | 6.1 | 56 | 60 | 42.4 | 1.2 | <.50 | 278 | 3 | 94 | 66 | | 4 | -4 |
| 02/23/95 | 75 | 5.8 | 13.6 | 34 | 12.0 | 1.6 | <.50 | 166 | 3 | 31 | 11 | | 20 | -20 |
| 03/23/95 | 100 | 6.2 | 50 | 52 | 40.1 | 1.2 | <.50 | 271 | 3 | 63 | 48 | | 2 | -2 |
| 04/11/95 | 106 | 6.2 | 48 | 52 | 37.6 | 1.1 | <.50 | 265 | 22 | 66 | 48 | | 4 | -4 |
| 05/25/95 | 122 | 6.2 | 50 | 52 | 43.5 | 1.3 | <.50 | 253 | 6 | 76 | 64 | | 2 | -2 |

SR115 DISCHARGE DEEP MINE BORE HOLE TREATED BY CONSERVATION DISTRICT SYSTEM

| | | | | | | | | | | | | | |
|----------|-----|------|-------|-------|------|-----|-----|-----|-------|-----|-----|-----|----|
| Min. | 3 | 5.80 | 28.00 | 0.00 | 0.3 | 0.4 | 0.0 | 136 | 2.00 | 0 | 0 | -46 | -6 |
| Max. | 721 | 6.40 | 62.00 | 66.00 | 24.1 | 1.3 | 0.0 | 230 | 22.00 | 464 | 129 | 6 | 46 |
| Range | 718 | 0.60 | 34.00 | 66.00 | 23.8 | 0.9 | 0.0 | 94 | 20.00 | 464 | 129 | 52 | 52 |
| AVERAGE | 278 | 6.1 | 43.0 | 24.0 | 16.1 | 1.0 | | 177 | 6 | 94 | 55 | | |
| 75% tile | 421 | | | 40 | | | | | | 120 | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 12/22/94 | | 6 | 46 | 0 | 13.6 | 1.0 | <.50 | 166 | 2 | | | | -46 | 46 |
| 02/23/95 | 236 | 6.1 | 48 | 24 | 21.2 | 1.2 | <.50 | 196 | 3 | 68 | 60 | | -24 | 24 |
| 03/23/95 | 500 | 6.1 | 42 | 20 | 18.9 | 1.2 | <.50 | 174 | 3 | 120 | 114 | | -22 | 22 |
| 04/11/95 | 302 | 6.3 | 36 | 8 | 18.8 | 1.2 | <.50 | 187 | 22 | 29 | 68 | | -28 | 28 |
| 05/25/95 | 504 | 6.1 | 40 | 11.8 | 17.4 | 1.1 | <.50 | 157 | 3 | 71 | 105 | | -28 | 28 |
| 07/27/95 | 66 | 6.1 | 48 | 18.8 | 17.4 | 1.1 | <.50 | 183 | 8 | 15 | 14 | | -29 | 29 |
| 10/11/95 | 3 | 6.3 | 28 | 0 | 0.3 | 0.5 | <.50 | 136 | 3 | 0 | 0 | | -28 | 28 |
| 11/02/95 | 5 | 6.4 | 28 | 0 | 0.3 | 0.4 | <.50 | 168 | 3 | 0 | 0 | | -28 | 28 |
| 01/25/96 | 189 | 6.1 | 48 | 40 | 14.7 | 1.0 | <.50 | 198 | 3 | 91 | 33 | | -8 | 8 |
| 02/21/96 | 235 | 5.9 | 44 | 42 | 24.1 | 1.3 | <.50 | 230 | 3 | 119 | 68 | | -2 | 2 |
| 03/13/96 | 585 | 5.9 | 38 | 66 | 18.3 | 1.1 | <.50 | 156 | 3 | 464 | 129 | | | |
| 04/16/96 | 332 | 5.8 | 42 | 40 | 19.4 | 1.2 | <.50 | 210 | 3 | 160 | 77 | | | |
| 05/16/96 | 721 | 5.8 | 38 | 44 | 14.1 | 0.9 | <.50 | 146 | 3 | 381 | 122 | | | |
| 06/26/96 | 200 | 6.1 | 40 | 11.4 | 19.3 | 1.2 | <.50 | 149 | 3 | 27 | 46 | | | |
| 07/24/96 | 84 | 6.1 | 48 | 17.2 | 19.3 | 1.1 | <.50 | 192 | <3 | 17 | 19 | | -31 | 31 |
| 08/13/96 | 30 | 6.3 | 42 | 3.2 | 21.1 | 1.2 | <.50 | 192 | 14 | 1 | 8 | | -39 | 39 |
| 09/18/96 | 52 | 6 | 48 | 46 | 21.0 | 1.2 | <.50 | 217 | <3 | 29 | 13 | | -2 | 2 |
| 10/22/96 | 200 | 6.1 | 46 | 52 | 16.7 | 1.0 | <.50 | 158 | 4 | 125 | 40 | | 6 | -6 |
| 12/11/96 | 395 | 6.1 | 48 | 11.6 | 13.9 | 0.9 | <.50 | 148 | 8 | 55 | 66 | | -36 | 36 |
| 02/19/97 | 332 | 6.1 | 44 | 36 | 15.9 | 1.0 | <.50 | 179 | 10 | 144 | 63 | | -8 | 8 |
| 03/19/97 | 638 | 6.1 | 38 | 15.6 | 10.4 | 0.7 | <.50 | 143 | <3 | 120 | 80 | | -22 | 22 |
| 04/09/97 | 430 | 6 | 42 | 22 | 14.1 | 1.0 | <.50 | 172 | 10 | 114 | 73 | | -20 | 20 |
| 05/20/97 | 461 | 6.1 | 42 | 38 | 17.0 | 0.9 | <.50 | 173 | <3 | 211 | 94 | | -4 | 4 |
| 06/19/97 | 260 | 6 | 42 | 19 | 17.2 | 1.0 | <.50 | 182 | <3 | 59 | 54 | | -23 | 23 |
| 07/15/97 | 78 | 6.1 | 46 | 15 | 18.5 | 1.0 | <.50 | 189 | <3 | 14 | 17 | | -31 | 31 |
| 08/19/97 | 4 | 6.2 | 62 | 44 | 18.4 | 1.1 | <.50 | 207 | <3 | 2 | 1 | | -18 | 18 |
| 01/21/98 | 395 | 6.1 | 46 | 3 | 14.3 | 0.9 | <.50 | 176 | <3 | 14 | 68 | | -43 | 43 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR 116 AT MINE OPENING ON STONE PROPERTY

| | | | | | | | | | | | | | | | |
|----------|----|-----|------|------|------|-----|-----|-----|-----|-------|----|---|---|-----|-----|
| Min. | 12 | 4.9 | 7.4 | 0.0 | 0.5 | 0.2 | 0.2 | 0.2 | 72 | 2.00 | 0 | 0 | 0 | -21 | -43 |
| Max. | 26 | 6.1 | 22.0 | 50.0 | 11.7 | 0.5 | 0.5 | 0.5 | 182 | 10.00 | 14 | 3 | 0 | 43 | 21 |
| Range | 14 | 1.2 | 14.6 | 50.0 | 11.2 | 0.4 | 0.3 | 0.3 | 110 | 8.00 | 14 | 2 | 0 | 64 | 64 |
| AVERAGE | 20 | 5.6 | 16.2 | 19 | 3.5 | 0.4 | 0.5 | 0.5 | 111 | 4 | 4 | 1 | 0 | 3 | -3 |
| 75% tile | 24 | | | 26.0 | | | | | | | 5 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| Sampled | | | | | | | | | | | | | | |
| 12/21/94 | 26 | 5.3 | 13.6 | 24 | 2.34 | 0.44 | 0.21 | 102 | 2 | 8 | 1 | 0 | 10 | -10 |
| 02/23/95 | 21 | 5.8 | 16.2 | 8 | 0.83 | 0.27 | 0.5 | 98 | 3 | 2 | 0 | 0 | -8 | 8 |
| 05/25/95 | 24 | 6.1 | 22 | 0.8 | 1.06 | 0.18 | 0.5 | 72 | 3 | 0 | 0 | 0 | -21 | 21 |
| 07/27/95 | 15 | 5.6 | 15.6 | 15.2 | 0.71 | 0.21 | 0.5 | 81 | 3 | 3 | 0 | 0 | 0 | 0 |
| 09/14/95 | 12 | 5.7 | 19.2 | 24 | 2.9 | 0.39 | 0.5 | 95 | 8 | 3 | 0 | 0 | 5 | -5 |
| 10/11/95 | 15 | 5.7 | 16.6 | 28 | 4.06 | 0.49 | 0.5 | 111 | 10 | 5 | 1 | 0 | 11 | -11 |
| 11/01/95 | 15 | 5.7 | 16.4 | 28 | 4.42 | 0.53 | 0.5 | 120 | 3 | 5 | 1 | 0 | 12 | -12 |
| 02/21/96 | 21 | 5.8 | 19.2 | 0 | 0.7 | 0.31 | 0.5 | 115 | 3 | 0 | 0 | 0 | -19 | 19 |
| 03/13/96 | 24 | 4.9 | 7.4 | 50 | 9.07 | 0.53 | 0.5 | 182 | 3 | 14 | 3 | 0 | 43 | -43 |
| 04/16/96 | 24 | 5.7 | 18.4 | 12.2 | 0.49 | 0.2 | 0.5 | 97 | 3 | 4 | 0 | 0 | -6 | 6 |
| 05/16/96 | 18 | 5.8 | 13.6 | 22 | 11.7 | 0.5 | 0.5 | 152 | 3 | 5 | 3 | 0 | 8 | -8 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR 116A DISCHARGE LOCATED ABOVE BOG PONDS STONE PROPERTY

| | | | | | | | | | | | | | | |
|----------|----|-----|------|------|------|-----|-----|-----|-------|----|---|---|----|-----|
| Min. | 12 | 4.5 | 7.6 | 22.0 | 0.4 | 0.1 | 0.1 | 63 | 3.00 | 5 | 0 | 0 | 2 | -36 |
| Max. | 24 | 6.1 | 32.0 | 46.0 | 29.9 | 0.8 | 0.5 | 227 | 10.00 | 10 | 5 | 0 | 36 | -2 |
| Range | 12 | 1.6 | 24.4 | 24.0 | 29.5 | 0.7 | 0.4 | 164 | 7.00 | 5 | 5 | 0 | 34 | 34 |
| AVERAGE | 17 | 5.7 | 14.4 | 35 | 12.6 | 0.6 | 0.5 | 184 | 5 | 7 | 2 | 0 | 21 | -21 |
| 75% tile | 19 | | | 39.5 | | | | | | 8 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 10/19/94 | | 5 | 9 | 38 | 12.5 | 0.71 | 0.5 | 195 | 3 | | | | 29 | -29 |
| 12/22/94 | | 6 | 32 | 36 | 29.9 | 0.63 | 0.14 | 221 | 10 | | | | 4 | -4 |
| 02/23/95 | 19 | 5.7 | 10.4 | 36 | 13.1 | 0.67 | 0.5 | 197 | 4 | 8 | 3 | 0 | 26 | -26 |
| 05/25/95 | 24 | 6.1 | 17.2 | 34 | 17 | 0.57 | 0.5 | 227 | 3 | 10 | 5 | 0 | 17 | -17 |
| 07/27/95 | 15 | 6 | 15.4 | 32 | 14.4 | 0.61 | 0.5 | 199 | 4 | 6 | 3 | 0 | 17 | -17 |
| 09/14/95 | 15 | 4.5 | 7.6 | 44 | 13.4 | 0.83 | 0.5 | 189 | 6 | 8 | 2 | 0 | 36 | -36 |
| 10/11/95 | 19 | 5.7 | 9.6 | 44 | 15 | 0.73 | 0.5 | 221 | 10 | 10 | 3 | 0 | 34 | -34 |
| 11/01/95 | 12 | 5.7 | 11.6 | 46 | 14.7 | 0.66 | 0.5 | 225 | 3 | 7 | 2 | 0 | 34 | -34 |
| 02/21/96 | 15 | 5.7 | 10 | 26 | 10.6 | 0.59 | 0.5 | 178 | 3 | 5 | 2 | 0 | 16 | -16 |
| 03/13/96 | 18 | 6 | 20 | 30 | 0.5 | 0.17 | 0.5 | 82 | 3 | 6 | 0 | 0 | 10 | -10 |
| 04/16/96 | 12 | 5.6 | 9.8 | 32 | 10.1 | 0.52 | 0.5 | 206 | 3 | 5 | 1 | 0 | 22 | -22 |
| 05/16/96 | 24 | 5.8 | 20 | 22 | 0.37 | 0.1 | 0.5 | 63 | 3 | 6 | 0 | 0 | 2 | -2 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR125B NORTH DISCHARGE HEADWATERS HILLIARDS TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|-----|------|------|-----|-----|-----|-------|---|---|---|----|-----|
| Min. | 2 | 3.9 | 0.0 | 15.0 | 0.3 | 0.4 | 1.2 | 24 | 3.00 | 1 | 0 | 0 | 7 | -54 |
| Max. | 9 | 4.7 | 9.0 | 54.0 | 12.0 | 5.0 | 2.0 | 108 | 14.00 | 2 | 0 | 0 | 54 | -7 |
| Range | 7 | 0.8 | 9.0 | 39.0 | 11.7 | 4.6 | 0.8 | 84 | 11.00 | 1 | 0 | 0 | 47 | 47 |
| AVERAGE | 6 | 4.4 | 6.4 | 28 | 2.9 | 1.4 | 1.6 | 52 | 4 | 2 | 0 | 0 | 22 | -22 |
| 75% tile | 7 | | | 36.5 | | | | | | 2 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 03/01/95 | | 4.7 | 9 | 22 | 0.3 | 0.44 | 1.37 | 31 | 3 | | | | 13 | -13 |
| 03/16/95 | | 4.6 | 9 | 24 | 0.3 | 0.54 | 1.8 | 36 | 3 | | | | 15 | -15 |
| 03/30/95 | 9 | 4.5 | 8 | 22 | 0.3 | 0.62 | 2 | 39 | 3 | 2 | 0 | 0 | 14 | -14 |
| 08/29/95 | | 4.2 | 5.4 | 36 | 2.83 | 1.08 | 1.83 | 64 | 3 | | | | 31 | -31 |
| 09/27/95 | | 4.2 | 4.8 | 38 | 12 | 1.32 | 1.57 | 85 | 14 | | | | 33 | -33 |
| 10/11/95 | 2 | 3.9 | 0 | 54 | 6.54 | 1.59 | 1.49 | 108 | 3 | 1 | 0 | 0 | 54 | -54 |
| 03/13/96 | | 4.5 | 7 | 16 | 0.3 | 5 | 1.51 | 32 | 3 | | | | 9 | -9 |
| 05/16/96 | | 4.6 | 7.8 | 15 | 0.3 | 0.45 | 1.22 | 24 | 3 | | | | 7 | -7 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR 125D SOUTH DISCHARGE HEADWATERS OF HILLIARDS TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|-----|------|-----|-----|-----|-----|-------|---|---|---|----|-----|
| Min. | 2 | 4.1 | 3.8 | 42.0 | 0.3 | 1.0 | 4.4 | 60 | 0.30 | 1 | 0 | 0 | 36 | -51 |
| Max. | 9 | 4.3 | 6.6 | 58.0 | 0.5 | 1.9 | 7.7 | 111 | 16.00 | 5 | 0 | 1 | 51 | -38 |
| Range | 7 | 0.2 | 2.8 | 16.0 | 0.2 | 0.9 | 3.3 | 51 | 15.70 | 4 | 0 | 1 | 16 | 16 |
| AVERAGE | 6 | 4.2 | 5.5 | 48 | 0.3 | 1.4 | 6.1 | 78 | 6 | 3 | 0 | 0 | 42 | -42 |
| 75% tile | 7 | | | 50.5 | | | | | | 4 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 03/01/95 | | 4.3 | 6.6 | 52 | 0.3 | 1.14 | 6.43 | 63 | 0.3 | | | | 45 | -45 |
| 03/16/95 | | 4.3 | 6.6 | 58 | 0.3 | 1.38 | 7.68 | 70 | 3 | | | | 51 | -51 |
| 03/30/95 | 9 | 4.3 | 6.6 | 49 | 0.3 | 1.42 | 7.36 | 103 | 3 | 5 | 0 | 1 | 42 | -42 |
| 08/29/95 | | 4.1 | 4.8 | 50 | 0.3 | 1.79 | 6.03 | 111 | 16 | | | | 45 | -45 |
| 09/27/95 | | 4.1 | 3.8 | 42 | 0.54 | 1.78 | 5.34 | 61 | 14 | | | | 38 | -38 |
| 10/11/95 | 2 | 4.1 | 3.8 | 48 | 0.3 | 1.86 | 4.37 | 86 | 3 | 1 | 0 | 0 | 44 | -44 |
| 03/13/96 | | 4.3 | 5.4 | 42 | 0.3 | 1.09 | 5.93 | 66 | 3 | | | | 37 | -37 |
| 05/16/96 | | 4.3 | 6.2 | 42 | 0.3 | 1.01 | 5.36 | 60 | 3 | | | | 36 | -36 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

4 BALISTERI TRIB. BEFORE MURRIN RUN

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| Min. | 0 | 6.7 | 60.0 | 0.0 | 0.4 | 0.3 | 0.5 | 105 | 3.00 | 0 | 0 | 0 | -158 | 0 |
| Max. | 0 | 7.7 | 158.0 | 0.0 | 1.3 | 0.6 | 0.5 | 237 | 28.00 | 0 | 0 | 0 | 0 | 158 |
| Range | 0 | 1.0 | 98.0 | 0.0 | 0.9 | 0.3 | 0.0 | 132 | 25.00 | 0 | 0 | 0 | 158 | 158 |
| AVERAGE | #DIV/0! | 7.2 | 120.0 | 0 | 0.6 | 0.4 | 0.5 | 148 | 6 | 0 | 0 | 0 | -31 | 31 |
| 75% tile | #NUM! | | | 0.0 | | | | | | 0 | | | | |
| 8/11/93 | | 6.9 | 122 | 0 | 0.95 | 0.5 | 0.5 | 237 | 18 | 0 | 0 | 0 | -122 | 122 |
| 8/29/95 | | 7.7 | 132 | 0 | 0.58 | 0.31 | 0.5 | 159 | 28 | 0 | 0 | 0 | -132 | 132 |
| 8/22/95 | | 6.9 | 158 | 0 | 0.55 | 0.37 | 0.5 | 159 | 4 | 0 | 0 | 0 | -158 | 158 |
| 9/12/95 | | 7.7 | 152 | 0 | 0.57 | 0.41 | 0.5 | 181 | 3 | 0 | 0 | 0 | -152 | 152 |
| 10/11/95 | | 7.5 | 142 | 0 | 0.4 | 0.43 | 0.5 | 171 | 3 | 0 | 0 | 0 | -142 | 142 |
| 11/7/95 | | 7 | 94 | 0 | 1.27 | 0.81 | 0.5 | 119 | 3 | 0 | 0 | 0 | -94 | 94 |
| 12/6/95 | | 7.7 | 132 | 0 | 0.43 | 0.33 | 0.5 | 123 | 3 | 0 | 0 | 0 | -132 | 132 |
| 2/22/96 | | 6.7 | 60 | 0 | 0.41 | 0.35 | 0.5 | 105 | 3 | 0 | 0 | 0 | -60 | 60 |
| 3/14/96 | | 7.2 | 108 | 0 | 0.39 | 0.29 | 0.5 | 131 | 3 | 0 | 0 | 0 | -108 | 108 |
| 4/17/96 | | 6.7 | 96 | 0 | 0.47 | 0.3 | 0.5 | 144 | 3 | 0 | 0 | 0 | -96 | 96 |
| 5/8/96 | | 7.2 | 108 | 0 | 0.44 | 0.29 | 0.5 | 132 | 3 | 0 | 0 | 0 | -108 | 108 |
| 6/6/96 | | 7.6 | 136 | 0 | 0.6 | 0.29 | 0.5 | 137 | 3 | 0 | 0 | 0 | -136 | 136 |

5 DISCHARGE INTO THOMAS TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|------|------|-------|------|-------|---|---|---|-----|------|
| Min. | 0 | 3.1 | 0.0 | 64.0 | 0.4 | 14.6 | 12.4 | 369 | 3.00 | 0 | 0 | 0 | 44 | -792 |
| Max. | 0 | 5.7 | 19.6 | 792.0 | 12.1 | 84.5 | 103.0 | 1846 | 50.00 | 0 | 0 | 0 | 792 | -44 |
| Range | 0 | 2.6 | 19.6 | 728.0 | 11.7 | 69.9 | 90.6 | 1277 | 47.00 | 0 | 0 | 0 | 748 | 748 |
| AVERAGE | | 3.6 | 1.0 | 336.6 | 3.5 | 37.5 | 36.0 | 835 | 12 | | | | 336 | -336 |
| 75% tile | | | | 394.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 6/2/94 | | 3.6 | 0.0 | 278.0 | 1.9 | 42.4 | 36.4 | 681 | 3 | | | | 278 | -278 |
| 9/8/94 | | 5.7 | 19.6 | 64.0 | 0.8 | 15.0 | 12.4 | 507 | 50 | | | | 44 | -44 |
| 5/16/95 | | 4.6 | 9.6 | 106.0 | 0.4 | 14.6 | 12.5 | 456 | 22 | | | | 96 | -96 |
| 7/20/95 | | 3.5 | 0.0 | 384.0 | 2.6 | 48.6 | 39.7 | 947 | 3 | | | | 384 | -384 |
| 8/22/95 | | 3.3 | 0.0 | 788.0 | 3.7 | 56.4 | 103.0 | 1592 | 18 | | | | 788 | -788 |
| 9/12/95 | | 3.4 | 0.0 | 458.0 | 4.7 | 52.0 | 47.9 | 987 | 3 | | | | 458 | -458 |
| 9/27/95 | | 3.5 | 0.0 | 678.0 | 4.0 | 74.5 | 77.9 | 1102 | 24 | | | | 678 | -678 |
| 10/11/95 | | 3.5 | 0.0 | 620.0 | 6.1 | 84.5 | 75.3 | 1601 | 20 | | | | 620 | -620 |
| 12/5/95 | | 3.7 | 0.0 | 292.0 | 1.6 | 37.7 | 34.1 | 761 | 3 | | | | 292 | -292 |
| 1/30/96 | | 3.8 | 0.0 | 182.0 | 1.3 | 22.9 | 21.9 | 493 | 22 | | | | 182 | -182 |
| 2/22/96 | | 3.8 | 0.0 | 114.0 | 0.9 | 18.5 | 15.9 | 383 | 3 | | | | 114 | -114 |
| 3/14/96 | | 3.7 | 0.0 | 214.0 | 1.2 | 25.3 | 22.5 | 623 | 3 | | | | 214 | -214 |
| 4/17/96 | | 3.7 | 0.0 | 232.0 | 1.1 | 27.4 | 25.8 | 577 | 3 | | | | 232 | -232 |
| 5/9/96 | | 3.8 | 0.0 | 224.0 | 1.1 | 27.1 | 23.3 | 539 | 3 | | | | 224 | -224 |
| 6/5/96 | | 3.3 | 0.0 | 470.0 | 5.6 | 45.5 | 49.5 | 1175 | 3 | | | | 470 | -470 |
| 7/10/96 | | 3.2 | 0.0 | 672.0 | 9.5 | 57.2 | 78.3 | 1547 | <3 | | | | 672 | -672 |
| 8/15/96 | | 3.1 | 0.0 | 792.0 | 12.1 | 64.0 | 85.4 | 1646 | <3 | | | | 792 | -792 |
| 9/11/96 | | 3.3 | 0.0 | 332.0 | 5.8 | 31.8 | 35.0 | 805 | <3 | | | | 332 | -332 |
| 10/8/96 | | 3.4 | 0.0 | 358.0 | 5.7 | 40.4 | 34.9 | 984 | 12 | | | | 358 | -358 |
| 11/19/96 | | 3.5 | 0.0 | 242.0 | 2.8 | 28.0 | 24.8 | 655 | 24 | | | | 242 | -242 |
| 12/12/96 | | 3.8 | 0.0 | 128.0 | 1.2 | 16.0 | 13.0 | 369 | 10 | | | | 128 | -128 |
| 1/8/97 | | 3.6 | 0.0 | 258.0 | 3.7 | 29.8 | 26.3 | 704 | 10 | | | | 258 | -258 |
| 2/11/97 | | 3.6 | 0.0 | 236.0 | 3.8 | 30.0 | 26.9 | 735 | 4 | | | | 236 | -236 |
| 3/11/97 | | 3.7 | 0.0 | 156.0 | 1.8 | 17.7 | 15.2 | 416 | <3 | | | | 156 | -156 |
| 4/15/97 | | 3.7 | 0.0 | 184.0 | 2.7 | 27.3 | 21.0 | 600 | <3 | | | | 184 | -184 |
| 5/13/97 | | 3.5 | 0.0 | 272.0 | 2.5 | 32.6 | 28.3 | 830 | 4 | | | | 272 | -272 |
| 7/10/97 | | 3.4 | 0.0 | 394.0 | 5.5 | 47.8 | 41.4 | 959 | 6 | | | | 394 | -394 |
| 10/9/97 | | 3.4 | 0.0 | 394.0 | 4.3 | 45.8 | 43.3 | 866 | <3 | | | | 394 | -394 |
| 2/3/98 | | 3.7 | 0.0 | 238.0 | 2.3 | 29.3 | 26.1 | 680 | <3 | | | | 238 | -238 |

STREAM STATIC NEATON / MURRIN

6 CONFLUENT OF THOMAS AND AND SEATON CREEK

| | | | | | | | | | | | | | | |
|----------|---|-----|-------|------|-----|------|------|-----|-------|---|---|---|------|-----|
| Min. | 0 | 4.5 | 7.6 | 0.0 | 0.3 | 1.5 | 0.5 | 261 | 300 | 0 | 0 | 0 | -108 | -98 |
| Max. | 0 | 7.5 | 108.0 | 96.0 | 3.0 | 17.9 | 13.0 | 977 | 48.00 | 0 | 0 | 0 | 88 | 108 |
| Range | 0 | 3.0 | 100.4 | 96.0 | 2.7 | 16.4 | 12.5 | 716 | 45.00 | 0 | 0 | 0 | 198 | 196 |
| AVERAGE | | 5.4 | 24.6 | 44.8 | 0.8 | 12.8 | 7.0 | 560 | 17 | | | | 20 | -20 |
| 75% tile | | | | 66.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 3/29/94 | | 4.6 | 10.4 | 54.0 | 0.4 | 12.2 | 13.0 | 261 | 32 | | | | 44 | -44 |
| 7/20/95 | | 6.5 | 42.0 | 0.0 | 0.6 | 10.3 | 4.1 | 650 | 18 | | | | -42 | 42 |
| 8/22/95 | | 6.3 | 42.0 | 0.0 | 3.0 | 16.0 | 0.5 | 977 | 16 | | | | -42 | 42 |
| 8/22/95 | | 7.3 | 102.0 | 0.0 | 0.3 | 4.1 | 0.5 | 590 | 3 | | | | -102 | 102 |
| 9/12/95 | | 7.5 | 108.0 | 0.0 | 0.3 | 1.5 | 0.5 | 568 | 3 | | | | -108 | 108 |
| 11/7/95 | | 6.3 | 36.0 | 0.0 | 1.2 | 6.5 | 6.4 | 475 | 13 | | | | -36 | 36 |
| 12/6/95 | | 5.6 | 11.8 | 32.0 | 0.5 | 12.8 | 8.1 | 547 | 20 | | | | 20 | -20 |
| 1/30/96 | | 4.7 | 11.2 | 82.0 | 0.4 | 14.6 | 12.5 | 508 | 42 | | | | 71 | -71 |
| 2/22/96 | | 4.5 | 7.6 | 56.0 | 0.4 | 10.9 | 9.5 | 349 | 8 | | | | 48 | -48 |
| 3/14/96 | | 4.6 | 7.8 | 80.0 | 0.3 | 14.9 | 12.5 | 524 | 23 | | | | 72 | -72 |
| 4/17/96 | | 4.6 | 8.6 | 72.0 | 0.3 | 13.5 | 10.4 | 507 | 10 | | | | 63 | -63 |
| 5/8/96 | | 4.7 | 9.4 | 64.0 | 0.4 | 14.0 | 10.2 | 455 | 13 | | | | 55 | -55 |
| 6/5/96 | | 4.6 | 8.4 | 96.0 | 0.6 | 17.9 | 11.4 | 649 | 9 | | | | 88 | -88 |
| 7/10/96 | | 6.3 | 36.0 | 11.4 | 0.9 | 12.1 | 3.4 | 611 | 12 | | | | -25 | 25 |
| 8/14/96 | | 6.7 | 46.0 | 0.0 | 1.0 | 11.5 | 2.7 | 616 | <3 | | | | -46 | 46 |
| 9/11/96 | | 4.8 | 8.8 | 66.0 | 1.1 | 14.3 | 7.3 | 509 | <3 | | | | 57 | -57 |
| 10/8/96 | | 5.1 | 10.8 | 58.0 | 1.4 | 16.2 | 5.7 | 665 | 22 | | | | 47 | -47 |
| 11/19/96 | | 4.8 | 9.2 | 64.0 | 0.7 | 13.9 | 7.2 | 467 | 48 | | | | 55 | -55 |
| 12/12/96 | | 4.7 | 8.8 | 44.0 | 0.4 | 8.5 | 5.6 | 277 | <3 | | | | 35 | -35 |
| 1/8/97 | | 4.8 | 11.4 | 66.0 | 0.7 | 14.5 | 9.0 | 613 | <3 | | | | 55 | -55 |
| 2/11/97 | | 4.9 | 12.0 | 52.0 | 0.7 | 13.7 | 7.3 | 578 | <3 | | | | 40 | -40 |
| 3/11/97 | | 4.6 | 9.8 | 72.0 | 0.4 | 11.9 | 8.3 | 385 | <3 | | | | 62 | -62 |
| 4/15/97 | | 4.7 | 12.2 | 86.0 | 0.6 | 17.9 | 10.7 | 823 | 4 | | | | 74 | -74 |
| 5/13/97 | | 4.9 | 11.2 | 66.0 | 0.7 | 15.2 | 5.2 | 672 | <3 | | | | 55 | -55 |
| 7/10/97 | | 6.4 | 38.0 | 28.0 | 1.2 | 15.8 | <5 | 677 | <3 | | | | -10 | 10 |
| 10/9/97 | | 6.0 | 32.0 | 24.0 | 1.4 | 13.7 | 1.4 | 654 | <3 | | | | -8 | 8 |
| 2/3/98 | | 5.0 | 12.6 | 36.0 | 0.7 | 17.0 | 9.7 | 524 | 10 | | | | 23 | -23 |

7 UPSTREAM THOMAS TRIB.

| | | | | | | | | | | | | | | |
|----------|----|-----|-----|--------|-------|-------|-------|------|--------|-----|----|----|------|-------|
| Min. | 3 | 2.9 | 0.0 | 56.0 | 0.3 | 3.2 | 6.8 | 148 | 3.00 | 2 | 0 | 0 | 52 | -1738 |
| Max. | 50 | 4.1 | 4.2 | 1738.0 | 143.0 | 104.0 | 169.0 | 2583 | 116.00 | 347 | 28 | 36 | 1738 | -52 |
| Range | 47 | 1.2 | 4.2 | 1682.0 | 142.7 | 100.8 | 162.2 | 2435 | 113.00 | 345 | 28 | 35 | 1686 | 1686 |
| AVERAGE | 26 | 3.5 | 0.3 | 461.4 | 29.4 | 29.7 | 51.1 | 798 | 19 | 161 | 10 | 18 | 461 | -461 |
| 75% tile | 40 | | | 548.0 | | | | | | 249 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 10/13/94 | | 4.1 | 4.2 | 56.0 | 0.3 | 3.2 | 7.7 | 154 | 3 | | | | 52 | -52 |
| 7/20/95 | | 3.5 | 0.0 | 268.0 | 8.1 | 17.6 | 27.2 | 483 | 3 | | | | 268 | -268 |
| 8/16/95 | 3 | 3.9 | 0.0 | 64.0 | 0.3 | 3.3 | 7.5 | 148 | 4 | 2 | 0 | 0 | 64 | -64 |
| 9/12/95 | | 3.7 | 0.0 | 88.0 | 3.2 | 7.0 | 9.6 | 246 | 3 | | | | 88 | -88 |
| 10/11/95 | | 3.8 | 0.0 | 60.0 | 1.1 | 5.1 | 6.8 | 239 | 6 | | | | 60 | -60 |
| 11/8/95 | 15 | 3.7 | 0.0 | 426.0 | 3.2 | 32.6 | 62.6 | 822 | 3 | 77 | 1 | 11 | 426 | -426 |
| 12/5/95 | | 3.7 | 0.0 | 282.0 | 2.8 | 18.2 | 34.9 | 523 | 3 | | | | 282 | -282 |
| 1/30/96 | | 3.8 | 0.0 | 188.0 | 2.2 | 11.0 | 24.9 | 368 | 3 | | | | 188 | -188 |
| 2/22/96 | | 3.8 | 0.0 | 134.0 | 2.4 | 10.7 | 21.2 | 313 | 3 | | | | 134 | -134 |
| 3/14/96 | | 3.6 | 0.0 | 206.0 | 2.2 | 12.6 | 25.6 | 439 | 3 | | | | 206 | -206 |
| 4/18/96 | | 3.7 | 0.0 | 160.0 | 1.5 | 11.1 | 23.0 | 346 | 3 | | | | 160 | -160 |
| 5/9/96 | | 4.0 | 4.0 | 134.0 | 1.0 | 7.7 | 15.5 | 241 | 3 | | | | 130 | -130 |
| 6/6/96 | | 3.3 | 0.0 | 956.0 | 89.3 | 62.8 | 105.0 | 1755 | 3 | | | | 956 | -956 |
| 7/11/96 | | 3.0 | 0.0 | 1500.0 | 131.0 | 93.4 | 152.0 | 2583 | 85 | | | | 1500 | -1500 |
| 8/14/96 | | 2.9 | 0.0 | 1738.0 | 143.0 | 104.0 | 169.0 | 2153 | 116 | | | | 1738 | -1738 |
| 9/11/96 | | 3.0 | 0.0 | 744.0 | 72.6 | 46.1 | 76.2 | 1206 | 54 | | | | 744 | -744 |
| 10/8/96 | 50 | 3.2 | 0.0 | 578.0 | 46.6 | 36.2 | 59.4 | 985 | 28 | 347 | 28 | 36 | 578 | -578 |
| 11/19/96 | | 3.3 | 0.0 | 398.0 | 20.3 | 25.5 | 44.2 | 713 | 28 | | | | 398 | -398 |
| 12/11/96 | | 3.4 | 0.0 | 356.0 | 17.8 | 23.4 | 39.9 | 366 | <2 | | | | 356 | -356 |
| 1/8/97 | 36 | 3.4 | 0.0 | 500.0 | 28.2 | 32.3 | 59.9 | 937 | 10 | 216 | 12 | 26 | 500 | -500 |
| 2/11/97 | | 3.4 | 0.0 | 428.0 | 26.3 | 27.0 | 48.1 | 889 | <3 | | | | 428 | -428 |
| 3/11/97 | | 3.6 | 0.0 | 206.0 | 7.0 | 11.5 | 24.2 | 410 | <3 | | | | 206 | -206 |
| 4/15/97 | | 3.4 | 0.0 | 344.0 | 20.4 | 26.1 | 43.9 | 728 | 12 | | | | 344 | -344 |
| 5/13/97 | | 3.3 | 0.0 | 518.0 | 26.3 | 34.2 | 55.8 | 1136 | 14 | | | | 518 | -518 |
| 7/10/97 | | 3.1 | 0.0 | 942.0 | 54.2 | 63.6 | 105.0 | 1285 | <3 | | | | 942 | -942 |
| 10/9/97 | | 3.1 | 0.0 | 850.0 | 60.8 | 52.6 | 89.0 | 1432 | <3 | | | | 850 | -850 |
| 2/3/98 | | 3.5 | 0.0 | 334.0 | 20.7 | 21.8 | 40.9 | 655 | <3 | | | | 334 | -334 |

8 MURRIN RUN AT JAMISON RD.

| | | | | | | | | | | | | | | |
|----------|---------|-----|------|-------|-----|------|-----|------|--------|---|---|---|-----|------|
| Min. | 0 | 4.5 | 7.6 | 0.0 | 0.4 | 11.3 | 0.8 | 409 | 3.00 | 0 | 0 | 0 | -28 | -118 |
| Max. | 0 | 6.5 | 28.0 | 128.0 | 1.1 | 38.0 | 9.5 | 1210 | 328.00 | 0 | 0 | 0 | 118 | 28 |
| Range | 0 | 2.0 | 20.4 | 128.0 | 0.7 | 26.7 | 8.7 | 801 | 325.00 | 0 | 0 | 0 | 148 | 146 |
| AVERAGE | #DIV/0! | 5.2 | 13.7 | 61 | 0.6 | 22.1 | 5.6 | 802 | 34 | 0 | 0 | 0 | 12 | -12 |
| 75% tile | #NUM! | | | 88.0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/13/84 | | 6.2 | 17.6 | 9.4 | 0.74 | 20.5 | 2.21 | 940 | 328 | | | | -8 | 8 |
| 7/20/95 | | 4.7 | 10.4 | 128 | 0.49 | 38 | 7.68 | 1165 | 8 | | | | 118 | -118 |
| 8/22/95 | | 6.1 | 17.6 | 58 | 0.52 | 29.2 | 2.64 | 1028 | 6 | | | | 40 | -40 |
| 9/12/95 | | 6.5 | 28 | 0 | 0.35 | 24.9 | 1.25 | 1210 | 3 | | | | -28 | 28 |
| 10/11/95 | | 6.3 | 28 | 19.4 | 0.47 | 22.6 | 0.77 | 1169 | 22 | | | | -9 | 9 |
| 11/7/95 | | 4.8 | 8.6 | 30 | 1.08 | 18.6 | 5.34 | 679 | 8 | | | | 21 | -21 |
| 12/6/95 | | 4.7 | 9.8 | 60 | 0.43 | 15.5 | 6.44 | 604 | 8 | | | | 50 | -50 |
| 1/30/96 | | 4.6 | 10.6 | 94 | 0.63 | 21.2 | 9.5 | 546 | 14 | | | | 83 | -83 |
| 2/22/96 | | 4.6 | 8.2 | 36 | 0.65 | 11.3 | 5.02 | 409 | 3 | | | | 28 | -28 |
| 3/14/96 | | 4.6 | 8.8 | 122 | 0.58 | 20.2 | 9.3 | 813 | 4 | | | | 113 | -113 |
| 4/18/96 | | 4.5 | 7.6 | 86 | 0.73 | 23 | 8.87 | 675 | 3 | | | | 78 | -78 |
| 5/9/96 | | 4.6 | 8.8 | 84 | 0.5 | 19.7 | 7.67 | 589 | 3 | | | | 75 | -75 |

9 MURRIN RUN ABOVE CONFLUENT WITH THOMAS TRIB.

| | | | | | | | | | | | | | | |
|----------|---------|-----|------|------|-----|------|-----|------|-------|---|---|---|-----|-----|
| Min. | 0 | 4.7 | 7.6 | 0.0 | 0.3 | 3.8 | 0.5 | 275 | 3.00 | 0 | 0 | 0 | -94 | -59 |
| Max. | 0 | 7.2 | 94.0 | 68.0 | 3.7 | 25.1 | 3.8 | 1225 | 20.00 | 0 | 0 | 0 | 59 | 94 |
| Range | 0 | 2.5 | 86.4 | 68.0 | 3.4 | 21.3 | 3.3 | 950 | 17.00 | 0 | 0 | 0 | 153 | 153 |
| AVERAGE | #DIV/0! | 5.7 | 27.7 | 22 | 1.2 | 12.0 | 1.7 | 686 | 7 | 0 | 0 | 0 | -2 | 2 |
| 75% tile | #NUM! | | | 36.0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 7/20/95 | | 6.1 | 18.2 | 64 | 1.75 | 25.1 | 0.5 | 1052 | 3 | | | | 46 | -46 |
| 8/22/95 | | 7.2 | 94 | 0 | 0.3 | 3.77 | 0.5 | 587 | 12 | | | | -94 | 94 |
| 8/22/95 | | 6.4 | 44 | 14 | 2.76 | 17.2 | 0.5 | 972 | 3 | | | | -30 | 30 |
| 9/12/95 | | 6.6 | 52 | 0 | 3.65 | 13.3 | 0.5 | 1225 | 12 | | | | -52 | 52 |
| 10/11/95 | | 6.3 | 48 | 0 | 1.85 | 11.3 | 0.5 | 985 | 3 | | | | -48 | 48 |
| 11/7/95 | | 6.2 | 32 | 0.2 | 1.48 | 9.37 | 0.72 | 696 | 20 | | | | -32 | 32 |
| 12/6/95 | | 6.2 | 20 | 2.8 | 0.76 | 7.45 | 0.74 | 509 | 12 | | | | -17 | 17 |
| 1/30/96 | | 5 | 10 | 24 | 0.59 | 9.86 | 2.84 | 402 | 3 | | | | 14 | -14 |
| 2/22/96 | | 4.9 | 7.6 | 15.2 | 0.47 | 7.31 | 2.37 | 275 | 8 | | | | 8 | -8 |
| 3/14/96 | | 4.9 | 7.6 | 36 | 0.56 | 9.98 | 3.54 | 416 | 10 | | | | 28 | -28 |
| 4/17/96 | | 4.7 | 8.4 | 38 | 0.5 | 12.5 | 3.82 | 500 | 3 | | | | 30 | -30 |
| 5/8/96 | | 5.3 | 9.6 | 28 | 0.45 | 10.5 | 1.83 | 416 | 3 | | | | 18 | -18 |
| 6/5/96 | | 4.8 | 8.8 | 68 | 0.71 | 18.9 | 3.59 | 882 | 3 | | | | 59 | -59 |

11 CAMPBELL TRIB. BEFORE CONFLUENT WITH ACT 43 TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|------|------|-------|---|---|---|-----|------|
| Min. | 0 | 4.5 | 6.6 | 0.0 | 0.3 | 4.2 | 1.3 | 172 | 3.00 | 0 | 0 | 0 | -38 | -139 |
| Max. | 0 | 6.5 | 38.0 | 150.0 | 2.5 | 35.9 | 14.5 | 1994 | 50.00 | 0 | 0 | 0 | 139 | 38 |
| Range | 0 | 2.0 | 31.4 | 150.0 | 2.2 | 31.7 | 13.3 | 1822 | 47.00 | 0 | 0 | 0 | 177 | 177 |
| AVERAGE | | 4.9 | 12.2 | 67.0 | 0.6 | 18.6 | 6.3 | 750 | 12 | | | | 55 | -55 |
| 75% tile | | | | 92.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 9/8/94 | | 5.8 | 16.6 | 68.0 | 0.9 | 21.7 | 4.1 | 932 | 12 | | | | 51 | -51 |
| 5/16/95 | | 5.1 | 11.2 | 54.0 | 2.5 | 14.7 | 5.1 | 1255 | 50 | | | | 43 | -43 |
| 7/20/95 | | 4.8 | 10.4 | 92.0 | 0.4 | 30.3 | 5.9 | 918 | 3 | | | | 82 | -82 |
| 9/12/95 | | 6.5 | 38.0 | 0.0 | 0.6 | 21.9 | 1.3 | 956 | 3 | | | | -38 | 38 |
| 9/27/95 | | 4.5 | 9.6 | 98.0 | 0.3 | 23.7 | 6.0 | 1994 | 3 | | | | 88 | -88 |
| 10/11/95 | | 5.9 | 18.8 | 13.4 | 0.3 | 15.1 | 3.2 | 892 | 22 | | | | -5 | 5 |
| 11/7/95 | | 4.5 | 9.4 | 76.0 | 0.3 | 20.0 | 10.5 | 673 | 3 | | | | 67 | -67 |
| 12/6/95 | | 4.7 | 9.2 | 38.0 | 0.3 | 9.3 | 5.2 | 391 | 12 | | | | 29 | -29 |
| 1/30/96 | | 4.9 | 9.8 | 24.0 | 0.3 | 6.5 | 3.5 | 213 | 8 | | | | 14 | -14 |
| 2/22/96 | | 4.9 | 7.6 | 16.8 | 0.3 | 4.2 | 2.3 | 224 | 3 | | | | 9 | -9 |
| 3/14/96 | | 4.7 | 7.4 | 54.0 | 0.3 | 6.0 | 3.5 | 198 | 3 | | | | 47 | -47 |
| 4/18/96 | | 4.6 | 6.6 | 20.0 | 0.3 | 7.9 | 3.8 | 307 | 3 | | | | 13 | -13 |
| 5/9/96 | | 4.7 | 7.6 | 22.0 | 0.3 | 5.6 | 2.9 | 172 | 3 | | | | 14 | -14 |
| 6/5/96 | | 4.9 | 9.2 | 54.0 | 0.3 | 15.4 | 4.2 | 714 | 3 | | | | 45 | -45 |
| 7/11/96 | | 4.9 | 13.0 | 112.0 | 0.7 | 33.0 | 9.0 | 1056 | 5 | | | | 99 | -99 |
| 8/15/96 | | 5.6 | 20.0 | 74.0 | 1.0 | 25.6 | 5.9 | 1253 | 11 | | | | 54 | -54 |
| 9/11/96 | | 4.6 | 9.8 | 106.0 | 0.8 | 23.7 | 9.9 | 880 | 18 | | | | 96 | -96 |
| 10/9/96 | | 4.9 | 11.6 | 82.0 | 0.6 | 20.8 | 7.0 | 847 | 24 | | | | 70 | -70 |
| 11/20/96 | | 4.7 | 10.8 | 90.0 | 0.5 | 20.4 | 10.2 | 641 | <3 | | | | 79 | -79 |
| 12/12/96 | | 4.7 | 11.2 | 64.0 | 0.4 | 12.7 | 6.7 | 291 | 16 | | | | 53 | -53 |
| 1/8/97 | | 4.8 | 11.6 | 46.0 | <.30 | 9.1 | 5.9 | 348 | 40 | | | | 34 | -34 |
| 7/10/97 | | 4.9 | 10.6 | 96.0 | 0.7 | 31.3 | 7.7 | 935 | 14 | | | | 85 | -85 |
| 10/3/97 | | 4.7 | 10.0 | 88.0 | 0.6 | 19.1 | 7.0 | 733 | 8 | | | | 78 | -78 |
| 10/9/97 | | 4.6 | 11.4 | 150.0 | 0.6 | 35.9 | 13.1 | 1160 | <3 | | | | 139 | -139 |
| 2/3/98 | | 4.7 | 12.4 | 136.0 | 0.5 | 30.9 | 14.5 | 774 | <3 | | | | 124 | -124 |

12 ACT 43 TRIB. AT MOUTH

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|------|------|-------|---|---|---|-----|------|
| Min. | 0 | 3.7 | 0.0 | 112.0 | 0.3 | 27.9 | 5.5 | 594 | 3.00 | 0 | 0 | 0 | 102 | -366 |
| Max. | 0 | 4.8 | 12.4 | 366.0 | 2.7 | 77.8 | 30.9 | 1732 | 18.00 | 0 | 0 | 0 | 366 | -102 |
| Range | 0 | 1.1 | 12.4 | 254.0 | 2.4 | 49.9 | 25.4 | 1138 | 15.00 | 0 | 0 | 0 | 264 | 264 |
| AVERAGE | | 4.2 | 6.9 | 234.1 | 1.1 | 51.5 | 19.3 | 1150 | 8 | | | | 227 | -227 |
| 75% tile | | | | 282.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 9/8/94 | | 4.8 | 11.0 | 114.0 | 2.7 | 36.6 | 7.1 | 1153 | 18 | | | | 103 | -103 |
| 5/16/95 | | 4.0 | 2.8 | 198.0 | 1.6 | 42.5 | 14.9 | 862 | 8 | | | | 195 | -195 |
| 7/20/95 | | 3.9 | 0.0 | 310.0 | 1.8 | 75.5 | 22.0 | 1449 | 6 | | | | 310 | -310 |
| 8/22/95 | | 3.9 | 0.0 | 256.0 | 0.8 | 77.8 | 12.0 | 1416 | 3 | | | | 256 | -256 |
| 9/12/95 | | 4.1 | 5.2 | 222.0 | 0.7 | 70.8 | 7.7 | 1691 | 3 | | | | 217 | -217 |
| 10/11/95 | | 4.5 | 9.0 | 126.0 | 0.3 | 50.1 | 5.5 | 1219 | 10 | | | | 117 | -117 |
| 11/7/95 | | 4.5 | 9.6 | 112.0 | 0.9 | 31.2 | 14.7 | 881 | 3 | | | | 102 | -102 |
| 12/6/95 | | 4.5 | 10.4 | 160.0 | 0.9 | 32.4 | 15.6 | 895 | 10 | | | | 150 | -150 |
| 1/30/96 | | 4.1 | 5.8 | 262.0 | 1.9 | 53.5 | 25.7 | 912 | 18 | | | | 256 | -256 |
| 2/22/96 | | 4.1 | 4.2 | 140.0 | 1.7 | 31.5 | 15.7 | 646 | 3 | | | | 136 | -136 |
| 3/14/96 | | 3.9 | 0.0 | 288.0 | 1.7 | 46.4 | 24.4 | 1046 | 3 | | | | 288 | -288 |
| 4/18/96 | | 3.7 | 0.0 | 240.0 | 2.3 | 51.2 | 22.1 | 1154 | 3 | | | | 240 | -240 |
| 5/9/96 | | 3.8 | 0.0 | 246.0 | 1.6 | 50.7 | 22.9 | 1082 | 3 | | | | 246 | -246 |
| 6/5/96 | | 3.7 | 0.0 | 366.0 | 2.1 | 68.8 | 29.6 | 1553 | 3 | | | | 366 | -366 |
| 7/11/96 | | 4.4 | 12.0 | 316.0 | 0.5 | 69.6 | 24.3 | 1732 | <3 | | | | 304 | -304 |
| 8/15/96 | | 4.4 | 10.8 | 252.0 | 0.7 | 60.6 | 17.8 | 1392 | <3 | | | | 241 | -241 |
| 9/11/96 | | 4.5 | 9.6 | 204.0 | 0.7 | 44.7 | 16.5 | 1083 | <3 | | | | 194 | -194 |
| 10/9/96 | | 4.5 | 12.4 | 234.0 | 0.7 | 49.2 | 18.9 | 1246 | 10 | | | | 222 | -222 |
| 11/20/96 | | 4.5 | 11.0 | 226.0 | 0.7 | 44.2 | 24.8 | 963 | <3 | | | | 215 | -215 |
| 12/12/96 | | 4.5 | 11.4 | 150.0 | 0.7 | 27.9 | 14.3 | 594 | 10 | | | | 139 | -139 |
| 1/8/97 | | 4.3 | 10.8 | 300.0 | 1.0 | 54.2 | 27.8 | 1167 | 18 | | | | 289 | -289 |
| 2/11/97 | | 4.3 | 8.2 | 242.0 | 0.9 | 48.3 | 24.1 | 1107 | <3 | | | | 234 | -234 |
| 3/11/97 | | 4.2 | 5.8 | 230.0 | 1.0 | 37.7 | 20.1 | 847 | 4 | | | | 224 | -224 |
| 4/15/97 | | 4.1 | 5.8 | 240.0 | 1.1 | 51.9 | 22.4 | 1175 | <3 | | | | 234 | -234 |
| 5/13/97 | | 4.2 | 8.4 | 334.0 | 0.8 | 57.0 | 23.1 | 1307 | 8 | | | | 326 | -326 |
| 7/10/97 | | 4.4 | 10.4 | 280.0 | 0.8 | 72.4 | 21.0 | 1197 | <3 | | | | 270 | -270 |
| 10/9/97 | | 4.4 | 10.8 | 202.0 | 0.6 | 48.4 | 14.8 | 1182 | 12 | | | | 191 | -191 |
| 2/3/98 | | 4.2 | 6.6 | 306.0 | 1.0 | 58.0 | 30.9 | 1249 | <3 | | | | 299 | -299 |

13 MURRIN RUN AT STATE ROUTE 58

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| Min. | 0 | 5.3 | 8.4 | 0.0 | 0.3 | 0.7 | 0.5 | 94 | 3.00 | 0 | 0 | 0 | -110 | -23 |
| Max. | 0 | 7.4 | 110.0 | 40.0 | 4.1 | 16.3 | 6.1 | 689 | 26.00 | 0 | 0 | 0 | 23 | 110 |
| Range | 0 | 2.1 | 101.6 | 40.0 | 3.8 | 15.7 | 5.6 | 595 | 23.00 | 0 | 0 | 0 | 133 | 133 |
| AVERAGE | #DIV/0! | 6.6 | 57.0 | 6 | 0.8 | 6.0 | 1.6 | 376 | 8 | 0 | 0 | 0 | -19 | 19 |
| 75% tile | #NUM! | | | 5.6 | | | | | | 0 | | | | |
| | | | | | | | | | | | | | | |
| 8/24/93 | | 7.2 | 110 | 0 | 0.44 | 0.65 | 0.5 | 492 | 4 | | | | -110 | 110 |
| 11/2/94 | | 7.1 | 52 | 0 | 0.54 | 0.87 | 0.5 | 94 | 12 | | | | -52 | 52 |
| 3/22/95 | | 6.5 | 28 | 0 | 0.51 | 7.42 | 1.88 | 386 | 6 | | | | -28 | 28 |
| 4/18/95 | | 6.5 | 28 | 0 | 1.14 | 6.24 | 2.44 | 362 | 10 | | | | -28 | 28 |
| 6/7/95 | | 7.4 | 94 | 0 | 0.3 | 1.13 | 0.5 | 175 | 4 | | | | -94 | 94 |
| 6/29/95 | | 7.1 | 110 | 0 | 0.54 | 2.88 | 0.5 | 180 | 4 | | | | -110 | 110 |
| 8/22/95 | | 6.7 | 72 | 0 | 0.86 | 10.7 | 0.5 | 658 | 3 | | | | -72 | 72 |
| 9/12/95 | | 6.7 | 86 | 0 | 0.93 | 6.32 | 0.5 | 666 | 3 | | | | -86 | 86 |
| 10/11/95 | | 6.5 | 62 | 0 | 1 | 7.22 | 0.5 | 689 | 12 | | | | -62 | 62 |
| 11/7/95 | | 6.5 | 92 | 0 | 1.31 | 5.78 | 0.5 | 357 | 9 | | | | -92 | 92 |
| 12/6/95 | | 7.3 | 86 | 0 | 0.45 | 3.28 | 0.5 | 234 | 4 | | | | -86 | 86 |
| 1/30/96 | | 6.3 | 24 | 5.6 | 0.54 | 8.3 | 3.97 | 369 | 22 | | | | -18 | 18 |
| 2/22/96 | | 5.3 | 8.4 | 20 | 0.3 | 6.45 | 2.97 | 232 | 26 | | | | 12 | -12 |
| 3/14/96 | | 6.2 | 26 | 6.2 | 0.35 | 5.8 | 2.38 | 324 | 9 | | | | -20 | 20 |
| 4/17/96 | | 5.8 | 16.2 | 22 | 0.34 | 8.65 | 2.96 | 373 | 3 | | | | 6 | -6 |
| 5/8/96 | | 6.6 | 58 | 0 | 0.3 | 4.84 | 0.81 | 198 | 3 | | | | -58 | 58 |
| 6/5/96 | | 5.9 | 17.2 | 40 | 4.13 | 16.3 | 6.13 | 603 | 3 | | | | 23 | -23 |

16 FIRST UPSTREAM TRIB. EAST ABOVE GOFF RD. BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|-------|---|---|---|-----|-----|
| Min. | 0 | 4.2 | 5.0 | 0.0 | 0.3 | 0.1 | 0.5 | 60 | 8.00 | 0 | 0 | 0 | -26 | -21 |
| Max. | 0 | 6.6 | 26.0 | 26.0 | 0.4 | 1.2 | 1.6 | 127 | 10.00 | 0 | 0 | 0 | 21 | 26 |
| Range | 0 | 2.4 | 21.0 | 26.0 | 0.1 | 1.1 | 1.1 | 67 | 2.00 | 0 | 0 | 0 | 47 | 47 |
| AVERAGE | | 5.4 | 15.5 | 13 | 0.3 | 0.6 | 1.0 | 94 | 9 | 0 | 0 | 0 | -3 | 3 |
| 75% tile | | | | 19.5 | | | | | | 0 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|---------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 9/8/94 | | 6.6 | 26 | 0 | 0.37 | 0.07 | 0.5 | 60 | 10 | 0 | 0 | 0 | -26 | 26 |
| 4/18/95 | | 4.2 | 5 | 26 | 0.3 | 1.21 | 1.58 | 127 | 8 | 0 | 0 | 0 | 21 | -21 |

17 UPSTREAM POINT FIRST TRIB. EAST ABOVE GOFF RD. BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 5.5 | 11.4 | 0.0 | 0.3 | 0.1 | 0.5 | 33 | 2.00 | 0 | 0 | 0 | -50 | -2 |
| Max. | 0 | 6.9 | 50.0 | 13.4 | 0.9 | 0.4 | 0.8 | 118 | 50.00 | 0 | 0 | 0 | 2 | 50 |
| Range | 0 | 1.4 | 38.6 | 13.4 | 0.6 | 0.4 | 0.3 | 85 | 48.00 | 0 | 0 | 0 | 52 | 52 |
| AVERAGE | | 6.4 | 32.4 | 3 | 0.7 | 0.2 | 0.6 | 78 | 17 | 0 | 0 | 0 | -29 | 29 |
| 75% tile | | | | 3.4 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 5/3/94 | | 6.8 | 42 | 0 | 0.7 | 0.33 | 0.5 | 118 | 2 | 0 | 0 | 0 | -42 | 42 |
| 11/2/94 | | 5.5 | 11.4 | 13.4 | 0.9 | 0.07 | 0.84 | 33 | 50 | 0 | 0 | 0 | 2 | -2 |
| 4/18/95 | | 6.9 | 50 | 0 | 0.85 | 0.44 | 0.5 | 70 | 14 | 0 | 0 | 0 | -50 | 50 |
| 1/30/96 | | 6.5 | 26 | 0 | 0.3 | 0.07 | 0.5 | 90 | 3 | 0 | 0 | 0 | -26 | 26 |

STREAM STATION SEATON / MURRIN

18 MURRIN RUN AT GOFF STATION

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|------|-------|---|---|---|-----|-----|
| Min. | 0 | 5.5 | 9.4 | 0.0 | 0.3 | 3.2 | 0.5 | 207 | 3.00 | 0 | 0 | 0 | -64 | -18 |
| Max. | 0 | 6.9 | 64.0 | 36.0 | 1.8 | 9.1 | 3.8 | 2989 | 36.00 | 0 | 0 | 0 | 18 | 64 |
| Range | 0 | 1.4 | 54.6 | 36.0 | 1.5 | 5.9 | 3.3 | 2782 | 33.00 | 0 | 0 | 0 | 82 | 82 |
| AVERAGE | | 6.4 | 34.7 | 4.8 | 0.9 | 5.9 | 1.5 | 459 | 10 | | | | -30 | 30 |
| 75% tile | | | | 9.1 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 5/3/94 | | 6.3 | 22.0 | 13.0 | 1.3 | 8.8 | 3.8 | 252 | 20 | | | | -9 | 9 |
| 11/2/94 | | 6.6 | 26.0 | 0.0 | 1.0 | 4.2 | 0.6 | 247 | 8 | | | | -26 | 26 |
| 3/22/95 | | 6.5 | 28.0 | 0.0 | 1.0 | 5.4 | 1.6 | 358 | 6 | | | | -28 | 28 |
| 4/18/95 | | 6.5 | 26.0 | 0.0 | 1.1 | 6.1 | 2.5 | 2989 | 14 | | | | -26 | 26 |
| 6/7/95 | | 6.6 | 32.0 | 0.0 | 0.3 | 4.4 | 0.5 | 323 | 6 | | | | -32 | 32 |
| 6/29/95 | | 6.5 | 36.0 | 0.0 | 0.5 | 6.7 | 0.5 | 447 | 26 | | | | -36 | 36 |
| 8/22/95 | | 6.4 | 62.0 | 0.0 | 0.7 | 4.7 | 0.5 | 505 | 6 | | | | -62 | 62 |
| 9/12/95 | | 6.6 | 64.0 | 0.0 | 0.8 | 3.4 | 0.5 | 560 | 3 | | | | -64 | 64 |
| 10/11/95 | | 6.6 | 60.0 | 0.0 | 0.9 | 3.2 | 0.5 | 485 | 4 | | | | -60 | 60 |
| 11/7/95 | | 6.4 | 46.0 | 0.0 | 1.5 | 3.7 | 0.7 | 394 | 3 | | | | -46 | 46 |
| 12/5/95 | | 6.9 | 44.0 | 0.0 | 0.9 | 4.3 | 0.5 | 362 | 3 | | | | -44 | 44 |
| 1/30/96 | | 6.3 | 20.0 | 4.6 | 1.4 | 5.4 | 3.1 | 309 | 20 | | | | -15 | 15 |
| 2/21/96 | | 5.5 | 9.4 | 9.2 | 0.9 | 5.5 | 2.8 | 207 | 20 | | | | 0 | 0 |
| 3/13/96 | | 6.2 | 17.6 | 36.0 | 0.9 | 6.5 | 2.9 | 328 | 20 | | | | 18 | -18 |
| 4/17/96 | | 6.1 | 14.8 | 8.8 | 0.8 | 7.1 | 2.3 | 326 | 8 | | | | -6 | 6 |
| 5/7/96 | | 6.2 | 16.0 | 17.6 | 0.7 | 6.1 | 1.4 | 304 | 6 | | | | 2 | -2 |
| 6/5/96 | | 6.2 | 30.0 | 10.0 | 0.9 | 9.1 | 0.6 | 449 | 3 | | | | -20 | 20 |
| 7/10/96 | | 6.3 | 46.0 | 0.0 | 1.4 | 6.2 | 0.5 | 395 | 4 | | | | -46 | 46 |
| 8/14/96 | | 6.5 | 52.0 | 0.0 | 1.0 | 5.5 | <.50 | 487 | <3 | | | | -52 | 52 |
| 9/11/96 | | 6.5 | 34.0 | 0.0 | 0.8 | 5.3 | <.50 | 291 | <3 | | | | -34 | 34 |
| 10/8/96 | | 6.7 | 48.0 | 0.0 | 0.7 | 4.7 | 0.6 | 327 | 4 | | | | -48 | 48 |
| 11/19/96 | | 6.4 | 28.0 | 0.8 | 0.8 | 5.6 | 1.0 | 310 | 38 | | | | -27 | 27 |
| 12/11/96 | | 6.3 | 28.0 | 28.0 | 1.0 | 7.4 | 2.1 | 327 | <2 | | | | 0 | 0 |
| 1/15/97 | | 6.4 | 34.0 | 2.0 | 1.2 | 7.5 | 1.9 | 607 | <3 | | | | -32 | 32 |
| 2/11/97 | | 6.4 | 28.0 | 0.0 | 0.8 | 5.8 | 1.7 | 354 | <3 | | | | -28 | 28 |
| 3/11/97 | | 6.2 | 16.4 | 10.8 | 0.9 | 5.0 | 2.8 | 249 | 10 | | | | -6 | 6 |
| 4/15/97 | | 6.0 | 16.2 | 12.0 | 0.7 | 7.4 | 2.4 | 317 | 4 | | | | -4 | 4 |
| 4/24/97 | | 6.3 | 28.0 | 0.0 | 1.8 | 7.9 | 0.9 | 389 | <3 | | | | -28 | 28 |
| 5/13/97 | | 6.5 | 34.0 | 0.0 | 0.7 | 6.3 | 0.5 | 480 | <3 | | | | -34 | 34 |
| 7/10/97 | | 6.7 | 58.0 | 0.0 | 0.9 | 6.1 | <.50 | 451 | <3 | | | | -58 | 58 |
| 7/16/97 | | 6.5 | 62.0 | 0.0 | 0.7 | 4.7 | <.50 | 478 | <3 | | | | -62 | 62 |

STREAM STATION SEATON / MURRIN

19 SEATON CREEK BEFORE CONFLUENT WITH MURRIN RUN

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|------|------|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 3.4 | 0.0 | 20.0 | 0.6 | 6.6 | 0.5 | 193 | 3.00 | 0 | 0 | 0 | 15 | -114 |
| Max. | 0 | 5.1 | 11.2 | 114.0 | 10.0 | 28.1 | 3.1 | 814 | 38.00 | 0 | 0 | 0 | 114 | -15 |
| Range | 0 | 1.7 | 11.2 | 94.0 | 9.4 | 21.5 | 2.6 | 621 | 35.00 | 0 | 0 | 0 | 99 | 99 |
| AVERAGE | | 4.0 | 3.0 | 56.8 | 2.2 | 14.9 | 1.0 | 466 | 9 | | | | 54 | -54 |
| 75% tile | | | | 73.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 5/3/94 | | 5.0 | 11.2 | 68.0 | 10.0 | 19.0 | 3.1 | 512 | 3 | | | | 57 | -57 |
| 11/2/94 | | 4.1 | 4.4 | 34.0 | 1.0 | 7.9 | 0.7 | 232 | 14 | | | | 30 | -30 |
| 3/22/95 | | 5.0 | 10.4 | 38.0 | 6.6 | 14.1 | 1.4 | 428 | 3 | | | | 28 | -28 |
| 6/7/95 | | 5.1 | 8.6 | 56.0 | 6.3 | 11.0 | 0.5 | 358 | 8 | | | | 47 | -47 |
| 6/29/95 | | 3.8 | 0.0 | 38.0 | 2.1 | 14.1 | 0.7 | 395 | 14 | | | | 38 | -38 |
| 8/22/95 | | 3.4 | 0.0 | 96.0 | 2.7 | 25.9 | 0.6 | 767 | 6 | | | | 96 | -96 |
| 9/12/95 | | 3.5 | 0.0 | 100.0 | 2.8 | 28.1 | 0.8 | 814 | 6 | | | | 100 | -100 |
| 10/11/95 | | 3.6 | 0.0 | 62.0 | 1.5 | 22.9 | 0.7 | 715 | 3 | | | | 62 | -62 |
| 11/14/95 | | 4.2 | 4.8 | 28.0 | 0.8 | 9.2 | 0.8 | 285 | 24 | | | | 23 | -23 |
| 2/21/96 | | 4.4 | 5.4 | 20.0 | 1.8 | 6.6 | 1.0 | 193 | 3 | | | | 15 | -15 |
| 3/14/96 | | 4.2 | 7.0 | 74.0 | 2.7 | 12.1 | 1.4 | 416 | 3 | | | | 67 | -67 |
| 4/16/96 | | 4.0 | 2.0 | 30.0 | 0.9 | 12.8 | 1.7 | 393 | 3 | | | | 28 | -28 |
| 5/8/96 | | 3.9 | 0.0 | 70.0 | 0.7 | 10.2 | 1.0 | 391 | 3 | | | | 70 | -70 |
| 6/18/96 | | 3.5 | 0.0 | 114.0 | 2.2 | 19.1 | 1.0 | 687 | 3 | | | | 114 | -114 |
| 7/10/96 | | 3.6 | 0.0 | 74.0 | 1.5 | 19.1 | 0.9 | 610 | <3 | | | | 74 | -74 |
| 8/16/96 | | 3.7 | 0.0 | 76.0 | 1.0 | 17.1 | 0.8 | 541 | <3 | | | | 76 | -76 |
| 9/11/96 | | 3.7 | 0.0 | 48.0 | 0.8 | 14.4 | 0.5 | 424 | <3 | | | | 48 | -48 |
| 10/16/96 | | 3.9 | 0.0 | 60.0 | 0.9 | 17.0 | 0.8 | 534 | <3 | | | | 60 | -60 |
| 11/19/96 | | 4.1 | 3.2 | 40.0 | 0.9 | 11.1 | 0.9 | 327 | 38 | | | | 37 | -37 |
| 1/28/97 | | 4.3 | 6.8 | 40.0 | 1.5 | 8.8 | 1.1 | 310 | <3 | | | | 33 | -33 |
| 2/12/97 | | 4.2 | 6.0 | 38.0 | 1.6 | 9.9 | 1.0 | 346 | <3 | | | | 32 | -32 |
| 3/19/97 | | 4.2 | 5.2 | 32.0 | 1.4 | 9.5 | 1.2 | 343 | <3 | | | | 27 | -27 |
| 5/20/97 | | 3.8 | 0.0 | 56.0 | 0.6 | 12.8 | 1.1 | 454 | <3 | | | | 56 | -56 |
| 8/5/97 | | 3.4 | 0.0 | 104.0 | 3.3 | 23.4 | 0.8 | 672 | <3 | | | | 104 | -104 |
| 10/10/97 | | 3.7 | 0.0 | 56.0 | 1.0 | 18.0 | 0.7 | 558 | <3 | | | | 56 | -56 |
| 1/7/98 | | 4.0 | 1.8 | 24.0 | 1.1 | 12.0 | 1.1 | 413 | <3 | | | | 22 | -22 |

19.1 SEATON CREEK AT ERICO ROAD BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|-----|-------|------|------|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 3.5 | 0.0 | 22.0 | 0.8 | 7.4 | 0.6 | 207 | 3.00 | 0 | 0 | 0 | 14 | -118 |
| Max. | 0 | 5.1 | 9.6 | 122.0 | 11.9 | 29.7 | 2.2 | 756 | 48.00 | 0 | 0 | 0 | 118 | -14 |
| Range | 0 | 1.6 | 9.6 | 100.0 | 11.1 | 22.3 | 1.5 | 549 | 45.00 | 0 | 0 | 0 | 104 | 104 |
| AVERAGE | | 4.5 | 6.2 | 59.1 | 4.8 | 15.1 | 1.1 | 454 | 13 | | | | 53 | -53 |
| 75% tile | | | | 76.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 2/21/96 | | 5.0 | 7.6 | 22.0 | 3.1 | 7.4 | 1.0 | 207 | 3 | | | | 14 | -14 |
| 3/13/96 | | 5.0 | 7.8 | 68.0 | 7.1 | 12.8 | 1.4 | 356 | 3 | | | | 60 | -60 |
| 4/16/96 | | 4.8 | 8.4 | 38.0 | 3.9 | 13.3 | 2.2 | 419 | 3 | | | | 30 | -30 |
| 5/8/96 | | 5.0 | 7.8 | 74.0 | 5.2 | 10.5 | 1.0 | 406 | 3 | | | | 66 | -66 |
| 6/18/96 | | 4.1 | 4.2 | 122.0 | 11.1 | 22.7 | 1.1 | 720 | 12 | | | | 118 | -118 |
| 7/9/96 | | 4.2 | 5.6 | 82.0 | 11.9 | 23.9 | 0.8 | 641 | <3 | | | | 76 | -76 |
| 8/15/96 | | 3.7 | 0.0 | 84.0 | 4.2 | 25.2 | 0.8 | 692 | <3 | | | | 84 | -84 |
| 9/10/96 | | 4.2 | 4.6 | 44.0 | 0.8 | 12.5 | 0.7 | 384 | 12 | | | | 39 | -39 |
| 10/15/96 | | 4.4 | 6.4 | 56.0 | 4.3 | 17.0 | 0.6 | 561 | <3 | | | | 50 | -50 |
| 11/19/96 | | 5.1 | 8.0 | 40.0 | 4.2 | 11.4 | 0.9 | 339 | 20 | | | | 32 | -32 |
| 1/23/97 | | 4.8 | 7.8 | 56.0 | 4.4 | 11.2 | 1.4 | 352 | 48 | | | | 48 | -48 |
| 2/27/97 | | 4.8 | 8.6 | 34.0 | 2.8 | 9.0 | 1.3 | 270 | 12 | | | | 25 | -25 |
| 3/19/97 | | 5.0 | 9.6 | 42.0 | 6.0 | 10.5 | 1.5 | 368 | <3 | | | | 32 | -32 |
| 8/5/97 | | 3.5 | 0.0 | 116.0 | 4.0 | 29.7 | 1.3 | 756 | <3 | | | | 118 | -118 |
| 10/9/97 | | 4.2 | 4.6 | 46.0 | 1.5 | 13.7 | 0.8 | 453 | <3 | | | | 41 | -41 |
| 1/7/98 | | 4.7 | 8.2 | 22.0 | 2.1 | 10.7 | 1.0 | 364 | <3 | | | | 14 | -14 |

21 DOWNSTREAM POINT FIRST NORTH TRIB. UPSTREAM ERICO BRIDGE

| | | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|----|-------|---|---|---|---|-----|----|
| Min. | 0 | 6.3 | 16.8 | 0.0 | 0.3 | 0.1 | 0.5 | 28 | 3.00 | 0 | 0 | 0 | 0 | -32 | -5 |
| Max. | 0 | 6.7 | 32.0 | 22.0 | 0.9 | 0.1 | 0.6 | 51 | 82.00 | 0 | 0 | 0 | 0 | 5 | 32 |
| Range | 0 | 0.4 | 15.2 | 22.0 | 0.6 | 0.1 | 0.1 | 23 | 79.00 | 0 | 0 | 0 | 0 | 37 | 37 |
| AVERAGE | | 6.5 | 26.8 | 5 | 0.5 | 0.1 | 0.5 | 40 | 20 | 0 | 0 | 0 | 0 | -22 | 22 |
| 75% tile | | | | 6.8 | | | | | | 0 | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 9/8/94 | | 6.7 | 32 | 0 | 0.3 | 0.12 | 0.5 | 51 | 3 | 0 | 0 | 0 | -32 | 32 |
| 9/8/94 | | 6.7 | 32 | 0 | 0.3 | 0.12 | 0.5 | 51 | 3 | 0 | 0 | 0 | -32 | 32 |
| 6/29/95 | | 6.5 | 30 | 0 | 0.86 | 0.1 | 0.59 | 40 | 22 | 0 | 0 | 0 | -30 | 30 |
| 10/12/95 | | 6.5 | 30 | 0 | 0.75 | 0.12 | 0.5 | 28 | 82 | 0 | 0 | 0 | -30 | 30 |
| 3/13/96 | | 6.4 | 19.8 | 9 | 0.34 | 0.05 | 0.5 | 35 | 4 | 0 | 0 | 0 | -11 | 11 |
| 5/8/96 | | 6.3 | 16.8 | 22 | 0.54 | 0.08 | 0.5 | 35 | 3 | 0 | 0 | 0 | 5 | -5 |

STREAM STATION SEATON / MURRIN

22 UPSTREAM FIRST NORTH TRIB. UPSTREAM ERICO BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|------|---|---|---|-----|----|
| Min. | 0 | 6.2 | 14.8 | 0.0 | 0.3 | 0.1 | 0.5 | 20 | 3.00 | 0 | 0 | 0 | -44 | -3 |
| Max. | 0 | 6.6 | 44.0 | 20.0 | 0.6 | 0.3 | 0.5 | 116 | 8.00 | 0 | 0 | 0 | 3 | 44 |
| Range | 0 | 0.4 | 29.2 | 20.0 | 0.3 | 0.3 | 0.0 | 96 | 5.00 | 0 | 0 | 0 | 47 | 47 |
| AVERAGE | | 6.4 | 21.9 | 13 | 0.4 | 0.1 | 0.5 | 67 | 4 | 0 | 0 | 0 | -9 | 9 |
| 75% tile | | | | 17.6 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 9/8/94 | | 6.3 | 14.8 | 17.6 | 0.3 | 0.05 | 0.5 | 116 | 3 | 0 | 0 | 0 | 3 | -3 |
| 9/8/94 | | 6.3 | 14.8 | 17.6 | 0.3 | 0.05 | 0.5 | 116 | 3 | 0 | 0 | 0 | 3 | -3 |
| 10/12/95 | | 6.6 | 44 | 0 | 0.63 | 0.32 | 0.5 | 20 | 3 | 0 | 0 | 0 | -44 | 44 |
| 3/13/96 | | 6.4 | 17.8 | 10 | 0.3 | 0.05 | 0.5 | 43 | 8 | 0 | 0 | 0 | -8 | 8 |
| 5/8/96 | | 6.2 | 18 | 20 | 0.36 | 0.06 | 0.5 | 40 | 3 | 0 | 0 | 0 | 2 | -2 |

STREAM STATION SEATON / MURRIN

23 WEST TRIB. SEATON CREEK AT STATE ROUTE 58

| | | | | | | | | | | | | | | |
|----------|-----|-----|-----|-------|------|------|------|------|-------|-----|---|---|-----|------|
| Min. | 19 | 3.0 | 0.0 | 32.0 | 2.3 | 9.9 | 2.0 | 198 | 3.00 | 96 | 4 | 3 | 29 | -420 |
| Max. | 150 | 4.3 | 6.4 | 420.0 | 19.5 | 81.1 | 14.3 | 1812 | 14.00 | 126 | 9 | 6 | 420 | -29 |
| Range | 131 | 1.3 | 6.4 | 388.0 | 17.2 | 71.2 | 12.3 | 1614 | 11.00 | 30 | 4 | 3 | 391 | 391 |
| AVERAGE | 85 | 3.5 | 0.4 | 178.9 | 8.7 | 36.1 | 6.6 | 803 | 5 | 111 | 7 | 5 | 178 | -178 |
| 75% tile | 117 | | | 233.0 | | | | | | 119 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 5/16/95 | | 3.4 | 0.0 | 162.0 | 8.4 | 32.8 | 5.8 | 598 | 6 | | | | 162 | -162 |
| 6/29/95 | | 3.6 | 0.0 | 116.0 | 5.1 | 35.6 | 7.0 | 571 | 14 | | | | 116 | -116 |
| 7/27/95 | | 3.1 | 0.0 | 242.0 | 9.8 | 51.9 | 8.0 | 1089 | 3 | | | | 242 | -242 |
| 9/12/95 | 19 | 3.0 | 0.0 | 420.0 | 19.5 | 81.1 | 14.3 | 1812 | 6 | 96 | 4 | 3 | 420 | -420 |
| 11/20/95 | | 3.7 | 0.0 | 58.0 | 4.9 | 16.8 | 3.0 | 350 | 3 | | | | 58 | -58 |
| 2/22/96 | | 4.0 | 2.6 | 32.0 | 2.9 | 11.5 | 2.5 | 266 | 3 | | | | 29 | -29 |
| 3/27/96 | | 3.4 | 0.0 | 150.0 | 8.0 | 30.6 | 6.9 | 837 | 3 | | | | 150 | -150 |
| 4/18/96 | | 3.5 | 0.0 | 130.0 | 6.9 | 28.2 | 5.5 | 681 | 3 | | | | 130 | -130 |
| 5/30/96 | | 3.3 | 0.0 | 224.0 | 12.6 | 49.6 | 9.5 | 1154 | 3 | | | | 224 | -224 |
| 6/27/96 | | 3.4 | 0.0 | 140.0 | 6.7 | 31.3 | 5.7 | 636 | 5 | | | | 140 | -140 |
| 7/31/96 | | 3.1 | 0.0 | 262.0 | 9.8 | 50.8 | 8.6 | 1132 | <3 | | | | 262 | -262 |
| 8/29/96 | | 3.1 | 0.0 | 334.0 | 13.0 | 63.2 | 11.0 | 1418 | <3 | | | | 334 | -334 |
| 9/18/96 | | 3.6 | 0.0 | 86.0 | 3.7 | 16.3 | 2.8 | 399 | <3 | | | | 86 | -86 |
| 10/24/96 | | 3.7 | 0.0 | 80.0 | 3.6 | 19.4 | 3.7 | 535 | 4 | | | | 80 | -80 |
| 11/26/96 | | 4.3 | 6.4 | 46.0 | 2.3 | 9.9 | 2.0 | 198 | 8 | | | | 40 | -40 |
| 3/21/97 | | 3.6 | 0.0 | 144.0 | 7.4 | 28.3 | 6.2 | 696 | <3 | | | | 144 | -144 |
| 6/10/97 | | 3.2 | 0.0 | 216.0 | 9.8 | 39.6 | 7.4 | 898 | <3 | | | | 216 | -216 |
| 7/10/97 | | 3.1 | 0.0 | 342.0 | 17.4 | 61.2 | 11.0 | 1203 | <3 | | | | 342 | -342 |
| 8/12/97 | | 3.0 | 0.0 | 410.0 | 18.2 | 69.8 | 12.4 | 1577 | 6 | | | | 410 | -410 |
| 10/9/97 | | 3.3 | 0.0 | 220.0 | 10.5 | 40.9 | 7.1 | 900 | <3 | | | | 220 | -220 |
| 11/18/97 | | 3.7 | 0.0 | 118.0 | 8.7 | 23.0 | 4.5 | 597 | <3 | | | | 118 | -118 |
| 12/23/97 | 150 | 3.8 | 0.0 | 70.0 | 4.8 | 15.7 | 3.3 | 373 | <3 | 126 | 9 | 6 | 70 | -70 |
| 1/7/98 | | 3.6 | 0.0 | 112.0 | 5.9 | 23.0 | 4.7 | 550 | 4 | | | | 112 | -112 |

24 UPSTREAM FIRST NORTH TRIB. BELOW MCJUNCTION RD. STREAM CROSSING

| | | | | | | | | | | | | | | |
|----------|----|-----|------|------|-----|------|-----|------|--------|---|---|---|-----|-----|
| Min. | 12 | 5.0 | 9.0 | 0.0 | 0.3 | 0.2 | 0.5 | 90 | 3.00 | 0 | 0 | 0 | -34 | -39 |
| Max. | 20 | 6.6 | 34.0 | 50.0 | 4.7 | 23.1 | 4.5 | 1221 | 166.00 | 0 | 0 | 0 | 39 | 34 |
| Range | 8 | 1.6 | 25.0 | 50.0 | 4.4 | 22.9 | 4.0 | 1131 | 163.00 | 0 | 0 | 0 | 73 | 73 |
| AVERAGE | 16 | 6.2 | 16.7 | 8 | 0.9 | 3.6 | 0.9 | 403 | 29 | 0 | 0 | 0 | -8 | 8 |
| 75% tile | 18 | | | 6.0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 12/6/88 | | 5.9 | 9 | 6 | 0.3 | 0.34 | 0.5 | 473 | | 0 | 0 | 0 | -3 | 3 |
| 6/29/95 | | 6.2 | 15.2 | 4.4 | 0.67 | 5.46 | 0.5 | 306 | 32 | 0 | 0 | 0 | -11 | 11 |
| 8/22/95 | | 5 | 10.6 | 50 | 0.3 | 23.1 | 0.5 | 870 | 10 | 0 | 0 | 0 | 39 | -39 |
| 11/15/95 | 12 | 6.2 | 18.8 | 0 | 0.3 | 0.64 | 0.5 | 144 | 8 | 0 | 0 | 0 | -19 | 19 |
| 2/22/96 | 20 | 6.2 | 13.8 | 0 | 0.3 | 0.37 | 0.5 | 90 | 3 | 0 | 0 | 0 | -14 | 14 |
| 3/13/96 | | 6.2 | 15.2 | 15.6 | 0.3 | 0.26 | 0.5 | 120 | 3 | 0 | 0 | 0 | 0 | 0 |
| 4/30/96 | | 6.6 | 14.6 | 0 | 0.94 | 1.15 | 0.53 | 1221 | 4 | 0 | 0 | 0 | -15 | 15 |
| 5/9/96 | | 6.6 | 19.4 | 0 | 0.3 | 0.23 | 0.5 | 141 | 3 | 0 | 0 | 0 | -19 | 19 |
| 6/18/96 | | 6.5 | 34 | 0 | 4.74 | 0.82 | 4.47 | 264 | 166 | 0 | 0 | 0 | -34 | 34 |

3

25 EAST TRIB. SEATON CREEK AT STATE ROUTE 58

| | | | | | | | | | | | | | | |
|----------|-----|-----|------|-------|------|------|------|------|-------|-----|----|----|-----|------|
| Min. | 8 | 3.1 | 0.0 | 30.0 | 1.5 | 6.2 | 2.8 | 148 | 3.00 | 31 | 0 | 0 | 19 | -328 |
| Max. | 150 | 5.2 | 11.0 | 328.0 | 13.8 | 52.2 | 23.2 | 1236 | 18.00 | 256 | 12 | 18 | 328 | -19 |
| Range | 142 | 2.1 | 11.0 | 298.0 | 12.3 | 46.0 | 20.4 | 1088 | 15.00 | 225 | 12 | 18 | 309 | 309 |
| AVERAGE | 61 | 3.4 | 0.5 | 221.4 | 7.5 | 34.9 | 14.4 | 812 | 5 | 106 | 4 | 7 | 221 | -221 |
| 75% tile | 88 | | | 281.5 | | | | | | 144 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 1/26/81 | 25 | 3.6 | 0.0 | 108.0 | 1.5 | 24.4 | | 580 | 4 | 32 | 0 | 0 | 108 | -108 |
| 5/16/95 | | 3.3 | 0.0 | 220.0 | 6.5 | 36.0 | 13.7 | 666 | 4 | | | | 220 | -220 |
| 6/29/95 | | 3.3 | 0.0 | 202.0 | 6.5 | 36.9 | 15.1 | 915 | 10 | | | | 202 | -202 |
| 7/27/95 | | 3.2 | 0.0 | 238.0 | 6.4 | 39.4 | 14.9 | 894 | 3 | | | | 238 | -238 |
| 9/12/95 | 8 | 3.2 | 0.0 | 320.0 | 7.3 | 52.2 | 23.2 | 879 | 3 | 31 | 1 | 2 | 320 | -320 |
| 11/20/95 | | 3.4 | 0.0 | 166.0 | 8.1 | 31.6 | 13.6 | 648 | 3 | | | | 166 | -166 |
| 2/22/96 | | 3.5 | 0.0 | 108.0 | 4.3 | 20.2 | 9.1 | 485 | 3 | | | | 108 | -108 |
| 3/27/96 | | 3.2 | 0.0 | 220.0 | 7.2 | 33.3 | 15.1 | 921 | 3 | | | | 220 | -220 |
| 4/18/96 | | 3.4 | 0.0 | 184.0 | 5.3 | 29.0 | 13.0 | 749 | 3 | | | | 184 | -184 |
| 5/30/96 | | 3.3 | 0.0 | 224.0 | 7.0 | 35.1 | 15.3 | 966 | 3 | | | | 224 | -224 |
| 6/27/96 | | 3.2 | 0.0 | 236.0 | 8.4 | 40.0 | 16.0 | 891 | 3 | | | | 236 | -236 |
| 7/31/96 | | 3.2 | 0.0 | 264.0 | 6.3 | 39.5 | 15.4 | 792 | <3 | | | | 264 | -264 |
| 8/29/96 | | 3.2 | 0.0 | 304.0 | 7.8 | 45.9 | 19.2 | 1188 | <3 | | | | 304 | -304 |
| 9/18/96 | | 3.2 | 0.0 | 222.0 | 7.2 | 30.7 | 11.5 | 737 | <3 | | | | 222 | -222 |
| 10/24/96 | | 3.4 | 0.0 | 190.0 | 10.1 | 34.7 | 13.0 | 767 | <3 | | | | 190 | -190 |
| 11/26/96 | | 5.2 | 11.0 | 30.0 | 1.9 | 6.2 | 2.8 | 148 | 18 | | | | 19 | -19 |
| 1/6/97 | | 3.4 | 0.0 | 184.0 | 7.9 | 27.1 | 11.2 | 867 | <3 | | | | 184 | -184 |
| 6/10/97 | | 3.1 | 0.0 | 276.0 | 9.2 | 36.8 | 13.8 | 880 | 6 | | | | 276 | -276 |
| 7/10/97 | | 3.1 | 0.0 | 302.0 | 9.9 | 45.1 | 17.1 | 782 | <3 | | | | 302 | -302 |
| 8/12/97 | | 3.1 | 0.0 | 322.0 | 8.2 | 46.4 | 18.7 | 947 | 4 | | | | 322 | -322 |
| 10/9/97 | | 3.1 | 0.0 | 328.0 | 12.2 | 49.0 | 19.0 | 1043 | 8 | | | | 328 | -328 |
| 11/18/97 | | 3.4 | 0.0 | 298.0 | 13.8 | 41.1 | 17.4 | 1008 | <3 | | | | 298 | -298 |
| 12/23/97 | 150 | 3.6 | 0.0 | 142.0 | 6.7 | 23.1 | 10.2 | 501 | <3 | 266 | 12 | 18 | 142 | -142 |
| 1/7/98 | | 3.3 | 0.0 | 226.0 | 10.7 | 34.2 | 12.9 | 1236 | <3 | | | | 226 | -226 |

26 DOWNSTREAM FIRST NORTH TRIB. BELOW MCJUNCTION RD. STREAM CROSSING

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|------|-----|------|---|---|---|-----|------|
| Min. | 0 | 4.5 | 9.0 | 0.0 | 0.3 | 11.5 | 0.5 | 758 | 8.00 | 0 | 0 | 0 | -34 | -105 |
| Max. | 0 | 6.2 | 34.0 | 114.0 | 1.1 | 45.4 | 12.2 | 996 | 8.00 | 0 | 0 | 0 | 105 | 34 |
| Range | 0 | 1.7 | 25.0 | 114.0 | 0.8 | 33.9 | 11.7 | 238 | 0.00 | 0 | 0 | 0 | 139 | 139 |
| AVERAGE | | 5.4 | 21.5 | 57 | 0.7 | 28.5 | 6.4 | 877 | 8 | 0 | 0 | 0 | 36 | -36 |
| 75% tile | | | | 85.5 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 8/17/89 | | 4.5 | 9 | 114 | 1.13 | 45.4 | 12.2 | 996 | | 0 | 0 | 0 | 105 | -105 |
| 8/22/95 | | 6.2 | 34 | 0 | 0.3 | 11.5 | 0.5 | 758 | 8 | 0 | 0 | 0 | -34 | 34 |

29 ABEL / DRESHMAN TRIB.

| | | | | | | | | | | | | | |
|----------|-----|-----|-----|-------|------|------|-----|------|--------|-----|---|-----|------|
| Min. | 8 | 3.3 | 0.0 | 40.0 | 0.4 | 17.4 | 1.7 | 208 | 2.00 | 0 | 0 | 40 | -248 |
| Max. | 130 | 4.1 | 3.6 | 248.0 | 35.8 | 86.0 | 8.1 | 1373 | 228.00 | 234 | 4 | 248 | -40 |
| Range | 122 | 0.8 | 3.6 | 208.0 | 35.4 | 68.6 | 6.4 | 1165 | 226.00 | 234 | 4 | 208 | 208 |
| AVERAGE | 59 | 3.6 | 0.1 | 127.5 | 3.2 | 44.8 | 3.3 | 708 | 22 | 52 | 1 | 127 | -127 |
| 75% tile | 70 | | | 150.0 | | | | | | 92 | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/12/94 | | 3.5 | 0.0 | 126.0 | 1.6 | 53.1 | 4.0 | 760 | 3 | | | | 126 | -126 |
| 5/16/95 | | 3.6 | 0.0 | 128.0 | 1.4 | 39.5 | 2.8 | 556 | 4 | | | | 128 | -128 |
| 6/29/95 | | 3.6 | 0.0 | 122.0 | 1.7 | 47.6 | 3.0 | 633 | 16 | | | | 122 | -122 |
| 7/17/95 | | 3.3 | 0.0 | 154.0 | 2.0 | 44.1 | 2.8 | 710 | | | | | 154 | -154 |
| 7/27/95 | | 3.3 | 0.0 | 208.0 | 2.3 | 68.6 | 3.2 | 1087 | 3 | | | | 208 | -208 |
| 9/12/95 | 8 | 3.4 | 0.0 | 234.0 | 1.7 | 77.2 | 4.4 | 1373 | 6 | 23 | 0 | 0 | 234 | -234 |
| 11/20/95 | | 3.9 | 0.0 | 40.0 | 0.4 | 18.0 | 2.9 | 336 | 3 | | | | 40 | -40 |
| 2/22/96 | | 3.9 | 0.0 | 52.0 | 0.6 | 23.1 | 2.5 | 354 | 3 | | | | 52 | -52 |
| 3/27/96 | | 3.6 | 0.0 | 150.0 | 1.5 | 49.7 | 3.6 | 849 | 3 | | | | 150 | -150 |
| 4/18/96 | | 3.6 | 0.0 | 148.0 | 1.3 | 47.4 | 4.1 | 908 | 3 | | | | 148 | -148 |
| 6/11/96 | 68 | 3.5 | 0.0 | 192.0 | 1.9 | 72.2 | 3.8 | 894 | 2 | 157 | 2 | 3 | 192 | -192 |
| 6/27/96 | 59 | 3.6 | 0.0 | 128.0 | 1.3 | 42.0 | 3.4 | 720 | 3 | 91 | 1 | 2 | 128 | -128 |
| 7/31/96 | 65 | 3.4 | 0.0 | 74.0 | | | | 826 | | 58 | | | 74 | -74 |
| 8/29/96 | 25 | 3.6 | 0.0 | 146.0 | | | | 640 | | 44 | | | 146 | -146 |
| 9/18/96 | | 3.6 | 0.0 | 72.0 | 0.7 | 17.4 | 2.0 | 332 | <3 | | | | 72 | -72 |
| 10/24/96 | 70 | 3.7 | 0.0 | 114.0 | | | | 288 | | 96 | | | 114 | -114 |
| 11/26/96 | | 3.9 | 0.0 | 86.0 | 1.0 | 22.0 | 3.2 | 465 | <3 | 0 | 0 | 0 | 86 | -86 |
| 1/6/97 | | 3.8 | 0.0 | 94.0 | 1.4 | 32.2 | 3.3 | 655 | <3 | 0 | 0 | 0 | 94 | -94 |
| 3/21/97 | 130 | 3.6 | 0.0 | 150.0 | 2.1 | 45.1 | 3.0 | 903 | <3 | 234 | 3 | 5 | 150 | -150 |
| 6/10/97 | 20 | 3.5 | 0.0 | 138.0 | 1.3 | 38.6 | 2.4 | 654 | <3 | 33 | 0 | 1 | 138 | -138 |
| 7/10/97 | | 3.4 | 0.0 | 186.0 | 2.5 | 55.0 | 2.7 | 950 | 4 | 0 | | | 186 | -186 |
| 9/4/97 | | 3.6 | 0.0 | 248.0 | 35.8 | 86.0 | 8.1 | 1100 | 228 | 0 | | | 248 | -248 |
| 9/22/97 | | 3.7 | 0.0 | 94.0 | 1.0 | 27.6 | 2.4 | 586 | <3 | 0 | | | 94 | -94 |
| 11/13/97 | | 4.1 | 3.6 | 44.0 | | | | 208 | | 0 | | | 40 | -40 |
| 12/29/97 | | 3.9 | 0.0 | 86.0 | | | | 890 | | 0 | | | 86 | -86 |
| 2/3/98 | 84 | 3.8 | 0.0 | 102.0 | 4.0 | 35.0 | 1.7 | 723 | <3 | 103 | 4 | 2 | 102 | -102 |

30 SEATON TRIB. BELOW SMITH ROAD

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 3.7 | 0.0 | 0.0 | 0.3 | 0.1 | 0.5 | 83 | 3.00 | 0 | 0 | 0 | -26 | -112 |
| Max. | 0 | 6.3 | 26.0 | 112.0 | 2.3 | 39.6 | 3.0 | 674 | 16.00 | 0 | 0 | 0 | 112 | 26 |
| Range | 0 | 2.6 | 26.0 | 112.0 | 2.0 | 39.5 | 2.5 | 591 | 13.00 | 0 | 0 | 0 | 138 | 138 |
| AVERAGE | | 4.6 | 6.7 | 45.6 | 0.8 | 13.8 | 1.3 | 269 | 6 | | | | 39 | -39 |
| 75% tile | | | | 64.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | All. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|------------------|---------------|--------------|
| 10/12/94 | | 6.3 | 26.0 | 0.0 | 0.3 | 0.1 | 0.5 | 109 | 3 | | | | -26 | 26 |
| 5/16/95 | | 4.5 | 6.8 | 44.0 | 0.8 | 10.8 | 0.9 | 152 | 10 | | | | 37 | -37 |
| 6/29/95 | | 4.8 | 10.4 | 26.0 | 0.3 | 8.0 | 3.0 | 274 | 4 | | | | 16 | -16 |
| 7/27/95 | | 3.7 | 0.0 | 112.0 | 1.4 | 39.6 | 1.8 | 674 | 3 | | | | 112 | -112 |
| 11/20/95 | | 5.5 | 8.6 | 11.6 | 0.3 | 4.2 | 0.7 | 83 | 3 | | | | 3 | -3 |
| 2/22/96 | | 4.9 | 6.8 | 7.2 | 0.5 | 4.8 | 0.7 | 85 | 10 | | | | 0 | 0 |
| 3/27/96 | | 4.2 | 4.6 | 58.0 | 0.6 | 16.1 | 1.3 | 239 | 3 | | | | 53 | -53 |
| 4/18/96 | | 4.3 | 5.4 | 52.0 | 0.6 | 16.7 | 1.5 | 301 | 3 | | | | 47 | -47 |
| 5/30/96 | | 3.8 | 0.0 | 82.0 | 1.0 | 27.2 | 1.8 | 432 | 3 | | | | 82 | -82 |
| 6/27/96 | | 4.5 | 6.8 | 28.0 | 0.5 | 12.4 | 1.2 | 187 | 3 | | | | 21 | -21 |
| 7/31/96 | | 3.7 | 0.0 | 98.0 | 1.1 | 29.7 | 2.3 | 526 | 6 | | | | 98 | -98 |
| 8/29/96 | | 4.2 | 5.8 | 70.0 | 0.7 | 20.0 | 1.9 | 360 | 6 | | | | 64 | -64 |
| 9/18/96 | | 5.5 | 8.4 | 12.8 | 0.6 | 4.2 | 0.7 | 94 | 12 | | | | 4 | -4 |
| 10/24/96 | | 5.0 | 8.4 | 12.6 | 0.3 | 8.8 | 0.7 | 136 | 4 | | | | 4 | -4 |
| 11/26/96 | | 5.1 | 10.0 | 30.0 | 0.8 | 8.1 | 1.4 | 134 | 4 | | | | 20 | -20 |
| 1/6/97 | | 4.7 | 8.8 | 26.0 | 0.6 | 10.7 | 1.2 | 174 | <3 | | | | 17 | -17 |
| 3/21/97 | | 4.1 | 4.4 | 54.0 | 2.3 | 16.5 | 1.9 | 367 | 8 | | | | 50 | -50 |
| 6/10/97 | | 4.3 | 5.2 | 40.0 | 0.9 | 11.7 | 1.1 | 236 | <3 | | | | 35 | -35 |
| 7/10/97 | | 3.8 | 0.0 | 102.8 | 0.9 | 11.7 | 1.1 | 556 | 4 | | | | 103 | -103 |

32 CONFLUENT ABEL / DRESHMAN AND DESALE TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|------|------|-------|---|---|---|-----|------|
| Min. | 0 | 3.5 | 0.0 | 9.4 | 0.3 | 7.4 | 0.5 | 191 | 3.00 | 0 | 0 | 0 | -2 | -294 |
| Max. | 0 | 6.1 | 11.2 | 294.0 | 6.5 | 59.4 | 23.2 | 1635 | 34.00 | 0 | 0 | 0 | 294 | 2 |
| Range | 0 | 2.6 | 11.2 | 284.6 | 6.2 | 52.0 | 22.7 | 1444 | 31.00 | 0 | 0 | 0 | 296 | 296 |
| AVERAGE | | 3.9 | 1.2 | 166.0 | 4.0 | 33.0 | 13.2 | 748 | 9 | | | | 167 | -167 |
| 75% tile | | | | 231.5 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Allload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 10/12/94 | | 3.7 | 0.0 | 232.0 | 4.9 | 57.2 | 23.2 | 367 | 3 | | | | 232 | -232 |
| 6/29/95 | | 3.7 | 0.0 | 160.0 | 2.6 | 34.2 | 13.8 | 817 | 18 | | | | 160 | -160 |
| 9/12/95 | | 3.9 | 0.0 | 290.0 | 3.7 | 59.4 | 22.0 | 1635 | 8 | | | | 290 | -290 |
| 11/20/95 | | 4.0 | 2.4 | 92.0 | 3.9 | 22.5 | 9.5 | 468 | 6 | | | | 90 | -90 |
| 2/22/96 | | 4.0 | 2.0 | 74.0 | 2.5 | 16.9 | 7.8 | 374 | 3 | | | | 72 | -72 |
| 3/27/96 | | 3.6 | 0.0 | 188.0 | 5.2 | 33.4 | 14.8 | 790 | 3 | | | | 188 | -188 |
| 4/18/96 | | 3.7 | 0.0 | 172.0 | 3.7 | 30.1 | 12.8 | 785 | 15 | | | | 172 | -172 |
| 5/30/96 | | 3.5 | 0.0 | 230.0 | 5.1 | 42.7 | 17.4 | 971 | 3 | | | | 230 | -230 |
| 6/27/96 | | 6.1 | 11.2 | 9.4 | 0.3 | 7.4 | 0.5 | 191 | 3 | | | | -2 | 2 |
| 9/18/96 | | 4.0 | 1.8 | 114.0 | 2.1 | 20.4 | 7.9 | 489 | <3 | | | | 112 | -112 |
| 10/24/96 | | 3.8 | 0.0 | 120.0 | 3.0 | 30.6 | 12.3 | 762 | <3 | | | | 120 | -120 |
| 11/26/96 | | 4.1 | 4.0 | 92.0 | 3.4 | 15.8 | 6.1 | 398 | <3 | | | | 88 | -88 |
| 1/6/97 | | 3.9 | 0.0 | 132.0 | 3.8 | 24.5 | 10.3 | 600 | <3 | | | | 132 | -132 |
| 3/21/97 | | 3.7 | 0.0 | 182.0 | 5.5 | 30.9 | 13.4 | 910 | 8 | | | | 182 | -182 |
| 6/10/97 | | 3.5 | 0.0 | 246.0 | 5.3 | 38.9 | 15.3 | 961 | <3 | | | | 246 | -246 |
| 8/12/97 | | 3.6 | 0.0 | 294.0 | 6.2 | 55.0 | 20.6 | 1326 | 4 | | | | 294 | -294 |
| 10/9/97 | | 3.6 | 0.0 | 238.0 | 4.9 | 43.7 | 16.9 | 1011 | <3 | | | | 238 | -238 |
| 1/7/98 | | 3.7 | 0.0 | 158.0 | 6.5 | 30.2 | 12.7 | 631 | 34 | | | | 158 | -158 |

33 ABEL / DRESHMAN TRIB. BEFORE CONFLUENT WITH DESALE TRIB.

| | | | | | | | | | | | | | | |
|----------|---------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| Min. | 0 | 3.7 | 0.0 | 0.0 | 0.3 | 0.1 | 0.5 | 102 | 3.00 | 0 | 0 | 0 | -28 | -194 |
| Max. | 0 | 6.5 | 28.0 | 194.0 | 0.6 | 15.6 | 1.5 | 866 | 12.00 | 0 | 0 | 0 | 194 | 28 |
| Range | 0 | 2.8 | 28.0 | 194.0 | 0.3 | 15.5 | 1.0 | 764 | 9.00 | 0 | 0 | 0 | 222 | 222 |
| AVERAGE | #DIV/0! | 5.4 | 10.1 | 36 | 0.4 | 7.0 | 0.9 | 264 | 5 | 0 | 0 | 0 | 6 | -6 |
| 75% tile | #NUM! | | | 39.0 | | | | | | 0 | | | | |
| Date | Flow | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al load lb/day | Net Acid mg/L | Net Alk mg/L |
| Sampled | (gpm) | | | | | | | | | | | | | |
| 10/12/94 | | 6.1 | 13.2 | 0 | 0.3 | 12.0 | 0.5 | 218 | 3 | | | | -13 | 13 |
| 5/16/95 | | 4.8 | 8.6 | 38 | 0.3 | 5.5 | 1.52 | 184 | 3 | | | | 29 | -29 |
| 6/29/95 | | 5.7 | 10.6 | 9.2 | 0.4 | 8.4 | 0.54 | 174 | 12 | | | | -1 | 1 |
| 7/17/95 | | 5 | 8 | 40 | 0.4 | 0.2 | 0.81 | 300 | | | | | 32 | -32 |
| 7/27/95 | | 6.5 | 28 | 0 | 0.3 | 0.1 | 0.5 | 180 | 3 | | | | -28 | 28 |
| 11/20/95 | | 6.1 | 11 | 8.8 | 0.3 | 3.2 | 0.5 | 106 | 3 | | | | -2 | 2 |
| 2/22/96 | | 5.2 | 7.2 | 7.6 | 0.6 | 3.9 | 0.9 | 102 | 10 | | | | 0 | 0 |
| 3/27/96 | | 4.9 | 6.6 | 40 | 0.3 | 11.2 | 1.25 | 254 | 3 | | | | 33 | -33 |
| 4/18/96 | | 5.5 | 8.2 | 24 | 0.3 | 9.9 | 1.1 | 218 | 3 | | | | 16 | -16 |
| 5/30/96 | | 5.4 | 9.8 | 34 | 0.3 | 15.6 | 1.16 | 306 | 3 | | | | 24 | -24 |
| 6/27/96 | | 3.7 | 0 | 194 | | | | 866 | 3 | | | | 194 | -194 |

34 QUARTER MILE UPSTREAM FIRST NORTH TRIB. BELOW MCJUNCTION RD. BRIDGE STREAM CROSSING

| | | | | | | | | | | | | | | |
|----------|----|-----|------|------|-----|------|-----|-----|--------|---|---|---|-----|-----|
| Min. | 40 | 4.8 | 7.2 | 0.0 | 0.3 | 2.0 | 0.5 | 134 | 3.00 | 0 | 0 | 0 | -38 | -19 |
| Max. | 50 | 6.5 | 38.0 | 36.0 | 5.8 | 22.8 | 3.6 | 937 | 130.00 | 0 | 0 | 0 | 19 | 38 |
| Range | 10 | 1.7 | 30.8 | 36.0 | 5.5 | 20.8 | 3.1 | 803 | 127.00 | 0 | 0 | 0 | 57 | 57 |
| AVERAGE | 45 | 6.1 | 22.3 | 12 | 1.2 | 8.8 | 1.0 | 437 | 20 | 0 | 0 | 0 | -10 | 10 |
| 75% tile | 48 | | | 23.0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 10/12/94 | | 6.4 | 38 | 0 | 0.35 | 11.5 | 0.5 | 641 | 3 | 0 | 0 | 0 | -38 | 38 |
| 6/29/95 | | 6.3 | 22 | 0.6 | 0.31 | 4.16 | 0.5 | 292 | 12 | 0 | 0 | 0 | -21 | 21 |
| 9/12/95 | | 6.2 | 30 | 36 | 0.58 | 21 | 0.5 | 909 | 6 | 0 | 0 | 0 | 6 | -6 |
| 10/12/95 | | 6.3 | 28 | 20 | 0.8 | 22.8 | 0.5 | 937 | 3 | 0 | 0 | 0 | -8 | 8 |
| 11/15/95 | 40 | 6 | 16.8 | 0.6 | 0.3 | 4.9 | 0.5 | 323 | 3 | 0 | 0 | 0 | -16 | 16 |
| 2/22/96 | 50 | 6.1 | 11.8 | 0 | 0.61 | 1.98 | 0.5 | 134 | 3 | 0 | 0 | 0 | -12 | 12 |
| 3/13/96 | | 6.1 | 13.6 | 24 | 0.3 | 3.19 | 0.5 | 207 | 10 | 0 | 0 | 0 | 10 | -10 |
| 4/30/96 | | 4.8 | 7.2 | 26 | 2.69 | 7.85 | 3.61 | 210 | 24 | 0 | 0 | 0 | 19 | -19 |
| 5/9/96 | | 6.5 | 18 | 0 | 0.3 | 3.06 | 0.5 | 235 | 3 | 0 | 0 | 0 | -18 | 18 |
| 6/18/96 | | 6.4 | 38 | 12.2 | 5.78 | 7.66 | 2.85 | 477 | 130 | 0 | 0 | 0 | -26 | 26 |

40 LUCAS SITE TRIB. AT GOFF ROAD

| | | | | | | | | | | | | | |
|----------|-----|-----|------|-------|-----|------|------|-----|-------|-----|---|-----|------|
| Min. | 3 | 4.0 | 2.6 | 30.0 | 0.3 | 10.7 | 3.9 | 200 | 3.00 | 4 | 0 | 24 | -197 |
| Max. | 250 | 4.6 | 11.0 | 202.0 | 0.8 | 59.0 | 15.6 | 747 | 26.00 | 192 | 0 | 197 | -24 |
| Range | 247 | 0.6 | 8.4 | 172.0 | 0.5 | 48.3 | 11.7 | 547 | 23.00 | 188 | 0 | 173 | 173 |
| AVERAGE | 82 | 4.4 | 6.9 | 117.7 | 0.4 | 28.9 | 8.9 | 435 | 10 | 74 | 0 | 111 | -111 |
| 75% tile | 80 | | | 166.0 | | | | | | 100 | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/27/94 | | 4.2 | 6.2 | 174.0 | 0.3 | 59.0 | 15.6 | 747 | 3 | | | | 168 | -168 |
| 6/21/95 | | 4.1 | 6.4 | 180.0 | 0.5 | 40.0 | 12.9 | 548 | 26 | | | | 174 | -174 |
| 8/22/95 | | 4.0 | 2.6 | 152.0 | 0.8 | 41.6 | 9.9 | 559 | 3 | | | | 149 | -149 |
| 10/11/95 | 3 | 4.2 | 5.0 | 110.0 | 0.3 | 33.1 | 7.9 | 484 | 14 | 4 | 0 | 0 | 105 | -105 |
| 11/14/95 | 40 | 4.6 | 9.2 | 98.0 | 0.3 | 26.8 | 7.9 | 379 | 22 | 47 | 0 | 4 | 89 | -89 |
| 2/21/96 | 80 | 4.4 | 6.4 | 30.0 | 0.4 | 10.7 | 3.9 | 200 | 3 | 29 | 0 | 4 | 24 | -24 |
| 3/14/96 | 80 | 4.5 | 7.4 | 116.0 | 0.3 | 21.5 | 7.8 | 302 | 3 | 112 | 0 | 8 | 109 | -109 |
| 4/16/96 | 80 | 4.5 | 7.0 | 44.0 | 0.3 | 14.1 | 4.7 | 249 | 3 | 42 | 0 | 5 | 37 | -37 |
| 5/8/96 | | 4.4 | 6.6 | 108.0 | 0.3 | 16.6 | 5.8 | 317 | 3 | | | | 101 | -101 |
| 6/18/96 | | 4.2 | 5.4 | 202.0 | 0.3 | 40.3 | 12.7 | 665 | 4 | | | | 197 | -197 |
| 7/10/96 | 40 | 4.3 | 7.0 | 164.0 | <.30 | 43.7 | 14.3 | 674 | 8 | 88 | | 7 | 177 | -177 |
| 8/16/96 | | 4.4 | 7.0 | 98.0 | <.30 | 21.3 | 5.6 | 277 | <3 | | | | 91 | -91 |
| 9/11/96 | | 4.2 | 4.8 | 114.0 | <.30 | 32.1 | 8.8 | 450 | <3 | | | | 109 | -109 |
| 10/16/96 | | 4.6 | 11.0 | 190.0 | <.30 | 43.5 | 13.7 | 618 | 12 | | | | 179 | -179 |
| 11/20/96 | | 4.3 | 4.8 | 94.0 | <.30 | 21.4 | 7.5 | 375 | <3 | | | | 89 | -89 |
| 1/28/97 | | 4.6 | 9.8 | 60.0 | <.30 | 12.3 | 4.3 | 221 | 26 | | | | 50 | -50 |
| 2/12/97 | | 4.5 | 9.0 | 100.0 | <.30 | 22.7 | 8.0 | 359 | <3 | | | | 91 | -91 |
| 3/19/97 | | 4.4 | 8.0 | 98.0 | <.30 | 20.7 | 8.0 | 364 | <3 | | | | 90 | -90 |
| 5/20/97 | | 4.5 | 8.2 | 90.0 | <.30 | 17.2 | 5.7 | 300 | <3 | | | | 82 | -82 |
| 10/10/97 | | 4.2 | 5.4 | 166.0 | <.30 | 47.9 | 13.8 | 746 | <3 | | | | 161 | -161 |
| 1/8/98 | 250 | 4.4 | 7.8 | 64.0 | <.30 | 20.5 | 7.1 | 300 | <3 | 192 | | 21 | 56 | -56 |

44 MAIN BRANCH ABOVE S.R.115 AND S.R.114

| | | | | | | | | | | | | | | |
|----------|------|------|-------|-------|-----|-----|-----|-----|-------|-----|----|----|-----|-----|
| Min. | 450 | 5.80 | 9.40 | 0.00 | 0.6 | 0.8 | 0.1 | 47 | 3.00 | 55 | 8 | 3 | -18 | -12 |
| Max. | 6200 | 6.30 | 22.00 | 24.00 | 2.6 | 1.9 | 0.6 | 152 | 30.00 | 298 | 89 | 37 | 12 | 18 |
| Range | 5750 | 0.50 | 12.60 | 24.00 | 2.0 | 1.1 | 0.4 | 105 | 27.00 | 243 | 81 | 35 | 30 | 30 |
| AVERAGE | 3325 | 6.1 | 14.8 | 8.1 | 1.4 | 1.2 | 0.5 | 94 | 11 | 177 | 48 | 20 | | |
| 75% tile | 4763 | | | 10 | | | | | | 237 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Allload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 01/31/95 | | 6.3 | 22 | 7.4 | 0.8 | 1.6 | 0.1 | 107 | 4 | | | | -15 | 15 |
| 04/19/95 | | 6.2 | 13.2 | 3.4 | 1.3 | 0.9 | 0.5 | 47 | 30 | | | | -10 | 10 |
| 05/04/95 | | 6.3 | 14.8 | 22 | 1.3 | 1.0 | 0.5 | 76 | 24 | | | | 7 | -7 |
| 06/06/95 | 6200 | 6.3 | 12.2 | 4 | 1.2 | 1.0 | 0.5 | 61 | 28 | 298 | 89 | 37 | -8 | 8 |
| 07/26/95 | | 6.1 | 15.8 | 4.4 | 1.8 | 1.1 | 0.5 | 103 | 10 | | | | -11 | 11 |
| 08/29/95 | | 6.2 | 18.4 | 5.2 | 2.1 | 0.8 | 0.5 | 121 | 8 | | | | -13 | 13 |
| 09/14/95 | 450 | 6.1 | 19.4 | 10.2 | 1.5 | 0.9 | 0.5 | 120 | 6 | 55 | 8 | 3 | -9 | 9 |
| 10/11/95 | | 6.1 | 17.4 | 14.8 | 2.6 | 1.1 | 0.5 | 143 | 18 | | | | -3 | 3 |
| 11/01/95 | | 6 | 15.6 | 24 | 2.5 | 1.0 | 0.5 | 152 | 3 | | | | 8 | -8 |
| 12/12/95 | | 6 | 14.8 | 8.4 | 1.9 | 0.9 | 0.5 | 113 | 3 | | | | -6 | 6 |
| 01/25/96 | | 5.9 | 9.8 | 4.4 | 0.7 | 1.3 | 0.5 | 100 | 10 | | | | -5 | 5 |
| 02/21/96 | | 5.8 | 9.4 | 6 | 1.1 | 1.3 | 0.6 | 51 | 13 | | | | -3 | 3 |
| 03/13/96 | | 6.1 | 11.8 | 24 | 0.7 | 1.4 | 0.5 | 79 | 3 | | | | 12 | -12 |
| 05/16/96 | | 5.8 | 11.8 | 1.2 | 0.6 | 1.2 | 0.5 | 70 | 3 | | | | -11 | 11 |
| 06/26/96 | | 6.2 | 12.6 | 4 | 1.0 | 1.0 | 0.5 | 73 | 3 | | | | -9 | 9 |
| 07/25/96 | | 5.8 | 14 | 7 | 1.6 | 1.2 | <.50 | 101 | <3 | | | | -7 | 7 |
| 08/13/96 | | 6 | 14.8 | 3.6 | 2.0 | 1.0 | <.50 | 108 | 24 | | | | -11 | 11 |
| 09/18/96 | | 6.2 | 12.4 | 9.6 | 0.9 | 0.8 | <.50 | 50 | 3 | | | | -3 | 3 |
| 10/22/96 | | 6.2 | 14.6 | 6.6 | 0.8 | 0.8 | <.50 | 65 | <3 | | | | -8 | 8 |
| 12/19/96 | | 6 | 13.4 | 3.8 | 0.8 | 1.6 | <.50 | 89 | 6 | | | | -10 | 10 |
| 10/15/97 | | 6.2 | 19.6 | 5 | 2.2 | 1.1 | <.50 | 121 | <3 | | | | -15 | 15 |
| 02/19/97 | | 6.1 | 14.6 | 4.4 | 1.1 | 1.7 | <.50 | 111 | <3 | | | | -10 | 10 |
| 03/19/97 | | 5.8 | 11.6 | 9.4 | 0.6 | 1.9 | <.50 | 85 | <3 | | | | -2 | 2 |
| 04/09/97 | | 6.1 | 13.8 | 10.2 | 1.2 | 1.7 | <.50 | 89 | <3 | | | | -4 | 4 |
| 05/20/97 | | 6.1 | 13.4 | 3.6 | 1.0 | 1.2 | <.50 | 65 | <3 | | | | -10 | 10 |
| 07/15/97 | | 6 | 17.6 | 0 | 1.2 | 0.9 | <.50 | 101 | <3 | | | | -18 | 18 |
| 08/20/97 | | 6.1 | 18.6 | 7.4 | 1.8 | 1.4 | <.50 | 113 | <3 | | | | -11 | 11 |
| 09/09/97 | | 6 | 18.2 | 12 | 2.3 | 1.0 | <.50 | 123 | <3 | | | | -6 | 6 |

45 BORELL TRIB. BEFORE MAIN BRANCH

| | | | | | | | | | | | | | | |
|----------|---|------|-------|-------|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 5.50 | 9.60 | 0.00 | 0.3 | 0.4 | 0.5 | 68 | 3.00 | 0 | 0 | 0 | -30 | -4 |
| Max. | 0 | 6.40 | 34.00 | 13.40 | 3.4 | 6.6 | 0.9 | 193 | 24.00 | 0 | 0 | 0 | 4 | 30 |
| Range | 0 | 0.90 | 24.40 | 13.40 | 3.1 | 6.2 | 0.4 | 125 | 21.00 | 0 | 0 | 0 | 33 | 33 |
| AVERAGE | | 6.1 | 21.6 | 3.8 | 1.0 | 1.5 | 0.5 | 113 | 8 | | | | | |
| 75% tile | | | | 6 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 10/19/94 | | 6.2 | 34 | 5.6 | 2.7 | 0.4 | 0.5 | 113 | 3 | | | | -28 | 28 |
| 05/04/95 | | 6.4 | 22 | 12.4 | 0.8 | 0.7 | 0.5 | 85 | 24 | | | | -10 | 10 |
| 07/26/95 | | 6.1 | 22 | 0 | 0.9 | 0.8 | 0.5 | 115 | 3 | | | | -22 | 22 |
| 08/29/95 | | 6.4 | 28 | 0 | 3.4 | 0.4 | 0.9 | 107 | 6 | | | | -28 | 28 |
| 09/14/95 | | 6.3 | 30 | 0.4 | 0.7 | 0.5 | 0.5 | 107 | 12 | | | | -30 | 30 |
| 11/01/95 | | 6.3 | 30 | 6.6 | 1.1 | 0.5 | 0.5 | 138 | 3 | | | | -23 | 23 |
| 12/12/95 | | 6.1 | 24 | 0.4 | 1.2 | 0.6 | 0.5 | 132 | 3 | | | | -24 | 24 |
| 01/25/96 | | 6.1 | 15.4 | 6 | 0.6 | 2.3 | 0.5 | 120 | 10 | | | | -9 | 9 |
| 02/21/96 | | 6 | 11.6 | 4.2 | 0.8 | 2.7 | 0.5 | 78 | 5 | | | | -7 | 7 |
| 03/13/96 | | 6.2 | 18.8 | 0 | 0.6 | 2.2 | 0.5 | 97 | 3 | | | | -19 | 19 |
| 05/16/96 | | 6 | 17.4 | 0 | 0.3 | 1.7 | 0.5 | 92 | 3 | | | | -17 | 17 |
| 8/13/96 | | 6.1 | 22 | 0 | 0.7 | 0.8 | <.50 | 113 | 24 | | | | -22 | 22 |
| 9/18/96 | | 6.3 | 16 | 6.4 | 0.6 | 1.1 | <.50 | 68 | <3 | | | | -10 | 10 |
| 10/22/96 | | 6.3 | 18.8 | 1.6 | 0.5 | 1.0 | <.50 | 96 | <3 | | | | -17 | 17 |
| 6/26/97 | | 5.5 | 9.6 | 13.4 | <.30 | 3.3 | <.50 | 191 | <3 | | | | 4 | -4 |
| 9/9/97 | | 6.2 | 28 | 3.4 | 0.4 | 0.4 | <.50 | 101 | <3 | | | | -25 | 25 |
| 12/11/97 | | 5.9 | 18.4 | 0 | 0.5 | 1.5 | <.50 | 98 | <3 | | | | -18 | 18 |
| 1/21/98 | | 6.2 | 22 | 7.6 | 0.8 | 6.6 | <.50 | 193 | <3 | | | | -14 | 14 |

45.1 UPSTREAM BORELL TRIB.

| | | | | | | | | | | | | | | | | | | |
|----------|---|------|-------|-------|-----|------|-----|-----|-------|---|---|---|---|---|---|---|---|-----|
| Min. | 0 | 5.30 | 8.40 | 9.00 | 0.3 | 0.5 | 0.5 | 37 | 4.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -39 |
| Max. | 0 | 6.10 | 15.80 | 50.00 | 1.3 | 15.1 | 1.0 | 350 | 16.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| Range | 0 | 0.80 | 7.40 | 41.00 | 1.0 | 14.6 | 0.5 | 313 | 12.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| AVERAGE | | 5.6 | 10.6 | 34.4 | 0.7 | 11.0 | 0.7 | 236 | 9 | | | | | | | | | |
| 75% tile | | | | 40 | | | | | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 11/01/94 | | 5.7 | 10.6 | 50 | 1.3 | 0.5 | 1.0 | 37 | 16 | | | | 39 | -39 |
| 05/02/95 | | 5.5 | 8.8 | 9 | 0.3 | 5.3 | 0.5 | 154 | 8 | | | | 0 | 0 |
| 11/21/96 | | 5.9 | 11.6 | 34 | 0.3 | 15.1 | <.50 | 236 | <3 | | | | 22 | -22 |
| 02/25/97 | | 5.4 | 8.8 | 40 | 0.3 | 14.3 | <.50 | 276 | <3 | | | | 31 | -31 |
| 06/26/97 | | 6.1 | 15.8 | 32 | <.30 | 14.2 | <.50 | 278 | <3 | | | | 16 | -16 |
| 07/24/97 | | 5.4 | 10.4 | 36 | 1.2 | 13.7 | 0.8 | 350 | 4 | | | | 26 | -26 |
| 10/01/97 | | 5.3 | 8.4 | 40 | 0.7 | 13.9 | 0.6 | 320 | 8 | | | | 32 | -32 |

46 DOWNSTREAM FROM S.R. 114 S.R.115, MAIN BRANCH

| | | | | | | | | | | | | | | |
|----------|------|------|-------|-------|------|-----|-----|-----|-------|-----|-----|----|-----|----|
| Min. | 900 | 5.90 | 10.80 | 0.00 | 0.6 | 0.5 | 0.1 | 61 | 3.00 | 35 | 43 | 5 | -52 | -8 |
| Max. | 7500 | 6.70 | 52.00 | 24.00 | 10.6 | 1.9 | 1.0 | 188 | 46.00 | 559 | 178 | 45 | 8 | 52 |
| Range | 6600 | 0.80 | 41.20 | 24.00 | 10.0 | 1.4 | 0.9 | 127 | 43.00 | 524 | 135 | 40 | 60 | 60 |
| AVERAGE | 4200 | 6.3 | 26.3 | 5.0 | 2.1 | 1.2 | 0.5 | 120 | 9 | 297 | 110 | 25 | | |
| 75% tile | 5850 | | | 6 | | | | | | 428 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 6.3 | 18.4 | 16.2 | 4.7 | 1.5 | 0.5 | 132 | 4 | | | | -2 | 2 |
| 01/31/95 | | 6.3 | 18.2 | 18.8 | 4.6 | 1.1 | 0.1 | 103 | 8 | | | | 1 | -1 |
| 05/04/95 | | 6.3 | 17.6 | 24 | 4.1 | 0.9 | 0.5 | 108 | 3 | | | | 6 | -6 |
| 06/06/95 | 7500 | 6.2 | 12 | 6.2 | 2.0 | 0.7 | 0.5 | 71 | 18 | 559 | 178 | 45 | -6 | 6 |
| 07/26/95 | 900 | 6.1 | 22 | 3.2 | 3.9 | 1.8 | 0.5 | 128 | 3 | 35 | 43 | 5 | -19 | 19 |
| 08/29/95 | | 6.5 | 52 | 0 | 1.2 | 1.5 | 0.6 | 174 | 14 | | | | -52 | 52 |
| 09/14/95 | | 6.5 | 46 | 0 | 0.6 | 1.7 | 0.5 | 166 | 14 | | | | -46 | 46 |
| 10/11/95 | | 6.5 | 44 | 0 | 1.1 | 1.5 | 0.5 | 184 | 3 | | | | -44 | 44 |
| 11/02/95 | | 6.2 | 24 | 0 | 10.6 | 1.9 | 1.0 | 142 | 46 | | | | -24 | 24 |
| 12/12/95 | | 6.2 | 32 | 0 | 2.3 | 1.1 | 0.5 | 145 | 4 | | | | -32 | 32 |
| 01/25/96 | | 6.1 | 10.8 | 4.6 | 1.0 | 0.8 | 0.5 | 88 | 8 | | | | -6 | 6 |
| 02/21/96 | | 6 | 11.8 | 6.6 | 2.2 | 1.2 | 0.5 | 65 | 11 | | | | -5 | 5 |
| 03/13/96 | | 6.1 | 16.4 | 24 | 2.4 | 0.9 | 0.5 | 90 | 3 | | | | 8 | -8 |
| 05/16/96 | | 5.9 | 15.8 | 19.8 | 2.1 | 0.8 | 0.5 | 90 | 3 | | | | 4 | -4 |
| 06/26/96 | | 6.2 | 14.2 | 1.4 | 1.2 | 1.6 | 0.5 | 103 | 3 | | | | -13 | 13 |
| 07/25/96 | | 6.2 | 34 | 0 | 1.1 | 1.1 | <.50 | 122 | <3 | | | | -34 | 34 |
| 08/13/96 | | 6.3 | 38 | 0 | 1.2 | 1.3 | <.50 | 105 | 6 | | | | -38 | 38 |
| 09/18/96 | | 5.9 | 15.6 | 6.2 | 1.0 | 0.5 | <.50 | 61 | 8 | | | | -9 | 9 |
| 10/23/96 | | 6.4 | 22 | 0.4 | 0.9 | 0.6 | <.50 | 86 | <3 | | | | -22 | 22 |
| 12/19/96 | | 6.1 | 20 | 0 | 1.4 | 1.0 | <.50 | 97 | 6 | | | | -20 | 20 |
| 02/19/97 | | 6.1 | 20 | 0 | 1.6 | 0.9 | <.50 | 124 | <3 | | | | -20 | 20 |
| 03/19/97 | | 5.9 | 15.6 | 5.8 | 1.0 | 1.1 | <.50 | 96 | <3 | | | | -10 | 10 |
| 04/09/97 | | 6.3 | 18.6 | 1.8 | 1.6 | 1.1 | <.50 | 120 | <3 | | | | -17 | 17 |
| 05/20/97 | | 6.3 | 20 | 0 | 1.2 | 0.8 | <.50 | 81 | <3 | | | | -20 | 20 |
| 07/15/97 | | 6.5 | 40 | 0 | 0.8 | 1.1 | <.50 | 156 | <3 | | | | -40 | 40 |
| 08/19/97 | | 6.5 | 40 | 0 | 1.3 | 1.9 | <.50 | 156 | <3 | | | | -40 | 40 |
| 09/09/97 | | 6.6 | 50 | 0 | 0.8 | 1.6 | <.50 | 188 | 7.9 | | | | -50 | 50 |
| 10/15/97 | | 6.7 | 48 | 0 | 1.3 | 1.5 | <.50 | 179 | 4 | | | | -48 | 48 |

48 SEATON CREEK AT MCJUNKIN ROAD

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-------|-----|------|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 4.4 | 6.6 | 0.0 | 0.3 | 2.7 | 0.5 | 93 | 3.00 | 0 | 0 | 0 | -22 | -114 |
| Max. | 0 | 6.0 | 22.0 | 124.0 | 4.7 | 33.8 | 9.6 | 941 | 20.00 | 0 | 0 | 0 | 114 | 22 |
| Range | 0 | 1.6 | 15.4 | 124.0 | 4.4 | 31.1 | 9.1 | 848 | 17.00 | 0 | 0 | 0 | 136 | 136 |
| AVERAGE | | 4.8 | 9.8 | 61.7 | 1.0 | 16.2 | 4.7 | 460 | 7 | | | | 52 | -52 |
| 75% tile | | | | 98.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 9/8/94 | | 4.6 | 10.2 | 124.0 | 1.3 | 26.6 | 8.2 | 571 | 3 | | | | 114 | -114 |
| 3/22/95 | | 4.8 | 10.2 | 36.0 | 0.4 | 12.8 | 3.5 | 422 | 3 | | | | 26 | -26 |
| 6/29/95 | | 4.7 | 9.6 | 46.0 | 0.5 | 14.6 | 4.3 | 385 | 6 | | | | 36 | -36 |
| 8/22/95 | | 4.4 | 7.4 | 110.0 | 0.7 | 29.8 | 8.1 | 852 | 16 | | | | 103 | -103 |
| 9/12/95 | | 4.6 | 10.8 | 118.0 | 1.0 | 33.2 | 8.4 | 888 | 8 | | | | 107 | -107 |
| 10/12/95 | | 4.6 | 10.0 | 102.0 | 2.4 | 33.8 | 9.6 | 832 | 8 | | | | 92 | -92 |
| 11/15/95 | | 6.0 | 22.0 | 0.0 | 0.8 | 2.7 | 0.5 | 93 | 6 | | | | -22 | 22 |
| 2/22/96 | | 4.7 | 7.2 | 14.4 | 0.9 | 8.3 | 3.3 | 158 | 3 | | | | 7 | -7 |
| 3/13/96 | | 4.6 | 7.8 | 76.0 | 1.4 | 13.0 | 4.7 | 332 | 12 | | | | 68 | -68 |
| 4/30/96 | | 4.6 | 6.6 | 24.0 | 0.3 | 7.3 | 1.8 | 205 | 3 | | | | 17 | -17 |
| 5/9/96 | | 4.8 | 10.2 | 48.0 | 0.8 | 12.2 | 3.9 | 359 | 3 | | | | 38 | -38 |
| 6/18/96 | | 4.5 | 9.0 | 112.0 | 1.0 | 22.8 | 7.7 | 941 | 3 | | | | 103 | -103 |
| 7/9/96 | | 4.6 | 9.4 | 76.0 | 0.7 | 21.6 | 7.1 | 627 | 6 | | | | 67 | -67 |
| 8/15/96 | | 4.6 | 9.0 | 102.0 | 0.5 | 20.0 | 5.8 | 733 | <3 | | | | 93 | -93 |
| 9/10/96 | | 5.8 | 14.8 | 24.0 | 0.7 | 8.0 | 0.9 | 110 | 4 | | | | 9 | -9 |
| 11/20/96 | | 5.6 | 7.2 | 13.8 | <.30 | 4.6 | 1.3 | 132 | <3 | | | | 7 | -7 |
| 1/23/97 | | 4.6 | 8.8 | 58.0 | 0.9 | 11.0 | 3.6 | 300 | 20 | | | | 49 | -49 |
| 2/27/97 | | 4.6 | 8.0 | 22.0 | 0.6 | 7.9 | 2.2 | 207 | 4 | | | | 14 | -14 |
| 3/19/97 | | 4.6 | 10.0 | 54.0 | 0.6 | 11.7 | 4.3 | 402 | <3 | | | | 44 | -44 |
| 5/20/97 | | 4.6 | 9.0 | 70.0 | 0.3 | 14.5 | 4.1 | 417 | <3 | | | | 61 | -61 |
| 8/6/97 | | 4.4 | 7.4 | 94.0 | 4.7 | 26.6 | 8.0 | 703 | 12 | | | | 87 | -87 |
| 10/9/97 | | 4.7 | 10.0 | 72.0 | 0.5 | 18.3 | 4.1 | 576 | <3 | | | | 62 | -62 |
| 1/7/98 | | 4.7 | 9.8 | 24.0 | <.30 | 12.0 | 3.6 | 331 | <3 | | | | 14 | -14 |

49 DOWNSTREAM PISOR TRIB. BEFORE MAIN BRANCH

| | | | | | | | | | | | | | | |
|----------|------|------|-------|-------|-----|-----|-----|-----|-------|-----|----|----|-----|-----|
| Min. | 135 | 5.40 | 7.80 | 0.00 | 0.5 | 0.2 | 0.1 | 46 | 2.00 | 0 | 2 | 1 | -36 | -11 |
| Max. | 5400 | 6.50 | 36.00 | 26.00 | 4.8 | 4.8 | 1.2 | 244 | 44.00 | 260 | 51 | 32 | 11 | 36 |
| Range | 5265 | 1.10 | 28.20 | 26.00 | 4.1 | 4.5 | 1.0 | 198 | 42.00 | 260 | 48 | 32 | 47 | 47 |
| AVERAGE | 2768 | 6.0 | 15.7 | 7.7 | 1.4 | 1.4 | 0.5 | 115 | 10 | 130 | 26 | 17 | | |
| 75% tile | 4084 | | | 10 | | | | | | 195 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/27/94 | | 6.1 | 16.6 | 4.8 | 2.0 | 1.8 | 0.5 | 150 | 8 | | | | -12 | 12 |
| 01/31/95 | | 6 | 11.2 | 16.4 | 1.1 | 0.7 | 0.1 | 76 | 2 | | | | 5 | -5 |
| 05/04/95 | | 6.1 | 10.8 | 22 | 1.0 | 0.7 | 0.5 | 101 | 3 | | | | 11 | -11 |
| 06/06/95 | 5400 | 6.4 | 12.4 | 4 | 0.8 | 0.2 | 0.5 | 48 | 14 | 260 | 51 | 32 | -8 | 8 |
| 07/26/95 | 135 | 6.3 | 28 | 0 | 1.4 | 1.5 | 0.5 | 110 | 3 | 0 | 2 | 1 | -28 | 28 |
| 08/29/95 | | 6.2 | 26 | 0 | 1.1 | 1.4 | 0.1 | 235 | 12 | | | | -26 | 26 |
| 09/14/95 | | 6.5 | 36 | 0 | 1.3 | 2.1 | 0.5 | 208 | 12 | | | | -36 | 36 |
| 10/18/95 | | 6 | 17.4 | 19.4 | 3.3 | 2.3 | 0.5 | 237 | 22 | | | | 2 | -2 |
| 11/02/95 | | 6 | 14.4 | 6.6 | 4.6 | 2.0 | 0.5 | 136 | 10 | | | | -8 | 8 |
| 12/12/95 | | 5.9 | 12.4 | 5.4 | 1.4 | 1.3 | 0.5 | 123 | 3 | | | | -7 | 7 |
| 01/25/96 | | 5.9 | 8.4 | 6 | 0.8 | 0.3 | 0.5 | 46 | 10 | | | | -2 | 2 |
| 02/21/96 | | 5.7 | 7.8 | 6.6 | 4.6 | 0.7 | 1.2 | 46 | 44 | | | | -1 | 1 |
| 03/13/96 | | 5.5 | 7.8 | 26 | 0.6 | 0.5 | 0.5 | 60 | 3 | | | | | |
| 05/16/96 | | 5.7 | 9.4 | 22 | 0.5 | 0.3 | 0.5 | 49 | 3 | | | | | |
| 06/26/96 | | 6.3 | 19.4 | 0 | 2.2 | 0.9 | 0.5 | 89 | 3 | | | | | |
| 08/13/96 | | 6.1 | 24 | 2 | 1.1 | 2.1 | <.50 | 132 | 14 | | | | -22 | 22 |
| 09/18/96 | | 6 | 16.4 | 4.8 | 0.9 | 0.4 | <.50 | 47 | 8 | | | | -12 | 12 |
| 10/23/96 | | 6.3 | 15.8 | 4 | 0.6 | 0.5 | <.50 | 71 | 4 | | | | -12 | 12 |
| 12/19/96 | | 5.9 | 13.2 | 2.4 | 0.6 | 0.4 | <.50 | 50 | <3 | | | | -11 | 11 |
| 03/19/97 | | 5.7 | 10 | 10.2 | <.30 | 0.5 | <.50 | 52 | <3 | | | | 0 | 0 |
| 04/09/97 | | 5.4 | 8.8 | 10 | 0.7 | 1.8 | <.50 | 134 | <3 | | | | 1 | -1 |
| 05/20/97 | | 5.9 | 10.4 | 2 | 0.9 | 1.1 | <.50 | 78 | <3 | | | | -8 | 8 |
| 07/15/97 | | 6.3 | 28 | 0 | 1.1 | 2.9 | <.50 | 189 | <3 | | | | -28 | 28 |
| 08/19/97 | | 6.1 | 15.8 | 17.4 | 1.7 | 3.7 | <.50 | 171 | <3 | | | | 2 | -2 |
| 09/09/97 | | 6.2 | 19 | 6.8 | 0.6 | 4.8 | <.50 | 244 | <3 | | | | -12 | 12 |
| 10/15/97 | | 6.2 | 16.4 | 6.2 | 0.9 | 2.7 | <.50 | 192 | <3 | | | | -10 | 10 |
| 12/11/97 | | 5.7 | 11.2 | 3 | 0.7 | 0.6 | <.50 | 57 | <3 | | | | -8 | 8 |
| 1/21/98 | | 5.7 | 11.8 | 8.2 | 1.0 | 1.4 | <.50 | 95 | <3 | | | | -4 | 4 |

50 PISOR TRIB. AT CULVERT

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|-------|---|---|---|-----|-----|
| Min. | 0 | 5.7 | 9.4 | 0.0 | 0.1 | 0.8 | 0.1 | 68 | 2.00 | 0 | 0 | 0 | -22 | -11 |
| Max. | 0 | 6.2 | 22.0 | 22.0 | 1.9 | 4.8 | 1.6 | 285 | 49.00 | 0 | 0 | 0 | 11 | 22 |
| Range | 0 | 0.5 | 12.6 | 22.0 | 1.8 | 4.0 | 1.4 | 217 | 47.00 | 0 | 0 | 0 | 33 | 33 |
| AVERAGE | | 6.1 | 12.4 | 9 | 0.5 | 2.7 | 0.5 | 184 | 8 | | | | -3 | 3 |
| 75% tile | | | | 15.1 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 08/23/94 | | 6.1 | 13 | 16.4 | 0.48 | 2.98 | 0.5 | 198 | 3 | | | | 3 | -3 |
| 01/31/95 | | 6.1 | 11.4 | 13.4 | 0.1 | 1.71 | 0.14 | 123 | 2 | | | | 2 | -2 |
| 02/09/95 | | 6.2 | 11.8 | 5 | 0.3 | 2.47 | 0.5 | 142 | 3 | | | | -7 | 7 |
| 05/04/95 | | 6.2 | 11.4 | 22 | 0.3 | 2.38 | 0.5 | 136 | 3 | | | | 11 | -11 |
| 07/26/95 | | 5.9 | 11.6 | 2 | 0.7 | 3.97 | 0.5 | 222 | 4 | | | | -10 | 10 |
| 08/29/95 | | 5.7 | 9.4 | 6.4 | 0.26 | 4.84 | 0.14 | 275 | 2 | | | | -3 | 3 |
| 09/27/95 | | 6.2 | 13.8 | 15.6 | 0.34 | 3.2 | 0.5 | 285 | 3 | | | | 2 | -2 |
| 11/02/95 | | 6.2 | 22 | 0 | 0.3 | 1.85 | 0.5 | 191 | 8 | | | | -22 | 22 |
| 12/12/95 | | 5.9 | 10 | 7.4 | 0.3 | 2.98 | 0.5 | 197 | 4 | | | | -3 | 3 |
| 02/21/96 | | 6 | 9.8 | 5 | 1.89 | 0.81 | 1.56 | 68 | 49 | | | | -5 | 5 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

51 TYREE TRIB. DOWNSTREAM

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|------|-----|-----|-----|-------|---|---|---|-----|-----|
| Min. | 0 | 3.7 | 0.0 | 0.0 | 1.1 | 0.2 | 0.5 | 27 | 4.00 | 0 | 0 | 0 | -26 | -88 |
| Max. | 0 | 6.2 | 26.0 | 88.0 | 13.0 | 3.3 | 3.9 | 328 | 28.00 | 0 | 0 | 0 | 88 | 26 |
| Range | 0 | 2.5 | 26.0 | 88.0 | 11.9 | 3.2 | 3.4 | 301 | 24.00 | 0 | 0 | 0 | 114 | 114 |
| AVERAGE | | 5.5 | 11.9 | 23 | 5.1 | 1.0 | 1.2 | 95 | 13 | | | | 11 | -11 |
| 75% tile | | | | 25.5 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/26/94 | | 6.2 | 22 | 5.8 | 6.57 | 0.98 | 0.5 | 79 | 24 | | | | -16 | 16 |
| 02/09/95 | | 6 | 12.2 | 6.8 | 3.08 | 0.46 | 0.55 | 41 | 4 | | | | -5 | 5 |
| 05/04/95 | | 6.2 | 12.2 | 24 | 2.01 | 0.29 | 0.5 | 36 | 18 | | | | 12 | -12 |
| 07/26/95 | | 6.1 | 26 | 0 | 4.77 | 0.59 | 1.44 | 82 | 28 | | | | -26 | 26 |
| 09/27/95 | | 3.7 | 0 | 88 | 12 | 3.33 | 3.88 | 328 | 4 | | | | 88 | -88 |
| 10/18/95 | | 4.6 | 7.8 | 52 | 13 | 2.06 | 2.43 | 189 | 14 | | | | 44 | -44 |
| 11/02/95 | | 5.3 | 10.2 | 15.4 | 4.34 | 1.33 | 0.79 | 100 | 6 | | | | 5 | -5 |
| 12/13/95 | | 5.9 | 11.6 | 9.4 | 2.58 | 0.29 | 0.65 | 36 | 8 | | | | -2 | 2 |
| 02/21/96 | | 5.9 | 8.8 | 4.8 | 1.2 | 0.17 | 0.76 | 27 | 17 | | | | -4 | 4 |
| 03/13/96 | | 5.5 | 8 | 26 | 1.1 | 0.15 | 0.6 | 30 | 4 | | | | 18 | -18 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

52 TRIB. TO PISOR AT MOUTH

| | | | | | | | | | | | | | | |
|----------|---------|-----|------|------|------|-----|-----|-----|-------|---------|---------|---------|-----|-----|
| Min. | 0 | 5.0 | 7.6 | 0.0 | 0.3 | 0.2 | 0.5 | 21 | 3.00 | 0 | 0 | 0 | -28 | -16 |
| Max. | 0 | 6.3 | 32.0 | 42.0 | 19.8 | 6.9 | 0.5 | 576 | 22.00 | 0 | 0 | 0 | 16 | 28 |
| Range | 0 | 1.3 | 24.4 | 42.0 | 19.5 | 6.8 | 0.0 | 555 | 19.00 | 0 | 0 | 0 | 44 | 44 |
| AVERAGE | #DIV/0! | 5.9 | 16.7 | 17 | 4.7 | 2.4 | 0.5 | 151 | 11 | #DIV/0! | #DIV/0! | #DIV/0! | 0 | 0 |
| 75% tile | 0 | | | 25.5 | | | | | | #NUM! | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 10/27/94 | | 6.3 | 22 | 0 | 3.34 | 0.89 | 0.5 | 33 | 6 | | | | -22 | 22 |
| 05/04/95 | | 6.2 | 11.4 | 22 | 0.81 | 0.32 | 0.5 | 32 | 18 | | | | 11 | -11 |
| 07/26/95 | | 6.2 | 28 | 0 | 3.03 | 1.98 | 0.5 | 89 | 8 | | | | -28 | 28 |
| 09/27/95 | | 6.2 | 32 | 42 | 19.8 | 6.93 | 0.5 | 576 | 22 | | | | 10 | -10 |
| 10/18/95 | | 5.7 | 14.6 | 30 | 8.15 | 6.62 | 0.5 | 331 | 14 | | | | 15 | -15 |
| 11/02/95 | | 5 | 9.2 | 12 | 1.78 | 2.3 | 0.5 | 101 | 10 | | | | 3 | -3 |
| 02/21/96 | | 5.8 | 7.6 | 3.4 | 0.36 | 0.25 | 0.5 | 21 | 3 | | | | -4 | 4 |
| 03/13/96 | | 5.7 | 8.4 | 24 | 0.3 | 0.16 | 0.5 | 28 | 3 | | | | 16 | -16 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

53 PISOR TRIB. UPSTREAM

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|----|-------|---|---|---|-----|----|
| Min. | 0 | 6.5 | 17.6 | 0.0 | 0.3 | 0.1 | 0.5 | 20 | 6.00 | 0 | 0 | 0 | -44 | 18 |
| Max. | 0 | 6.6 | 44.0 | 0.0 | 4.2 | 0.2 | 1.8 | 22 | 24.00 | 0 | 0 | 0 | -18 | 44 |
| Range | 0 | 0.1 | 26.4 | 0.0 | 3.9 | 0.2 | 1.3 | 2 | 18.00 | 0 | 0 | 0 | 26 | 26 |
| AVERAGE | | 6.6 | 30.8 | 0 | 2.3 | 0.1 | 1.1 | 21 | 15 | | | | -31 | 31 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| Sampled | | | | | | | | | | | | | | |
| 08/23/94 | | 6.6 | 44 | 0 | 4.23 | 0.23 | 1.79 | 20 | 24 | | | | -44 | 44 |
| 02/09/95 | | 6.5 | 17.6 | 0 | 0.3 | 0.05 | 0.5 | 22 | 6 | | | | -18 | 18 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

54 TYREE TRIB UPSTREAM

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|----|-------|---|---|---|-----|----|
| Min. | 0 | 6.2 | 12.6 | 0.0 | 0.3 | 0.1 | 0.5 | 20 | 3.00 | 0 | 0 | 0 | -56 | -3 |
| Max. | 0 | 7.1 | 56.0 | 17.2 | 0.8 | 0.1 | 0.6 | 37 | 15.00 | 0 | 0 | 0 | 3 | 56 |
| Range | 0 | 0.9 | 43.4 | 17.2 | 0.5 | 0.1 | 0.1 | 17 | 12.00 | 0 | 0 | 0 | 59 | 59 |
| AVERAGE | | 6.6 | 32.6 | 2 | 0.4 | 0.1 | 0.5 | 26 | 9 | | | | -30 | 30 |
| 75% tile | | | | 0.1 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| Sampled | | | | | | | | | | | | | | |
| 10/26/94 | | 6.7 | 34 | 0 | 0.3 | 0.05 | 0.5 | 21 | 10 | | | | -34 | 34 |
| 02/09/95 | | 6.7 | 22 | 0 | 0.3 | 0.05 | 0.5 | 20 | 3 | | | | -22 | 22 |
| 07/26/95 | | 6.6 | 46 | 0 | 0.3 | 0.05 | 0.5 | 26 | 10 | | | | -46 | 46 |
| 09/27/95 | | 7.1 | 56 | 0 | 0.3 | 0.07 | 0.5 | 26 | 3 | | | | -56 | 56 |
| 10/18/95 | | 6.6 | 40 | 0 | 0.3 | 0.05 | 0.5 | 29 | 14 | | | | -40 | 40 |
| 11/02/95 | | 6.6 | 36 | 0 | 0.7 | 0.1 | 0.5 | 37 | 10 | | | | -36 | 36 |
| 02/21/96 | | 6.2 | 12.6 | 0.4 | 0.78 | 0.08 | 0.61 | 24 | 15 | | | | -12 | 12 |
| 03/13/96 | | 6.2 | 14.4 | 17.2 | 0.3 | 0.05 | 0.5 | 23 | 3 | | | | 3 | -3 |

55 UPSTREAM HILLIARDS TRIB.

| | | | | | | | | | | | | | | |
|----------|---|------|------|-------|-----|-----|-----|----|------|---|---|---|----|-----|
| Min. | 0 | 4.30 | 5.80 | 16.60 | 0.1 | 0.6 | 1.1 | 31 | 2.00 | 0 | 0 | 0 | 10 | -53 |
| Max. | 0 | 4.70 | 8.80 | 62.00 | 0.3 | 2.5 | 2.4 | 71 | 4.00 | 0 | 0 | 0 | 53 | 0 |
| Range | 0 | 0.40 | 3.00 | 45.40 | 0.2 | 1.9 | 1.3 | 40 | 2.00 | 0 | 0 | 0 | 44 | 53 |
| AVERAGE | | 4.5 | 7.1 | 27.2 | 0.3 | 1.3 | 1.8 | 49 | 3 | | | | | |
| 75% tile | | | | 32 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 4.5 | 7.2 | 34 | 0.3 | 1.4 | 2.0 | 47 | 3 | | | | 27 | -27 |
| 01/31/95 | | 4.7 | 8.8 | 62 | 0.1 | 0.9 | 2.1 | 37 | 2 | | | | 53 | -53 |
| 03/30/95 | | 4.6 | 8 | 20 | 0.3 | 0.8 | 2.2 | 47 | 3 | | | | 12 | -12 |
| 05/04/95 | | 4.5 | 7.6 | 36 | 0.3 | 0.9 | 2.4 | 40 | | | | | 28 | -28 |
| 07/26/95 | | 4.4 | 7 | 16.6 | 0.3 | 1.7 | 2.0 | 52 | 3 | | | | 10 | -10 |
| 08/29/95 | | 4.3 | 5.8 | 22 | 0.3 | 1.7 | 1.6 | 60 | 3 | | | | 16 | -16 |
| 09/27/95 | | 4.5 | 7 | 16.8 | 0.3 | 2.2 | 1.3 | 60 | 4 | | | | 10 | -10 |
| 10/11/95 | | 4.5 | 6.2 | 26 | 0.3 | 2.5 | 1.1 | 71 | 3 | | | | 20 | -20 |
| 03/13/96 | | 4.5 | 5.8 | 16.8 | 0.3 | 0.6 | 1.9 | 40 | 3 | | | | 11 | -11 |
| 05/16/96 | | 4.7 | 7.8 | 22 | 0.3 | 0.6 | 1.6 | 31 | 3 | | | | 14 | -14 |

56 HILLIARDS TRIB. AT BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|----|------|---|---|---|-----|----|
| Min. | 0 | 6.1 | 11.6 | 0.0 | 0.1 | 0.1 | 0.2 | 27 | 3.00 | 0 | 0 | 0 | -42 | 7 |
| Max. | 0 | 6.9 | 42.0 | 5.8 | 0.4 | 0.3 | 0.5 | 71 | 8.00 | 0 | 0 | 0 | -7 | 42 |
| Range | 0 | 0.8 | 30.4 | 5.8 | 0.3 | 0.3 | 0.3 | 44 | 5.00 | 0 | 0 | 0 | 35 | 35 |
| AVERAGE | | 6.5 | 25.4 | 1 | 0.3 | 0.2 | 0.5 | 45 | 4 | | | | -25 | 25 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 6.6 | 30 | 0 | 0.3 | 0.08 | 0.5 | 37 | 3 | | | | -30 | 30 |
| 01/31/95 | | 6.5 | 17.6 | 0 | 0.13 | 0.16 | 0.17 | 38 | 4 | | | | -18 | 18 |
| 05/04/95 | | 6.7 | 17.6 | 0 | 0.3 | 0.23 | 0.5 | 47 | 8 | | | | -18 | 18 |
| 07/26/95 | | 6.6 | 32 | 0 | 0.3 | 0.15 | 0.5 | 33 | 3 | | | | -32 | 32 |
| 08/29/95 | | 6.5 | 36 | 0 | 0.3 | 0.08 | 0.5 | 66 | 3 | | | | -36 | 36 |
| 09/27/95 | | 6.9 | 42 | 0 | 0.3 | 0.11 | 0.5 | 63 | 4 | | | | -42 | 42 |
| 10/11/95 | | 6.7 | 40 | 0 | 0.3 | 0.15 | 0.5 | 71 | 3 | | | | -40 | 40 |
| 11/02/95 | | 6.4 | 32 | 0 | 0.41 | 0.34 | 0.5 | 64 | 3 | | | | -32 | 32 |
| 12/12/95 | | 6.3 | 19.6 | 0 | 0.3 | 0.1 | 0.5 | 36 | 6 | | | | -20 | 20 |
| 01/25/96 | | 6.2 | 11.6 | 1 | 0.3 | 0.12 | 0.5 | 27 | 3 | | | | -11 | 11 |
| 03/13/96 | | 6.3 | 13.2 | 0 | 0.3 | 0.12 | 0.5 | 35 | 3 | | | | -13 | 13 |
| 05/16/96 | | 6.1 | 13 | 5.8 | 0.3 | 0.18 | 0.5 | 27 | 3 | | | | -7 | 7 |

57 SOUTH TRIB TO HILLIARDS TRIB. AT HILLIARDS RD. BRIDGE

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|----|-------|---|---|---|-----|-----|
| Min. | 0 | 6.2 | 11.8 | 0.0 | 0.1 | 0.0 | 0.1 | 20 | 0.30 | 0 | 0 | 0 | -34 | -31 |
| Max. | 0 | 6.8 | 34.0 | 46.0 | 0.3 | 0.1 | 0.5 | 42 | 32.00 | 0 | 0 | 0 | 31 | 34 |
| Range | 0 | 0.6 | 22.2 | 46.0 | 0.2 | 0.0 | 0.4 | 22 | 31.70 | 0 | 0 | 0 | 65 | 65 |
| AVERAGE | | 6.5 | 21.7 | 6 | 0.3 | 0.0 | 0.5 | 29 | 7 | | | | -16 | 16 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 6.6 | 26 | 0 | 0.3 | 0.05 | 0.5 | 24 | 3 | | | | -26 | 26 |
| 01/31/95 | | 6.4 | 15.4 | 46 | 0.06 | 0.01 | 0.14 | 25 | 2 | | | | 31 | -31 |
| 05/04/95 | | 6.6 | 16.2 | 0 | 0.3 | 0.05 | 0.5 | 25 | 20 | | | | -16 | 16 |
| 07/26/95 | | 6.5 | 28 | 0 | 0.3 | 0.05 | 0.5 | 26 | 3 | | | | -28 | 28 |
| 08/29/95 | | 6.7 | 30 | 0 | 0.3 | 0.05 | 0.5 | 35 | 3 | | | | -30 | 30 |
| 09/27/95 | | 6.8 | 32 | 0 | 0.3 | 0.05 | 0.5 | 40 | 6 | | | | -32 | 32 |
| 10/11/95 | | 6.5 | 34 | 0 | 0.3 | 0.05 | 0.5 | 42 | 4 | | | | -34 | 34 |
| 12/12/95 | | 6.2 | 17.4 | 0 | 0.3 | 0.05 | 0.5 | 30 | 3 | | | | -17 | 17 |
| 01/25/96 | | 6.2 | 11.8 | 0 | 0.3 | 0.05 | 0.5 | 27 | 32 | | | | -12 | 12 |
| 03/13/96 | | 6.3 | 12.8 | 0 | 0.3 | 0.05 | 0.5 | 28 | 0.3 | | | | -13 | 13 |
| 05/16/96 | | 6.3 | 14.8 | 16.4 | 0.3 | 0.05 | 0.5 | 20 | 3 | | | | 2 | -2 |

58 DOWNSTREAM HILLIARD TRIB. BEFORE MAIN BRANCH

| | | | | | | | | | | | | | | |
|----------|-------|------|-------|--------|------|-----|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 3.00 | 0.00 | 0.00 | 0.2 | 0.3 | 0.1 | 34 | 2.00 | 0 | 0 | 0 | -18 | -150 |
| Max. | 0 | 6.60 | 19.80 | 150.00 | 24.4 | 6.9 | 4.4 | 343 | 38.00 | 0 | 0 | 0 | 150 | 18 |
| Range | 0 | 3.60 | 19.80 | 150.00 | 24.2 | 6.6 | 4.3 | 309 | 36.00 | 0 | 0 | 0 | 168 | 168 |
| AVERAGE | | 5.4 | 10.2 | 20.1 | 3.0 | 1.1 | 1.1 | 101 | 8 | | | | | |
| 75% tile | #NUM! | | | 24 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 10/19/94 | | 6.40 | 19.80 | 7.80 | 0.6 | 0.8 | 0.5 | 91 | 3.00 | | | | -12 | 12 |
| 01/31/95 | | 6.40 | 16.00 | 4.60 | 0.2 | 0.4 | 0.1 | 45 | 2.00 | | | | -11 | 11 |
| 05/04/95 | | 6.60 | 18.20 | 0.00 | 0.4 | 0.6 | 0.5 | 47 | 12.00 | | | | -18 | 18 |
| 08/29/95 | | 3.00 | 0.00 | 150.00 | 24.4 | 6.9 | 4.4 | 343 | 22.00 | | | | 150 | -150 |
| 09/14/95 | | 4.80 | 7.80 | 12.20 | 0.8 | 1.0 | 0.5 | 256 | 3.00 | | | | 4 | -4 |
| 10/12/95 | | 3.30 | 0.00 | 84.00 | 12.3 | 3.9 | 2.9 | 197 | 38.00 | | | | 84 | -84 |
| 11/02/95 | | 4.10 | 3.80 | 22.00 | 4.8 | 2.0 | 1.2 | 136 | 4.00 | | | | 18 | -18 |
| 12/12/95 | | 6.00 | 13.40 | 7.80 | 1.4 | 0.6 | 0.5 | 100 | 4.00 | | | | -6 | 6 |
| 01/25/96 | | 6.10 | 11.60 | 0.00 | 0.5 | 0.3 | 0.7 | 38 | 6.00 | | | | -12 | 12 |
| 02/22/96 | | 6.30 | 12.00 | 12.00 | 0.6 | 0.4 | 0.5 | 34 | 3.00 | | | | 0 | 0 |
| 03/19/96 | | 5.30 | 8.40 | 10.00 | 0.9 | 0.7 | 0.5 | 67 | 3.00 | | | | 2 | -2 |
| 05/16/96 | | 5.50 | 10.20 | 30.00 | 0.9 | 0.4 | 0.5 | 72 | 3.00 | | | | 20 | -20 |
| 06/26/96 | | 6.20 | 15.20 | 24.00 | 0.8 | 0.5 | 0.5 | 55 | 3.00 | | | | 9 | -9 |
| 08/15/96 | | 5.30 | 9.20 | 13.00 | 2.9 | 0.9 | 0.6 | 129 | <3 | | | | 4 | -4 |
| 09/18/96 | | 5.80 | 15.00 | 5.80 | 1.0 | 0.3 | <.50 | 42 | <3 | | | | -9 | 9 |
| 10/24/96 | | 6.10 | 16.40 | 0.00 | 0.9 | 0.4 | <.50 | 57 | <3 | | | | -16 | 16 |
| 12/19/96 | | 5.60 | 9.60 | 4.20 | 1.0 | 0.4 | <.50 | 52 | <3 | | | | -5 | 5 |
| 02/25/97 | | 5.90 | 11.80 | 6.20 | 0.5 | 0.3 | <.50 | 53 | <3 | | | | -6 | 6 |
| 03/20/97 | | 6.00 | 11.80 | 2.40 | <.30 | 0.4 | <.50 | 40 | 6.00 | | | | -9 | 9 |
| 04/15/97 | | 5.80 | 12.20 | 5.20 | 1.2 | 0.5 | <.50 | 55 | 10.00 | | | | -7 | 7 |
| 06/19/97 | | 5.60 | 8.60 | 7.20 | 1.7 | 0.8 | <.50 | 71 | <3 | | | | -1 | 1 |
| 08/20/97 | | 4.40 | 5.80 | 24.00 | 3.6 | 1.6 | 0.9 | 139 | 4.00 | | | | 18 | -18 |
| 09/17/97 | | 3.70 | 0.00 | 48.00 | 6.6 | 1.8 | 1.5 | 200 | 12.00 | | | | 48 | -48 |
| 10/15/97 | | 3.80 | 0.00 | 36.00 | 4.4 | 1.7 | 1.7 | 207 | <3 | | | | 36 | -36 |
| 12/11/97 | | 5.8 | 15.4 | 5 | 0.9 | 0.4 | <.50 | 57 | <3 | | | | -10 | 10 |
| 1/21/98 | | 5.7 | 14 | 2.2 | 0.9 | 0.4 | <.50 | 50 | <3 | | | | -12 | 12 |

58 DOWNSTREAM HILLIARD TRIB. BEFORE MAIN BRANCH

| | | | | | | | | | | | | | | |
|----------|-------|------|-------|--------|------|-----|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 3.00 | 0.00 | 0.00 | 0.2 | 0.3 | 0.1 | 34 | 2.00 | 0 | 0 | 0 | -18 | -150 |
| Max. | 0 | 6.60 | 19.80 | 150.00 | 24.4 | 6.9 | 4.4 | 343 | 38.00 | 0 | 0 | 0 | 150 | 18 |
| Range | 0 | 3.60 | 19.80 | 150.00 | 24.2 | 6.6 | 4.3 | 309 | 36.00 | 0 | 0 | 0 | 168 | 168 |
| AVERAGE | | 5.4 | 10.2 | 20.1 | 3.0 | 1.1 | 1.1 | 101 | 8 | | | | | |
| 75% tile | #NUM! | | | 24 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 10/19/94 | | 6.40 | 19.80 | 7.80 | 0.6 | 0.8 | 0.5 | 91 | 3.00 | | | | -12 | 12 |
| 01/31/95 | | 6.40 | 16.00 | 4.60 | 0.2 | 0.4 | 0.1 | 45 | 2.00 | | | | -11 | 11 |
| 05/04/95 | | 6.60 | 18.20 | 0.00 | 0.4 | 0.6 | 0.5 | 47 | 12.00 | | | | -18 | 18 |
| 08/29/95 | | 3.00 | 0.00 | 150.00 | 24.4 | 6.9 | 4.4 | 343 | 22.00 | | | | 150 | -150 |
| 09/14/95 | | 4.80 | 7.80 | 12.20 | 0.8 | 1.0 | 0.5 | 256 | 3.00 | | | | 4 | -4 |
| 10/12/95 | | 3.30 | 0.00 | 84.00 | 12.3 | 3.9 | 2.9 | 197 | 38.00 | | | | 84 | -84 |
| 11/02/95 | | 4.10 | 3.80 | 22.00 | 4.8 | 2.0 | 1.2 | 136 | 4.00 | | | | 18 | -18 |
| 12/12/95 | | 6.00 | 13.40 | 7.80 | 1.4 | 0.6 | 0.5 | 100 | 4.00 | | | | -6 | 6 |
| 01/25/96 | | 6.10 | 11.60 | 0.00 | 0.5 | 0.3 | 0.7 | 38 | 6.00 | | | | -12 | 12 |
| 02/22/96 | | 6.30 | 12.00 | 12.00 | 0.6 | 0.4 | 0.5 | 34 | 3.00 | | | | 0 | 0 |
| 03/19/96 | | 5.30 | 8.40 | 10.00 | 0.9 | 0.7 | 0.5 | 67 | 3.00 | | | | 2 | -2 |
| 05/16/96 | | 5.50 | 10.20 | 30.00 | 0.9 | 0.4 | 0.5 | 72 | 3.00 | | | | 20 | -20 |
| 06/26/96 | | 6.20 | 15.20 | 24.00 | 0.8 | 0.5 | 0.5 | 55 | 3.00 | | | | 9 | -9 |
| 08/15/96 | | 5.30 | 9.20 | 13.00 | 2.9 | 0.9 | 0.6 | 129 | <3 | | | | 4 | -4 |
| 09/18/96 | | 5.80 | 15.00 | 5.80 | 1.0 | 0.3 | <.50 | 42 | <3 | | | | -9 | 9 |
| 10/24/96 | | 6.10 | 16.40 | 0.00 | 0.9 | 0.4 | <.50 | 57 | <3 | | | | -16 | 16 |
| 12/19/96 | | 5.60 | 9.60 | 4.20 | 1.0 | 0.4 | <.50 | 52 | <3 | | | | -5 | 5 |
| 02/25/97 | | 5.90 | 11.80 | 6.20 | 0.5 | 0.3 | <.50 | 53 | <3 | | | | -6 | 6 |
| 03/20/97 | | 6.00 | 11.80 | 2.40 | <.30 | 0.4 | <.50 | 40 | 6.00 | | | | -9 | 9 |
| 04/15/97 | | 5.80 | 12.20 | 5.20 | 1.2 | 0.5 | <.50 | 55 | 10.00 | | | | -7 | 7 |
| 06/19/97 | | 5.60 | 8.60 | 7.20 | 1.7 | 0.8 | <.50 | 71 | <3 | | | | -1 | 1 |
| 08/20/97 | | 4.40 | 5.80 | 24.00 | 3.6 | 1.6 | 0.9 | 139 | 4.00 | | | | 18 | -18 |
| 09/17/97 | | 3.70 | 0.00 | 48.00 | 6.6 | 1.8 | 1.5 | 200 | 12.00 | | | | 48 | -48 |
| 10/15/97 | | 3.80 | 0.00 | 36.00 | 4.4 | 1.7 | 1.7 | 207 | <3 | | | | 36 | -36 |
| 12/11/97 | | 5.8 | 15.4 | 5 | 0.9 | 0.4 | <.50 | 57 | <3 | | | | -10 | 10 |
| 1/21/98 | | 5.7 | 14 | 2.2 | 0.9 | 0.4 | <.50 | 50 | <3 | | | | -12 | 12 |

59 MAIN BRANCH BELOW HIGGINS ROAD BRIDGE

| | | | | | | | | | | | | | | |
|----------|------|------|-------|-------|-----|-----|-----|-----|-------|----|----|---|-----|--------|
| Min. | 690 | 5.80 | 10.20 | 0.00 | 0.7 | 0.5 | 0.2 | 57 | 2.00 | 0 | 0 | 4 | -48 | -19.80 |
| Max. | 1035 | 6.70 | 48.00 | 38.00 | 9.1 | 2.1 | 1.0 | 187 | 34.00 | 17 | 32 | 6 | 20 | 48.00 |
| Range | 345 | 0.90 | 37.80 | 38.00 | 8.4 | 1.6 | 0.9 | 130 | 32.00 | 17 | 32 | 2 | 68 | 67.80 |
| AVERAGE | 863 | 6.2 | 24.5 | 6.6 | 2.0 | 1.2 | 0.5 | 115 | 11 | 1 | 2 | 5 | | |
| 75% tile | 949 | | | 7 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 6.3 | 20 | 15.2 | 4.5 | 1.5 | 0.5 | 134 | 3 | | | | -5 | 4.80 |
| 01/31/95 | | 6.2 | 15.4 | 12.4 | 3.1 | 1.0 | 0.2 | 102 | 2 | | | | -3 | 3.00 |
| 05/04/95 | | 6.3 | 15.6 | 22 | 3.6 | 0.9 | 0.5 | 101 | 16 | | | | 6 | -6.40 |
| 07/26/95 | 1035 | 6.2 | 24 | 1.4 | 2.6 | 1.8 | 0.5 | 117 | 3 | 17 | 32 | 6 | -23 | 22.60 |
| 08/29/95 | | 6.7 | 48 | 0 | 0.7 | 1.4 | 0.5 | 148 | 3 | | | | -48 | 48.00 |
| 09/14/95 | 690 | 6.5 | 46 | 0 | 0.7 | 1.8 | 0.5 | 157 | 6 | 0 | 6 | 4 | -46 | 46.00 |
| 10/18/95 | | 6.3 | 36 | 0 | 2.0 | 1.8 | 0.5 | 186 | 22 | | | | -36 | 36.00 |
| 11/02/95 | | 6.3 | 22 | 0 | 9.1 | 2.0 | 1.0 | 156 | 34 | | | | -22 | 22.00 |
| 12/12/95 | | 6.2 | 26 | 0.6 | 1.9 | 1.2 | 0.5 | 137 | 10 | | | | -25 | 25.40 |
| 01/25/96 | | 6.1 | 10.2 | 6.4 | 0.9 | 0.7 | 0.5 | 61 | 16 | | | | -4 | 3.80 |
| 02/21/96 | | 6 | 10.4 | 6.2 | 3.5 | 1.0 | 0.8 | 57 | 29 | | | | -4 | 4.20 |
| 03/13/96 | | 6.1 | 14.6 | 24 | 2.3 | 0.8 | 0.5 | 82 | 9 | | | | 9 | -9.40 |
| 03/19/96 | | 6.1 | 16 | 20 | 2.7 | 1.0 | 0.5 | 97 | 3 | | | | 4 | -4.00 |
| 05/16/96 | | 5.9 | 14.4 | 24 | 1.7 | 0.7 | 0.5 | 76 | 3 | | | | 10 | -9.60 |
| 08/26/96 | | 6.3 | 18.2 | 38 | 2.4 | 1.1 | 0.5 | 89 | 3 | | | | 20 | -19.80 |
| 07/25/96 | | 6.2 | 32 | 0 | 0.9 | 1.2 | <.50 | 118 | 8 | 0 | 0 | | -32 | 32.00 |
| 08/13/96 | | 6.2 | 36 | 0 | 1.1 | 1.5 | <.50 | 133 | 10 | 0 | 0 | | -36 | 36.00 |
| 09/16/96 | | 5.9 | 15.6 | 5 | 0.9 | 0.5 | <.50 | 57 | <3 | 0 | 0 | | -11 | 10.60 |
| 10/23/96 | | 6.4 | 20 | 7.6 | 0.9 | 0.5 | <.50 | 88 | <3 | 0 | 0 | | -12 | 12.40 |
| 12/19/96 | | 6.1 | 17 | 0 | 2.8 | 0.9 | <.50 | 96 | 14 | 0 | 0 | | -17 | 17.00 |
| 02/19/97 | | 6.1 | 17.4 | 2 | 1.4 | 1.0 | <.50 | 113 | 6 | 0 | 0 | | -15 | 15.40 |
| 03/19/97 | | 6 | 13.4 | 5.2 | 0.7 | 0.8 | <.50 | 61 | 22 | 0 | 0 | | -8 | 8.20 |
| 04/09/97 | | 6.3 | 19.2 | 7.2 | 1.4 | 1.2 | <.50 | 117 | <3 | 0 | 0 | | -12 | 12.00 |
| 05/21/97 | | 6.3 | 20 | 0.6 | 1.0 | 1.0 | <.50 | 103 | <3 | 0 | 0 | | -19 | 19.40 |
| 06/25/97 | | 6.3 | 26 | 0 | 1.3 | 1.0 | <.50 | 107 | <3 | 0 | 0 | | -26 | 26.00 |
| 07/15/97 | | 6.5 | 40 | 0 | 1.1 | 1.2 | <.50 | 161 | <3 | 0 | 0 | | -40 | 40.00 |
| 08/19/97 | | 6.5 | 38 | 0 | 2.1 | 2.1 | <.50 | 155 | <3 | 0 | 0 | | -38 | 38.00 |
| 09/09/97 | | 6.6 | 48 | 0 | 1.0 | 1.6 | <.50 | 187 | <3 | 0 | 0 | | -48 | 48.00 |
| 10/15/97 | | 6.7 | 44 | 0 | 1.3 | 1.7 | <.50 | 169 | <3 | 0 | 0 | | -44 | 44.00 |

60 MAIN BRANCH BEFORE HILLIARDS TRIB.

| | | | | | | | | | | | | | | |
|----------|-------|------|-------|-------|-----|-----|-----|-----|-------|-----|-----|----|-----|-----|
| Min. | 760 | 5.30 | 7.60 | 0.00 | 0.3 | 0.3 | 0.1 | 51 | 3.00 | 0 | 0 | 0 | -20 | -18 |
| Max. | 14300 | 6.30 | 20.00 | 28.00 | 2.8 | 1.5 | 0.5 | 236 | 24.00 | 756 | 107 | 86 | 18 | 20 |
| Range | 13540 | 1.00 | 12.40 | 28.00 | 2.5 | 1.2 | 0.4 | 185 | 21.00 | 756 | 107 | 86 | 38 | 38 |
| AVERAGE | 7530 | 5.9 | 12.2 | 8.5 | 0.9 | 0.8 | 0.5 | 123 | 9 | 255 | 38 | 43 | | |
| 75% tile | 10915 | | | 12 | | | | | | 383 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/19/94 | | 5.5 | 10.4 | 17 | 0.6 | 0.8 | 0.5 | 143 | 3.00 | 0 | 0 | 0 | 7 | -7 |
| 01/31/95 | | 5.6 | 10.6 | 17 | 2.8 | 1.0 | 0.1 | 94 | 8.00 | | | | 6 | -6 |
| 04/11/95 | | 5.9 | 9.2 | 12.2 | 1.1 | 0.5 | 0.5 | 86 | 12.00 | | | | 3 | -3 |
| 05/04/95 | | 6.1 | 11 | 24 | 1.3 | 0.8 | 0.5 | 96 | 18.00 | | | | 13 | -13 |
| 06/06/95 | 14300 | 6 | 10.2 | 4.4 | 0.6 | 0.4 | 0.5 | 59 | 16.00 | 756 | 107 | 86 | -6 | 6 |
| 06/29/95 | | 5.8 | 9.2 | 10 | 0.7 | 0.9 | 0.5 | 203 | 3.00 | | | | 1 | -1 |
| 01/00/00 | | 6.2 | 14 | 12 | 0.7 | 0.9 | 0.5 | 224 | 3.00 | | | | -2 | 2 |
| 10/12/95 | | 6 | 12.6 | 0 | 0.7 | 1.2 | 0.3 | 218 | 24.00 | | | | -13 | 13 |
| 11/02/95 | | 6 | 11.6 | 3 | 1.2 | 1.4 | 0.5 | 199 | 3.00 | | | | -9 | 9 |
| 12/12/95 | | 6 | 16 | 8.2 | 1.4 | 1.0 | 0.5 | 164 | 20.00 | | | | -8 | 8 |
| 01/25/96 | | 5.5 | 7.6 | 6.6 | 0.4 | 0.5 | 0.5 | 54 | 3.00 | | | | -1 | 1 |
| 02/22/96 | | 5.7 | 8 | 18.4 | 0.8 | 0.8 | 0.5 | 51 | 3.00 | | | | 10 | -10 |
| 03/19/96 | | 6 | 11.4 | | 1.6 | 0.9 | 0.5 | 99 | 3.00 | | | | | |
| 05/16/96 | | 5.8 | 10.2 | 28 | 0.7 | 0.6 | 0.5 | 102 | 3.00 | | | | 18 | -18 |
| 08/26/96 | | 5.8 | 10 | 16.6 | 1.2 | 0.7 | 0.5 | 81 | 3.00 | | | | 7 | -7 |
| 7/25/96 | | 5.9 | 15 | 0 | 0.6 | 0.4 | <.50 | 134 | 24 | | | | -15 | 15 |
| 8/15/96 | | 6 | 20 | 0 | 0.7 | 0.3 | <.50 | 146 | <3 | | | | -20 | 20 |
| 9/18/96 | | 5.8 | 11.4 | 7.4 | 0.8 | 0.4 | <.50 | 61 | <3 | | | | -4 | 4 |
| 10/24/96 | | 6.3 | 16.6 | 0 | 1.2 | 0.6 | <.50 | 236 | 6 | | | | -17 | 17 |
| 12/19/96 | | 5.9 | 11.2 | 8.2 | 0.7 | 0.7 | <.50 | 91 | <3 | | | | -3 | 3 |
| 2/25/97 | | 5.9 | 11 | 5.2 | 0.7 | 0.7 | <.50 | 87 | 6 | | | | -6 | 6 |
| 3/12/97 | | 6.1 | 11.4 | 4 | 0.4 | 0.8 | <.50 | 75 | <3 | | | | -7 | 7 |
| 3/20/97 | | 5.7 | 10.2 | 4.2 | 0.3 | 0.7 | <.50 | 90 | 6 | | | | -6 | 6 |
| 4/15/97 | | 6.1 | 14 | 2 | 0.5 | 0.8 | <.50 | 78 | 10 | | | | -12 | 12 |
| 6/19/97 | | 5.9 | 14.4 | 2 | 1.0 | 0.7 | <.50 | 108 | <3 | | | | -12 | 12 |
| 8/20/97 | | 5.3 | 8.8 | 16 | 2.1 | 1.5 | <.50 | 182 | <3 | | | | 7 | -7 |
| 9/17/97 | | 6 | 16.6 | 6.8 | 0.7 | 0.9 | <.50 | 187 | <3 | | | | -10 | 10 |
| 10/15/97 | 760 | 6.2 | 17.4 | 1 | 0.8 | 0.5 | <.50 | 190 | <3 | 9 | 7 | | -16 | 16 |
| 12/11/97 | | 5.6 | 11 | 5.2 | 0.6 | 0.6 | <.50 | 64 | <3 | | | | -6 | 6 |

61 HIGGINS TRIB. UPSTREAM

| | | | | | | | | | | | | | | |
|----------|------|-----|------|------|-----|-----|-----|----|-------|----|---|----|-----|----|
| Min. | 2000 | 6.2 | 10.2 | 0.0 | 0.3 | 0.1 | 0.2 | 20 | 3.00 | 67 | 8 | 12 | -26 | -7 |
| Max. | 2000 | 6.8 | 26.0 | 18.8 | 0.6 | 0.1 | 0.5 | 58 | 24.00 | 67 | 8 | 12 | 7 | 26 |
| Range | 0 | 0.6 | 15.8 | 18.8 | 0.3 | 0.1 | 0.3 | 38 | 21.00 | 0 | 0 | 0 | 33 | 33 |
| AVERAGE | 2000 | 6.4 | 15.9 | 4 | 0.3 | 0.1 | 0.5 | 35 | 8 | 67 | 8 | 12 | -12 | 12 |
| 75% tile | 0 | | | 6.2 | | | | | | 67 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 10/19/94 | | 6.5 | 20 | 0 | 0.3 | 0.07 | 0.5 | 25 | 3 | | | | -20 | 20 |
| 01/31/95 | | 6.4 | 13 | 7.4 | 0.64 | 0.08 | 0.41 | 25 | 4 | | | | -6 | 6 |
| 05/04/95 | | 6.8 | 15.8 | 0 | 0.3 | 0.09 | 0.5 | 31 | 24 | | | | -16 | 16 |
| 06/06/95 | 2000 | 6.4 | 11.8 | 2.8 | 0.35 | 0.07 | 0.5 | 28 | 10 | 67 | 8 | 12 | -9 | 9 |
| 07/26/95 | | 6.3 | 15.6 | 0 | 0.3 | 0.05 | 0.5 | 32 | 3 | | | | -16 | 16 |
| 08/29/95 | | 6.3 | 15.6 | 0 | 0.44 | 0.06 | 0.2 | 58 | 12 | | | | -16 | 16 |
| 09/27/95 | | 6.5 | 18.6 | 0 | 0.3 | 0.05 | 0.5 | 48 | 3 | | | | -19 | 19 |
| 10/18/95 | | 6.2 | 17 | 5.8 | 0.3 | 0.06 | 0.5 | 47 | 24 | | | | -11 | 11 |
| 11/02/95 | | 6.6 | 26 | 0 | 0.3 | 0.05 | 0.5 | 43 | 3 | | | | -26 | 26 |
| 12/12/95 | | 6.3 | 15.6 | 0.4 | 0.3 | 0.06 | 0.5 | 37 | 3 | | | | -15 | 15 |
| 02/22/96 | | 6.3 | 10.2 | 7.4 | 0.3 | 0.14 | 0.5 | 20 | 3 | | | | -3 | 3 |
| 03/19/96 | | 6.2 | 11.6 | 18.8 | 0.3 | 0.08 | 0.5 | 28 | 3 | | | | 7 | -7 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

62 DOWNSTREAM HIGGINS TRIB.

| | | | | | | | | | | | | | | |
|----------|------|-----|------|------|-----|-----|-----|-----|-------|-----|----|----|-----|-----|
| Min. | 120 | 3.5 | 0.0 | 2.0 | 0.5 | 0.3 | 0.2 | 22 | 3.00 | 11 | 4 | 1 | -18 | -54 |
| Max. | 2600 | 6.3 | 20.0 | 54.0 | 8.6 | 1.5 | 0.5 | 280 | 34.00 | 213 | 21 | 16 | 54 | 18 |
| Range | 2480 | 2.8 | 20.0 | 52.0 | 8.1 | 1.2 | 0.4 | 258 | 31.00 | 201 | 17 | 15 | 72 | 72 |
| AVERAGE | 1360 | 5.5 | 8.6 | 19 | 2.7 | 0.7 | 0.5 | 115 | 8 | 112 | 13 | 8 | 10 | -10 |
| 75% tile | 0 | | | 25.0 | | | | | | 162 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al.load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|--------------|
| 10/19/94 | | 5.9 | 12 | 17.6 | 2.95 | 0.82 | 0.5 | 119 | 3 | | | | 6 | -6 |
| 01/31/95 | | 6 | 11 | 12.4 | 1.26 | 0.38 | 0.19 | 75 | 4 | | | | 1 | -1 |
| 05/04/95 | | 6.1 | 10.8 | 22 | 1.19 | 0.52 | 0.5 | 76 | 6 | | | | 11 | -11 |
| 06/06/95 | 2600 | 6.2 | 10 | 6.8 | 0.68 | 0.35 | 0.5 | 50 | 10 | 213 | 21 | 16 | -3 | 3 |
| 07/26/95 | 120 | 5.4 | 7.8 | 7.8 | 2.99 | 0.71 | 0.5 | 120 | 8 | 11 | 4 | 1 | 0 | 0 |
| 08/29/95 | | 3.5 | 0 | 34 | 6.02 | 1.5 | 0.19 | 240 | 20 | | | | 34 | -34 |
| 09/27/95 | | 3.6 | 0 | 54 | 8.56 | 1.53 | 0.5 | 280 | 3 | | | | 54 | -54 |
| 10/18/95 | | 3.9 | 0 | 36 | 7.75 | 1.39 | 0.54 | 271 | 34 | | | | 36 | -36 |
| 11/02/95 | | 6.3 | 20 | 2 | 2.46 | 0.48 | 0.5 | 103 | 8 | | | | -18 | 18 |
| 12/12/95 | | 5.7 | 9.4 | 8.6 | 2.39 | 0.75 | 0.5 | 127 | 3 | | | | -1 | 1 |
| 01/25/96 | | 5.9 | 8.6 | 7.4 | 0.49 | 0.3 | 0.5 | 47 | 3 | | | | -1 | 1 |
| 02/22/96 | | 6 | 9.2 | 9.8 | 0.63 | 0.3 | 0.5 | 22 | 9 | | | | 1 | -1 |
| 03/19/96 | | 5.8 | 9.4 | 26 | 0.9 | 0.49 | 0.5 | 65 | 3 | | | | 17 | -17 |
| 05/16/96 | | 5.7 | 10 | 24 | 0.77 | 0.47 | 0.5 | 66 | 3 | | | | 14 | -14 |
| 06/26/96 | | 5.9 | 10.4 | 15 | 1.09 | 0.53 | 0.5 | 61 | 3 | | | | 5 | -5 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

63 MAIN BRANCH BELOW HILLIARDS TRIB. UPSTREAM FROM FERRIS TREATMENT SYSTEMS

| | | | | | | | | | | | | | | |
|----------|---|------|-------|--------|------|-----|-----|-----|-------|---|---|---|-----|--------|
| Min. | 0 | 3.20 | 0.00 | 0.00 | 0.5 | 0.4 | 0.3 | 51 | 2.00 | 0 | 0 | 0 | -16 | -1.44 |
| Max. | 0 | 6.20 | 16.80 | 126.00 | 16.6 | 7.0 | 3.7 | 293 | 34.00 | 0 | 0 | 0 | 126 | 109.40 |
| Range | 0 | 3.00 | 16.80 | 126.00 | 16.1 | 6.6 | 3.4 | 242 | 32.00 | 0 | 0 | 0 | 142 | 110.84 |
| AVERAGE | | 5.5 | 9.9 | 17.0 | 2.5 | 1.1 | 0.8 | 121 | 10 | | | | | |
| 75% tile | | | | 21 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 10/19/94 | | 4.1 | 3.8 | 34 | 3.5 | 1.2 | 0.8 | 149 | 6 | | | | 30 | 30.46 |
| 01/31/95 | | 5.4 | 10.4 | 10.8 | 2.7 | 0.9 | 0.3 | 72 | 2 | | | | 0 | 8.09 |
| 05/04/95 | | 5.9 | 10.4 | 24 | 1.8 | 0.7 | 0.5 | 88 | 24 | | | | 14 | 22.16 |
| 08/29/95 | | 3.5 | 0 | 40 | 6.1 | 2.1 | 1.0 | 253 | 12 | | | | 40 | 33.94 |
| 08/14/95 | | 3.2 | 0 | 126 | 16.6 | 7.0 | 3.7 | 293 | 8 | | | | 126 | 109.40 |
| 10/12/95 | | 4.3 | 5 | 34 | 4.3 | 1.8 | 0.9 | 226 | 34 | | | | 29 | 29.70 |
| 11/02/95 | | 5.3 | 9 | 10.2 | 2.8 | 1.6 | 0.5 | 198 | 8 | | | | 1 | 7.36 |
| 12/12/95 | | 6 | 16.8 | 10 | 3.6 | 0.9 | 0.5 | 158 | 12 | | | | -7 | 6.44 |
| 01/25/96 | | 5.7 | 7.8 | 6.8 | 0.5 | 0.5 | 0.5 | 51 | 3 | | | | -1 | 6.34 |
| 02/22/96 | | 5.7 | 8.4 | 19.2 | 1.0 | 0.8 | 0.5 | 59 | 3 | | | | 11 | 18.21 |
| 03/19/96 | | 5.9 | 10.6 | 30 | 1.5 | 0.9 | 0.5 | 124 | 3 | | | | 19 | 28.47 |
| 06/26/96 | | 5.9 | 11 | 15.6 | 1.2 | 0.7 | 0.5 | 76 | 3 | | | | 5 | 14.42 |
| 07/25/96 | | 5.7 | 11.8 | 2.8 | 1.7 | 0.6 | <.50 | 118 | 4 | | | | -9 | 1.15 |
| 08/15/96 | | 5.8 | 14.4 | 3.8 | 1.7 | 0.6 | <.50 | 113 | <3 | | | | -11 | 2.08 |
| 09/18/96 | | 5.9 | 12 | 5.4 | 1.1 | 0.4 | <.50 | 59 | <3 | | | | -7 | 4.33 |
| 10/24/96 | | 6.2 | 15.6 | 0 | 1.0 | 0.5 | <.50 | 83 | 10 | | | | -16 | -1.04 |
| 12/19/96 | | 5.8 | 10.4 | 9.4 | 1.0 | 0.6 | <.50 | 84 | <3 | | | | -1 | 8.45 |
| 02/25/97 | | 5.8 | 10.8 | 6.2 | 1.0 | 0.6 | <.50 | 78 | 4 | | | | -5 | 5.22 |
| 03/12/97 | | 6 | 11 | 4.2 | 0.6 | 0.7 | <.50 | 70 | <3 | | | | -7 | 3.58 |
| 03/20/97 | | 5.6 | 9.6 | 5 | 0.8 | 0.7 | <.50 | 74 | 24 | | | | -5 | 4.21 |
| 04/15/97 | | 6.1 | 13.6 | 2.8 | 0.9 | 0.7 | <.50 | 70 | <3 | | | | -11 | 1.90 |
| 06/19/97 | | 5.8 | 11.6 | 1.6 | 3.0 | 0.8 | 0.8 | 97 | <3 | | | | -10 | -1.44 |
| 08/20/97 | | 5.6 | 10.6 | 15 | 2.5 | 1.5 | <.50 | 171 | <3 | | | | 4 | 12.53 |
| 09/17/97 | | 5.1 | 9 | 22 | 2.4 | 1.2 | <.50 | 197 | <3 | | | | 13 | 19.65 |
| 10/08/97 | | 5.4 | 9.8 | 11.8 | 1.7 | 1.0 | <.50 | 178 | <3 | | | | 2 | 10.06 |
| 12/04/97 | | 5.9 | 13.2 | 3.6 | 0.9 | 0.7 | <.50 | 72 | <3 | | | | -10 | 2.72 |
| 12/11/97 | | 5.7 | 11.8 | 4.4 | 0.8 | 0.5 | <.50 | 64 | <3 | | | | -7 | 3.64 |

STREAM STATION MAI RANCH SLIPPERY ROCK

64 MAIN BRANCH DOWNSTREAM FROM FERRIS TREATMENT SYSTEMS

| | | | | | | | | | | | | | | |
|----------|-------|------|-------|-------|-----|-----|-----|-----|-------|------|-----|-----|-----|-----|
| Min. | 24000 | 3.50 | 0.00 | 2.40 | 0.4 | 0.4 | 0.5 | 53 | 3.00 | 2481 | 150 | 144 | -11 | -44 |
| Max. | 24000 | 6.10 | 17.40 | 44.00 | 2.3 | 2.5 | 1.4 | 288 | 22.00 | 2481 | 150 | 144 | 44 | 11 |
| Range | 0 | 2.60 | 17.40 | 41.60 | 2.0 | 2.1 | 1.0 | 235 | 19.00 | 0 | 0 | 0 | 55 | 55 |
| AVERAGE | 24000 | 5.2 | 8.6 | 15.3 | 1.1 | 1.0 | 0.7 | 125 | 6 | 2481 | 150 | 144 | | |
| 75% tile | 24000 | | | 22 | | | | | | 2481 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Allload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|----------------|---------------|--------------|
| 10/19/94 | | 3.9 | 0 | 40 | 1.5 | 1.7 | 1.4 | 171 | 3 | | | | 40 | -40 |
| 01/31/95 | | 4.9 | 9.2 | 17.8 | 2.3 | 1.0 | 0.5 | 72 | 4 | | | | 9 | -9 |
| 05/04/95 | | 5.1 | 8.6 | 26 | 1.2 | 0.8 | 0.5 | 115 | 22 | | | | 17 | -17 |
| 06/06/95 | 24000 | 5.6 | 8.2 | 8.6 | 0.5 | 0.4 | 0.5 | 61 | 3 | 2481 | 150 | 144 | 0 | 0 |
| 08/29/95 | | 3.5 | 0 | 38 | 1.7 | 2.1 | 1.3 | 258 | 3 | | | | 38 | -38 |
| 09/14/95 | | 3.5 | 0 | 44 | 1.4 | 2.5 | 1.2 | 288 | 8 | | | | 44 | -44 |
| 10/12/95 | | 3.9 | 0 | 32 | 0.9 | 2.0 | 0.9 | 224 | 6 | | | | 32 | -32 |
| 11/02/95 | | 4.1 | 3.8 | 22 | 0.8 | 1.8 | 0.8 | 201 | 3 | | | | 18 | -18 |
| 12/12/95 | | 5.9 | 12.6 | 10.4 | 1.5 | 0.9 | 0.5 | 160 | 6 | | | | -2 | 2 |
| 01/25/96 | | 5.4 | 8.6 | 8.4 | 0.4 | 0.5 | 0.5 | 53 | 4 | | | | 0 | 0 |
| 02/22/96 | | 5.1 | 7 | 19 | 0.6 | 0.8 | 0.5 | 54 | 3 | | | | 12 | -12 |
| 05/16/96 | | 5.5 | 9.6 | 28 | 1.1 | 0.5 | 0.5 | 79 | 3 | | | | 18 | -18 |
| 05/23/96 | | 4.9 | 7.2 | 9.8 | 0.6 | 0.7 | 0.5 | 126 | 3 | | | | 3 | -3 |
| 06/26/96 | | 5.6 | 9.6 | 20 | 1.0 | 0.7 | 0.5 | 79 | 3 | | | | 10 | -10 |
| 07/25/96 | | 5.5 | 9.8 | 6.6 | 1.5 | 0.7 | <.50 | 121 | <3 | | | | -3 | 3 |
| 08/15/96 | | 5.7 | 11.4 | 6 | 1.3 | 0.6 | <.50 | 119 | <3 | | | | -5 | 5 |
| 09/18/96 | | 5.5 | 9.2 | 6 | 0.6 | 0.4 | <.50 | 53 | <3 | | | | -3 | 3 |
| 10/29/96 | | 6.1 | 13 | 4.6 | 1.0 | 0.6 | <.50 | 85 | 10 | | | | -8 | 8 |
| 12/19/96 | | 5.6 | 13.8 | 7.2 | 0.8 | 0.6 | <.50 | 85 | <3 | | | | -7 | 7 |
| 02/19/97 | | 5.4 | 9.6 | 18.6 | 1.4 | 0.9 | <.50 | 101 | <3 | | | | 9 | -9 |
| 03/12/97 | | 5.6 | 9.4 | 7.2 | 0.8 | 0.7 | <.50 | 72 | <3 | | | | -2 | 2 |
| 03/20/97 | | 5.2 | 9.2 | 5.2 | 0.7 | 0.7 | <.50 | 80 | 10 | | | | -4 | 4 |
| 04/15/97 | | 6 | 11.4 | 2.4 | 0.8 | 0.7 | <.50 | 75 | <3 | | | | -9 | 9 |
| 07/10/97 | | 4.3 | 3.8 | 17 | 1.3 | 0.9 | 0.7 | 176 | <3 | | | | 13 | -13 |
| 08/20/97 | | 5.1 | 8.4 | 22 | 2.2 | 1.8 | <.50 | 185 | <3 | | | | 14 | -14 |
| 09/17/97 | | 5.1 | 8.2 | 15 | 1.1 | 1.4 | <.50 | 214 | 12 | | | | 7 | -7 |
| 10/08/97 | | 5.8 | 15.6 | 4.4 | 1.0 | 1.1 | <.50 | 182 | <3 | | | | -11 | 11 |
| 12/4/97 | | 6 | 13.8 | 2.4 | 1.3 | 0.8 | <.50 | 86 | <3 | | | | -11 | 11 |
| 12/11/97 | | 5.5 | 10.6 | 4.4 | 1.0 | 0.6 | <.50 | 66 | <3 | | | | -6 | 6 |
| 1/23/98 | | 6.1 | 17.4 | 6.6 | 1.8 | 1.3 | <.50 | 97 | <3 | | | | -11 | 11 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

65 MAIN BRANCH BEHIND BOYERS STORTAMEN BUILDING, FINAL DOWNSTREAM POINT.

| | | | | | | | | | | | | | | |
|----------|------|------|-------|-------|-----|-----|-----|-----|-------|---|----|---|-----|-----|
| Min. | 3200 | 5.80 | 11.60 | 0.00 | 0.4 | 1.1 | 0.2 | 153 | 3.00 | 0 | 32 | 0 | -32 | -11 |
| Max. | 3200 | 6.50 | 32.00 | 24.00 | 1.1 | 7.2 | 0.5 | 408 | 16.00 | 0 | 32 | 0 | 11 | 32 |
| Range | 0 | 0.70 | 20.40 | 24.00 | 0.7 | 6.2 | 0.3 | 255 | 13.00 | 0 | 0 | 0 | 43 | 43 |
| AVERAGE | 3200 | 6.1 | 21.8 | 6.8 | 0.8 | 4.9 | 0.5 | 284 | 5 | 0 | 32 | | | |
| 75% tile | 3200 | | | 9 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 10/20/94 | | 5.9 | 11.6 | 0 | 0.5 | 1.1 | 0.5 | 177 | 3 | | | | -12 | 12 |
| 05/04/95 | | 6.2 | 12.6 | 24 | 1.1 | 4.7 | 0.5 | 153 | 16 | | | | 11 | -11 |
| 08/29/95 | | 6.2 | 28 | 7.4 | 0.4 | 7.2 | 0.5 | 408 | 3 | | | | -21 | 21 |
| 09/27/95 | | 6.5 | 24 | 0 | 0.6 | 6.2 | 0.5 | 404 | 3 | | | | -24 | 24 |
| 10/12/95 | | 6.2 | 28 | 9.2 | 0.8 | 6.2 | 0.2 | 347 | 8 | | | | -19 | 19 |
| 12/12/95 | | 6.1 | 22 | 12.2 | 1.1 | 4.4 | 0.5 | 273 | 3 | | | | -10 | 10 |
| 08/15/96 | | 6 | 22 | 4.2 | 1.0 | 5.3 | <.50 | 278 | <3 | | | | -18 | 18 |
| 08/15/96 | | 6 | 22 | 4.2 | 1.0 | 5.3 | 0.5 | 278 | 3 | | | | -18 | 18 |
| 10/15/97 | 3200 | 6.5 | 32 | 0 | 0.8 | 5.9 | <.50 | 358 | 4 | 0 | 32 | | -32 | 32 |
| 12/11/97 | | 5.8 | 15.4 | 6.6 | 0.4 | 2.5 | <.50 | 165 | <3 | | | | -9 | 9 |

66 DOWNSTREAM WISKERVILLE TRIB.

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 6.6 | 30.0 | 0.0 | 0.2 | 0.7 | 0.1 | 86 | 3.00 | 0 | 0 | 0 | -72 | 30 |
| Max. | 0 | 7.2 | 72.0 | 0.0 | 0.7 | 1.8 | 0.5 | 365 | 10.00 | 0 | 0 | 0 | -30 | 72 |
| Range | 0 | 0.6 | 42.0 | 0.0 | 0.5 | 1.1 | 0.4 | 279 | 7.00 | 0 | 0 | 0 | 42 | 42 |
| AVERAGE | | 6.9 | 54.3 | 0 | 0.4 | 1.3 | 0.4 | 251 | 5 | | | | -54 | 54 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|--------------|
| 08/30/94 | | 6.9 | 30 | 0 | 0.68 | 1.84 | 0.5 | 86 | 3 | | | | -30 | 30 |
| 05/04/95 | | 7.2 | 34 | 0 | 0.3 | 0.92 | 0.5 | 208 | 3 | | | | -34 | 34 |
| 07/26/95 | | 6.6 | 56 | 0 | 0.5 | 1.48 | 0.5 | 278 | 3 | | | | -56 | 56 |
| 08/29/95 | | 6.8 | 72 | 0 | 0.43 | 1.62 | 0.5 | 365 | 8 | | | | -72 | 72 |
| 09/14/95 | | 7.1 | 62 | 0 | 0.3 | 1.14 | 0.5 | 223 | 3 | | | | -62 | 62 |
| 10/12/95 | | 6.7 | 72 | 0 | 0.2 | 0.72 | 0.14 | 345 | 10 | | | | -72 | 72 |

the 6/69
have same analysis

STREAM STATION MAIN BRANCH SLIPPERY ROCK

67 MAIN BRANCH ABOVE SUNBEAM PREP. PLANT

| | | | | | | | | | | | | | | |
|----------|---|------|-------|--------|-----|-----|-----|-----|-------|---|---|---|-----|------|
| Min. | 0 | 5.60 | 8.80 | 0.00 | 0.4 | 0.4 | 0.3 | 55 | 3.00 | 0 | 0 | 0 | -26 | -166 |
| Max. | 0 | 6.30 | 26.00 | 180.00 | 3.1 | 6.4 | 0.8 | 361 | 10.00 | 0 | 0 | 0 | 166 | 26 |
| Range | 0 | 0.70 | 17.20 | 180.00 | 2.7 | 6.0 | 0.5 | 306 | 7.00 | 0 | 0 | 0 | 192 | 192 |
| AVERAGE | | 6.0 | 14.7 | 16.6 | 1.2 | 1.2 | 0.5 | 154 | 6 | | | | | |
| 75% tile | | | | 15 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 09/28/94 | | 6 | 12.8 | 0.4 | 0.8 | 0.9 | 0.5 | 114 | 3 | | | | -12 | 12 |
| 01/31/95 | | 5.6 | 10.4 | 16 | 0.7 | 0.7 | 0.4 | 98 | 4 | | | | 6 | -6 |
| 05/04/95 | | 6 | 10.6 | 22 | 0.6 | 0.8 | 0.5 | 116 | 10 | | | | 11 | -11 |
| 08/29/95 | | 6.1 | 19.6 | 1 | 0.8 | 1.3 | 0.5 | 250 | 10 | | | | -19 | 19 |
| 09/27/95 | | 6.3 | 15.4 | 3.8 | 0.5 | 1.2 | 0.5 | 220 | 3 | | | | -12 | 12 |
| 10/12/95 | | 5.8 | 12 | 11.6 | 0.7 | 1.8 | 0.3 | 208 | 10 | | | | 0 | 0 |
| 11/02/95 | | 5.6 | 10.6 | 10.6 | 0.5 | 1.6 | 0.5 | 215 | 8 | | | | 0 | 0 |
| 12/12/95 | | 5.6 | 11.6 | 14.6 | 0.7 | 0.8 | 0.5 | 159 | 3 | | | | 3 | -3 |
| 02/22/96 | | 5.9 | 8.8 | 16.4 | 0.5 | 0.7 | 0.5 | 55 | 3 | | | | 8 | -8 |
| 05/23/96 | | 6 | 12.2 | 7 | 0.7 | 0.6 | 0.5 | 108 | 3 | | | | -5 | 5 |
| 06/26/96 | | 5.9 | 13.8 | 180 | 1.9 | 0.6 | 0.5 | 108 | 3 | | | | 166 | -166 |
| 07/25/96 | | 5.9 | 16.4 | 0 | 2.7 | 0.6 | <.50 | 129 | <3 | | | | -16 | 16 |
| 08/15/96 | | 5.9 | 19.4 | 1.2 | 2.7 | 0.5 | <.50 | 143 | <3 | | | | -18 | 18 |
| 10/29/96 | | 6.2 | 15.2 | 2 | 1.1 | 0.4 | <.50 | 94 | <3 | | | | -13 | 13 |
| 11/15/96 | | 6 | 12.6 | 18.6 | 0.9 | 6.4 | 0.8 | 361 | <3 | | | | 6 | -6 |
| 03/25/97 | | 6.2 | 12 | 7.4 | 0.4 | 0.8 | <.50 | 89 | 8 | | | | -5 | 5 |
| 06/26/97 | | 6.3 | 24 | 0.4 | 2.4 | 1.4 | <.50 | 138 | <3 | | | | -24 | 24 |
| 07/10/97 | | 6.2 | 26 | 0 | 3.1 | 1.3 | <.50 | 177 | 8 | | | | -26 | 26 |
| 12/11/97 | | 6 | 15.6 | 2.4 | 0.5 | 0.5 | <.50 | 141 | <3 | | | | -13 | 13 |

68 SEATON CREEK BEFORE CONFLUENT WITH MAIN BRANCH SLIPPERY ROCK CREEK

| | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|------|-----|-----|-------|---|---|---|-----|-----|
| Min. | 0 | 4.9 | 7.2 | 0.0 | 0.3 | 0.3 | 0.5 | 71 | 3.00 | 0 | 0 | 0 | -20 | -50 |
| Max. | 0 | 6.5 | 28.0 | 60.0 | 1.9 | 14.1 | 2.1 | 683 | 24.00 | 0 | 0 | 0 | 50 | 20 |
| Range | 0 | 1.6 | 20.8 | 60.0 | 1.6 | 13.8 | 1.6 | 612 | 21.00 | 0 | 0 | 0 | 70 | 70 |
| AVERAGE | | 5.7 | 13.5 | 19.6 | 1.0 | 8.8 | 1.1 | 378 | 7 | | | | 6 | -6 |
| 75% tile | | | | 24.0 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 9/28/94 | | 5.9 | 12.8 | 3.2 | 0.8 | 12.2 | 0.5 | 406 | 3 | | | | -10 | 10 |
| 8/29/95 | | 5.8 | 11.6 | 13.2 | 1.0 | 10.8 | 0.5 | 432 | 18 | | | | 2 | -2 |
| 8/22/95 | | 6.0 | 24.0 | 16.8 | 0.3 | 13.7 | 0.5 | 626 | 3 | | | | -7 | 7 |
| 9/12/95 | | 6.3 | 28.0 | 15.0 | 0.3 | 12.8 | 0.5 | 683 | 4 | | | | -13 | 13 |
| 10/11/95 | | 6.2 | 24.0 | 11.4 | 0.3 | 11.4 | 0.5 | 581 | 3 | | | | -13 | 13 |
| 11/7/95 | | 6.1 | 19.0 | 5.0 | 0.8 | 8.8 | 0.5 | 436 | 3 | | | | -14 | 14 |
| 11/15/95 | | 5.7 | 11.0 | 5.8 | 1.9 | 3.5 | 1.0 | 163 | 3 | | | | -5 | 5 |
| 11/20/95 | | 5.9 | 11.8 | 11.0 | 0.6 | 6.4 | 0.7 | 272 | 4 | | | | -1 | 1 |
| 12/5/95 | | 6.5 | 20.0 | 0.0 | 0.8 | 7.1 | 0.7 | 335 | 3 | | | | -20 | 20 |
| 2/21/96 | | 4.9 | 7.2 | 19.6 | 1.9 | 6.0 | 1.9 | 204 | 14 | | | | 12 | -12 |
| 2/22/96 | | 4.9 | 7.2 | 13.4 | 1.3 | 6.3 | 1.8 | 226 | 4 | | | | 6 | -6 |
| 3/14/96 | | 5.3 | 10.2 | 60.0 | 1.8 | 9.3 | 2.1 | 347 | 14 | | | | 50 | -50 |
| 3/27/96 | | 5.4 | 9.0 | 36.0 | 1.7 | 9.1 | 1.9 | 330 | 3 | | | | 27 | -27 |
| 4/18/96 | | 5.0 | 7.8 | 30.0 | 1.0 | 9.2 | 1.7 | 389 | 3 | | | | 22 | -22 |
| 5/8/96 | | 5.4 | 8.2 | 56.0 | 0.8 | 7.4 | 1.0 | 320 | 3 | | | | 48 | -48 |
| 5/30/96 | | 5.5 | 10.0 | 24.0 | 0.8 | 12.6 | 0.7 | 453 | 3 | | | | 14 | -14 |
| 6/18/96 | | 5.4 | 9.8 | 46.0 | 1.7 | 14.0 | 0.9 | 554 | 24 | | | | 36 | -36 |
| 6/27/96 | | 5.8 | 10.8 | 12.8 | 0.9 | 8.8 | 0.6 | 312 | 3 | | | | 2 | -2 |
| 7/10/96 | | 6.2 | 13.8 | 24.0 | 0.5 | 11.8 | <.50 | 547 | <3 | | | | 10 | -10 |
| 7/31/96 | | 5.9 | 11.8 | 36.0 | 0.5 | 14.1 | <.50 | 590 | <3 | | | | 24 | -24 |
| 10/16/96 | | 6.3 | 22.0 | 15.8 | 0.5 | 10.0 | <.50 | 488 | 4 | | | | -6 | 6 |
| 11/15/96 | | 6.2 | 13.0 | 3.4 | 0.7 | 0.3 | <.50 | 71 | <3 | | | | -10 | 10 |
| 11/26/96 | | 5.8 | 12.4 | 24.0 | 1.7 | 7.4 | 1.1 | 268 | <3 | | | | 12 | -12 |
| 1/6/97 | | 5.2 | 8.8 | 2.2 | 1.1 | 9.1 | 2.0 | 322 | 6 | | | | -7 | 7 |
| 3/12/97 | | 5.5 | 10.0 | 24.0 | 1.0 | 7.2 | 1.7 | 296 | 14 | | | | 14 | -14 |
| 9/30/97 | | 6.0 | 17.8 | 0.0 | 1.0 | 0.7 | <.50 | 180 | <3 | | | | -18 | 18 |

69 WISKERVILLE TRIB. BELOW STATE GAME PONDS

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 6.6 | 30.0 | 0.0 | 0.2 | 0.7 | 0.1 | 86 | 3.00 | 0 | 0 | 0 | -72 | 30 |
| Max. | 0 | 7.2 | 72.0 | 0.0 | 0.7 | 1.8 | 0.5 | 365 | 10.00 | 0 | 0 | 0 | -30 | 72 |
| Range | 0 | 0.6 | 42.0 | 0.0 | 0.5 | 1.1 | 0.4 | 279 | 7.00 | 0 | 0 | 0 | 42 | 42 |
| AVERAGE | | 6.9 | 54.3 | 0 | 0.4 | 1.3 | 0.4 | 251 | 5 | | | | -54 | 54 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 08/30/94 | | 6.9 | 30 | 0 | 0.68 | 1.84 | 0.5 | 86 | 3 | | | | -30 | 30 |
| 05/04/95 | | 7.2 | 34 | 0 | 0.3 | 0.92 | 0.5 | 208 | 3 | | | | -34 | 34 |
| 07/26/95 | | 6.6 | 56 | 0 | 0.5 | 1.48 | 0.5 | 278 | 3 | | | | -56 | 56 |
| 08/29/95 | | 6.8 | 72 | 0 | 0.43 | 1.62 | 0.5 | 365 | 8 | | | | -72 | 72 |
| 09/14/95 | | 7.1 | 62 | 0 | 0.3 | 1.14 | 0.5 | 223 | 3 | | | | -62 | 62 |
| 10/12/95 | | 6.7 | 72 | 0 | 0.2 | 0.72 | 0.14 | 345 | 10 | | | | -72 | 72 |

66 & 69
have same
analyses

STREAM STATION MAIN BRANCH SLIPPERY ROCK

71 WISKERVILLE TRIB. EAST BRANCH

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 6.2 | 17.4 | 0.0 | 0.1 | 1.6 | 0.1 | 130 | 3.00 | 0 | 0 | 0 | -26 | 17 |
| Max. | 0 | 6.6 | 26.0 | 3.0 | 0.3 | 3.1 | 0.5 | 466 | 10.00 | 0 | 0 | 0 | -17 | 26 |
| Range | 0 | 0.4 | 8.6 | 3.0 | 0.2 | 1.5 | 0.4 | 336 | 7.00 | 0 | 0 | 0 | 9 | 9 |
| AVERAGE | | 6.4 | 23.4 | 1 | 0.3 | 2.4 | 0.4 | 361 | 6 | | | | -23 | 23 |
| 75% tile | | | | 0.8 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 05/04/95 | | 6.6 | 17.4 | 0 | 0.3 | 1.56 | 0.5 | 130 | 8 | | | | -17 | 17 |
| 07/26/95 | | 6.3 | 26 | 0 | 0.3 | 2.36 | 0.5 | 382 | 3 | | | | -26 | 26 |
| 08/29/95 | | 6.2 | 24 | 0 | 0.31 | 3.07 | 0.5 | 466 | 3 | | | | -24 | 24 |
| 10/12/95 | | 6.3 | 26 | 3 | 0.12 | 2.57 | 0.14 | 465 | 10 | | | | -23 | 23 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

72 WISKERVILLE TRIB. WEST BRANCH

| | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|-----|-------|---|---|---|-----|----|
| Min. | 0 | 6.6 | 52.0 | 0.0 | 0.1 | 0.1 | 0.2 | 158 | 3.00 | 0 | 0 | 0 | -86 | 52 |
| Max. | 0 | 8.7 | 86.0 | 0.0 | 0.4 | 0.3 | 0.5 | 391 | 26.00 | 0 | 0 | 0 | -52 | 86 |
| Range | 0 | 2.1 | 34.0 | 0.0 | 0.3 | 0.2 | 0.3 | 233 | 23.00 | 0 | 0 | 0 | 34 | 34 |
| AVERAGE | | 7.3 | 68.0 | 0 | 0.3 | 0.2 | 0.4 | 260 | 12 | | | | -68 | 68 |
| 75% tile | | | | 0.0 | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 05/04/95 | | 8.7 | 54 | 0 | 0.37 | 0.27 | 0.5 | 158 | 18 | | | | -54 | 54 |
| 07/26/95 | | 6.9 | 66 | 0 | 0.31 | 0.29 | 0.5 | 301 | 3 | | | | -66 | 66 |
| 08/29/95 | | 7.3 | 86 | 0 | 0.3 | 0.16 | 0.5 | 391 | 3 | | | | -86 | 86 |
| 09/14/95 | | 6.6 | 52 | 0 | 0.3 | 0.13 | 0.5 | 159 | 26 | | | | -52 | 52 |
| 10/12/95 | | 6.9 | 82 | 0 | 0.1 | 0.09 | 0.18 | 292 | 12 | | | | -82 | 82 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

73 SOUTH TRIB. ABOVE GOFF JUNCTION

| | | | | | | | | | | | | | | | |
|----------|---|-----|------|------|-----|-----|-----|-----|-------|------|---|---|-----|-----|---|
| Min. | 0 | 6.4 | 18.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 20 | 2.00 | 0 | 0 | 0 | -20 | 3 |
| Max. | 0 | 6.7 | 20.0 | 15.6 | 0.3 | 0.1 | 0.5 | 25 | 18.00 | 0 | 0 | 0 | -3 | 20 | |
| Range | 0 | 0.3 | 1.8 | 15.6 | 0.2 | 0.0 | 0.4 | 5 | 16.00 | 0 | 0 | 0 | 17 | 17 | |
| AVERAGE | | 6.6 | 19.1 | 8 | 0.2 | 0.1 | 0.3 | 23 | 10 | | | | -11 | 11 | |
| 75% tile | | | | 11.7 | | | | | | | | | | | |

| Date | Flow | Lab. | Alk. | Acidity | Iron | Mang. | Al. | Sulfate | Susp.S. | Acid Load | Iron Load | Al.load | Net Acid | Net Alk |
|----------|-------|------|------|---------|------|-------|------|---------|---------|-----------|-----------|---------|----------|---------|
| Sampled | (gpm) | pH | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | lb/day | lb/day | lb/day | mg/L | mg/L |
| 12/21/94 | | 6.4 | 18.2 | 15.6 | 0.12 | 0.04 | 0.14 | 20 | 2 | | | | -3 | 3 |
| 05/04/95 | | 6.7 | 20 | 0 | 0.34 | 0.08 | 0.5 | 25 | 18 | | | | -20 | 20 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

75 SNOW MOBILE CLUB TRIB. DOWNSTREAM

| | | | | | | | | | | | | | | | |
|----------|---|-----|------|-----|-----|-----|-----|-----|-------|------|---|---|---|-----|----|
| Min. | 0 | 6.4 | 20.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 30 | 2.00 | 0 | 0 | 0 | -94 | 20 |
| Max. | 0 | 7.7 | 94.0 | 0.0 | 1.1 | 0.1 | 0.5 | 135 | 22.00 | 0 | 0 | 0 | 0 | -20 | 94 |
| Range | 0 | 1.3 | 74.0 | 0.0 | 1.0 | 0.1 | 0.4 | 105 | 20.00 | 0 | 0 | 0 | 0 | 74 | 74 |
| AVERAGE | | 6.8 | 50.4 | 0 | 0.4 | 0.1 | 0.4 | 65 | 6 | | | | | -50 | 50 |
| 75% tile | | | | 0.0 | | | | | | | | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|----------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 12/21/94 | | 6.6 | 32 | 0 | 0.09 | 0.02 | 0.14 | 31 | 12 | | | | -32 | 32 |
| 01/31/95 | | 6.7 | 32 | 0 | 0.15 | 0.02 | 0.14 | 55 | 2 | | | | -32 | 32 |
| 05/04/95 | | 6.9 | 34 | 0 | 0.31 | 0.05 | 0.5 | 49 | 22 | | | | -34 | 34 |
| 07/26/95 | | 7.1 | 68 | 0 | 0.3 | 0.05 | 0.5 | 63 | 3 | | | | -68 | 68 |
| 08/29/95 | | 7.2 | 88 | 0 | 1.09 | 0.12 | 0.5 | 135 | 3 | | | | -88 | 88 |
| 09/27/95 | | 7.7 | 94 | 0 | 0.36 | 0.05 | 0.5 | 112 | 6 | | | | -94 | 94 |
| 10/11/95 | | 7.1 | 90 | 0 | 0.3 | 0.05 | 0.5 | 117 | 3 | | | | -90 | 90 |
| 12/12/95 | | 6.5 | 46 | 0 | 0.3 | 0.05 | 0.5 | 59 | 3 | | | | -46 | 46 |
| 01/25/96 | | 6.4 | 20 | 0 | 0.3 | 0.05 | 0.5 | 30 | 3 | | | | -20 | 20 |
| 03/13/96 | | 6.6 | 24 | 0 | 0.3 | 0.05 | 0.5 | 36 | 3 | | | | -24 | 24 |
| 05/16/96 | | 6.4 | 26 | 0 | 0.57 | 0.05 | 0.5 | 33 | 3 | | | | -26 | 26 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

76 FERRIS TRIB. BEFORE CONSTRUCTION OF FERRIS TREATMENT SYSTEMS

| | | | | | | | | | | | | | |
|----------|-----|------|------|--------|-----|-----|-----|-----|-------|-----|----|----|-----|
| Min. | 45 | 3.20 | 0.00 | 50.00 | 2.3 | 1.2 | 2.1 | 174 | 2.00 | 39 | 2 | 3 | 50 |
| Max. | 486 | 3.60 | 0.00 | 186.00 | 9.5 | 2.5 | 5.8 | 429 | 24.00 | 411 | 27 | 20 | 186 |
| Range | 421 | 0.40 | 0.00 | 136.00 | 7.2 | 1.3 | 3.8 | 255 | 22.00 | 372 | 25 | 17 | 136 |
| AVERAGE | 176 | 3.4 | 0.0 | 81.4 | 4.9 | 1.7 | 4.0 | 269 | 6 | 158 | 11 | 9 | |
| 75% tile | 246 | | | 92 | | | | | | 215 | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|
| 02/02/95 | | 3.4 | 0 | 86 | 4.1 | 1.5 | 4.3 | 256 | 2 | | | | 86 |
| 03/01/95 | | 3.5 | 0 | 64 | 3.9 | 1.6 | 4.0 | 181 | 3 | | | | 64 |
| 05/04/95 | | 3.4 | 0 | 92 | 5.3 | 1.6 | 4.7 | 260 | 24 | | | | 92 |
| 07/27/95 | | 3.3 | 0 | 76 | 5.6 | 1.4 | 3.1 | 247 | 6 | | | | 76 |
| 08/29/95 | | 3.2 | 0 | 84 | 4.7 | 1.5 | 3.7 | 276 | 3 | | | | 84 |
| 09/21/95 | 65 | 3.6 | 0 | 50 | 3.1 | 2.2 | 3.3 | 288 | 4 | 39 | 2 | 3 | 50 |
| 09/27/95 | | 3.4 | 0 | 82 | 4.1 | 2.0 | 3.7 | 285 | 3 | | | | 82 |
| 10/12/95 | | 3.3 | 0 | 88 | 5.3 | 2.2 | 3.9 | 298 | 12 | | | | 88 |
| 11/02/95 | | 3.4 | 0 | 72 | 4.7 | 2.3 | 4.1 | 356 | 6 | | | | 72 |
| 12/12/95 | | 3.3 | 0 | 102 | 5.2 | 2.5 | 5.8 | 429 | 3 | | | | 102 |
| 01/10/96 | 100 | 3.3 | 0 | 88 | 4.9 | 2.3 | 5.1 | 411 | 3 | 108 | 6 | 6 | 88 |
| 02/11/96 | | 3.4 | 0 | 96 | 4.9 | 1.6 | 4.6 | 335 | 10 | | | | 96 |
| 02/22/96 | | 3.5 | 0 | 66 | 2.3 | 1.8 | 4.0 | 194 | 3 | | | | 66 |
| 03/19/96 | | 3.4 | 0 | 96 | 5.6 | 1.6 | 4.7 | 251 | | | | | 96 |
| 05/23/96 | | 3.5 | 0 | 60 | 2.8 | 1.2 | 3.1 | 174 | 3 | | | | 60 |
| 06/26/96 | | 3.3 | 0 | 186 | 4.1 | 1.3 | 3.6 | 191 | 3 | | | | 186 |
| 07/24/96 | | 3.5 | 0 | 58 | 3.6 | 1.5 | 2.1 | 190 | 6 | | | | 58 |
| 08/13/96 | | 3.5 | 0 | 62 | 8.6 | 1.5 | 3.0 | 217 | <3 | | | | 62 |
| 09/18/96 | | 3.5 | 0 | 56 | 3.1 | 1.4 | 2.3 | 184 | <3 | | | | 56 |
| 10/29/96 | | 3.4 | 0 | 74 | 5.3 | 1.9 | 4.3 | 274 | <3 | | | | 74 |
| 12/11/96 | 356 | 3.4 | 0 | 96 | 4.9 | 1.6 | 4.6 | 335 | 10 | 411 | 21 | 20 | 96 |
| 03/19/97 | 466 | 3.5 | 0 | 58 | 4.8 | 1.3 | 3.3 | 250 | <3 | 325 | 27 | 18 | 58 |
| 04/15/97 | 136 | 3.5 | 0 | 62 | 3.8 | 1.4 | 3.4 | 264 | <3 | 101 | 6 | 6 | 62 |
| 06/25/97 | 45 | 3.2 | 0 | 94 | 8.1 | 1.7 | 5.2 | 301 | <3 | 51 | 4 | 3 | 94 |
| 07/15/97 | 66 | 3.3 | 0 | 88 | 9.5 | 1.7 | 5.8 | 283 | <3 | 70 | 8 | 5 | 88 |

STREAM STATION MAIN BRANCH SLIPPERY ROCK

76 FERRIS TRIB. AFTER CONSTRUCTION OF FERRIS TREATMENT PROJECT

| | | | | | | | | | | | | | | |
|----------|-----|------|--------|------|-----|-----|-----|-----|-------|---|---|---|------|-----|
| Min. | 99 | 6.20 | 40.00 | 0.00 | 1.2 | 0.9 | 0.0 | 242 | 4.00 | 0 | 1 | 0 | -118 | 36 |
| Max. | 285 | 6.80 | 118.00 | 4.00 | 5.7 | 2.0 | 0.0 | 336 | 22.00 | 0 | 5 | 0 | -36 | 118 |
| Range | 187 | 0.60 | 78.00 | 4.00 | 4.6 | 1.1 | 0.0 | 94 | 18.00 | 0 | 4 | 0 | 82 | 82 |
| AVERAGE | 184 | 6.5 | 72.2 | 0.3 | 2.2 | 1.4 | | 291 | 13 | 0 | 3 | | | |
| 75% tile | 202 | | | 0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Alload lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|---------------|---------------|--------------|
| 09/17/97 | | 6.2 | 40 | 4 | 5.7 | 1.9 | <.50 | 281 | 22 | | | | -36 | 36 |
| 09/30/97 | | 6.4 | 84 | 0 | 4.4 | 1.2 | <.50 | 242 | 20 | | | | -84 | 84 |
| 10/08/97 | | 6.4 | 84 | 0 | 2.6 | 1.1 | <.50 | 266 | 4 | | | | -84 | 84 |
| 10/21/97 | | 6.7 | 118 | 0 | 2.3 | 1.1 | <.50 | 245 | <3 | | | | -118 | 118 |
| 10/31/97 | | 6.8 | 110 | 0 | 1.6 | 1.0 | <.50 | 279 | <3 | | | | -110 | 110 |
| 11/18/97 | 99 | 6.5 | 72 | 0 | 1.2 | 1.4 | <.50 | 284 | <3 | 0 | 1 | | -72 | 72 |
| 12/04/97 | 160 | 6.5 | 62 | 0 | 1.2 | 1.9 | <.50 | 249 | <3 | 0 | 2 | | -62 | 62 |
| 12/17/97 | | 6.3 | 66 | 0 | 1.2 | 1.9 | <.50 | 336 | <3 | 0 | | | -66 | 66 |
| 12/30/97 | 160 | 6.5 | 74 | 0 | 1.2 | 2.0 | <.50 | 334 | <3 | 0 | 2 | | -74 | 74 |
| 01/21/98 | 180 | 6.2 | 48 | 0 | 2.3 | 1.5 | <.50 | 330 | 12 | 0 | 5 | | -48 | 48 |
| 02/10/98 | 180 | 6.6 | 62 | 0 | 1.8 | 1.3 | <.50 | 335 | <3 | 0 | 4 | | -62 | 62 |
| 03/03/98 | 223 | 6.8 | 60 | 0 | 1.3 | 1.0 | <.50 | 301 | <3 | 0 | 3 | | -60 | 60 |
| 03/17/98 | 285 | 6.6 | 58 | 0 | 1.3 | 0.9 | <.50 | 296 | 6 | 0 | 4 | | -58 | 58 |

77 HILLIARDS TRIB. HEADWATERS NORTH

| | | | | | | | | | | | | | | |
|----------|---|------|------|-------|-----|-----|-----|----|-------|---|---|---|----|-----|
| Min. | 0 | 4.50 | 6.20 | 7.20 | 0.3 | 0.3 | 0.5 | 22 | 2.00 | 0 | 0 | 0 | -1 | -24 |
| Max. | 0 | 4.80 | 9.60 | 32.00 | 0.4 | 1.1 | 1.5 | 50 | 12.00 | 0 | 0 | 0 | 24 | 1 |
| Range | 0 | 0.30 | 3.40 | 24.80 | 0.1 | 0.8 | 1.0 | 28 | 10.00 | 0 | 0 | 0 | 25 | 25 |
| AVERAGE | | 4.6 | 7.6 | 14.2 | 0.3 | 0.7 | 1.0 | 33 | 4 | | | | | |
| 75% tile | | | | 14 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|---------------|------------------|------------------|----------------|---------------|--------------|
| 12/28/94 | | 4.8 | 9.6 | 8.4 | 0.4 | 0.5 | 1.3 | 29 | 2 | | | | -1 | 1 |
| 03/01/95 | | 4.8 | 8.8 | 14.4 | 0.4 | 0.3 | 0.8 | 25 | 8 | | | | 6 | -8 |
| 05/04/95 | | 4.6 | 7.8 | 32 | 0.3 | 0.6 | 1.5 | 34 | 12 | | | | 24 | -24 |
| 07/26/95 | | 4.5 | 7.4 | 12.8 | 0.3 | 0.8 | 1.5 | 31 | 3 | | | | 5 | -5 |
| 08/29/95 | | 4.5 | 7.2 | 11.2 | 0.3 | 0.9 | 0.8 | 40 | 3 | | | | 4 | -4 |
| 09/27/95 | | 4.6 | 7.2 | 7.2 | 0.4 | 0.9 | 0.6 | 39 | 3 | | | | 0 | 0 |
| 10/11/95 | | 4.7 | 6.8 | 20 | 0.3 | 1.1 | 0.5 | 50 | 3 | | | | 13 | -13 |
| 03/13/96 | | 4.6 | 6.2 | 11.6 | 0.3 | 0.4 | 1.1 | 29 | 3 | | | | 5 | -5 |
| 05/16/96 | | 4.7 | 7.4 | 10.4 | 0.3 | 0.4 | 0.9 | 22 | 3 | | | | 3 | -3 |

78 HILLIARDS TRIB. HEADWATERS EAST

| | | | | | | | | | | | | | | |
|----------|---|------|------|-------|------|-----|-----|-----|-------|---|---|---|----|-----|
| Min. | 0 | 4.30 | 5.80 | 20.00 | 0.3 | 0.7 | 1.8 | 43 | 2.00 | 0 | 0 | 0 | 12 | -35 |
| Max. | 0 | 4.60 | 8.80 | 42.00 | 0.4 | 4.0 | 3.5 | 100 | 16.00 | 0 | 0 | 0 | 35 | -12 |
| Range | 0 | 0.30 | 3.00 | 22.00 | -0.1 | 3.3 | 1.7 | 57 | 14.00 | 0 | 0 | 0 | 22 | 22 |
| AVERAGE | | 4.5 | 7.2 | 25.6 | 0.3 | 1.8 | 2.6 | 68 | 5 | | | | | |
| 75% tile | | | | 28 | | | | | | | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acidity mg/L | Iron mg/L | Mang. mg/L | AL. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. load lb/day | Net Acid mg/L | Net Alk mg/L |
|--------------|------------|---------|-----------|--------------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|--------------|
| 12/28/94 | | 4.6 | 8.8 | 22 | 0.4 | 1.1 | 3.5 | 59 | 2 | | | | 13 | -13 |
| 03/01/95 | | 4.6 | 8.2 | 24 | 0.3 | 0.7 | 2.0 | 43 | 10 | | | | 16 | -16 |
| 05/04/95 | | 4.5 | 7.4 | 42 | 0.3 | 1.3 | 3.3 | 61 | 16 | | | | 35 | -35 |
| 07/26/95 | | 4.4 | 7 | 22 | 0.3 | 2.1 | 2.7 | 85 | 3 | | | | 15 | -15 |
| 08/29/95 | | 4.3 | 6.2 | 28 | 0.3 | 2.1 | 2.6 | 70 | 3 | | | | 22 | -22 |
| 09/27/95 | | 4.4 | 6.2 | 28 | 0.4 | 3.7 | 2.2 | 100 | 3 | | | | 22 | -22 |
| 10/11/95 | | 4.4 | 5.8 | 22 | 0.3 | 4.0 | 1.8 | 90 | 3 | | | | 16 | -16 |
| 03/13/96 | | 4.5 | 7 | 22 | 0.3 | 0.9 | 2.8 | 53 | 3 | | | | 15 | -15 |
| 05/16/96 | | 4.6 | 7.8 | 20 | 0.3 | 0.7 | 2.2 | 49 | 3 | | | | 12 | -12 |

STREAM STATION MAINT. RANCH SLIPPERY ROCK

VK1 COMPOST V.F.W. POND FOR SR86

| | | | | | | | | | | | | | | |
|----------|-----|------|--------|------|-----|-----|-----|-----|--------|---|---|---|------|-----|
| Min. | 60 | 6.80 | 122.00 | 0.00 | 0.3 | 0.7 | 0.0 | 235 | 8.00 | 0 | 0 | 0 | -400 | 122 |
| Max. | 120 | 7.70 | 400.00 | 0.00 | 1.1 | 2.5 | 0.0 | 548 | 196.00 | 0 | 1 | 0 | -122 | 400 |
| Range | 60 | 0.90 | 278.00 | 0.00 | 0.8 | 1.8 | 0.0 | 313 | 188.00 | 0 | 1 | 0 | 278 | 278 |
| AVERAGE | 70 | 7.2 | 210.4 | 0.0 | 0.6 | 1.5 | | 366 | 71 | 0 | 0 | | | |
| 75% tile | 64 | | | 0 | | | | | | 0 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 08/12/97 | | 7.7 | 400 | 0 | 0.9 | 1.1 | <.50 | 379 | <3 | 0 | 0 | | -400 | 400 |
| 08/14/97 | 60 | 7.5 | 312 | 0 | 1.1 | 0.9 | <.50 | 330 | 8 | 0 | 1 | | -312 | 312 |
| 08/19/97 | 60 | 7.5 | 238 | 0 | 0.7 | 0.7 | <.50 | 257 | 8 | 0 | 0 | | -238 | 238 |
| 08/25/97 | 60 | 7.4 | 220 | 0 | 0.5 | 0.7 | <.50 | 304 | <3 | 0 | 0 | | -220 | 220 |
| 08/28/97 | | 7.3 | 236 | 0 | 0.5 | 0.8 | <.50 | 291 | <3 | 0 | 0 | | -236 | 236 |
| 09/08/97 | 60 | 7.2 | 222 | 0 | 0.3 | 0.9 | <.50 | 235 | <3 | 0 | 0 | | -222 | 222 |
| 09/17/97 | 60 | 7.2 | 236 | 0 | <.30 | 1.1 | <.50 | 283 | <3 | 0 | 0 | | -236 | 236 |
| 09/17/97 | | 7.4 | 250 | 0 | <.30 | 1.1 | <.50 | 280 | 196 | | | | -250 | 250 |
| 09/29/97 | 60 | 7.2 | 210 | 0 | <.30 | 1.3 | <.50 | 327 | <3 | 0 | | | -210 | 210 |
| 10/03/97 | | 7.2 | 200 | 0 | <.30 | 1.3 | <.50 | 329 | <3 | | | | -200 | 200 |
| 10/08/97 | 60 | 7.1 | 258 | 0 | <.30 | 1.6 | <.50 | 325 | <3 | 0 | | | -258 | 258 |
| 10/21/97 | | 7.1 | 190 | 0 | <.30 | 1.9 | <.50 | 354 | <3 | | | | -190 | 190 |
| 10/31/97 | 65 | 7.1 | 162 | 0 | <.30 | 1.9 | <.50 | 451 | <3 | 0 | | | -162 | 162 |
| 11/18/97 | 60 | 7.3 | 148 | 0 | <.30 | 2.3 | <.50 | 480 | <3 | 0 | | | -148 | 148 |
| 12/04/97 | 60 | 7.1 | 156 | 0 | <.30 | 2.5 | <.50 | 456 | <3 | 0 | | | -156 | 156 |
| 12/17/97 | 60 | 7 | 154 | 0 | <.30 | 2.3 | <.50 | 519 | <3 | 0 | 0 | | -154 | 154 |
| 12/30/97 | 70 | 7 | 144 | 0 | 0.3 | 2.3 | <.50 | 548 | <3 | 0 | 0 | | -144 | 144 |
| 1/2/98 | 120 | 6.8 | 122 | 0 | 0.5 | 2.2 | <.50 | 440 | <3 | 0 | 1 | | -122 | 122 |
| 2/10/98 | 120 | 6.9 | 140 | 0 | 0.5 | 2.0 | <.50 | 386 | <3 | 0 | 1 | | -140 | 140 |

DISCHARGE STATION M. BRANCH SLIPPERY ROCK

VK2 FINAL V.F.W. POND FOR SR86

| | | | | | | | | | | | | | | |
|----------|-----|------|--------|------|-----|-----|-----|-----|-------|---|---|---|------|-----|
| Min. | 40 | 6.50 | 118.00 | 0.00 | 0.3 | 0.8 | 0.0 | 236 | 10.00 | 0 | 0 | 0 | -216 | 118 |
| Max. | 120 | 7.60 | 216.00 | 0.00 | 1.6 | 2.5 | 0.0 | 507 | 16.00 | 0 | 1 | 0 | -118 | 216 |
| Range | 80 | 1.10 | 98.00 | 0.00 | 1.3 | 1.7 | 0.0 | 271 | 6.00 | 0 | 1 | 0 | 98 | 98 |
| AVERAGE | 72 | 7.2 | 164.1 | 0.0 | 0.7 | 1.8 | | 386 | 14 | 0 | 0 | | | |
| 75% tile | 69 | | | 0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|----------------|---------------|---------------|
| 9/3/97 | | 7.2 | 208 | 0 | 1.6 | 1.0 | <.50 | 236 | 16 | | | | -208 | 208 |
| 9/8/97 | 60 | 7.3 | 216 | 0 | 1.2 | 1.0 | <.50 | 279 | <3 | 0 | 1 | | -216 | 216 |
| 9/17/97 | | 7.3 | 198 | 0 | 0.8 | 0.8 | <.50 | 282 | <3 | | 0 | | -198 | 198 |
| 9/29/97 | 60 | 7.4 | 192 | 0 | 0.4 | 0.9 | <.50 | 314 | <3 | 0 | 0 | | -192 | 192 |
| 10/8/97 | | 7.2 | 210 | 0 | 0.3 | 1.3 | <.50 | 323 | 10 | | | | -210 | 210 |
| 10/21/97 | 40 | 7.3 | 206 | 0 | 0.3 | 1.6 | <.50 | 336 | <3 | 0 | 0 | | -206 | 206 |
| 10/31/97 | 65 | 7.3 | 168 | 0 | 0.6 | 1.8 | <.50 | 415 | <3 | 0 | 0 | | -168 | 168 |
| 11/18/97 | 60 | 7.6 | 130 | 0 | 0.8 | 2.2 | <.50 | 442 | 14 | 0 | 1 | | -130 | 130 |
| 12/4/97 | 60 | 7.1 | 138 | 0 | 0.4 | 2.5 | <.50 | 447 | 16 | 0 | 0 | | -138 | 138 |
| 12/17/97 | 60 | 6.9 | 130 | 0 | 0.8 | 2.4 | <.50 | 495 | <3 | 0 | 1 | | -130 | 130 |
| 12/30/97 | 70 | 7 | 140 | 0 | 0.4 | 2.4 | <.50 | 507 | <3 | 0 | 0 | | -140 | 140 |
| 1/21/98 | 120 | 7 | 120 | 0 | 0.7 | 2.4 | <.50 | 483 | <3 | 0 | 1 | | -120 | 120 |
| 1/23/98 | | 6.5 | 118 | 0 | 0.7 | 2.4 | <.50 | 424 | <3 | | | | -118 | 118 |
| 2/10/98 | 120 | 7 | 124 | 0 | 0.4 | 2.1 | <.50 | 414 | <3 | 0 | 1 | | -124 | 124 |

JP1 COMPOST V.F.W. POND SR87 /SR88

| | | | | | | | | | | | | | | |
|----------|----|------|--------|------|-----|-----|-----|-----|------|---|---|---|------|-----|
| Min. | 2 | 7.00 | 94.00 | 0.00 | 0.4 | 0.7 | 0.0 | 135 | 4.00 | 0 | 0 | 0 | -742 | 94 |
| Max. | 24 | 7.60 | 742.00 | 0.00 | 0.9 | 2.4 | 0.0 | 684 | 4.00 | 0 | 0 | 0 | -94 | 742 |
| Range | 23 | 0.60 | 648.00 | 0.00 | 0.5 | 1.7 | 0.0 | 549 | 0.00 | 0 | 0 | 0 | 648 | 648 |
| AVERAGE | 12 | 7.4 | 271.6 | 0.0 | 0.6 | 1.5 | | 316 | 4 | 0 | 0 | | | |
| 75% tile | 18 | | | 0 | | | | | | 0 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 10/08/97 | 2 | 7.4 | 742 | 0 | 0.9 | 2.1 | <.50 | 684 | <3 | 0 | 0 | | -742 | 742 |
| 10/21/97 | 15 | 7.6 | 670 | 0 | 0.7 | 1.7 | <.50 | 135 | <3 | 0 | 0 | | -670 | 670 |
| 10/31/97 | 3 | 7.6 | 346 | 0 | 0.5 | 1.1 | <.50 | 227 | <3 | 0 | 0 | | -346 | 346 |
| 11/18/97 | 6 | 7.6 | 132 | 0 | <.30 | 0.7 | <.50 | 337 | <3 | 0 | | | -132 | 132 |
| 12/04/97 | 18 | 7.5 | 110 | 0 | <.30 | 0.9 | <.50 | 299 | <3 | 0 | | | -110 | 110 |
| 12/17/97 | 12 | 7.2 | 114 | 0 | <.30 | 1.2 | <.50 | 387 | <3 | 0 | | | -114 | 114 |
| 12/30/97 | 12 | 7.3 | 132 | 0 | <.30 | 1.5 | <.50 | 277 | <3 | 0 | | | -132 | 132 |
| 1/21/98 | 18 | 7 | 94 | 0 | 0.4 | 2.1 | <.50 | 261 | 4 | 0 | 0 | | -94 | 94 |
| 2/10/98 | 24 | 7.2 | 104 | 0 | 0.5 | 2.4 | <.50 | 237 | <3 | 0 | 0 | | -104 | 104 |

DISCHARGE STATION M/ BRANCH SLIPPERY ROCK

JP2 FINAL V.F.W. POND FOR SR87 / SR88

| | | | | | | | | | | | | | | |
|----------|----|------|--------|------|-----|-----|-----|-----|------|---|---|---|------|-----|
| Min. | 12 | 6.90 | 82.00 | 0.00 | 0.3 | 1.0 | 0.0 | 248 | 0.00 | 0 | 0 | 0 | -344 | 82 |
| Max. | 24 | 7.30 | 344.00 | 0.00 | 2.2 | 2.3 | 0.0 | 424 | 0.00 | 0 | 0 | 0 | -82 | 344 |
| Range | 12 | 0.40 | 262.00 | 0.00 | 1.9 | 1.3 | 0.0 | 175 | 0.00 | 0 | 0 | 0 | 262 | 262 |
| AVERAGE | 17 | 7.1 | 141.7 | 0.0 | 0.8 | 1.5 | | 304 | | 0 | 0 | | | 262 |
| 75% tile | 18 | | | 0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 11/18/97 | | 7.3 | 344 | 0 | 2.2 | 2.3 | <.50 | 424 | <3 | | | | -344 | 344 |
| 12/04/97 | 18 | 7.3 | 114 | 0 | 0.4 | 1.0 | <.50 | 272 | <3 | 0 | 0 | | -114 | 114 |
| 12/17/97 | 12 | 7 | 100 | 0 | <.30 | 1.0 | <.50 | 328 | <3 | 0 | | | -100 | 100 |
| 12/30/97 | 12 | 7.1 | 114 | 0 | 0.6 | 1.2 | <.50 | 281 | <3 | 0 | 0 | | -114 | 114 |
| 1/21/98 | 18 | 6.9 | 82 | 0 | 0.3 | 1.6 | <.50 | 278 | <3 | 0 | 0 | | -82 | 82 |
| 2/10/98 | 24 | 7.2 | 96 | 0 | 0.4 | 2.0 | <.50 | 248 | <3 | 0 | 0 | | -96 | 96 |

DISCHARGE STATION M ○ BRANCH SLIPPERY ROCK

FRP LARGE RETENTION POND DISCHARGE FOR FERRIS DISCHARGES

| | | | | | | | | | | | | | | |
|----------|-----|------|--------|------|------|-----|-----|-----|-------|---|----|---|------|-----|
| Min. | 58 | 6.10 | 50.00 | 0.00 | 1.3 | 0.7 | 0.0 | 288 | 4.00 | 0 | 2 | 0 | -134 | 50 |
| Max. | 250 | 6.90 | 134.00 | 0.00 | 11.0 | 2.7 | 0.0 | 373 | 20.00 | 0 | 16 | 0 | -50 | 134 |
| Range | 192 | 0.80 | 84.00 | 0.00 | 9.7 | 2.0 | 0.0 | 105 | 16.00 | 0 | 14 | 0 | 84 | 84 |
| AVERAGE | 115 | 6.6 | 90.9 | 0.0 | 4.8 | 1.9 | | 303 | 11 | 0 | 7 | | | |
| 75% tile | 133 | | | 0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 08/25/97 | 150 | 6.6 | 86 | 0 | 6.8 | 2.4 | <.50 | 278 | 20 | 0 | 12 | | -86 | 86 |
| 09/08/97 | 75 | 6.7 | 94 | 0 | 4.0 | 2.5 | <.50 | 293 | 14 | 0 | 4 | | -94 | 94 |
| 09/17/97 | 75 | 6.7 | 106 | 0 | 3.5 | 2.0 | <.50 | 276 | 8 | 0 | 3 | | -106 | 106 |
| 09/29/97 | 250 | 6.8 | 134 | 0 | 5.4 | 2.0 | <.50 | 271 | 4 | 0 | 16 | | -134 | 134 |
| 10/08/97 | 80 | 6.5 | 108 | 0 | 2.0 | 1.0 | <.50 | 280 | 14 | 0 | 2 | | -108 | 108 |
| 10/21/97 | 58 | 6.7 | 130 | 0 | 4.3 | 1.9 | <.50 | 268 | <3 | 0 | 3 | | -130 | 130 |
| 10/31/97 | | 6.8 | 110 | 0 | 6.0 | 1.9 | <.50 | 307 | 14 | | | | -110 | 110 |
| 11/18/97 | | 6.9 | 120 | 0 | 3.7 | 2.1 | <.50 | 275 | 14 | | | | -120 | 120 |
| 12/04/97 | | 6.5 | 78 | 0 | 3.7 | 2.5 | <.50 | 314 | 4 | | | | -78 | 78 |
| 12/17/97 | | 6.1 | 50 | 0 | 9.8 | 2.7 | <.50 | 348 | 16 | | | | -50 | 50 |
| 12/30/97 | | 6.3 | 68 | 0 | 11.0 | 2.7 | <.50 | 373 | 6 | | | | -68 | 68 |
| 01/23/98 | | 6.3 | 74 | 0 | 4.2 | 1.9 | <.50 | 322 | 8 | | | | -74 | 74 |
| 02/10/98 | | 6.6 | 74 | 0 | 4.2 | 1.5 | <.50 | 357 | <3 | | | | -74 | 74 |
| 03/03/98 | | 6.6 | 66 | 0 | 2.4 | 1.2 | <.50 | 301 | <3 | | | | -66 | 66 |
| 03/17/98 | | 6.6 | 66 | 0 | 1.3 | 0.7 | <.50 | 286 | 4 | | | | -66 | 66 |

DISCHARGE STATION NUMBER 1000 BRANCH SLIPPERY ROCK

SR94.1 DISCHARGE FROM A.L.D FOR SR94

| | | | | | | | | | | | | | | |
|----------|----|------|--------|--------|-------|-----|-----|------|--------|----|----|---|------|------|
| Min. | 6 | 5.30 | 22.00 | 0.00 | 115.0 | 3.7 | 1.4 | 760 | 26.00 | 0 | 12 | 0 | -208 | -346 |
| Max. | 17 | 6.50 | 208.00 | 368.00 | 176.0 | 6.4 | 1.4 | 1512 | 172.00 | 73 | 29 | 0 | 346 | 208 |
| Range | 11 | 1.20 | 186.00 | 368.00 | 61.0 | 2.7 | 0.0 | 752 | 146.00 | 73 | 18 | 0 | 554 | 554 |
| AVERAGE | 9 | 6.2 | 153.8 | 147.6 | 152.9 | 4.3 | 1.4 | 1125 | 91 | 19 | 16 | 0 | | |
| 75% tile | 9 | | | 178 | | | | | | 19 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 04/04/96 | 15 | 6.2 | 176 | 84 | 115.0 | 6.4 | <.50 | 985 | 94 | 12 | 21 | | -112 | 112 |
| 04/16/96 | | 6.2 | 188 | 114 | 131.0 | 4.9 | <.50 | 1129 | 26 | | | | -74 | 74 |
| 05/16/96 | | 6.2 | 178 | 136 | 149.0 | 4.2 | <.50 | 1141 | 75 | | | | -42 | 42 |
| 06/26/96 | | 6.3 | 134 | 82 | 176.0 | 4.7 | <.50 | 1190 | 112 | | | | -52 | 52 |
| 07/24/96 | | 6.1 | 118 | 122 | 160.0 | 4.2 | <.50 | 1512 | 132 | | | | 4 | -4 |
| 08/15/96 | | 6 | 106 | 120 | 167.0 | 4.1 | <.50 | 1110 | 126 | | | | 14 | -14 |
| 10/24/96 | 7 | 6.2 | 144 | 80 | 149.0 | 4.1 | <.50 | 1152 | 172 | 7 | 13 | | -64 | 64 |
| 12/11/96 | 9 | 6.4 | 182 | 266 | 148.0 | 3.7 | <.50 | 1102 | 36 | 29 | 16 | | 84 | -84 |
| 02/25/97 | 8 | 6.2 | 166 | 122 | 158.0 | 4.1 | <.50 | 1153 | 164 | 12 | 15 | | -44 | 44 |
| 03/19/97 | 8 | 6.2 | 156 | 138 | 151.0 | 4.0 | <.50 | 1095 | 48 | 13 | 15 | | -18 | 18 |
| 04/15/97 | 9 | 6.4 | 172 | 134 | 163.0 | 4.2 | <.50 | 1187 | 36 | 14 | 18 | | -38 | 38 |
| 05/21/97 | 8 | | | | | | <.50 | | | | | | 0 | 0 |
| 06/25/97 | 8 | 6.2 | 164 | 158 | 166.0 | 4.1 | <.50 | 1092 | 112 | 15 | 16 | | -6 | 6 |
| 07/15/97 | 6 | 6.3 | 170 | 190 | 160.0 | 4.0 | <.50 | 1254 | 80 | 14 | 12 | | 20 | -20 |
| 08/20/97 | 17 | 5.3 | 22 | 368 | 147.0 | 5.2 | 1.4 | 760 | <3 | 73 | 29 | 0 | 346 | -346 |
| 09/17/97 | 8 | 6.2 | 162 | 238 | 167.4 | 4.2 | <.50 | 1098 | 104 | 23 | 16 | | 76 | -76 |
| 12/11/97 | 8 | 6.3 | 168 | 178 | 150.0 | 3.8 | <.50 | 1102 | 56 | 17 | 14 | | 10 | -10 |
| 01/21/98 | 8 | 6.5 | 208 | 0 | 142.0 | 3.7 | <.50 | 1062 | 108 | 0 | 14 | | -208 | 208 |

NB DISCHARGE FROM WETLAND FOR SR94 TREATMENT AND SR89

| | | | | | | | | | | | | | | |
|----------|----|------|-------|--------|-------|-----|------|------|-------|-----|----|---|-----|------|
| Min. | 14 | 2.70 | 0.00 | 120.00 | 9.9 | 1.3 | 0.5 | 324 | 3.00 | 28 | 3 | 0 | 120 | -264 |
| Max. | 60 | 5.80 | 48.00 | 312.00 | 144.0 | 5.0 | 10.0 | 1034 | 16.00 | 186 | 33 | 7 | 264 | -120 |
| Range | 46 | 3.10 | 48.00 | 192.00 | 134.1 | 3.6 | 9.5 | 710 | 13.00 | 158 | 30 | 7 | 144 | 144 |
| AVERAGE | 33 | 3.1 | 2.7 | 195.7 | 32.2 | 3.4 | 4.7 | 573 | 6 | 76 | 14 | 2 | | |
| 75% tile | 50 | | | 234 | | | | | | 90 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 03/01/95 | | 3 | 0 | 234 | 33.2 | 5.0 | 10.0 | 518 | 3 | | | | 234 | -234 |
| 09/21/95 | | 2.8 | 0 | 232 | 39.5 | 4.8 | 8.4 | 488 | 8 | | | | 232 | -232 |
| 10/12/95 | | 3.1 | 0 | 134 | 14.8 | 2.8 | 3.1 | 331 | 16 | | | | 134 | -134 |
| 02/22/96 | 14 | 5.8 | 48 | 312 | 144.0 | 3.8 | 0.5 | 1034 | 3 | 53 | 24 | 0 | 264 | -264 |
| 04/16/96 | | 2.9 | 0 | 182 | 14.7 | 4.1 | 6.3 | 556 | 3 | | | | 182 | -182 |
| 05/16/96 | | 2.9 | 0 | 228 | 15.1 | 3.8 | 5.6 | 618 | 3 | | | | 228 | -228 |
| 7/24/96 | | 2.8 | 0 | 234 | 19.1 | 3.6 | 5.4 | 749 | <3 | | | | 234 | -234 |
| 8/15/96 | | 2.7 | 0 | 252 | 28.2 | 3.6 | 5.2 | 744 | <3 | | | | 252 | -252 |
| 10/24/96 | | 3 | 0 | 158 | 23.4 | 3.4 | 3.6 | 598 | <3 | | | | 158 | -158 |
| 12/11/96 | 50 | 3.2 | 0 | 158 | 25.3 | 3.0 | 3.8 | 616 | 6 | 95 | 15 | 2 | 158 | -158 |
| 4/15/97 | | 3.2 | 0 | 144 | 22.6 | 3.2 | 5.4 | 527 | 8 | | | | 144 | -144 |
| 5/21/97 | 28 | 3.1 | 0 | 240 | 55.1 | 4.9 | 7.9 | 592 | <3 | 81 | 19 | 3 | 240 | -240 |
| 6/19/97 | 28 | 3 | 0 | 120 | 9.9 | 1.3 | 0.9 | 324 | <3 | 40 | 3 | 0 | 120 | -120 |
| 7/15/97 | 19 | 3.1 | 0 | 122 | 21.4 | 1.8 | 0.9 | 356 | <3 | 28 | 5 | 0 | 122 | -122 |
| 8/20/97 | 29 | 2.9 | 0 | 168 | 20.7 | 2.5 | 1.9 | 472 | <3 | 58 | 7 | 1 | 168 | -168 |
| 9/17/97 | 22 | 2.9 | 0 | 196 | 21.6 | 2.8 | 2.4 | 608 | <3 | 52 | 6 | 1 | 196 | -196 |
| 12/11/97 | 50 | 3.1 | 0 | 150 | 24.7 | 2.6 | 4.5 | 421 | <3 | 90 | 15 | 3 | 150 | -150 |
| 1/21/98 | 60 | 3.1 | 0 | 258 | 45.7 | 4.2 | 9.2 | 766 | <3 | 186 | 33 | 7 | 258 | -258 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR114B1 A.L.D. DISCHARGE FOR 114B HEDIN / C.D.S. SYSTEM

| | | | | | | | | | | | | | | |
|----------|----|------|--------|------|------|-----|-----|-----|-------|---|---|---|------|-----|
| Min. | 40 | 6.40 | 114.00 | 0.00 | 3.0 | 1.1 | 0.0 | 149 | 2.00 | 0 | 0 | 0 | -172 | 114 |
| Max. | 45 | 6.70 | 172.00 | 5.80 | 17.0 | 1.9 | 0.0 | 221 | 22.00 | 0 | 6 | 0 | -114 | 172 |
| Range | 5 | 0.30 | 58.00 | 5.80 | 14.0 | 0.8 | 0.0 | 72 | 20.00 | 0 | 6 | 0 | 58 | 58 |
| AVERAGE | 43 | 6.6 | 137.4 | 0.2 | 12.7 | 1.5 | | 186 | 9 | 0 | 3 | | | |
| 75% tile | 44 | | | 0 | | | | | | 0 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 08/30/95 | | 6.5 | 132 | 0 | 3.0 | 1.8 | <.50 | 173 | 2 | | | | -132 | 132 |
| 09/14/95 | 40 | 6.6 | 154 | 0 | 12.7 | 1.9 | <.50 | 191 | 4 | 0 | 6 | | -154 | 154 |
| 10/11/95 | | 6.5 | 154 | 0 | 17.0 | 1.9 | <.50 | 196 | 22 | | | | -154 | 154 |
| 11/01/95 | | 6.5 | 156 | 0 | 16.4 | 1.8 | <.50 | 219 | 3 | | | | -156 | 156 |
| 12/13/95 | | 6.5 | 172 | 0 | 11.5 | 1.9 | <.50 | 221 | 4 | | | | -172 | 172 |
| 01/10/96 | | 6.5 | 154 | 0 | 11.8 | 1.7 | <.50 | 219 | 22 | | | | -154 | 154 |
| 02/21/96 | | 6.5 | 150 | 0 | 11.8 | 1.8 | <.50 | 220 | 4 | | | | -150 | 150 |
| 03/13/96 | | 6.6 | 140 | 0 | 10.3 | 1.6 | <.50 | 170 | 5 | | | | -140 | 140 |
| 04/16/96 | | 6.4 | 136 | 0 | 12.3 | 1.5 | <.50 | 180 | 3 | | | | -136 | 136 |
| 05/16/96 | | 6.4 | 130 | 0 | 11.2 | 1.3 | <.50 | 157 | 3 | | | | | |
| 06/26/96 | 45 | 6.7 | 122 | 0 | 13.6 | 1.5 | <.50 | 161 | 4 | 0 | 0 | | | |
| 07/24/96 | | 6.6 | 132 | 0 | 14.2 | 1.6 | <.50 | 160 | 6 | | | | -132 | 132 |
| 07/24/96 | | 6.6 | 132 | 0 | 14.2 | 1.6 | <.50 | 160 | 6 | | | | | |
| 08/13/96 | | 6.4 | 136 | 0.2 | 15.0 | 1.6 | <.50 | 185 | 10 | | | | -136 | 136 |
| 09/18/96 | | 6.6 | 140 | 0 | 16.3 | 1.7 | <.50 | 218 | 14 | | | | -140 | 140 |
| 10/22/96 | | 6.6 | 138 | 0 | 13.8 | 1.6 | <.50 | 175 | 12 | | | | -138 | 138 |
| 12/11/96 | | 6.6 | 140 | 0 | 11.4 | 1.3 | <.50 | 169 | 12 | | | | -140 | 140 |
| 02/19/97 | | 6.6 | 132 | 0 | 9.6 | 1.3 | <.50 | 170 | <3 | | | | -132 | 132 |
| 03/19/97 | | 6.5 | 114 | 0 | 8.3 | 1.1 | <.50 | 150 | <3 | | | | -114 | 114 |
| 04/09/97 | | 6.6 | 122 | 0 | 9.1 | 1.2 | <.50 | 154 | 14 | | | | -122 | 122 |
| 05/20/97 | | 6.7 | 124 | 0 | 11.2 | 1.2 | <.50 | 149 | <3 | | | | -124 | 124 |
| 06/19/97 | | 6.5 | 124 | 0 | 12.4 | 1.4 | <.50 | 176 | 10 | | | | -124 | 124 |
| 07/15/97 | | 6.6 | 126 | 0 | 12.4 | 1.3 | <.50 | 187 | 10 | | | | -126 | 126 |
| 08/19/97 | | 6.7 | 138 | 0 | 12.9 | 1.5 | <.50 | 196 | 4 | | | | -138 | 138 |
| 09/09/97 | | 6.5 | 136 | 0 | 16.1 | 1.7 | <.50 | 212 | 6 | | | | -136 | 136 |
| 10/08/97 | | 6.4 | 146 | 5.8 | 15.5 | 1.6 | <.50 | 207 | 8 | | | | -140 | 140 |
| 12/11/97 | | 6.5 | 140 | 0 | 16.8 | 1.6 | <.50 | 213 | 16 | | | | -140 | 140 |
| 1/21/98 | | 6.7 | 126 | 0 | 13.7 | 1.4 | <.50 | 214 | 16 | | | | -126 | 126 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR114B2 FINAL POND DISCHARGE FOR SR114B
HEDIN / C.D.S. SYSTEM

| Min. | 45 | 6.40 | 86.00 | 0.00 | 2.3 | 1.0 | 0.0 | 135 | 2.00 | 0 | 0 | -126 | 86 |
|----------|----|------|--------|------|-----|-----|-----|-----|-------|---|---|------|-----|
| Max. | 91 | 7.00 | 126.00 | 0.00 | 6.9 | 2.0 | 0.0 | 233 | 26.00 | 0 | 5 | -86 | 126 |
| Range | 46 | 0.60 | 40.00 | 0.00 | 4.6 | 0.9 | 0.0 | 98 | 24.00 | 0 | 5 | 40 | 40 |
| AVERAGE | 59 | 6.7 | 100.4 | 0.0 | 5.2 | 1.5 | | 181 | 8 | 0 | 4 | | |
| 75% tile | 66 | | | 0 | | | | | | 0 | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 08/30/95 | | 6.7 | 108 | 0 | 2.3 | 1.8 | <.50 | 152 | 2 | | | | -108 | 108 |
| 09/14/95 | | 6.9 | 118 | 0 | 5.5 | 1.9 | <.50 | 188 | 12 | | | | -118 | 118 |
| 10/11/95 | 55 | 6.8 | 106 | 0 | 6.5 | 2.0 | <.50 | 187 | 20 | 0 | 4 | | -106 | 106 |
| 11/01/95 | 45 | 6.7 | 110 | 0 | 5.9 | 1.7 | <.50 | 233 | 3 | 0 | 3 | | -110 | 110 |
| 12/13/95 | | 6.7 | 126 | 0 | 5.7 | 1.7 | <.50 | 232 | 3 | | | | -126 | 126 |
| 01/10/96 | 45 | 6.6 | 120 | 0 | 6.7 | 1.7 | <.50 | 212 | 10 | 0 | 4 | | -120 | 120 |
| 02/21/96 | 66 | 6.7 | 102 | 0 | 5.6 | 1.7 | <.50 | 203 | 7 | 0 | 4 | | -102 | 102 |
| 03/13/96 | 58 | 6.9 | 110 | 0 | 5.4 | 1.5 | <.50 | 167 | 3 | 0 | 4 | | -110 | 110 |
| 04/16/96 | 77 | 6.5 | 100 | 0 | 5.5 | 1.4 | <.50 | 172 | 3 | 0 | 5 | | -100 | 100 |
| 05/16/96 | 55 | 6.5 | 96 | 0 | 5.2 | 1.4 | <.50 | 153 | 5 | 0 | 3 | | -96 | 96 |
| 06/26/96 | | 7 | 92 | 0 | 4.6 | 1.5 | <.50 | 135 | 3 | | | | -92 | 92 |
| 07/24/96 | | 6.8 | 100 | 0 | 6.1 | 1.5 | <.50 | 151 | <3 | 0 | 0 | | -100 | 100 |
| 08/13/96 | 45 | 6.5 | 98 | 0 | 5.6 | 1.5 | <.50 | 193 | 26 | 0 | 3 | | -98 | 98 |
| 09/18/96 | 55 | 6.8 | 94 | 0 | 6.9 | 1.6 | <.50 | 207 | 8 | 0 | 5 | | -94 | 94 |
| 10/22/96 | 50 | 6.8 | 98 | 0 | 5.6 | 1.5 | <.50 | 172 | 12 | 0 | 3 | | -98 | 98 |
| 12/11/96 | | 6.8 | 104 | 0 | 6.5 | 1.3 | <.50 | 160 | 24 | | | | -104 | 104 |
| 02/19/97 | | 6.9 | 102 | 0 | 4.5 | 1.2 | <.50 | 173 | 8 | | | | -102 | 102 |
| 03/19/97 | 91 | 6.7 | 86 | 0 | 3.9 | 1.0 | <.50 | 148 | 4 | 0 | 4 | | -86 | 86 |
| 04/09/97 | | 6.9 | 90 | 0 | 4.6 | 1.1 | <.50 | 158 | <3 | | | | -90 | 90 |
| 05/20/97 | 65 | 6.9 | 90 | 0 | 4.1 | 1.1 | <.50 | 149 | <3 | 0 | 3 | | -90 | 90 |
| 06/19/97 | | 6.6 | 90 | 0 | 4.1 | 1.2 | <.50 | 170 | <3 | | | | -90 | 90 |
| 07/15/97 | 54 | 6.7 | 96 | 0 | 4.1 | 1.3 | <.50 | 187 | <3 | 0 | 3 | | -96 | 96 |
| 08/19/97 | | 6.8 | 94 | 0 | 4.7 | 1.4 | <.50 | 180 | 4 | | | | -94 | 94 |
| 09/09/97 | | 6.6 | 92 | 0 | 4.8 | 1.5 | <.50 | 203 | <3 | | | | -92 | 92 |
| 10/08/97 | 66 | 6.4 | 96 | 0 | 5.3 | 1.4 | <.50 | 202 | 4 | 0 | 4 | | -96 | 96 |
| 12/11/97 | 66 | 6.6 | 92 | 0 | 6.4 | 1.4 | <.50 | 213 | <3 | 0 | 5 | | -92 | 92 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR114D1 DISCHARGE FROM A.L.D. FOR HEDIN / C.D.S. SYSTEM WEST

| | | | | | | | | | | | | | | |
|----------|-----|------|--------|-------|------|-----|-----|-----|-------|----|----|---|------|-----|
| Min. | 60 | 6.30 | 128.00 | 0.00 | 31.9 | 1.0 | 0.0 | 220 | 4.00 | 0 | 23 | 0 | -154 | 98 |
| Max. | 158 | 6.50 | 154.00 | 54.00 | 37.4 | 1.2 | 0.0 | 285 | 60.00 | 69 | 67 | 0 | -98 | 154 |
| Range | 98 | 0.20 | 26.00 | 54.00 | 5.5 | 0.2 | 0.0 | 65 | 56.00 | 69 | 44 | 0 | 56 | 56 |
| AVERAGE | 135 | 6.4 | 140.9 | 4.9 | 34.2 | 1.1 | | 250 | 25 | 7 | 56 | | | |
| 75% tile | 154 | | | 0 | | | | | | 0 | | | | |

| Date | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp. S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|----------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|---------------|------------------|------------------|-----------------|---------------|---------------|
| 07/24/96 | 139 | 6.5 | 138 | 0 | 34.6 | 1.1 | <.50 | 285 | 14 | 0 | 58 | | -138 | 138 |
| 08/13/96 | 139 | 6.3 | 134 | 20 | 35.3 | 1.1 | <.50 | 220 | 34 | 33 | 59 | | -114 | 114 |
| 09/18/96 | 150 | 6.4 | 154 | 0 | 37.4 | 1.2 | <.50 | 272 | 52 | 0 | 67 | | -154 | 154 |
| 10/23/96 | 148 | 6.4 | 152 | 0 | 34.5 | 1.1 | <.50 | 224 | 48 | 0 | 61 | | -152 | 152 |
| 12/1/96 | 158 | 6.5 | 152 | 0 | 32.6 | 1.0 | <.50 | 229 | 22 | 0 | 62 | | -152 | 152 |
| 02/19/97 | 140 | 6.5 | 140 | 0 | 33.5 | 1.0 | <.50 | 264 | 20 | 0 | 56 | | -140 | 140 |
| 03/19/97 | 158 | 6.4 | 134 | 0 | 32.6 | 1.0 | <.50 | 259 | 8 | 0 | 62 | | -134 | 134 |
| 04/09/97 | 158 | 6.4 | 132 | 0 | 33.4 | 1.1 | <.50 | 228 | 60 | 0 | 63 | | -132 | 132 |
| 05/20/97 | 149 | 6.5 | 140 | 0 | 34.4 | 1.0 | <.50 | 239 | <3 | 0 | 62 | | -140 | 140 |
| 06/19/97 | 158 | 6.3 | 130 | 0 | 35.2 | 1.1 | <.50 | 243 | 8 | 0 | 67 | | -130 | 130 |
| 07/15/97 | 80 | 6.5 | 128 | 0 | 32.4 | 1.0 | <.50 | 253 | 18 | 0 | 23 | | -128 | 128 |
| 08/19/97 | 91 | 6.5 | 140 | 0 | 31.9 | 1.0 | <.50 | 247 | 4 | 0 | 35 | | -140 | 140 |
| 09/09/97 | 149 | 6.5 | 144 | 0 | 35.8 | 1.1 | <.50 | 265 | <3 | 0 | 64 | | -144 | 144 |
| 10/08/97 | 106 | 6.3 | 152 | 54 | 34.6 | 1.1 | <.50 | 258 | 6 | 69 | 44 | | -98 | 98 |
| 12/11/97 | 123 | 6.4 | 144 | 0 | 35.2 | 1.1 | <.50 | 271 | 26 | 0 | 52 | | -144 | 144 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK

SR114D5 FINAL WETLAND DISCHARGE FOR SR114D HEDIN / C.D.S. SYSTEM WEST

| | | | | | | | | | | | | | | |
|----------|-----|------|-------|------|------|-----|-----|-----|-------|---|----|---|-----|----|
| Min. | 60 | 6.40 | 86.00 | 0.00 | 6.1 | 0.9 | 0.0 | 183 | 4.00 | 0 | 6 | 0 | -96 | 86 |
| Max. | 158 | 6.90 | 96.00 | 0.00 | 17.4 | 1.1 | 0.0 | 286 | 40.00 | 0 | 33 | 0 | -86 | 96 |
| Range | 98 | 0.50 | 10.00 | 0.00 | 11.3 | 0.2 | 0.0 | 104 | 36.00 | 0 | 27 | 0 | 10 | 10 |
| AVERAGE | 135 | 6.6 | 90.0 | 0.0 | 12.6 | 1.0 | | 234 | 17 | 0 | 21 | | | |
| 75% tile | 154 | | | 0 | | | | | | 0 | | | | |

| Date Sampled | Flow (gpm) | Lab. pH | Alk. mg/L | Acid mg/L | Iron mg/L | Mang. mg/L | Al. mg/L | Sulfate mg/L | Susp.S. mg/L | Acid Load lb/day | Iron Load lb/day | Al. Load lb/day | Net Acid mg/L | Net Alk. mg/L |
|--------------|------------|---------|-----------|-----------|-----------|------------|----------|--------------|--------------|------------------|------------------|-----------------|---------------|---------------|
| 07/24/96 | 139 | 6.7 | 94 | 0 | 9.4 | 1.0 | <.50 | 286 | 6 | 0 | 16 | | -94 | 94 |
| 08/13/96 | 139 | 6.4 | 94 | 0 | 14.1 | 1.1 | <.50 | 205 | 40 | 0 | 24 | | -94 | 94 |
| 09/18/96 | 150 | 6.4 | 92 | 0 | 15.9 | 1.1 | <.50 | 209 | 28 | 0 | 29 | | -92 | 92 |
| 10/23/96 | 148 | 6.7 | 92 | 0 | 14.1 | 1.1 | <.50 | 230 | 36 | 0 | 25 | | -92 | 92 |
| 12/11/96 | 158 | 6.6 | 96 | 0 | 17.1 | 0.9 | <.50 | 214 | 36 | 0 | 32 | | -96 | 96 |
| 02/19/97 | 140 | 6.6 | 92 | 0 | 16.6 | 1.0 | <.50 | 221 | 15.9 | 0 | 28 | | -92 | 92 |
| 03/19/97 | 158 | 6.6 | 86 | 0 | 17.4 | 1.0 | <.50 | 277 | <3 | 0 | 33 | | -86 | 86 |
| 04/09/97 | 158 | 6.7 | 88 | 0 | 15.3 | 1.0 | <.50 | 241 | 4 | 0 | 29 | | -88 | 88 |
| 05/20/97 | 149 | 6.9 | 88 | 0 | 11.0 | 0.9 | <.50 | 225 | 12 | 0 | 20 | | -88 | 88 |
| 06/19/97 | 158 | 6.5 | 86 | 0 | 10.6 | 1.0 | <.50 | 163 | 4 | 0 | 20 | | -86 | 86 |
| 07/15/97 | 90 | 6.6 | 92 | 0 | 8.4 | 1.0 | <.50 | 249 | 4 | 0 | 6 | | -92 | 92 |
| 08/19/97 | 91 | 6.7 | 88 | 0 | 6.1 | 0.9 | <.50 | 214 | <3 | 0 | 7 | | -88 | 88 |
| 09/09/97 | 149 | 6.6 | 88 | 0 | 10.2 | 1.0 | <.50 | 255 | <3 | 0 | 18 | | -88 | 88 |
| 10/08/97 | 106 | 6.4 | 88 | 0 | 8.2 | 1.0 | <.50 | 252 | 6 | 0 | 10 | | -88 | 88 |
| 12/11/97 | 123 | 6.6 | 86 | 0 | 14.0 | 1.1 | <.50 | 250 | <3 | 0 | 21 | | -86 | 86 |

DISCHARGE STATION MAIN BRANCH SLIPPERY ROCK