

## APPENDIX A

Estimated Total Deposition of Major Ions at Each Modeling Site for the  
Future Years 2009 and 2018



**Table A1.** Total deposition (wet plus dry plus cloud) of ions at each modeled site for the reference year 2009 under the Base Case scenario.

| Name                             | Site ID | Precip (m/yr) | Total Deposition at Each Site (meq/m <sup>2</sup> /yr) |     |      |     |                 |                 |      |                 |      |       |        |
|----------------------------------|---------|---------------|--|-----|------|-----|-----------------|-----------------|------|-----------------|------|-------|--------|
|                                  |         |               | Ca   | Mg  | Na   | K   | NH <sub>4</sub> | SO <sub>4</sub> | Cl   | NO <sub>3</sub> | SBC  | SAA   | CALK   |
| Adam Camp Branch                 | 237     | 1.8           | 9.5  | 2.7 | 7.1  | 1.3 | 35.3            | 62.4            | 12.6 | 38.1            | 20.6 | 113.1 | -57.2  |
| Bear Branch                      | 195     | 1.0           | 5.2  | 1.4 | 3.5  | 0.7 | 19.9            | 33.4            | 6.2  | 20.9            | 10.8 | 60.5  | -29.8  |
| Bearpen Branch                   | 253     | 1.7           | 9.4  | 2.8 | 7.6  | 1.3 | 38.4            | 61.4            | 13.3 | 38.0            | 21.1 | 112.7 | -53.2  |
| Beetree Branch                   | 190     | 1.0           | 5.8  | 1.6 | 4.0  | 0.8 | 20.4            | 34.1            | 7.5  | 21.4            | 12.2 | 62.9  | -30.3  |
| Big Cove Branch                  | 259     | 1.4           | 8.6  | 2.5 | 6.6  | 1.2 | 28.2            | 48.0            | 12.3 | 29.4            | 18.8 | 89.6  | -42.5  |
| Big Laurel Brook                 | 215     | 2.3           | 9.9  | 3.6 | 11.8 | 1.5 | 44.2            | 69.4            | 18.2 | 43.2            | 26.9 | 130.8 | -59.7  |
| Big Oak Cove Creek               | 261     | 1.6           | 8.7  | 2.6 | 6.9  | 1.2 | 32.5            | 56.3            | 12.0 | 34.0            | 19.3 | 102.3 | -50.5  |
| Briar Creek                      | 72      | 1.1           | 5.1  | 1.5 | 4.0  | 0.6 | 26.4            | 44.4            | 6.6  | 24.0            | 11.2 | 75.0  | -37.4  |
| Bubbling Spring Branch           | 129     | 1.7           | 6.9  | 2.4 | 7.3  | 1.0 | 71.5            | 110.5           | 11.2 | 68.8            | 17.6 | 190.5 | -101.4 |
| Bubbling Spring West Tributary   | 131     | 1.6           | 6.3  | 2.2 | 6.6  | 1.0 | 68.1            | 104.9           | 9.9  | 65.6            | 16.1 | 180.4 | -96.3  |
| Buckeye Cove Creek               | 133     | 1.9           | 7.3  | 2.5 | 7.5  | 1.1 | 73.5            | 113.6           | 11.7 | 71.1            | 18.4 | 196.4 | -104.6 |
| Cane Creek Tributary             | 204     | 2.3           | 12.0   | 4.4 | 14.4 | 1.9 | 42.9            | 67.4            | 24.2 | 42.0            | 32.6 | 133.6 | -58.2  |
| Cathey Creek                     | 122     | 1.5           | 6.9  | 2.3 | 6.9  | 1.0 | 30.1            | 47.7            | 11.5 | 29.5            | 17.1 | 88.7  | -41.5  |
| Colberts Creek                   | 53      | 1.8           | 7.4  | 2.5 | 7.6  | 1.0 | 38.6            | 66.6            | 12.5 | 35.2            | 18.6 | 114.4 | -57.2  |
| Courthouse Creek                 | 121     | 2.1           | 10.4   | 3.6 | 11.0 | 1.6 | 42.9            | 68.6            | 18.7 | 41.8            | 26.5 | 129.0 | -59.6  |
| Dark Prong                       | 114     | 1.7           | 6.3  | 2.1 | 6.5  | 0.9 | 69.9            | 109.2           | 9.6  | 68.1            | 15.9 | 186.9 | -101.2 |
| Davidson River                   | 102     | 2.4           | 10.2   | 3.5 | 10.6 | 1.5 | 48.8            | 78.7            | 16.8 | 47.8            | 25.7 | 143.4 | -68.9  |
| East Fork Pigeon                 | 101     | 2.2           | 8.6  | 2.9 | 9.0  | 1.3 | 42.2            | 68.2            | 14.0 | 41.7            | 21.8 | 123.9 | -59.9  |
| Flat Laurel Creek                | 127     | 1.4           | 5.7  | 1.9 | 5.9  | 0.8 | 30.3            | 47.6            | 8.8  | 29.3            | 14.5 | 85.7  | -41.0  |
| Glade Creek                      | 198     | 2.0           | 9.2  | 3.4 | 11.3 | 1.4 | 38.4            | 59.9            | 17.8 | 37.3            | 25.3 | 115.0 | -51.3  |
| Greenland Creek                  | 160     | 2.0           | 8.6  | 3.2 | 10.4 | 1.3 | 37.6            | 59.2            | 16.1 | 36.9            | 23.4 | 112.2 | -51.2  |
| Indian Branch                    | 255     | 1.5           | 10.8   | 3.1 | 7.9  | 1.5 | 31.2            | 54.2            | 16.1 | 32.7            | 23.2 | 103.0 | -48.6  |
| Indian Camp                      | 185     | 1.8           | 12.5   | 4.6 | 15.0 | 1.9 | 35.5            | 55.0            | 27.2 | 34.3            | 34.0 | 116.5 | -47.0  |
| Indian Spring Branch             | 239     | 2.6           | 13.4   | 4.1 | 11.1 | 1.9 | 55.6            | 90.9            | 19.3 | 56.3            | 30.4 | 166.5 | -80.5  |
| Kilby Creek                      | 217     | 1.8           | 9.6  | 3.5 | 11.2 | 1.5 | 47.4            | 74.3            | 16.5 | 46.0            | 25.7 | 136.9 | -63.8  |
| Kirkland Cove                    | 260     | 1.5           | 8.3  | 2.4 | 6.4  | 1.1 | 29.8            | 50.8            | 11.5 | 30.9            | 18.3 | 93.2  | -45.0  |
| Left Prong South Toe River       | 61      | 2.1           | 9.0  | 2.9 | 8.8  | 1.3 | 45.8            | 79.4            | 15.1 | 40.7            | 22.0 | 135.2 | -67.4  |
| Lindy Camp Branch                | 35      | 1.3           | 7.1  | 2.0 | 5.0  | 0.9 | 34.5            | 57.7            | 8.7  | 32.5            | 15.0 | 98.9  | -49.3  |
| Little Prong Hickey Fork         | 91      | 1.1           | 4.3  | 1.3 | 3.5  | 0.6 | 26.0            | 44.6            | 5.3  | 23.4            | 9.6  | 73.3  | -37.7  |
| Little Santetlah Cr. (NuCM site) | 281     | 2.3           | 11.9   | 3.5 | 9.2  | 1.7 | 42.7            | 74.2            | 16.4 | 45.7            | 26.2 | 136.3 | -67.4  |
| Long Branch                      | 103     | 2.7           | 10.9   | 3.7 | 11.6 | 1.6 | 51.6            | 83.7            | 18.3 | 51.1            | 27.9 | 153.1 | -73.6  |
| Lost Cove                        | 56      | 2.2           | 9.4  | 3.0 | 9.2  | 1.3 | 48.2            | 82.4            | 15.4 | 43.4            | 23.0 | 141.2 | -70.0  |
| Lower Creek                      | 59      | 1.7           | 9.8  | 3.2 | 10.1 | 1.3 | 37.0            | 64.2            | 18.9 | 33.2            | 24.5 | 116.3 | -54.8  |
| McNabb Creek                     | 270     | 1.4           | 16.8   | 4.8 | 12.3 | 2.2 | 29.8            | 52.1            | 29.3 | 31.3            | 36.0 | 112.7 | -46.8  |
| Middle Creek                     | 55      | 1.8           | 7.5  | 2.5 | 7.8  | 1.1 | 38.9            | 67.2            | 12.8 | 35.6            | 18.9 | 115.6 | -57.8  |
| Mill Station Creek               | 132     | 1.8           | 14.5   | 5.0 | 15.2 | 2.2 | 39.0            | 61.7            | 29.7 | 37.6            | 36.9 | 129.0 | -53.1  |
| Paddy Creek                      | 26      | 1.2           | 3.8  | 1.3 | 3.9  | 0.5 | 28.6            | 48.1            | 11.2 | 25.0            | 9.4  | 84.3  | -46.3  |
| Peach Orchard Creek              | 70      | 1.1           | 4.2  | 1.4 | 4.2  | 0.6 | 24.0            | 41.2            | 6.8  | 20.9            | 10.4 | 68.9  | -34.5  |
| Pigpen Branch                    | 191     | 1.8           | 9.2  | 3.4 | 11.3 | 1.4 | 34.6            | 54.1            | 18.4 | 33.9            | 25.2 | 106.4 | -46.5  |
| Rattlesnake Branch               | 143     | 1.0           | 5.2  | 1.5 | 4.0  | 0.7 | 23.1            | 39.4            | 7.3  | 21.9            | 11.4 | 68.5  | -34.0  |
| Right Hand Prong                 | 147     | 1.7           | 7.5  | 2.5 | 7.6  | 1.1 | 34.9            | 55.4            | 12.2 | 34.3            | 18.7 | 102.0 | -48.4  |
| Roaring Branch                   | 251     | 1.5           | 8.2  | 2.4 | 6.2  | 1.1 | 29.9            | 50.9            | 11.0 | 31.1            | 17.9 | 93.0  | -45.2  |
| Rough Ridge Creek                | 257     | 1.5           | 8.6  | 2.5 | 6.7  | 1.2 | 30.6            | 51.9            | 11.9 | 31.7            | 18.9 | 95.4  | -45.9  |
| Russell Creek                    | 15      | 1.3           | 7.1  | 2.4 | 7.1  | 1.0 | 32.3            | 54.0            | 12.7 | 27.9            | 17.6 | 94.7  | -44.8  |
| Scotsman Creek                   | 193     | 1.9           | 8.9  | 3.3 | 10.7 | 1.4 | 35.8            | 55.6            | 17.3 | 34.7            | 24.3 | 107.7 | -47.6  |
| South Fork Fowler Creek          | 188     | 1.8           | 8.8  | 3.3 | 10.8 | 1.4 | 37.3            | 58.0            | 17.0 | 36.2            | 24.3 | 111.3 | -49.7  |
| Spivey Creek                     | 266     | 1.3           | 8.2  | 2.4 | 6.3  | 1.1 | 27.2            | 46.6            | 11.6 | 28.3            | 17.9 | 86.6  | -41.5  |

**Table A1.** Continued.

| Name                            | Site ID | Precip (m/yr) | Total Deposition at Each Site (meq/m <sup>2</sup> /yr) |     |      |     |                 |                 |      |                 |      |       |       |
|---------------------------------|---------|---------------|--|-----|------|-----|-----------------|-----------------|------|-----------------|------|-------|-------|
|                                 |         |               | Ca   | Mg  | Na   | K   | NH <sub>4</sub> | SO <sub>4</sub> | Cl   | NO <sub>3</sub> | SBC  | SAA   | CALK  |
| Squibb Creek                    | 88      | 1.0           | 5.0  | 1.5 | 4.1  | 0.6 | 22.5            | 38.1            | 7.3  | 20.6            | 11.2 | 66.0  | -32.3 |
| Stillhouse Branch               | 28      | 1.3           | 3.6  | 1.2 | 3.6  | 0.5 | 30.7            | 51.6            | 10.6 | 26.5            | 8.9  | 88.7  | -49.2 |
| Unnamed creek A                 | 245     | 2.0           | 10.3   | 3.0 | 8.1  | 1.4 | 39.4            | 68.9            | 13.9 | 41.7            | 22.8 | 124.5 | -62.3 |
| Unnamed creek B                 | 246     | 1.6           | 16.7   | 4.8 | 12.5 | 2.3 | 32.8            | 57.2            | 28.8 | 34.7            | 36.2 | 120.7 | -51.7 |
| Unnamed creek C                 | 249     | 1.6           | 11.2   | 3.2 | 8.4  | 1.5 | 31.2            | 54.2            | 17.2 | 32.9            | 24.3 | 104.3 | -48.7 |
| Upper Creek                     | 60      | 1.7           | 9.5  | 3.1 | 9.7  | 1.3 | 37.4            | 64.8            | 18.0 | 33.5            | 23.6 | 116.4 | -55.3 |
| UT Flat Laurel Creek            | 120     | 1.5           | 7.4  | 2.5 | 7.7  | 1.1 | 63.2            | 97.0            | 13.1 | 60.5            | 18.7 | 170.6 | -88.6 |
| UT Laurel Branch                | 265     | 1.5           | 19.4   | 5.5 | 14.2 | 2.6 | 30.7            | 53.4            | 34.7 | 32.2            | 41.7 | 120.2 | -47.9 |
| UT Linville River (NUCM site)   | 21      | 1.4           | 7.0  | 2.3 | 7.0  | 1.0 | 34.2            | 57.9            | 12.3 | 29.8            | 17.4 | 100.0 | -48.5 |
| UT McNabb Creek                 | 262     | 1.3           | 8.6  | 2.4 | 6.3  | 1.2 | 30.5            | 54.0            | 11.5 | 32.4            | 18.4 | 97.9  | -49.0 |
| UT North Fork of Catawba        | 33      | 1.2           | 3.7  | 1.2 | 3.7  | 0.5 | 29.2            | 49.1            | 10.8 | 25.3            | 9.2  | 85.3  | -46.9 |
| UT Paint Creek                  | 94      | 0.9           | 4.4  | 1.3 | 3.6  | 0.6 | 20.9            | 35.7            | 6.4  | 19.1            | 9.9  | 61.1  | -30.3 |
| UT Panthertown Creek (Boggy Cr) | 163     | 1.8           | 7.6  | 2.8 | 9.2  | 1.2 | 35.2            | 55.0            | 14.0 | 34.2            | 20.8 | 103.2 | -47.3 |
| UT Russell Creek                | 14      | 1.4           | 4.6  | 1.5 | 4.6  | 0.7 | 32.7            | 54.6            | 13.4 | 28.5            | 11.4 | 96.4  | -52.3 |
| White Creek                     | 16      | 1.5           | 7.9  | 2.7 | 7.8  | 1.2 | 34.5            | 57.7            | 14.3 | 30.2            | 19.6 | 102.2 | -48.1 |
| Wildcat Branch                  | 232     | 2.2           | 10.9   | 3.4 | 9.2  | 1.6 | 45.8            | 74.7            | 15.9 | 46.4            | 25.0 | 137.0 | -66.2 |
| Wilson Creek                    | 169     | 2.2           | 16.0   | 5.9 | 19.8 | 2.5 | 44.6            | 70.8            | 35.5 | 44.1            | 44.2 | 150.4 | -61.7 |
| Wolf Creek                      | 150     | 1.8           | 8.2  | 2.8 | 8.7  | 1.2 | 37.3            | 59.1            | 14.0 | 36.3            | 21.0 | 109.4 | -51.1 |
| Yellow Fork                     | 27      | 1.2           | 3.3  | 1.1 | 3.3  | 0.5 | 27.9            | 46.9            | 9.8  | 24.2            | 8.2  | 81.0  | -44.9 |

**Table A2.** Total deposition (wet plus dry plus cloud) of ions at each modeled site for the reference year 2018 under the Base Case scenario.

| Name                             | Site ID | Precip (m/yr) | Total Deposition at Each Site (meq/m <sup>2</sup> /yr) |     |      |     |                 |                 |      |                 |      |       |       |
|----------------------------------|---------|---------------|--|-----|------|-----|-----------------|-----------------|------|-----------------|------|-------|-------|
|                                  |         |               | Ca   | Mg  | Na   | K   | NH <sub>4</sub> | SO <sub>4</sub> | Cl   | NO <sub>3</sub> | SBC  | SAA   | CALK  |
| Adam Camp Branch                 | 237     | 1.8           | 9.5  | 2.7 | 7.1  | 1.3 | 40.3            | 43.4            | 12.6 | 27.8            | 20.6 | 83.8  | -22.9 |
| Bear Branch                      | 195     | 1.0           | 5.2  | 1.4 | 3.5  | 0.7 | 22.7            | 23.2            | 6.2  | 15.3            | 10.8 | 44.7  | -11.1 |
| Bearpen Branch                   | 253     | 1.7           | 9.4  | 2.8 | 7.6  | 1.3 | 43.9            | 42.7            | 13.3 | 27.7            | 21.1 | 83.8  | -18.8 |
| Beetree Branch                   | 190     | 1.0           | 5.8  | 1.6 | 4.0  | 0.8 | 23.3            | 23.7            | 7.5  | 15.6            | 12.2 | 46.7  | -11.3 |
| Big Cove Branch                  | 259     | 1.4           | 8.6  | 2.5 | 6.6  | 1.2 | 32.3            | 33.4            | 12.3 | 21.5            | 18.8 | 67.1  | -16.0 |
| Big Laurel Brook                 | 215     | 2.3           | 9.9  | 3.6 | 11.8 | 1.5 | 50.5            | 48.2            | 18.2 | 31.6            | 26.9 | 98.0  | -20.6 |
| Big Oak Cove Creek               | 261     | 1.6           | 8.7  | 2.6 | 6.9  | 1.2 | 37.1            | 39.1            | 12.0 | 24.8            | 19.3 | 76.0  | -19.5 |
| Briar Creek                      | 72      | 1.1           | 5.1  | 1.5 | 4.0  | 0.6 | 30.2            | 30.9            | 6.6  | 17.5            | 11.2 | 55.0  | -13.7 |
| Bubbling Spring Branch           | 129     | 1.7           | 6.9  | 2.4 | 7.3  | 1.0 | 81.7            | 76.8            | 11.2 | 50.3            | 17.6 | 138.3 | -39.0 |
| Bubbling Spring West Tributary   | 131     | 1.6           | 6.3  | 2.2 | 6.6  | 1.0 | 77.8            | 72.9            | 9.9  | 47.9            | 16.1 | 130.7 | -36.9 |
| Buckeye Cove Creek               | 133     | 1.9           | 7.3  | 2.5 | 7.5  | 1.1 | 84.0            | 79.0            | 11.7 | 52.0            | 18.4 | 142.6 | -40.3 |
| Cane Creek Tributary             | 204     | 2.3           | 12.0   | 4.4 | 14.4 | 1.9 | 49.0            | 46.8            | 24.2 | 30.7            | 32.6 | 101.8 | -20.2 |
| Cathey Creek                     | 122     | 1.5           | 6.9  | 2.3 | 6.9  | 1.0 | 34.4            | 33.2            | 11.5 | 21.6            | 17.1 | 66.2  | -14.7 |
| Colberts Creek                   | 53      | 1.8           | 7.4  | 2.5 | 7.6  | 1.0 | 44.1            | 46.3            | 12.5 | 25.8            | 18.6 | 84.6  | -21.9 |
| Courthouse Creek                 | 121     | 2.1           | 10.4   | 3.6 | 11.0 | 1.6 | 49.1            | 47.7            | 18.7 | 30.6            | 26.5 | 96.9  | -21.3 |
| Dark Prong                       | 114     | 1.7           | 6.3  | 2.1 | 6.5  | 0.9 | 79.8            | 75.9            | 9.6  | 49.8            | 15.9 | 135.3 | -39.6 |
| Davidson River                   | 102     | 2.4           | 10.2   | 3.5 | 10.6 | 1.5 | 55.7            | 54.7            | 16.8 | 35.0            | 25.7 | 106.5 | -25.1 |
| East Fork Pigeon                 | 101     | 2.2           | 8.6  | 2.9 | 9.0  | 1.3 | 48.3            | 47.4            | 14.0 | 30.5            | 21.8 | 91.9  | -21.9 |
| Flat Laurel Creek                | 127     | 1.4           | 5.7  | 1.9 | 5.9  | 0.8 | 34.7            | 33.1            | 8.8  | 21.4            | 14.5 | 63.3  | -14.2 |
| Glade Creek                      | 198     | 2.0           | 9.2  | 3.4 | 11.3 | 1.4 | 43.9            | 41.6            | 17.8 | 27.3            | 25.3 | 86.7  | -17.6 |
| Greenland Creek                  | 160     | 2.0           | 8.6  | 3.2 | 10.4 | 1.3 | 42.9            | 41.1            | 16.1 | 26.9            | 23.4 | 84.2  | -17.9 |
| Indian Branch                    | 255     | 1.5           | 10.8   | 3.1 | 7.9  | 1.5 | 35.7            | 37.7            | 16.1 | 23.9            | 23.2 | 77.6  | -18.8 |
| Indian Camp                      | 185     | 1.8           | 12.5   | 4.6 | 15.0 | 1.9 | 40.5            | 38.3            | 27.2 | 25.1            | 34.0 | 90.5  | -15.9 |
| Indian Spring Branch             | 239     | 2.6           | 13.4   | 4.1 | 11.1 | 1.9 | 63.6            | 63.2            | 19.3 | 41.1            | 30.4 | 123.6 | -29.7 |
| Kilby Creek                      | 217     | 1.8           | 9.6  | 3.5 | 11.2 | 1.5 | 54.2            | 51.7            | 16.5 | 33.6            | 25.7 | 101.8 | -21.9 |
| Kirkland Cove                    | 260     | 1.5           | 8.3  | 2.4 | 6.4  | 1.1 | 34.1            | 35.3            | 11.5 | 22.6            | 18.3 | 69.4  | -17.0 |
| Left Prong South Toe River       | 61      | 2.1           | 9.0  | 2.9 | 8.8  | 1.3 | 52.3            | 55.2            | 15.1 | 29.7            | 22.0 | 100.0 | -25.7 |
| Lindy Camp Branch                | 35      | 1.3           | 7.1  | 2.0 | 5.0  | 0.9 | 39.5            | 40.1            | 8.7  | 23.8            | 15.0 | 72.5  | -18.0 |
| Little Prong Hickey Fork         | 91      | 1.1           | 4.3  | 1.3 | 3.5  | 0.6 | 29.8            | 31.0            | 5.3  | 17.1            | 9.6  | 53.4  | -14.1 |
| Little Santetlah Cr. (NuCM site) | 281     | 2.3           | 11.9   | 3.5 | 9.2  | 1.7 | 48.8            | 51.6            | 16.4 | 33.4            | 26.2 | 101.4 | -26.4 |
| Long Branch                      | 103     | 2.7           | 10.9   | 3.7 | 11.6 | 1.6 | 59.0            | 58.2            | 18.3 | 37.4            | 27.9 | 113.8 | -26.9 |
| Lost Cove                        | 56      | 2.2           | 9.4  | 3.0 | 9.2  | 1.3 | 55.1            | 57.3            | 15.4 | 31.7            | 23.0 | 104.4 | -26.3 |
| Lower Creek                      | 59      | 1.7           | 9.8  | 3.2 | 10.1 | 1.3 | 42.3            | 44.6            | 18.9 | 24.3            | 24.5 | 87.8  | -21.0 |
| McNabb Creek                     | 270     | 1.4           | 16.8   | 4.8 | 12.3 | 2.2 | 34.1            | 36.2            | 29.3 | 22.9            | 36.0 | 88.4  | -18.2 |
| Middle Creek                     | 55      | 1.8           | 7.5  | 2.5 | 7.8  | 1.1 | 44.5            | 46.7            | 12.8 | 26.0            | 18.9 | 85.5  | -22.2 |
| Mill Station Creek               | 132     | 1.8           | 14.5   | 5.0 | 15.2 | 2.2 | 44.6            | 42.9            | 29.7 | 27.5            | 36.9 | 100.1 | -18.6 |
| Paddy Creek                      | 26      | 1.2           | 3.8  | 1.3 | 3.9  | 0.5 | 32.7            | 33.5            | 11.2 | 18.3            | 9.4  | 62.9  | -20.8 |
| Peach Orchard Creek              | 70      | 1.1           | 4.2  | 1.4 | 4.2  | 0.6 | 27.5            | 28.6            | 6.8  | 15.3            | 10.4 | 50.7  | -12.9 |
| Pigpen Branch                    | 191     | 1.8           | 9.2  | 3.4 | 11.3 | 1.4 | 39.6            | 37.6            | 18.4 | 24.8            | 25.2 | 80.7  | -16.0 |
| Rattlesnake Branch               | 143     | 1.0           | 5.2  | 1.5 | 4.0  | 0.7 | 26.4            | 27.4            | 7.3  | 16.0            | 11.4 | 50.6  | -12.8 |
| Right Hand Prong                 | 147     | 1.7           | 7.5  | 2.5 | 7.6  | 1.1 | 39.8            | 38.5            | 12.2 | 25.1            | 18.7 | 75.8  | -17.3 |
| Roaring Branch                   | 251     | 1.5           | 8.2  | 2.4 | 6.2  | 1.1 | 34.1            | 35.4            | 11.0 | 22.7            | 17.9 | 69.1  | -17.1 |
| Rough Ridge Creek                | 257     | 1.5           | 8.6  | 2.5 | 6.7  | 1.2 | 35.0            | 36.1            | 11.9 | 23.2            | 18.9 | 71.1  | -17.1 |
| Russell Creek                    | 15      | 1.3           | 7.1  | 2.4 | 7.1  | 1.0 | 36.9            | 37.5            | 12.7 | 20.4            | 17.6 | 70.7  | -16.2 |
| Scotsman Creek                   | 193     | 1.9           | 8.9  | 3.3 | 10.7 | 1.4 | 40.9            | 38.7            | 17.3 | 25.4            | 24.3 | 81.4  | -16.2 |
| South Fork Fowler Creek          | 188     | 1.8           | 8.8  | 3.3 | 10.8 | 1.4 | 42.6            | 40.3            | 17.0 | 26.5            | 24.3 | 83.8  | -17.0 |
| Spivey Creek                     | 266     | 1.3           | 8.2  | 2.4 | 6.3  | 1.1 | 31.1            | 32.4            | 11.6 | 20.7            | 17.9 | 64.8  | -15.8 |

**Table A2.** Continued.

| Name                            | Site ID | Precip (m/yr) | Total Deposition at Each Site (meq/m <sup>2</sup> /yr) |     |      |     |                 |                 |      |                 |      |       |       |
|---------------------------------|---------|---------------|--|-----|------|-----|-----------------|-----------------|------|-----------------|------|-------|-------|
|                                 |         |               | Ca   | Mg  | Na   | K   | NH <sub>4</sub> | SO <sub>4</sub> | Cl   | NO <sub>3</sub> | SBC  | SAA   | CALK  |
| Squibb Creek                    | 88      | 1.0           | 5.0  | 1.5 | 4.1  | 0.6 | 25.8            | 26.5            | 7.3  | 15.0            | 11.2 | 48.8  | -11.9 |
| Stillhouse Branch               | 28      | 1.3           | 3.6  | 1.2 | 3.6  | 0.5 | 35.1            | 35.8            | 10.6 | 19.4            | 8.9  | 65.8  | -21.9 |
| Unnamed creek A                 | 245     | 2.0           | 10.3   | 3.0 | 8.1  | 1.4 | 45.0            | 47.9            | 13.9 | 30.5            | 22.8 | 92.2  | -24.5 |
| Unnamed creek B                 | 246     | 1.6           | 16.7   | 4.8 | 12.5 | 2.3 | 37.5            | 39.8            | 28.8 | 25.4            | 36.2 | 93.9  | -20.2 |
| Unnamed creek C                 | 249     | 1.6           | 11.2   | 3.2 | 8.4  | 1.5 | 35.7            | 37.7            | 17.2 | 24.0            | 24.3 | 78.9  | -18.9 |
| Upper Creek                     | 60      | 1.7           | 9.5  | 3.1 | 9.7  | 1.3 | 42.8            | 45.1            | 18.0 | 24.5            | 23.6 | 87.6  | -21.2 |
| UT Flat Laurel Creek            | 120     | 1.5           | 7.4  | 2.5 | 7.7  | 1.1 | 72.2            | 67.4            | 13.1 | 44.2            | 18.7 | 124.7 | -33.7 |
| UT Laurel Branch                | 265     | 1.5           | 19.4   | 5.5 | 14.2 | 2.6 | 35.1            | 37.1            | 34.7 | 23.5            | 41.7 | 95.3  | -18.6 |
| UT Linville River (NUCM site)   | 21      | 1.4           | 7.0  | 2.3 | 7.0  | 1.0 | 39.0            | 40.3            | 12.3 | 21.8            | 17.4 | 74.3  | -18.0 |
| UT McNabb Creek                 | 262     | 1.3           | 8.6  | 2.4 | 6.3  | 1.2 | 34.9            | 37.5            | 11.5 | 23.6            | 18.4 | 72.7  | -19.4 |
| UT North Fork of Catawba        | 33      | 1.2           | 3.7  | 1.2 | 3.7  | 0.5 | 33.4            | 34.1            | 10.8 | 18.5            | 9.2  | 63.5  | -20.9 |
| UT Paint Creek                  | 94      | 0.9           | 4.4  | 1.3 | 3.6  | 0.6 | 23.9            | 24.8            | 6.4  | 14.0            | 9.9  | 45.1  | -11.3 |
| UT Panthertown Creek (Boggy Cr) | 163     | 1.8           | 7.6  | 2.8 | 9.2  | 1.2 | 40.2            | 38.2            | 14.0 | 25.0            | 20.8 | 77.3  | -16.3 |
| UT Russell Creek                | 14      | 1.4           | 4.6  | 1.5 | 4.6  | 0.7 | 37.3            | 37.9            | 13.4 | 20.8            | 11.4 | 72.1  | -23.4 |
| White Creek                     | 16      | 1.5           | 7.9  | 2.7 | 7.8  | 1.2 | 39.5            | 40.1            | 14.3 | 22.1            | 19.6 | 76.5  | -17.4 |
| Wildcat Branch                  | 232     | 2.2           | 10.9   | 3.4 | 9.2  | 1.6 | 52.3            | 51.9            | 15.9 | 33.9            | 25.0 | 101.7 | -24.4 |
| Wilson Creek                    | 169     | 2.2           | 16.0   | 5.9 | 19.8 | 2.5 | 51.0            | 49.2            | 35.5 | 32.2            | 44.2 | 117.0 | -21.8 |
| Wolf Creek                      | 150     | 1.8           | 8.2  | 2.8 | 8.7  | 1.2 | 42.7            | 41.1            | 14.0 | 26.5            | 21.0 | 81.6  | -18.0 |
| Yellow Fork                     | 27      | 1.2           | 3.3  | 1.1 | 3.3  | 0.5 | 31.9            | 32.6            | 9.8  | 17.7            | 8.2  | 60.2  | -20.1 |

## APPENDIX B

### HINDCAST SIMULATION RESULTS FOR SELECTED YEARS IN THE PAST

Simulated streamwater concentrations of major ions are given in the main body of the report for the year 1860. Here we present results of other selected past years. Tables B-1 through B-6 provide hindcast results for the years 1900, 1964, 1975, 1989, 1995, and 2005.





Table B1. Simulated 1900 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |      |      |      |                 |                 |      |                 |       |      |       |     |
|---------------------------------|---------|--|------|------|------|-----------------|-----------------|------|-----------------|-------|------|-------|-----|
|                                 |         | Ca   | Mg   | Na   | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL   | NO <sub>3</sub> | SBC   | SAA  | CALK  | PH  |
| UT Russell Creek                | 14      | 10.6   | 13.2 | 15.6 | 16.9 | 0.0             | 3.9             | 19.6 | 0.0             | 56.2  | 23.7 | 32.6  | 6.5 |
| Russell Creek                   | 15      | 17.6   | 20.3 | 20.5 | 23.4 | 0.0             | 5.8             | 19.4 | 0.0             | 81.8  | 25.3 | 56.4  | 6.7 |
| White Creek                     | 16      | 11.5   | 10.6 | 25.1 | 15.3 | 0.0             | 3.3             | 19.7 | 0.0             | 62.4  | 23.0 | 39.7  | 6.4 |
| UT Linville River (NUCM site)   | 21      | 13.7   | 9.5  | 19.2 | 9.3  | 0.0             | 3.5             | 17.7 | 0.2             | 51.6  | 21.6 | 30.7  | 6.4 |
| Paddy Creek                     | 26      | 6.5  | 13.5 | 19.7 | 17.3 | 0.0             | 3.3             | 18.8 | 0.0             | 57.2  | 21.5 | 35.3  | 6.5 |
| Yellow Fork                     | 27      | 6.6  | 14.8 | 14.4 | 13.0 | 0.0             | 3.2             | 16.4 | 0.0             | 48.7  | 19.3 | 29.2  | 6.3 |
| Stillhouse Branch               | 28      | 5.4  | 12.9 | 15.7 | 11.6 | 0.0             | 2.2             | 15.5 | 0.0             | 45.7  | 17.7 | 28.0  | 6.3 |
| UT North Fork of Catawba        | 33      | 6.4  | 14.6 | 17.9 | 13.8 | 0.0             | 2.5             | 17.7 | 0.0             | 53.0  | 20.0 | 32.3  | 6.4 |
| Lindy Camp Branch               | 35      | 21.4   | 20.0 | 19.6 | 13.7 | 0.0             | 3.4             | 11.2 | 0.1             | 74.5  | 14.6 | 60.0  | 6.4 |
| Colberts Creek                  | 53      | 15.0   | 14.0 | 26.7 | 7.3  | 0.0             | 2.0             | 11.9 | 0.7             | 62.9  | 14.7 | 48.4  | 6.5 |
| Middle Creek                    | 55      | 16.6   | 13.3 | 27.7 | 6.8  | 0.0             | 2.1             | 12.0 | 0.5             | 64.4  | 14.7 | 49.8  | 6.5 |
| Lost Cove                       | 56      | 26.3   | 12.9 | 31.1 | 6.2  | 0.0             | 2.5             | 11.8 | 0.4             | 76.3  | 14.7 | 61.6  | 6.8 |
| Lower Creek                     | 59      | 14.9   | 11.9 | 32.1 | 15.1 | 0.0             | 2.1             | 26.1 | 0.8             | 74.0  | 28.7 | 45.4  | 6.6 |
| Upper Creek                     | 60      | 13.9   | 11.5 | 26.3 | 14.4 | 0.0             | 2.2             | 24.8 | 0.8             | 66.1  | 27.8 | 38.4  | 6.5 |
| Left Prong South Toe River      | 61      | 23.6   | 15.9 | 33.7 | 6.0  | 0.7             | 1.3             | 13.9 | 1.9             | 79.1  | 17.1 | 62.6  | 6.6 |
| Peach Orchard Creek             | 70      | 29.0   | 11.8 | 34.6 | 5.1  | 0.7             | 3.8             | 10.8 | 2.5             | 80.4  | 17.3 | 64.1  | 6.6 |
| Briar Creek                     | 72      | 30.2   | 39.2 | 21.3 | 12.2 | 0.0             | 4.0             | 10.8 | 0.2             | 102.9 | 14.5 | 88.1  | 6.9 |
| Squibb Creek                    | 88      | 31.7   | 50.1 | 51.4 | 18.5 | 0.0             | 6.1             | 13.9 | 2.2             | 151.6 | 22.6 | 129.6 | 6.9 |
| Little Prong Hickey Fork        | 91      | 40.1   | 47.7 | 41.7 | 9.9  | 0.9             | 1.6             | 6.2  | 0.8             | 139.3 | 8.6  | 131.7 | 6.8 |
| UT Paint Creek                  | 94      | 50.9   | 44.4 | 32.5 | 12.0 | 0.0             | 3.3             | 13.3 | 1.1             | 139.7 | 17.4 | 122.1 | 6.8 |
| East Fork Pigeon                | 101     | 17.8   | 11.4 | 25.8 | 7.8  | 0.0             | 1.5             | 9.7  | 0.3             | 62.8  | 11.5 | 51.4  | 6.7 |
| Davidson River                  | 102     | 32.8   | 22.5 | 38.0 | 9.9  | 0.7             | 2.0             | 11.3 | 0.5             | 103.1 | 13.9 | 90.1  | 6.7 |
| Long Branch                     | 103     | 29.4   | 17.6 | 57.1 | 8.1  | 0.5             | 0.9             | 10.8 | 0.0             | 112.2 | 11.7 | 100.9 | 6.6 |
| Dark Prong                      | 114     | 12.2   | 7.1  | 23.6 | 5.6  | 0.0             | 1.9             | 7.0  | 0.0             | 48.5  | 9.0  | 39.8  | 6.6 |
| UT Flat Laurel Creek            | 120     | 18.3   | 10.8 | 33.4 | 5.7  | 0.6             | 2.4             | 17.5 | 0.5             | 68.2  | 20.0 | 48.6  | 6.4 |
| Courthouse Creek                | 121     | 14.9   | 12.9 | 34.6 | 9.1  | 0.0             | 1.9             | 17.1 | 0.4             | 71.5  | 19.4 | 52.1  | 6.7 |
| Cathey Creek                    | 122     | 42.8   | 29.2 | 38.4 | 14.3 | 0.0             | 2.5             | 13.7 | 1.5             | 124.6 | 17.7 | 106.6 | 7.0 |
| Flat Laurel Creek               | 127     | 16.3   | 8.7  | 22.8 | 5.8  | 0.0             | 2.2             | 8.4  | 0.3             | 53.6  | 10.8 | 42.8  | 6.4 |
| Bubbling Spring Branch          | 129     | 17.6   | 9.5  | 20.0 | 5.5  | 0.0             | 2.8             | 9.7  | 0.2             | 52.6  | 12.6 | 39.9  | 6.4 |
| Bubbling Spring West Tributary  | 131     | 10.9   | 6.8  | 18.2 | 3.9  | 0.0             | 2.5             | 8.2  | 0.2             | 39.7  | 10.7 | 28.9  | 6.0 |
| Mill Station Creek              | 132     | 22.3   | 9.6  | 47.4 | 7.7  | 0.0             | 3.7             | 42.5 | 0.6             | 86.8  | 46.9 | 40.2  | 6.6 |
| Buckeye Cove Creek              | 133     | 20.0   | 9.3  | 21.3 | 5.5  | 0.0             | 2.0             | 9.4  | 1.1             | 56.1  | 12.5 | 43.5  | 6.5 |
| Rattlesnake Branch              | 143     | 23.7   | 16.9 | 59.5 | 11.8 | 0.0             | 2.8             | 14.3 | 0.1             | 111.8 | 17.3 | 94.5  | 6.7 |
| Right Hand Prong                | 147     | 21.5   | 16.4 | 31.8 | 7.7  | 0.0             | 2.1             | 12.0 | 1.8             | 77.4  | 15.9 | 61.3  | 6.8 |
| Wolf Creek                      | 150     | 22.5   | 12.7 | 33.6 | 7.0  | 0.0             | 1.2             | 13.8 | 0.2             | 75.7  | 15.2 | 60.5  | 6.8 |
| Greenland Creek                 | 160     | 11.2   | 9.3  | 33.5 | 6.2  | 0.0             | 2.1             | 14.1 | 0.2             | 60.2  | 16.4 | 43.7  | 6.1 |
| UT Panthertown Creek (Boggy Cr) | 163     | 21.3   | 8.4  | 40.5 | 5.1  | 0.4             | 2.3             | 12.8 | 0.2             | 75.2  | 15.3 | 60.1  | 6.3 |
| Wilson Creek                    | 169     | 30.9   | 21.5 | 59.1 | 10.0 | 0.0             | 0.8             | 37.5 | 0.1             | 121.5 | 38.5 | 82.7  | 6.4 |
| UT East Fork                    | 185     | 36.2   | 20.9 | 51.2 | 9.9  | 0.2             | 0.9             | 35.7 | 0.1             | 118.1 | 36.8 | 81.7  | 6.6 |
| South Fork Fowler Creek         | 188     | 14.9   | 17.6 | 34.3 | 7.4  | 0.0             | 0.7             | 16.3 | 0.0             | 74.1  | 17.0 | 57.1  | 6.6 |
| Beetree Branch                  | 190     | 46.4   | 54.2 | 31.9 | 45.2 | 0.4             | 52.8            | 14.1 | 0.0             | 177.7 | 66.9 | 112.6 | 6.9 |
| Pigpen Branch                   | 191     | 28.8   | 28.6 | 53.0 | 13.4 | 0.0             | 0.7             | 20.4 | 0.0             | 123.7 | 21.1 | 102.7 | 6.9 |
| Scotsman Creek                  | 193     | 16.5   | 16.8 | 38.0 | 8.6  | 0.0             | 1.2             | 17.4 | 0.2             | 79.9  | 18.8 | 61.3  | 6.7 |
| Bear Branch                     | 195     | 43.2   | 40.3 | 30.3 | 15.1 | 0.0             | 5.4             | 10.4 | 0.0             | 128.9 | 16.0 | 112.9 | 7.0 |
| Glade Creek                     | 198     | 24.9   | 22.4 | 41.7 | 9.5  | 0.0             | 0.8             | 16.3 | 0.1             | 98.6  | 17.1 | 81.7  | 6.4 |
| Cane Creek Tributary            | 204     | 11.7   | 13.8 | 35.5 | 9.0  | 0.0             | 2.5             | 23.3 | 0.3             | 69.8  | 26.0 | 43.8  | 6.0 |
| Big Laurel Brook                | 215     | 10.8   | 10.9 | 22.7 | 6.4  | 0.0             | 0.8             | 13.2 | 0.1             | 50.8  | 14.0 | 36.7  | 6.5 |

Table B1. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |      |      |      |                 |                 |      |                 |       |       |       |     |
|----------------------|---------|--|------|------|------|-----------------|-----------------|------|-----------------|-------|-------|-------|-----|
|                      |         | Ca   | Mg   | Na   | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL   | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH  |
| Kilby Creek          | 217     | 13.4   | 12.4 | 25.7 | 7.9  | 0.0             | 0.8             | 13.0 | 0.1             | 59.5  | 13.9  | 45.6  | 6.6 |
| Wildcat Branch       | 232     | 15.2   | 14.8 | 28.6 | 8.3  | 0.0             | 1.2             | 12.7 | 0.2             | 66.9  | 14.0  | 52.9  | 6.7 |
| Adam Camp Branch     | 237     | 13.7   | 11.9 | 27.9 | 8.9  | 0.0             | 1.3             | 11.5 | 0.0             | 62.3  | 12.7  | 49.6  | 6.7 |
| Indian Spring Branch | 239     | 19.4   | 14.0 | 32.2 | 7.1  | 0.0             | 1.7             | 12.1 | 0.3             | 72.8  | 13.9  | 58.7  | 6.8 |
| Unnamed creek A      | 245     | 18.9   | 9.3  | 26.2 | 6.9  | 0.0             | 2.1             | 11.6 | 2.0             | 61.3  | 15.5  | 45.6  | 6.7 |
| Unnamed creek B      | 246     | 54.0   | 18.1 | 44.7 | 6.2  | 0.0             | 2.9             | 46.6 | 2.9             | 123.1 | 52.3  | 70.8  | 6.8 |
| Unnamed creek C      | 249     | 33.5   | 15.1 | 35.8 | 9.5  | 0.0             | 1.9             | 24.4 | 3.0             | 94.0  | 29.2  | 64.9  | 6.8 |
| Roaring Branch       | 251     | 44.9   | 13.1 | 32.4 | 6.8  | 0.0             | 2.4             | 12.9 | 3.4             | 97.1  | 18.5  | 78.2  | 6.7 |
| Bearpen Branch       | 253     | 14.8   | 11.5 | 28.4 | 6.9  | 0.1             | 2.1             | 13.6 | 0.5             | 61.5  | 16.3  | 45.5  | 6.6 |
| Indian Branch        | 255     | 38.2   | 16.5 | 37.4 | 10.7 | 0.0             | 2.3             | 22.7 | 3.8             | 103.0 | 28.8  | 73.3  | 6.9 |
| Rough Ridge Creek    | 257     | 20.1   | 12.9 | 39.8 | 6.9  | 0.0             | 1.9             | 13.7 | 0.3             | 79.7  | 15.8  | 64.2  | 6.6 |
| Big Cove Branch      | 259     | 35.0   | 19.0 | 43.3 | 12.2 | 0.0             | 1.5             | 16.3 | 3.8             | 109.5 | 21.6  | 88.1  | 6.9 |
| Kirkland Cove        | 260     | 22.8   | 10.7 | 32.4 | 8.0  | 0.0             | 2.1             | 13.6 | 1.9             | 73.8  | 17.5  | 56.4  | 6.8 |
| Big Oak Cove Creek   | 261     | 16.4   | 12.0 | 27.8 | 4.7  | 0.0             | 2.6             | 12.7 | 1.9             | 60.7  | 17.1  | 43.7  | 6.7 |
| UT McNabb Creek      | 262     | 12.2   | 8.5  | 27.8 | 8.3  | 0.0             | 1.4             | 15.3 | 0.1             | 56.9  | 16.8  | 40.1  | 6.5 |
| UT Laurel Branch     | 265     | 55.3   | 21.6 | 62.6 | 11.4 | 0.0             | 4.3             | 63.0 | 0.8             | 150.7 | 68.1  | 83.1  | 6.9 |
| Spivey Creek         | 266     | 29.2   | 19.0 | 46.8 | 14.4 | 0.3             | 3.0             | 15.9 | 0.8             | 109.3 | 19.8  | 90.0  | 6.9 |
| McNabb Creek         | 270     | 122.6  | 60.1 | 69.7 | 14.0 | 0.0             | 87.4            | 55.6 | 0.1             | 266.4 | 146.5 | 122.8 | 7.1 |
| Joyce Kilmer 5       | 281     | 20.9   | 11.8 | 25.3 | 7.2  | 0.1             | 2.3             | 12.3 | 1.1             | 65.1  | 15.7  | 49.4  | 6.5 |

Table B2. Simulated 1964 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |      |      |      |                 |                 |      |                 |       |       |       |     |
|---------------------------------|---------|--|------|------|------|-----------------|-----------------|------|-----------------|-------|-------|-------|-----|
|                                 |         | Ca   | Mg   | Na   | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL   | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH  |
| UT Russell Creek                | 14      | 11.3   | 14.4 | 15.7 | 17.7 | 0.0             | 34.4            | 19.6 | 0.0             | 59.2  | 54.6  | 4.7   | 5.7 |
| Russell Creek                   | 15      | 18.2   | 21.4 | 20.6 | 24.1 | 0.0             | 49.3            | 19.4 | 0.0             | 84.3  | 68.6  | 15.8  | 6.1 |
| White Creek                     | 16      | 15.4   | 14.8 | 27.2 | 17.8 | 0.0             | 28.3            | 19.7 | 0.0             | 75.2  | 47.7  | 27.6  | 6.2 |
| UT Linville River (NUCM site)   | 21      | 14.5   | 10.4 | 19.3 | 9.8  | 0.0             | 30.8            | 17.7 | 0.8             | 53.9  | 50.3  | 3.9   | 5.5 |
| Paddy Creek                     | 26      | 7.9  | 16.3 | 21.1 | 18.7 | 0.0             | 27.9            | 18.8 | 0.0             | 64.4  | 45.6  | 18.3  | 6.1 |
| Yellow Fork                     | 27      | 8.2  | 17.8 | 15.6 | 14.2 | 0.0             | 28.0            | 16.4 | 0.0             | 55.7  | 43.6  | 11.5  | 5.7 |
| Stillhouse Branch               | 28      | 6.3  | 14.8 | 16.6 | 12.4 | 0.0             | 19.0            | 15.5 | 0.0             | 50.3  | 34.9  | 15.5  | 5.9 |
| UT North Fork of Catawba        | 33      | 7.5  | 16.7 | 18.9 | 14.8 | 0.0             | 21.8            | 17.7 | 0.0             | 58.4  | 38.9  | 19.1  | 6.0 |
| Lindy Camp Branch               | 35      | 28.0   | 25.5 | 19.7 | 15.5 | 0.0             | 29.7            | 11.2 | 0.4             | 88.7  | 41.0  | 47.6  | 6.1 |
| Colberts Creek                  | 53      | 17.8   | 16.9 | 27.7 | 8.1  | 0.0             | 17.4            | 11.9 | 3.7             | 70.5  | 33.5  | 37.3  | 6.4 |
| Middle Creek                    | 55      | 18.8   | 15.9 | 28.3 | 7.6  | 0.0             | 17.4            | 12.0 | 2.8             | 70.5  | 32.4  | 38.2  | 6.4 |
| Lost Cove                       | 56      | 30.1   | 15.2 | 31.7 | 6.8  | 0.0             | 21.0            | 11.8 | 2.2             | 83.7  | 35.3  | 48.8  | 6.7 |
| Lower Creek                     | 59      | 18.9   | 14.9 | 32.9 | 17.1 | 0.0             | 18.3            | 26.1 | 4.5             | 83.7  | 48.2  | 35.2  | 6.4 |
| Upper Creek                     | 60      | 17.8   | 14.5 | 27.6 | 16.0 | 0.0             | 19.1            | 24.8 | 4.3             | 76.1  | 48.2  | 27.9  | 6.3 |
| Left Prong South Toe River      | 61      | 25.8   | 17.4 | 33.9 | 6.3  | 3.7             | 10.7            | 13.9 | 10.5            | 83.3  | 35.3  | 51.7  | 6.5 |
| Peach Orchard Creek             | 70      | 39.1   | 16.4 | 35.7 | 6.1  | 4.0             | 31.7            | 10.8 | 14.0            | 97.2  | 56.6  | 44.3  | 6.4 |
| Briar Creek                     | 72      | 32.8   | 43.4 | 21.9 | 13.2 | 0.0             | 33.5            | 10.8 | 0.9             | 111.3 | 45.3  | 66.8  | 6.8 |
| Squibb Creek                    | 88      | 46.5   | 67.4 | 51.4 | 22.4 | 0.0             | 52.5            | 13.9 | 12.1            | 187.6 | 81.1  | 109.3 | 6.7 |
| Little Prong Hickey Fork        | 91      | 42.7   | 50.2 | 42.0 | 10.2 | 5.1             | 13.2            | 6.2  | 4.5             | 145.0 | 23.7  | 126.4 | 6.8 |
| UT Paint Creek                  | 94      | 55.8   | 49.2 | 33.6 | 12.9 | 0.0             | 28.4            | 13.3 | 6.2             | 151.4 | 47.1  | 104.0 | 6.6 |
| East Fork Pigeon                | 101     | 19.4   | 12.4 | 25.9 | 8.1  | 0.0             | 12.3            | 9.7  | 1.7             | 65.8  | 23.5  | 42.4  | 6.6 |
| Davidson River                  | 102     | 34.1   | 23.3 | 38.1 | 10.1 | 3.5             | 16.3            | 11.3 | 2.3             | 105.5 | 30.2  | 79.0  | 6.6 |
| Long Branch                     | 103     | 30.0   | 18.0 | 57.1 | 8.3  | 2.7             | 7.0             | 10.8 | 0.0             | 113.3 | 17.9  | 98.0  | 6.6 |
| Dark Prong                      | 114     | 13.9   | 8.2  | 24.1 | 6.0  | 0.0             | 15.7            | 7.0  | 0.0             | 52.3  | 22.8  | 29.6  | 6.5 |
| UT Flat Laurel Creek            | 120     | 20.3   | 12.0 | 34.2 | 6.0  | 2.9             | 20.3            | 17.5 | 2.4             | 72.6  | 39.6  | 36.0  | 6.2 |
| Courthouse Creek                | 121     | 18.9   | 16.0 | 35.3 | 10.2 | 0.0             | 15.4            | 17.1 | 2.2             | 80.5  | 34.9  | 45.7  | 6.6 |
| Cathey Creek                    | 122     | 45.3   | 30.9 | 38.6 | 14.8 | 0.0             | 20.9            | 13.7 | 7.8             | 129.6 | 42.4  | 86.9  | 6.9 |
| Flat Laurel Creek               | 127     | 18.2   | 10.0 | 22.8 | 6.2  | 0.0             | 17.9            | 8.4  | 1.7             | 57.2  | 27.6  | 29.6  | 6.2 |
| Bubbling Spring Branch          | 129     | 19.7   | 11.0 | 20.9 | 6.0  | 0.0             | 24.5            | 9.7  | 0.8             | 57.5  | 34.8  | 22.9  | 6.0 |
| Bubbling Spring West Tributary  | 131     | 12.6   | 8.0  | 19.1 | 4.2  | 0.0             | 21.6            | 8.2  | 0.9             | 43.9  | 30.6  | 13.5  | 5.4 |
| Mill Station Creek              | 132     | 31.6   | 15.0 | 49.6 | 9.7  | 0.0             | 32.6            | 42.5 | 2.9             | 105.5 | 76.7  | 28.0  | 6.4 |
| Buckeye Cove Creek              | 133     | 22.1   | 10.5 | 21.9 | 5.9  | 0.0             | 17.0            | 9.4  | 5.6             | 60.4  | 31.8  | 28.5  | 6.2 |
| Rattlesnake Branch              | 143     | 26.5   | 18.9 | 59.9 | 12.4 | 0.0             | 24.1            | 14.3 | 0.4             | 117.8 | 39.1  | 78.8  | 6.5 |
| Right Hand Prong                | 147     | 28.1   | 21.1 | 31.8 | 9.0  | 0.0             | 17.1            | 12.0 | 9.3             | 90.2  | 38.4  | 51.8  | 6.7 |
| Wolf Creek                      | 150     | 23.9   | 13.9 | 34.1 | 7.3  | 0.0             | 9.9             | 13.8 | 1.2             | 79.2  | 24.9  | 54.3  | 6.7 |
| Greenland Creek                 | 160     | 12.9   | 10.2 | 33.6 | 6.6  | 0.0             | 16.7            | 14.1 | 1.3             | 63.3  | 32.1  | 31.1  | 5.8 |
| UT Panthertown Creek (Boggy Cr) | 163     | 23.5   | 9.1  | 40.5 | 5.4  | 2.0             | 18.9            | 12.8 | 0.9             | 78.3  | 32.1  | 48.2  | 6.0 |
| Wilson Creek                    | 169     | 31.9   | 22.2 | 59.1 | 10.2 | 0.0             | 6.2             | 37.5 | 0.5             | 123.4 | 44.5  | 78.7  | 6.4 |
| UT East Fork                    | 185     | 37.8   | 21.9 | 51.4 | 10.1 | 1.1             | 7.3             | 35.7 | 0.5             | 121.2 | 43.6  | 78.9  | 6.5 |
| South Fork Fowler Creek         | 188     | 15.3   | 18.0 | 34.4 | 7.5  | 0.0             | 5.7             | 16.3 | 0.1             | 75.2  | 22.2  | 53.0  | 6.5 |
| Beetree Branch                  | 190     | 48.5   | 56.0 | 31.9 | 46.5 | 2.3             | 99.0            | 14.1 | 0.1             | 182.9 | 113.5 | 71.8  | 6.6 |
| Pigpen Branch                   | 191     | 29.8   | 29.6 | 53.2 | 13.7 | 0.0             | 5.7             | 20.4 | 0.0             | 126.1 | 26.1  | 100.1 | 6.9 |
| Scotsman Creek                  | 193     | 17.1   | 17.5 | 38.5 | 8.9  | 0.0             | 9.6             | 17.4 | 1.1             | 82.0  | 28.0  | 54.0  | 6.7 |
| Bear Branch                     | 195     | 45.6   | 42.3 | 30.4 | 15.9 | 0.0             | 47.9            | 10.4 | 0.0             | 134.1 | 58.8  | 75.6  | 6.7 |
| Glade Creek                     | 198     | 25.6   | 23.1 | 42.0 | 9.7  | 0.0             | 6.2             | 16.3 | 0.3             | 100.4 | 22.7  | 77.8  | 6.3 |
| Cane Creek Tributary            | 204     | 13.4   | 15.6 | 36.2 | 9.5  | 0.0             | 21.1            | 23.3 | 1.8             | 74.5  | 45.9  | 28.7  | 5.6 |
| Big Laurel Brook                | 215     | 11.2   | 11.6 | 22.8 | 6.6  | 0.0             | 6.1             | 13.2 | 0.4             | 52.2  | 19.5  | 32.6  | 6.4 |

Table B2. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |      |      |      |                 |                 |      |                 |       |       |      |     |
|----------------------|---------|--|------|------|------|-----------------|-----------------|------|-----------------|-------|-------|------|-----|
|                      |         | Ca   | Mg   | Na   | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL   | NO <sub>3</sub> | SBC   | SAA   | CALK | PH  |
| Kilby Creek          | 217     | 14.1   | 13.2 | 25.9 | 8.2  | 0.0             | 6.0             | 13.0 | 0.5             | 61.4  | 19.5  | 41.9 | 6.6 |
| Wildcat Branch       | 232     | 16.8   | 16.2 | 28.6 | 8.8  | 0.0             | 9.3             | 12.7 | 0.9             | 70.4  | 22.9  | 47.6 | 6.6 |
| Adam Camp Branch     | 237     | 15.3   | 13.4 | 27.9 | 9.5  | 0.0             | 10.5            | 11.5 | 0.0             | 66.0  | 21.9  | 44.2 | 6.6 |
| Indian Spring Branch | 239     | 22.2   | 15.9 | 32.3 | 7.7  | 0.0             | 13.6            | 12.1 | 1.4             | 77.9  | 27.0  | 51.0 | 6.7 |
| Unnamed creek A      | 245     | 22.6   | 11.7 | 26.2 | 7.7  | 0.0             | 18.1            | 11.6 | 10.6            | 68.1  | 39.5  | 28.3 | 6.4 |
| Unnamed creek B      | 246     | 58.8   | 21.1 | 44.7 | 6.9  | 0.0             | 26.2            | 46.6 | 15.3            | 131.4 | 87.2  | 44.0 | 6.6 |
| Unnamed creek C      | 249     | 40.9   | 18.8 | 37.4 | 10.8 | 0.0             | 16.5            | 24.4 | 16.1            | 107.8 | 56.6  | 51.0 | 6.6 |
| Roaring Branch       | 251     | 52.5   | 16.3 | 33.8 | 7.9  | 0.0             | 21.3            | 12.9 | 17.9            | 110.5 | 52.0  | 58.7 | 6.5 |
| Bearpen Branch       | 253     | 17.3   | 13.7 | 28.4 | 7.6  | 0.3             | 17.2            | 13.6 | 2.7             | 66.9  | 33.8  | 33.8 | 6.4 |
| Indian Branch        | 255     | 49.6   | 21.4 | 39.7 | 12.4 | 0.0             | 19.9            | 22.7 | 20.0            | 122.9 | 62.6  | 60.3 | 6.8 |
| Rough Ridge Creek    | 257     | 24.4   | 15.5 | 39.8 | 7.7  | 0.0             | 16.6            | 13.7 | 1.6             | 87.4  | 31.5  | 56.0 | 6.5 |
| Big Cove Branch      | 259     | 43.3   | 23.2 | 45.0 | 13.6 | 0.0             | 12.3            | 16.3 | 20.5            | 125.3 | 48.8  | 76.1 | 6.9 |
| Kirkland Cove        | 260     | 29.9   | 14.1 | 33.7 | 9.3  | 0.0             | 18.4            | 13.6 | 9.9             | 87.0  | 41.5  | 45.1 | 6.7 |
| Big Oak Cove Creek   | 261     | 24.3   | 17.4 | 27.8 | 5.9  | 0.0             | 22.8            | 12.7 | 9.9             | 75.3  | 45.5  | 30.0 | 6.5 |
| UT McNabb Creek      | 262     | 14.3   | 9.9  | 28.7 | 9.0  | 0.0             | 12.1            | 15.3 | 0.5             | 61.9  | 27.6  | 34.2 | 6.4 |
| UT Laurel Branch     | 265     | 73.2   | 29.0 | 62.7 | 13.4 | 0.0             | 41.6            | 63.0 | 4.4             | 178.4 | 108.8 | 69.4 | 6.8 |
| Spivey Creek         | 266     | 37.3   | 24.1 | 46.9 | 16.3 | 1.6             | 26.2            | 15.9 | 4.3             | 124.5 | 47.0  | 79.9 | 6.8 |
| McNabb Creek         | 270     | 124.8  | 61.8 | 69.7 | 14.6 | 0.0             | 166.2           | 55.6 | 0.4             | 270.8 | 221.3 | 49.0 | 6.7 |
| Joyce Kilmer 5       | 281     | 27.1   | 15.1 | 26.0 | 8.2  | 0.4             | 19.6            | 12.3 | 5.7             | 76.4  | 38.0  | 38.9 | 6.4 |

Table B3. Simulated 1975 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |       |      |
|---------------------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|-------|------|
|                                 |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH   |
| UT Russell Creek                | 14      | 11.42  | 14.53 | 15.72 | 17.9 | 0               | 41.4            | 19.57 | 0               | 59.54 | 61.4  | -1.77 | 5.3  |
| Russell Creek                   | 15      | 18.21  | 21.47 | 20.59 | 24.2 | 0               | 58.1            | 19.41 | 0               | 84.46 | 77.45 | 7.13  | 5.68 |
| White Creek                     | 16      | 16.23  | 15.67 | 27.42 | 18.2 | 0               | 33.8            | 19.71 | 0               | 77.54 | 53.26 | 24.37 | 6.07 |
| UT Linville River (NUCM site)   | 21      | 14.56  | 10.55 | 19.32 | 9.92 | 0               | 37.2            | 17.66 | 1.03            | 54.21 | 56.75 | -2.18 | 5.16 |
| Paddy Creek                     | 26      | 8.28   | 16.81 | 21.3  | 18.9 | 0               | 33.4            | 18.79 | 0               | 65.55 | 51.19 | 14.02 | 5.96 |
| Yellow Fork                     | 27      | 8.47   | 18.26 | 15.8  | 14.4 | 0               | 33.6            | 16.42 | 0               | 56.9  | 49.25 | 7.07  | 5.53 |
| Stillhouse Branch               | 28      | 6.5  | 15.13 | 16.78 | 12.5 | 0               | 22.9            | 15.48 | 0               | 51.06 | 38.72 | 12.49 | 5.77 |
| UT North Fork of Catawba        | 33      | 7.73   | 17.14 | 19.09 | 15   | 0               | 26.2            | 17.71 | 0               | 59.29 | 43.34 | 15.55 | 5.89 |
| Lindy Camp Branch               | 35      | 29.28  | 26.47 | 19.68 | 15.9 | 0               | 35.6            | 11.21 | 0.56            | 91.22 | 46.97 | 44.22 | 6.06 |
| Colberts Creek                  | 53      | 18.44  | 17.53 | 27.76 | 8.3  | 0               | 20.9            | 11.87 | 4.67            | 72.02 | 37.91 | 34.35 | 6.31 |
| Middle Creek                    | 55      | 19.07  | 16.39 | 28.31 | 7.79 | 0               | 20.8            | 12.03 | 3.6             | 71.49 | 36.56 | 35.01 | 6.3  |
| Lost Cove                       | 56      | 30.8   | 15.71 | 31.78 | 6.91 | 0               | 25.1            | 11.78 | 2.76            | 85.14 | 39.88 | 45.49 | 6.61 |
| Lower Creek                     | 59      | 19.8   | 15.53 | 32.9  | 17.5 | 0               | 22.1            | 26.08 | 5.73            | 85.73 | 53.18 | 32.27 | 6.35 |
| Upper Creek                     | 60      | 18.74  | 15.24 | 27.78 | 16.3 | 0               | 23.1            | 24.81 | 5.53            | 78.25 | 53.29 | 24.86 | 6.26 |
| Left Prong South Toe River      | 61      | 26.22  | 17.79 | 33.91 | 6.4  | 4.66            | 12.8            | 13.91 | 13.5            | 84.25 | 40.27 | 48.67 | 6.4  |
| Peach Orchard Creek             | 70      | 41.18  | 17.41 | 35.68 | 6.32 | 5.11            | 37.7            | 10.8  | 17.8            | 100.6 | 66.72 | 38.97 | 6.28 |
| Briar Creek                     | 72      | 32.99  | 43.93 | 21.92 | 13.4 | 0               | 39.9            | 10.76 | 1.14            | 112.2 | 51.66 | 61.13 | 6.72 |
| Squibb Creek                    | 88      | 49.84  | 69.99 | 51.45 | 23.2 | 0               | 62              | 13.88 | 15.3            | 194.5 | 92.62 | 103.3 | 6.67 |
| Little Prong Hickey Fork        | 91      | 43.27  | 50.59 | 41.98 | 10.3 | 6.54            | 15.7            | 6.2   | 5.71            | 146.1 | 27.46 | 125.1 | 6.74 |
| UT Paint Creek                  | 94      | 56.58  | 50.11 | 33.73 | 13.1 | 0               | 34              | 13.26 | 7.93            | 153.5 | 54.4  | 98.95 | 6.56 |
| East Fork Pigeon                | 101     | 19.69  | 12.64 | 25.92 | 8.18 | 0               | 14.8            | 9.71  | 2.13            | 66.44 | 26.47 | 40.03 | 6.6  |
| Davidson River                  | 102     | 34.25  | 23.45 | 38.1  | 10.1 | 4.52            | 19.7            | 11.33 | 3.01            | 105.9 | 34.21 | 76.39 | 6.58 |
| Long Branch                     | 103     | 29.99  | 17.99 | 57.09 | 8.29 | 3.45            | 8.48            | 10.84 | 0               | 113.3 | 19.31 | 97.38 | 6.59 |
| Dark Prong                      | 114     | 14.18  | 8.4   | 24.19 | 6.13 | 0               | 19.1            | 7.04  | 0               | 52.94 | 26.17 | 26.92 | 6.42 |
| UT Flat Laurel Creek            | 120     | 20.73  | 12.35 | 34.31 | 6.13 | 3.77            | 24.9            | 17.49 | 3.02            | 73.52 | 44.78 | 32.56 | 6.09 |
| Courthouse Creek                | 121     | 19.99  | 16.68 | 35.4  | 10.5 | 0               | 18.6            | 17.09 | 2.81            | 82.61 | 38.65 | 43.95 | 6.56 |
| Cathey Creek                    | 122     | 45.89  | 31.25 | 38.58 | 14.9 | 0               | 25.4            | 13.72 | 10              | 130.6 | 48.89 | 81.45 | 6.9  |
| Flat Laurel Creek               | 127     | 18.52  | 10.25 | 22.84 | 6.33 | 0               | 21.4            | 8.37  | 2.2             | 57.9  | 31.67 | 26.23 | 6.05 |
| Bubbling Spring Branch          | 129     | 19.95  | 11.35 | 21.02 | 6.09 | 0               | 29.9            | 9.73  | 0.98            | 58.37 | 40.42 | 18    | 5.8  |
| Bubbling Spring West Tributary  | 131     | 12.88  | 8.3   | 19.19 | 4.33 | 0               | 26.3            | 8.19  | 1.13            | 44.69 | 35.5  | 9.35  | 5.26 |
| Mill Station Creek              | 132     | 33.76  | 16.47 | 49.68 | 10.2 | 0               | 39.9            | 42.51 | 3.76            | 109.8 | 84.72 | 24.04 | 6.32 |
| Buckeye Cove Creek              | 133     | 22.61  | 10.85 | 21.96 | 5.97 | 0               | 20.7            | 9.37  | 7.13            | 61.38 | 37.13 | 24.16 | 6.12 |
| Rattlesnake Branch              | 143     | 27.12  | 19.33 | 59.92 | 12.6 | 0               | 29              | 14.25 | 0.46            | 118.9 | 43.95 | 75    | 6.46 |
| Right Hand Prong                | 147     | 29.84  | 22.22 | 31.85 | 9.34 | 0               | 20.6            | 12    | 12              | 93.52 | 44.57 | 48.91 | 6.64 |
| Wolf Creek                      | 150     | 24.19  | 14.21 | 34.2  | 7.39 | 0               | 12              | 13.75 | 1.48            | 79.93 | 27.24 | 52.57 | 6.68 |
| Greenland Creek                 | 160     | 13.23  | 10.25 | 33.57 | 6.68 | 0               | 20.1            | 14.08 | 1.62            | 63.74 | 35.82 | 27.83 | 5.72 |
| UT Panthertown Creek (Boggy Cr) | 163     | 23.76  | 9.2   | 40.5  | 5.44 | 2.54            | 22.7            | 12.84 | 1.2             | 78.79 | 36.16 | 45.04 | 5.94 |
| Wilson Creek                    | 169     | 32.09  | 22.28 | 59.06 | 10.3 | 0               | 7.53            | 37.53 | 0.67            | 123.7 | 45.9  | 77.61 | 6.35 |
| UT East Fork                    | 185     | 38.09  | 22.1  | 51.46 | 10.2 | 1.45            | 8.82            | 35.74 | 0.64            | 121.8 | 45.21 | 78.12 | 6.52 |
| South Fork Fowler Creek         | 188     | 15.37  | 18.04 | 34.43 | 7.53 | 0               | 6.86            | 16.27 | 0.12            | 75.35 | 23.44 | 51.99 | 6.49 |
| Beetree Branch                  | 190     | 48.58  | 55.92 | 31.9  | 46.6 | 2.89            | 108             | 14.07 | 0.1             | 183   | 122.4 | 63.28 | 6.5  |
| Pigpen Branch                   | 191     | 30   | 29.74 | 53.18 | 13.7 | 0               | 6.86            | 20.38 | 0               | 126.6 | 27.29 | 99.43 | 6.84 |
| Scotsman Creek                  | 193     | 17.24  | 17.58 | 38.58 | 8.9  | 0               | 11.6            | 17.43 | 1.45            | 82.28 | 30.33 | 51.97 | 6.63 |
| Bear Branch                     | 195     | 45.66  | 42.28 | 30.38 | 16   | 0               | 56.4            | 10.44 | 0               | 134.3 | 67.32 | 67.25 | 6.66 |
| Glade Creek                     | 198     | 25.7   | 23.29 | 41.99 | 9.75 | 0               | 7.47            | 16.33 | 0.34            | 100.7 | 24.08 | 76.78 | 6.3  |
| Cane Creek Tributary            | 204     | 13.72  | 15.95 | 36.24 | 9.66 | 0               | 25.5            | 23.3  | 2.28            | 75.49 | 50.72 | 24.77 | 5.47 |
| Big Laurel Brook                | 215     | 11.2   | 11.72 | 22.85 | 6.69 | 0               | 7.37            | 13.15 | 0.49            | 52.49 | 20.87 | 31.54 | 6.36 |

Table B3. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |       |      |
|----------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|-------|------|
|                      |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH   |
| Kilby Creek          | 217     | 14.2   | 13.35 | 25.88 | 8.23 | 0               | 7.22            | 12.99 | 0.63            | 61.72 | 20.82 | 40.87 | 6.56 |
| Wildcat Branch       | 232     | 17.15  | 16.51 | 28.6  | 8.88 | 0               | 11.2            | 12.67 | 1.18            | 71.16 | 25.01 | 46.16 | 6.62 |
| Adam Camp Branch     | 237     | 15.57  | 13.76 | 27.91 | 9.6  | 0               | 12.5            | 11.49 | 0               | 66.74 | 23.92 | 42.86 | 6.58 |
| Indian Spring Branch | 239     | 22.68  | 16.25 | 32.26 | 7.87 | 0               | 16.3            | 12.05 | 1.8             | 78.86 | 30.16 | 48.85 | 6.67 |
| Unnamed creek A      | 245     | 23.18  | 12.16 | 26.23 | 7.88 | 0               | 21.6            | 11.64 | 13.3            | 69.36 | 45.87 | 23.31 | 6.34 |
| Unnamed creek B      | 246     | 59.26  | 21.65 | 44.74 | 7.06 | 0               | 31.8            | 46.64 | 19.2            | 132.7 | 96.65 | 35.76 | 6.52 |
| Unnamed creek C      | 249     | 42.55  | 19.62 | 37.54 | 11.1 | 0               | 19.8            | 24.36 | 20.3            | 110.9 | 64.13 | 46.53 | 6.58 |
| Roaring Branch       | 251     | 53.67  | 17    | 34.01 | 8.13 | 0               | 25.6            | 12.85 | 22.5            | 112.9 | 60.83 | 52.1  | 6.41 |
| Bearpen Branch       | 253     | 17.7   | 14.18 | 28.43 | 7.77 | 0.43            | 20.9            | 13.56 | 3.49            | 67.97 | 38.15 | 30.59 | 6.35 |
| Indian Branch        | 255     | 52.58  | 22.6  | 39.92 | 12.8 | 0               | 24              | 22.65 | 25.2            | 127.8 | 71.89 | 55.97 | 6.75 |
| Rough Ridge Creek    | 257     | 25.19  | 16.05 | 39.77 | 7.83 | 0               | 19.8            | 13.66 | 1.96            | 88.93 | 35.16 | 53.86 | 6.47 |
| Big Cove Branch      | 259     | 45.53  | 24.25 | 45.24 | 14   | 0               | 14.8            | 16.32 | 25.7            | 129.2 | 56.54 | 72.33 | 6.82 |
| Kirkland Cove        | 260     | 31.63  | 14.91 | 33.79 | 9.56 | 0               | 22              | 13.57 | 12.4            | 89.98 | 47.77 | 41.82 | 6.63 |
| Big Oak Cove Creek   | 261     | 26.02  | 18.58 | 27.82 | 6.13 | 0               | 27.3            | 12.65 | 12.5            | 78.42 | 52.54 | 26.14 | 6.41 |
| UT McNabb Creek      | 262     | 14.73  | 10.23 | 28.77 | 9.16 | 0               | 14.4            | 15.32 | 0.58            | 62.95 | 30.12 | 32.71 | 6.39 |
| UT Laurel Branch     | 265     | 77.32  | 30.78 | 62.69 | 13.8 | 0               | 50.9            | 63.01 | 5.52            | 184.7 | 119.2 | 65.28 | 6.78 |
| Spivey Creek         | 266     | 39.11  | 25.13 | 46.89 | 16.7 | 2               | 31.5            | 15.94 | 5.44            | 127.8 | 53.29 | 77.28 | 6.79 |
| McNabb Creek         | 270     | 124.6  | 61.75 | 69.7  | 14.7 | 0               | 181             | 55.62 | 0.48            | 270.7 | 236.8 | 33.37 | 6.51 |
| Joyce Kilmer 5       | 281     | 28.64  | 15.84 | 26.02 | 8.37 | 0.46            | 23.5            | 12.31 | 7.2             | 78.89 | 43.29 | 36.19 | 6.33 |

Table B4. Simulated 1989 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |        |      |
|---------------------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|--------|------|
|                                 |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK   | PH   |
| UT Russell Creek                | 14      | 11.48  | 14.68 | 15.71 | 18   | 0               | 50.5            | 19.57 | 0               | 59.89 | 70.05 | -10.25 | 4.93 |
| Russell Creek                   | 15      | 18.17  | 21.48 | 20.57 | 24.3 | 0               | 68.8            | 19.41 | 0               | 84.46 | 88.22 | -3.73  | 5.1  |
| White Creek                     | 16      | 17.13  | 16.83 | 27.62 | 18.7 | 0               | 41              | 19.71 | 0               | 80.23 | 60.53 | 19.76  | 5.92 |
| UT Linville River (NUCM site)   | 21      | 14.62  | 10.69 | 19.3  | 10   | 0               | 45.5            | 17.66 | 1.1             | 54.5  | 64.7  | -9.93  | 4.89 |
| Paddy Creek                     | 26      | 8.75   | 17.38 | 21.5  | 19.2 | 0               | 40.6            | 18.79 | 0               | 66.89 | 58.55 | 8.14   | 5.69 |
| Yellow Fork                     | 27      | 8.86   | 18.81 | 15.98 | 14.6 | 0               | 41              | 16.42 | 0               | 58.22 | 56.91 | 1.03   | 5.22 |
| Stillhouse Branch               | 28      | 6.77   | 15.53 | 16.93 | 12.7 | 0               | 28              | 15.48 | 0               | 51.95 | 43.65 | 8.44   | 5.58 |
| UT North Fork of Catawba        | 33      | 8.04   | 17.62 | 19.26 | 15.1 | 0               | 32.1            | 17.71 | 0               | 60.26 | 49.31 | 10.62  | 5.68 |
| Lindy Camp Branch               | 35      | 30.82  | 27.49 | 19.67 | 16.3 | 0               | 43.2            | 11.21 | 0.59            | 94.26 | 54.62 | 39.44  | 5.95 |
| Colberts Creek                  | 53      | 19.02  | 18.08 | 27.71 | 8.53 | 0               | 25.6            | 11.87 | 4.97            | 73.29 | 42.65 | 30.7   | 6.23 |
| Middle Creek                    | 55      | 19.17  | 16.82 | 28.25 | 7.98 | 0               | 25.3            | 12.03 | 3.83            | 72.2  | 41.22 | 30.95  | 6.21 |
| Lost Cove                       | 56      | 31.38  | 16.23 | 31.75 | 7.07 | 0               | 30.4            | 11.78 | 2.93            | 86.44 | 45.24 | 41.2   | 6.56 |
| Lower Creek                     | 59      | 20.57  | 16.06 | 32.8  | 18   | 0               | 27.2            | 26.08 | 6.09            | 87.36 | 58.7  | 28.47  | 6.28 |
| Upper Creek                     | 60      | 19.77  | 15.94 | 27.77 | 16.6 | 0               | 28.3            | 24.81 | 5.89            | 80.13 | 58.96 | 21.17  | 6.17 |
| Left Prong South Toe River      | 61      | 26.44  | 17.97 | 33.84 | 6.47 | 4.95            | 15.6            | 13.91 | 14.3            | 84.69 | 43.86 | 45.76  | 6.35 |
| Peach Orchard Creek             | 70      | 42.71  | 18.33 | 35.41 | 6.56 | 5.44            | 45.3            | 10.8  | 19              | 103   | 75.31 | 33.16  | 6.14 |
| Briar Creek                     | 72      | 33.08  | 44.25 | 21.92 | 13.6 | 0               | 48.1            | 10.76 | 1.21            | 112.8 | 59.3  | 53.28  | 6.64 |
| Squibb Creek                    | 88      | 52.82  | 70.93 | 51.4  | 23.8 | 0               | 72.4            | 13.88 | 16.4            | 199.1 | 102.6 | 96.03  | 6.6  |
| Little Prong Hickey Fork        | 91      | 44.09  | 51.13 | 42    | 10.4 | 6.94            | 19              | 6.2   | 6.07            | 147.6 | 31.16 | 123.3  | 6.72 |
| UT Paint Creek                  | 94      | 57.05  | 50.72 | 33.76 | 13.3 | 0               | 41.2            | 13.26 | 8.42            | 154.9 | 62.39 | 92.29  | 6.48 |
| East Fork Pigeon                | 101     | 20   | 12.86 | 25.9  | 8.26 | 0               | 18.2            | 9.71  | 2.21            | 67.02 | 30.01 | 37.03  | 6.57 |
| Davidson River                  | 102     | 34.5   | 23.64 | 38.11 | 10.2 | 4.7             | 24.4            | 11.33 | 3.13            | 106.4 | 38.81 | 72.45  | 6.53 |
| Long Branch                     | 103     | 30.23  | 18.13 | 57.1  | 8.35 | 3.58            | 10.4            | 10.84 | 0               | 113.8 | 21.26 | 96.02  | 6.58 |
| Dark Prong                      | 114     | 14.57  | 8.67  | 24.27 | 6.25 | 0               | 23.8            | 7.04  | 0               | 53.77 | 30.85 | 23.06  | 6.34 |
| UT Flat Laurel Creek            | 120     | 21.38  | 12.81 | 34.47 | 6.24 | 3.92            | 31.4            | 17.49 | 3.14            | 74.89 | 51.37 | 27.34  | 5.94 |
| Courthouse Creek                | 121     | 21.24  | 17.4  | 35.36 | 10.8 | 0               | 23.1            | 17.09 | 2.92            | 84.79 | 43.11 | 41.64  | 6.53 |
| Cathey Creek                    | 122     | 46.19  | 31.46 | 38.53 | 14.9 | 0               | 31.6            | 13.72 | 10.4            | 131.1 | 55.25 | 75.67  | 6.86 |
| Flat Laurel Creek               | 127     | 18.87  | 10.54 | 22.83 | 6.43 | 0               | 26.2            | 8.37  | 2.29            | 58.64 | 36.75 | 21.95  | 5.92 |
| Bubbling Spring Branch          | 129     | 20.24  | 11.71 | 21.14 | 6.22 | 0               | 37.6            | 9.73  | 1.02            | 59.27 | 48.16 | 11.02  | 5.51 |
| Bubbling Spring West Tributary  | 131     | 13.22  | 8.64  | 19.31 | 4.43 | 0               | 33              | 8.19  | 1.17            | 45.61 | 42.09 | 3.6    | 5.05 |
| Mill Station Creek              | 132     | 36.15  | 18.39 | 49.56 | 10.9 | 0               | 50.5            | 42.51 | 3.91            | 114.8 | 96.07 | 17.93  | 6.18 |
| Buckeye Cove Creek              | 133     | 22.96  | 11.12 | 21.96 | 6.06 | 0               | 25.9            | 9.37  | 7.4             | 62.1  | 42.74 | 19.41  | 5.97 |
| Rattlesnake Branch              | 143     | 27.83  | 19.83 | 59.9  | 12.8 | 0               | 35.4            | 14.25 | 0.49            | 120.3 | 50.26 | 70.04  | 6.39 |
| Right Hand Prong                | 147     | 31.17  | 22.93 | 31.83 | 9.63 | 0               | 25.4            | 12    | 12.5            | 95.75 | 49.84 | 45.88  | 6.61 |
| Wolf Creek                      | 150     | 24.42  | 14.53 | 34.23 | 7.49 | 0               | 14.7            | 13.75 | 1.54            | 80.67 | 30.08 | 50.37  | 6.66 |
| Greenland Creek                 | 160     | 13.59  | 10.32 | 33.56 | 6.75 | 0               | 24.8            | 14.08 | 1.69            | 64.22 | 40.53 | 23.64  | 5.59 |
| UT Panthertown Creek (Boggy Cr) | 163     | 24.14  | 9.32  | 40.5  | 5.51 | 2.64            | 27.9            | 12.84 | 1.25            | 79.44 | 41.84 | 40.17  | 5.82 |
| Wilson Creek                    | 169     | 32.3   | 22.41 | 59.06 | 10.3 | 0               | 9.27            | 37.53 | 0.7             | 124.1 | 47.62 | 76.33  | 6.33 |
| UT East Fork                    | 185     | 38.56  | 22.42 | 51.51 | 10.3 | 1.5             | 10.9            | 35.74 | 0.66            | 122.7 | 47.3  | 77.02  | 6.5  |
| South Fork Fowler Creek         | 188     | 15.46  | 18.12 | 34.44 | 7.56 | 0               | 8.44            | 16.27 | 0.12            | 75.57 | 25.03 | 50.59  | 6.47 |
| Beetree Branch                  | 190     | 48.56  | 55.79 | 31.88 | 46.7 | 3               | 119             | 14.07 | 0.1             | 183   | 133.3 | 52.58  | 6.35 |
| Pigpen Branch                   | 191     | 30.28  | 29.99 | 53.2  | 13.8 | 0               | 8.45            | 20.38 | 0               | 127.3 | 28.85 | 98.5   | 6.84 |
| Scotsman Creek                  | 193     | 17.32  | 17.67 | 38.61 | 8.94 | 0               | 14.2            | 17.43 | 1.5             | 82.54 | 33.12 | 49.44  | 6.6  |
| Bear Branch                     | 195     | 45.57  | 42.19 | 30.37 | 16.1 | 0               | 66.9            | 10.44 | 0               | 134.3 | 77.58 | 56.82  | 6.54 |
| Glade Creek                     | 198     | 25.82  | 23.46 | 42.01 | 9.81 | 0               | 9.2             | 16.33 | 0.35            | 101.1 | 25.83 | 75.38  | 6.28 |
| Cane Creek Tributary            | 204     | 14.18  | 16.38 | 36.28 | 9.8  | 0               | 31.6            | 23.3  | 2.37            | 76.56 | 57.05 | 19.55  | 5.3  |
| Big Laurel Brook                | 215     | 11.25  | 11.91 | 22.86 | 6.74 | 0               | 9.07            | 13.15 | 0.51            | 52.81 | 22.64 | 30.12  | 6.33 |

Table B4. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |       |      |
|----------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|-------|------|
|                      |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH   |
| Kilby Creek          | 217     | 14.32  | 13.52 | 25.88 | 8.31 | 0               | 8.89            | 12.99 | 0.65            | 62.08 | 22.54 | 39.54 | 6.54 |
| Wildcat Branch       | 232     | 17.51  | 16.8  | 28.59 | 9.01 | 0               | 13.8            | 12.67 | 1.23            | 71.95 | 27.68 | 44.26 | 6.6  |
| Adam Camp Branch     | 237     | 15.93  | 14.19 | 27.91 | 9.76 | 0               | 15.2            | 11.49 | 0               | 67.69 | 26.65 | 41.06 | 6.56 |
| Indian Spring Branch | 239     | 23.13  | 16.61 | 32.25 | 8.03 | 0               | 20.2            | 12.05 | 1.87            | 79.86 | 33.98 | 45.91 | 6.64 |
| Unnamed creek A      | 245     | 23.17  | 12.42 | 26.21 | 7.98 | 0               | 26.3            | 11.64 | 13.7            | 69.69 | 51.3  | 18.3  | 6.23 |
| Unnamed creek B      | 246     | 58.66  | 21.9  | 44.72 | 7.23 | 0               | 39.5            | 46.64 | 19.9            | 132.5 | 105.6 | 26.96 | 6.38 |
| Unnamed creek C      | 249     | 43.06  | 20.04 | 37.24 | 11.3 | 0               | 24.2            | 24.36 | 21              | 111.7 | 69.33 | 42.27 | 6.53 |
| Roaring Branch       | 251     | 53.13  | 17.24 | 33.74 | 8.36 | 0               | 31.4            | 12.85 | 23.3            | 112.5 | 67.24 | 45.08 | 6.28 |
| Bearpen Branch       | 253     | 18.06  | 14.64 | 28.42 | 7.94 | 0.44            | 25.9            | 13.56 | 3.63            | 69.1  | 43.26 | 26.43 | 6.27 |
| Indian Branch        | 255     | 54.01  | 23.28 | 39.58 | 13.1 | 0               | 29.4            | 22.65 | 26              | 130   | 78.29 | 51.75 | 6.71 |
| Rough Ridge Creek    | 257     | 26.12  | 16.64 | 39.77 | 8.02 | 0               | 24.1            | 13.66 | 2.03            | 90.52 | 39.62 | 51.21 | 6.43 |
| Big Cove Branch      | 259     | 46.35  | 24.49 | 44.81 | 14.2 | 0               | 17.9            | 16.32 | 26.6            | 129.9 | 60.74 | 69.03 | 6.8  |
| Kirkland Cove        | 260     | 32.81  | 15.54 | 33.53 | 9.82 | 0               | 26.9            | 13.57 | 12.8            | 91.78 | 53.2  | 38.42 | 6.6  |
| Big Oak Cove Creek   | 261     | 27.3   | 19.33 | 27.8  | 6.37 | 0               | 33.4            | 12.65 | 12.9            | 80.53 | 58.77 | 21.91 | 6.33 |
| UT McNabb Creek      | 262     | 15.29  | 10.6  | 28.82 | 9.35 | 0               | 17.6            | 15.32 | 0.6             | 64.1  | 33.39 | 30.65 | 6.35 |
| UT Laurel Branch     | 265     | 82.01  | 32.9  | 62.68 | 14.5 | 0               | 63.9            | 63.01 | 5.72            | 192   | 132.5 | 59.44 | 6.73 |
| Spivey Creek         | 266     | 41.28  | 26.31 | 46.88 | 17.2 | 2.07            | 38.5            | 15.94 | 5.63            | 131.6 | 60.28 | 73.89 | 6.76 |
| McNabb Creek         | 270     | 124.4  | 61.68 | 69.69 | 14.8 | 0               | 200             | 55.62 | 0.5             | 270.4 | 256.2 | 14.29 | 6.11 |
| Joyce Kilmer 5       | 281     | 30.17  | 16.54 | 25.89 | 8.56 | 0.48            | 28.6            | 12.31 | 7.43            | 81.21 | 48.45 | 33.17 | 6.27 |



Table B5. Simulated 1995 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |        |      |
|---------------------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|--------|------|
|                                 |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK   | PH   |
| UT Russell Creek                | 14      | 11.49  | 14.71 | 15.7  | 18.1 | 0               | 54.1            | 19.57 | 0               | 59.96 | 73.88 | -14.01 | 4.84 |
| Russell Creek                   | 15      | 18.13  | 21.44 | 20.56 | 24.3 | 0               | 72.7            | 19.41 | 0               | 84.38 | 92.22 | -8.03  | 4.95 |
| White Creek                     | 16      | 17.42  | 17.3  | 27.66 | 18.8 | 0               | 44              | 19.71 | 0               | 81.23 | 63.61 | 17.68  | 5.84 |
| UT Linville River (NUCM site)   | 21      | 14.61  | 10.73 | 19.3  | 10.1 | 0               | 48.8            | 17.66 | 1.13            | 54.61 | 67.87 | -13.08 | 4.81 |
| Paddy Creek                     | 26      | 8.94   | 17.57 | 21.58 | 19.3 | 0               | 43.6            | 18.79 | 0               | 67.27 | 61.69 | 5.58   | 5.55 |
| Yellow Fork                     | 27      | 9.01   | 18.97 | 16.03 | 14.6 | 0               | 44              | 16.42 | 0               | 58.63 | 59.97 | -1.49  | 5.11 |
| Stillhouse Branch               | 28      | 6.89   | 15.67 | 16.98 | 12.8 | 0               | 30.1            | 15.48 | 0               | 52.27 | 45.67 | 6.7    | 5.49 |
| UT North Fork of Catawba        | 33      | 8.16   | 17.82 | 19.32 | 15.2 | 0               | 34.6            | 17.71 | 0               | 60.58 | 51.9  | 8.47   | 5.57 |
| Lindy Camp Branch               | 35      | 31.33  | 27.69 | 19.67 | 16.4 | 0               | 46.2            | 11.21 | 0.61            | 95.17 | 58.03 | 37.37  | 5.9  |
| Colberts Creek                  | 53      | 19.22  | 18.26 | 27.68 | 8.61 | 0               | 27.5            | 11.87 | 5.11            | 73.75 | 44.62 | 29.09  | 6.2  |
| Middle Creek                    | 55      | 19.17  | 16.95 | 28.22 | 8.04 | 0               | 27.2            | 12.03 | 3.94            | 72.38 | 43.16 | 29.17  | 6.17 |
| Lost Cove                       | 56      | 31.56  | 16.45 | 31.73 | 7.13 | 0               | 32.6            | 11.78 | 3.01            | 86.83 | 47.4  | 39.41  | 6.54 |
| Lower Creek                     | 59      | 20.83  | 16.23 | 32.76 | 18.1 | 0               | 29.3            | 26.08 | 6.27            | 87.94 | 61.17 | 26.79  | 6.24 |
| Upper Creek                     | 60      | 20.19  | 16.22 | 27.76 | 16.8 | 0               | 30.5            | 24.81 | 6.06            | 80.89 | 61.38 | 19.52  | 6.12 |
| Left Prong South Toe River      | 61      | 26.47  | 18    | 33.8  | 6.5  | 5.37            | 16.8            | 13.91 | 14.7            | 84.74 | 45.38 | 44.7   | 6.33 |
| Peach Orchard Creek             | 70      | 43.04  | 18.58 | 35.28 | 6.65 | 5.89            | 48.2            | 10.8  | 19.5            | 103.5 | 78.59 | 30.93  | 6.09 |
| Briar Creek                     | 72      | 33.04  | 44.28 | 21.91 | 13.7 | 0               | 51.2            | 10.76 | 1.25            | 112.8 | 62.65 | 49.91  | 6.61 |
| Squibb Creek                    | 88      | 53.67  | 70.75 | 51.39 | 24   | 0               | 75.5            | 13.88 | 16.8            | 199.8 | 106.6 | 93.26  | 6.58 |
| Little Prong Hickey Fork        | 91      | 44.31  | 51.22 | 41.96 | 10.4 | 7.54            | 20.3            | 6.2   | 6.2             | 147.9 | 32.69 | 122.7  | 6.72 |
| UT Paint Creek                  | 94      | 57.13  | 50.89 | 33.77 | 13.4 | 0               | 44.1            | 13.26 | 8.66            | 155.2 | 65.81 | 89.32  | 6.44 |
| East Fork Pigeon                | 101     | 20.1   | 12.93 | 25.9  | 8.28 | 0               | 19.5            | 9.71  | 2.24            | 67.21 | 31.43 | 35.77  | 6.55 |
| Davidson River                  | 102     | 34.53  | 23.67 | 38.1  | 10.2 | 4.95            | 26.2            | 11.33 | 3.16            | 106.5 | 40.62 | 70.98  | 6.51 |
| Long Branch                     | 103     | 30.27  | 18.15 | 57.1  | 8.37 | 3.77            | 11.2            | 10.84 | 0               | 113.9 | 22.06 | 95.51  | 6.57 |
| Dark Prong                      | 114     | 14.7   | 8.76  | 24.27 | 6.29 | 0               | 25.7            | 7.04  | 0               | 54.03 | 32.75 | 21.37  | 6.31 |
| UT Flat Laurel Creek            | 120     | 21.62  | 12.98 | 34.49 | 6.29 | 4.13            | 34.1            | 17.49 | 3.18            | 75.38 | 54.44 | 25.01  | 5.87 |
| Courthouse Creek                | 121     | 21.73  | 17.64 | 35.34 | 10.9 | 0               | 24.9            | 17.09 | 2.96            | 85.56 | 44.91 | 40.63  | 6.51 |
| Cathey Creek                    | 122     | 46.25  | 31.5  | 38.51 | 15   | 0               | 33.9            | 13.72 | 10.5            | 131.2 | 57.81 | 73.29  | 6.85 |
| Flat Laurel Creek               | 127     | 18.97  | 10.64 | 22.83 | 6.46 | 0               | 28.1            | 8.37  | 2.32            | 58.88 | 38.72 | 20.21  | 5.86 |
| Bubbling Spring Branch          | 129     | 20.28  | 11.82 | 21.15 | 6.26 | 0               | 40.8            | 9.73  | 1.03            | 59.53 | 51.46 | 8.01   | 5.37 |
| Bubbling Spring West Tributary  | 131     | 13.32  | 8.76  | 19.33 | 4.47 | 0               | 35.7            | 8.19  | 1.19            | 45.86 | 44.86 | 1.03   | 4.97 |
| Mill Station Creek              | 132     | 36.66  | 19.1  | 49.43 | 11.2 | 0               | 54.7            | 42.51 | 3.96            | 116.3 | 100.9 | 15.11  | 6.09 |
| Buckeye Cove Creek              | 133     | 23.06  | 11.23 | 21.95 | 6.09 | 0               | 28              | 9.37  | 7.5             | 62.34 | 44.92 | 17.39  | 5.9  |
| Rattlesnake Branch              | 143     | 28.09  | 20.02 | 59.88 | 12.8 | 0               | 38              | 14.25 | 0.51            | 120.8 | 52.81 | 67.95  | 6.36 |
| Right Hand Prong                | 147     | 31.63  | 23.14 | 31.82 | 9.75 | 0               | 27.3            | 12    | 12.6            | 96.49 | 51.91 | 44.51  | 6.59 |
| Wolf Creek                      | 150     | 24.49  | 14.65 | 34.23 | 7.53 | 0               | 15.9            | 13.75 | 1.56            | 80.9  | 31.22 | 49.44  | 6.65 |
| Greenland Creek                 | 160     | 13.69  | 10.32 | 33.56 | 6.77 | 0               | 26.6            | 14.08 | 1.71            | 64.33 | 42.38 | 21.92  | 5.54 |
| UT Panthertown Creek (Boggy Cr) | 163     | 24.23  | 9.33  | 40.5  | 5.52 | 2.78            | 30              | 12.84 | 1.26            | 79.58 | 44.09 | 38.23  | 5.78 |
| Wilson Creek                    | 169     | 32.36  | 22.45 | 59.06 | 10.4 | 0               | 9.98            | 37.53 | 0.71            | 124.3 | 48.32 | 75.79  | 6.32 |
| UT East Fork                    | 185     | 38.72  | 22.54 | 51.51 | 10.3 | 1.58            | 11.7            | 35.74 | 0.67            | 123.1 | 48.14 | 76.57  | 6.5  |
| South Fork Fowler Creek         | 188     | 15.48  | 18.14 | 34.44 | 7.58 | 0               | 9.08            | 16.27 | 0.13            | 75.62 | 25.68 | 49.98  | 6.46 |
| Beetree Branch                  | 190     | 48.45  | 55.67 | 31.88 | 46.7 | 2.94            | 122             | 14.07 | 0.1             | 182.7 | 136.4 | 49.24  | 6.29 |
| Pigpen Branch                   | 191     | 30.38  | 30.08 | 53.2  | 13.9 | 0               | 9.1             | 20.38 | 0               | 127.5 | 29.48 | 98.06  | 6.83 |
| Scotsman Creek                  | 193     | 17.34  | 17.68 | 38.61 | 8.95 | 0               | 15.3            | 17.43 | 1.52            | 82.58 | 34.25 | 48.36  | 6.59 |
| Bear Branch                     | 195     | 45.47  | 42.07 | 30.36 | 16.2 | 0               | 70.2            | 10.44 | 0               | 134.1 | 80.92 | 53.21  | 6.5  |
| Glade Creek                     | 198     | 25.85  | 23.52 | 42.01 | 9.83 | 0               | 9.9             | 16.33 | 0.36            | 101.2 | 26.55 | 74.78  | 6.27 |
| Cane Creek Tributary            | 204     | 14.35  | 16.52 | 36.26 | 9.85 | 0               | 34.1            | 23.3  | 2.4             | 76.91 | 59.6  | 17.38  | 5.23 |
| Big Laurel Brook                | 215     | 11.26  | 11.99 | 22.86 | 6.76 | 0               | 9.76            | 13.15 | 0.51            | 52.91 | 23.36 | 29.53  | 6.32 |

Table B5. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |       |      |
|----------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|-------|------|
|                      |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH   |
| Kilby Creek          | 217     | 14.36  | 13.59 | 25.88 | 8.34 | 0               | 9.57            | 12.99 | 0.66            | 62.22 | 23.24 | 38.95 | 6.53 |
| Wildcat Branch       | 232     | 17.65  | 16.9  | 28.59 | 9.05 | 0               | 14.9            | 12.67 | 1.24            | 72.23 | 28.76 | 43.45 | 6.59 |
| Adam Camp Branch     | 237     | 16.06  | 14.35 | 27.9  | 9.82 | 0               | 16.3            | 11.49 | 0               | 68.06 | 27.74 | 40.31 | 6.55 |
| Indian Spring Branch | 239     | 23.29  | 16.73 | 32.25 | 8.09 | 0               | 21.7            | 12.05 | 1.89            | 80.22 | 35.6  | 44.63 | 6.63 |
| Unnamed creek A      | 245     | 22.93  | 12.39 | 26.19 | 7.98 | 0               | 28.2            | 11.64 | 13.2            | 69.45 | 52.75 | 16.63 | 6.18 |
| Unnamed creek B      | 246     | 58.11  | 21.86 | 44.7  | 7.27 | 0               | 42.6            | 46.64 | 19.1            | 132   | 108.2 | 23.89 | 6.32 |
| Unnamed creek C      | 249     | 42.87  | 20.02 | 37.01 | 11.4 | 0               | 26              | 24.36 | 20.2            | 111.3 | 70.33 | 40.96 | 6.51 |
| Roaring Branch       | 251     | 52.38  | 17.15 | 33.52 | 8.41 | 0               | 33.6            | 12.85 | 22.3            | 111.4 | 68.73 | 42.75 | 6.24 |
| Bearpen Branch       | 253     | 18.17  | 14.81 | 28.42 | 8    | 0.47            | 27.9            | 13.56 | 3.68            | 69.42 | 45.25 | 24.67 | 6.23 |
| Indian Branch        | 255     | 54.03  | 23.29 | 39.29 | 13.2 | 0               | 31.6            | 22.65 | 25              | 129.8 | 79.35 | 50.43 | 6.7  |
| Rough Ridge Creek    | 257     | 26.44  | 16.82 | 39.76 | 8.08 | 0               | 25.8            | 13.66 | 1.94            | 91.09 | 41.21 | 50.08 | 6.41 |
| Big Cove Branch      | 259     | 46.16  | 24.33 | 44.48 | 14.2 | 0               | 19.2            | 16.32 | 25.6            | 129.2 | 61.04 | 68.09 | 6.79 |
| Kirkland Cove        | 260     | 33.01  | 15.67 | 33.36 | 9.89 | 0               | 28.9            | 13.57 | 12.3            | 92    | 54.74 | 37.23 | 6.58 |
| Big Oak Cove Creek   | 261     | 27.46  | 19.43 | 27.78 | 6.43 | 0               | 35.7            | 12.65 | 12.4            | 80.79 | 60.56 | 20.27 | 6.3  |
| UT McNabb Creek      | 262     | 15.52  | 10.73 | 28.81 | 9.43 | 0               | 18.8            | 15.32 | 0.58            | 64.51 | 34.67 | 29.81 | 6.33 |
| UT Laurel Branch     | 265     | 83.35  | 33.62 | 62.66 | 14.7 | 0               | 69.1            | 63.01 | 5.52            | 194.4 | 137.5 | 56.88 | 6.71 |
| Spivey Creek         | 266     | 42.07  | 26.71 | 46.87 | 17.3 | 2.02            | 41.3            | 15.94 | 5.4             | 132.8 | 62.67 | 72.38 | 6.75 |
| McNabb Creek         | 270     | 124.1  | 61.51 | 69.68 | 14.8 | 0               | 205             | 55.62 | 0.48            | 270   | 261.7 | 8.14  | 5.88 |
| Joyce Kilmer 5       | 281     | 30.67  | 16.74 | 25.79 | 8.62 | 0.46            | 30.7            | 12.31 | 7.12            | 81.85 | 50.13 | 32.12 | 6.25 |

Table B6. Simulated 2005 concentrations of various ions in streamwater for the modeled national forest streams.

| Site Name                       | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |        |      |
|---------------------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|--------|------|
|                                 |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK   | PH   |
| UT Russell Creek                | 14      | 11.46  | 14.72 | 15.68 | 18.1 | 0               | 59.6            | 19.57 | 0               | 59.97 | 79.16 | -19.18 | 4.73 |
| Russell Creek                   | 15      | 18.05  | 21.38 | 20.54 | 24.2 | 0               | 78.3            | 19.41 | 0               | 84.18 | 97.81 | -13.68 | 4.8  |
| White Creek                     | 16      | 17.76  | 17.99 | 27.64 | 19.1 | 0               | 48.5            | 19.71 | 0               | 82.51 | 68.24 | 14.17  | 5.71 |
| UT Linville River (NUCM site)   | 21      | 14.58  | 10.76 | 19.28 | 10.1 | 0               | 53.9            | 17.66 | 1.18            | 54.73 | 72.75 | -17.96 | 4.72 |
| Paddy Creek                     | 26      | 9.16   | 17.79 | 21.63 | 19.4 | 0               | 48.2            | 18.79 | 0               | 67.97 | 66.94 | 1.07   | 5.3  |
| Yellow Fork                     | 27      | 9.23   | 19.13 | 16.09 | 14.7 | 0               | 48.6            | 16.42 | 0               | 59.14 | 65.05 | -5.91  | 4.95 |
| Stillhouse Branch               | 28      | 7.06   | 15.88 | 17.02 | 12.8 | 0               | 33.6            | 15.48 | 0               | 52.76 | 49.04 | 3.74   | 5.34 |
| UT North Fork of Catawba        | 33      | 8.34   | 18.08 | 19.39 | 15.3 | 0               | 38.5            | 17.71 | 0               | 61.09 | 56.22 | 4.87   | 5.39 |
| Lindy Camp Branch               | 35      | 31.94  | 28    | 19.66 | 16.6 | 0               | 50.9            | 11.21 | 0.64            | 96.47 | 62.67 | 33.68  | 5.8  |
| Colberts Creek                  | 53      | 19.43  | 18.52 | 27.63 | 8.73 | 0               | 30.6            | 11.87 | 5.34            | 74.26 | 47.71 | 26.42  | 6.13 |
| Middle Creek                    | 55      | 19.11  | 17.13 | 28.17 | 8.14 | 0               | 30.1            | 12.03 | 4.11            | 72.53 | 46.21 | 26.22  | 6.09 |
| Lost Cove                       | 56      | 31.75  | 16.71 | 31.69 | 7.23 | 0               | 36              | 11.78 | 3.15            | 87.39 | 50.97 | 36.39  | 6.5  |
| Lower Creek                     | 59      | 21.18  | 16.45 | 32.71 | 18.4 | 0               | 32.7            | 26.08 | 6.55            | 88.68 | 65.48 | 23.66  | 6.16 |
| Upper Creek                     | 60      | 20.8   | 16.6  | 27.7  | 16.9 | 0               | 34.1            | 24.81 | 6.33            | 82.06 | 65.28 | 16.66  | 6.03 |
| Left Prong South Toe River      | 61      | 26.44  | 18.01 | 33.78 | 6.53 | 6.17            | 18.7            | 13.91 | 15.2            | 84.72 | 47.79 | 43.04  | 6.3  |
| Peach Orchard Creek             | 70      | 43.33  | 18.97 | 35.11 | 6.78 | 6.77            | 52.5            | 10.8  | 20.2            | 104.1 | 83.39 | 27.47  | 5.99 |
| Briar Creek                     | 72      | 32.83  | 44.14 | 21.85 | 13.8 | 0               | 55.8            | 10.76 | 1.31            | 112.6 | 67.86 | 44.76  | 6.55 |
| Squibb Creek                    | 88      | 54.64  | 69.69 | 51.37 | 24.3 | 0               | 79.4            | 13.88 | 17.6            | 200.1 | 110.8 | 89     | 6.53 |
| Little Prong Hickey Fork        | 91      | 44.63  | 51.27 | 41.92 | 10.4 | 8.66            | 22.5            | 6.2   | 6.38            | 148.2 | 35.17 | 121.7  | 6.71 |
| UT Paint Creek                  | 94      | 57.22  | 51.12 | 33.77 | 13.5 | 0               | 48.5            | 13.26 | 9.04            | 155.6 | 70.8  | 84.71  | 6.38 |
| East Fork Pigeon                | 101     | 20.19  | 12.99 | 25.87 | 8.3  | 0               | 21.4            | 9.71  | 2.27            | 67.35 | 33.4  | 33.94  | 6.53 |
| Davidson River                  | 102     | 34.51  | 23.64 | 38.07 | 10.2 | 5.4             | 28.8            | 11.33 | 3.19            | 106.5 | 43.05 | 68.83  | 6.49 |
| Long Branch                     | 103     | 30.29  | 18.15 | 57.1  | 8.39 | 4.12            | 12.4            | 10.84 | 0               | 113.9 | 23.2  | 94.75  | 6.56 |
| Dark Prong                      | 114     | 14.8   | 8.86  | 24.23 | 6.33 | 0               | 28.4            | 7.04  | 0               | 54.24 | 35.47 | 18.74  | 6.25 |
| UT Flat Laurel Creek            | 120     | 21.93  | 13.21 | 34.48 | 6.35 | 4.5             | 38              | 17.49 | 3.22            | 75.98 | 59.05 | 21.47  | 5.75 |
| Courthouse Creek                | 121     | 22.41  | 17.89 | 35.23 | 11   | 0               | 27.4            | 17.09 | 3.01            | 86.51 | 47.46 | 38.99  | 6.49 |
| Cathey Creek                    | 122     | 46.24  | 31.49 | 38.48 | 15   | 0               | 37.1            | 13.72 | 10.7            | 131.2 | 61.17 | 69.93  | 6.82 |
| Flat Laurel Creek               | 127     | 18.97  | 10.72 | 22.82 | 6.49 | 0               | 30.5            | 8.37  | 2.36            | 59    | 41.28 | 17.81  | 5.78 |
| Bubbling Spring Branch          | 129     | 20.25  | 11.91 | 21.11 | 6.31 | 0               | 45.3            | 9.73  | 1.05            | 59.57 | 56.06 | 3.53   | 5.18 |
| Bubbling Spring West Tributary  | 131     | 13.35  | 8.87  | 19.3  | 4.52 | 0               | 39.5            | 8.19  | 1.21            | 46.03 | 48.99 | -2.95  | 4.86 |
| Mill Station Creek              | 132     | 36.66  | 19.97 | 49.02 | 11.6 | 0               | 60.1            | 42.51 | 4.03            | 117.6 | 106.7 | 10.81  | 5.93 |
| Buckeye Cove Creek              | 133     | 23.13  | 11.35 | 21.89 | 6.13 | 0               | 31.1            | 9.37  | 7.63            | 62.51 | 48.12 | 14.38  | 5.78 |
| Rattlesnake Branch              | 143     | 28.47  | 20.28 | 59.84 | 12.9 | 0               | 42.1            | 14.25 | 0.53            | 121.5 | 56.9  | 64.59  | 6.3  |
| Right Hand Prong                | 147     | 32.18  | 23.25 | 31.82 | 9.91 | 0               | 29.9            | 12    | 12.8            | 97.21 | 54.71 | 42.43  | 6.57 |
| Wolf Creek                      | 150     | 24.52  | 14.8  | 34.19 | 7.59 | 0               | 17.5            | 13.75 | 1.59            | 81.09 | 32.85 | 47.98  | 6.64 |
| Greenland Creek                 | 160     | 13.76  | 10.26 | 33.55 | 6.78 | 0               | 29.1            | 14.08 | 1.74            | 64.35 | 44.88 | 19.45  | 5.45 |
| UT Panthertown Creek (Boggy Cr) | 163     | 24.21  | 9.31  | 40.49 | 5.54 | 3.03            | 32.6            | 12.84 | 1.28            | 79.51 | 46.72 | 35.66  | 5.71 |
| Wilson Creek                    | 169     | 32.43  | 22.5  | 59.06 | 10.4 | 0               | 11              | 37.53 | 0.72            | 124.4 | 49.32 | 74.9   | 6.31 |
| UT East Fork                    | 185     | 38.9   | 22.7  | 51.49 | 10.4 | 1.73            | 12.9            | 35.74 | 0.68            | 123.4 | 49.37 | 75.86  | 6.49 |
| South Fork Fowler Creek         | 188     | 15.5   | 18.15 | 34.43 | 7.6  | 0               | 10              | 16.27 | 0.13            | 75.66 | 26.61 | 49.07  | 6.45 |
| Beetree Branch                  | 190     | 48   | 55.23 | 31.86 | 46.5 | 2.73            | 124             | 14.07 | 0.09            | 181.6 | 138.4 | 46.06  | 6.23 |
| Pigpen Branch                   | 191     | 30.52  | 30.2  | 53.19 | 13.9 | 0               | 10.1            | 20.38 | 0               | 127.8 | 30.39 | 97.44  | 6.83 |
| Scotsman Creek                  | 193     | 17.33  | 17.67 | 38.58 | 8.96 | 0               | 16.9            | 17.43 | 1.55            | 82.55 | 35.83 | 46.72  | 6.57 |
| Bear Branch                     | 195     | 44.91  | 41.54 | 30.34 | 16.1 | 0               | 71.9            | 10.44 | 0               | 132.9 | 82.27 | 50.63  | 6.46 |
| Glade Creek                     | 198     | 25.87  | 23.6  | 42    | 9.86 | 0               | 10.9            | 16.33 | 0.36            | 101.3 | 27.59 | 73.82  | 6.25 |
| Cane Creek Tributary            | 204     | 14.54  | 16.66 | 36.17 | 9.9  | 0               | 37.4            | 23.3  | 2.44            | 77.23 | 63.18 | 14.06  | 5.13 |
| Big Laurel Brook                | 215     | 11.26  | 12.08 | 22.84 | 6.79 | 0               | 10.8            | 13.15 | 0.52            | 53    | 24.41 | 28.62  | 6.3  |

Table B6. Continued.

| Site Name            | Site ID | Simulated Stream Water Concentrations in µeq/L (except pH) |       |       |      |                 |                 |       |                 |       |       |       |      |
|----------------------|---------|--|-------|-------|------|-----------------|-----------------|-------|-----------------|-------|-------|-------|------|
|                      |         | Ca   | Mg    | Na    | K    | NH <sub>4</sub> | SO <sub>4</sub> | CL    | NO <sub>3</sub> | SBC   | SAA   | CALK  | PH   |
| Kilby Creek          | 217     | 14.39  | 13.64 | 25.86 | 8.39 | 0               | 10.6            | 12.99 | 0.67            | 62.33 | 24.26 | 38.01 | 6.52 |
| Wildcat Branch       | 232     | 17.81  | 16.97 | 28.59 | 9.12 | 0               | 16.4            | 12.67 | 1.26            | 72.5  | 30.31 | 42.18 | 6.57 |
| Adam Camp Branch     | 237     | 16.14  | 14.52 | 27.9  | 9.88 | 0               | 17.7            | 11.49 | 0               | 68.42 | 29.13 | 39.26 | 6.54 |
| Indian Spring Branch | 239     | 23.37  | 16.77 | 32.25 | 8.16 | 0               | 23.9            | 12.05 | 1.92            | 80.51 | 37.88 | 42.62 | 6.61 |
| Unnamed creek A      | 245     | 22.33  | 12.2  | 26.18 | 7.94 | 0               | 30.4            | 11.64 | 11.8            | 68.64 | 53.82 | 14.76 | 6.13 |
| Unnamed creek B      | 246     | 56.96  | 21.57 | 44.69 | 7.31 | 0               | 46.4            | 46.64 | 17.1            | 130.5 | 110.1 | 20.52 | 6.25 |
| Unnamed creek C      | 249     | 42.16  | 19.78 | 36.6  | 11.4 | 0               | 28.2            | 24.36 | 18.1            | 109.9 | 70.69 | 39.35 | 6.49 |
| Roaring Branch       | 251     | 50.74  | 16.79 | 33.09 | 8.43 | 0               | 36.3            | 12.85 | 20              | 109.1 | 69.3  | 39.96 | 6.18 |
| Bearpen Branch       | 253     | 18.19  | 14.96 | 28.41 | 8.08 | 0.51            | 30.7            | 13.56 | 3.73            | 69.63 | 47.98 | 21.99 | 6.16 |
| Indian Branch        | 255     | 53.34  | 22.94 | 38.76 | 13.2 | 0               | 34.3            | 22.65 | 22.4            | 128.2 | 79.34 | 48.69 | 6.69 |
| Rough Ridge Creek    | 257     | 26.65  | 16.96 | 39.75 | 8.15 | 0               | 27.9            | 13.66 | 1.74            | 91.59 | 43.24 | 48.4  | 6.39 |
| Big Cove Branch      | 259     | 45.34  | 23.8  | 43.94 | 14.2 | 0               | 20.8            | 16.32 | 22.9            | 127.2 | 60.09 | 67.1  | 6.78 |
| Kirkland Cove        | 260     | 32.98  | 15.67 | 33    | 9.95 | 0               | 31.2            | 13.57 | 11              | 91.65 | 55.82 | 35.78 | 6.56 |
| Big Oak Cove Creek   | 261     | 27.06  | 19.04 | 27.77 | 6.47 | 0               | 38.4            | 12.65 | 11.1            | 80.25 | 62.15 | 18.16 | 6.24 |
| UT McNabb Creek      | 262     | 15.78  | 10.88 | 28.73 | 9.52 | 0               | 20.5            | 15.32 | 0.52            | 64.93 | 36.31 | 28.6  | 6.31 |
| UT Laurel Branch     | 265     | 84.05  | 34.16 | 62.63 | 15   | 0               | 74.7            | 63.01 | 4.95            | 195.8 | 142.7 | 53.22 | 6.68 |
| Spivey Creek         | 266     | 42.66  | 26.94 | 46.85 | 17.5 | 1.88            | 44.4            | 15.94 | 4.84            | 133.9 | 65.18 | 70.38 | 6.73 |
| McNabb Creek         | 270     | 123.2  | 60.87 | 69.66 | 14.7 | 0               | 207             | 55.62 | 0.43            | 268.5 | 263.2 | 5.19  | 5.72 |
| Joyce Kilmer 5       | 281     | 31.1   | 16.84 | 25.6  | 8.67 | 0.43            | 33.1            | 12.31 | 6.37            | 82.22 | 51.9  | 30.8  | 6.22 |

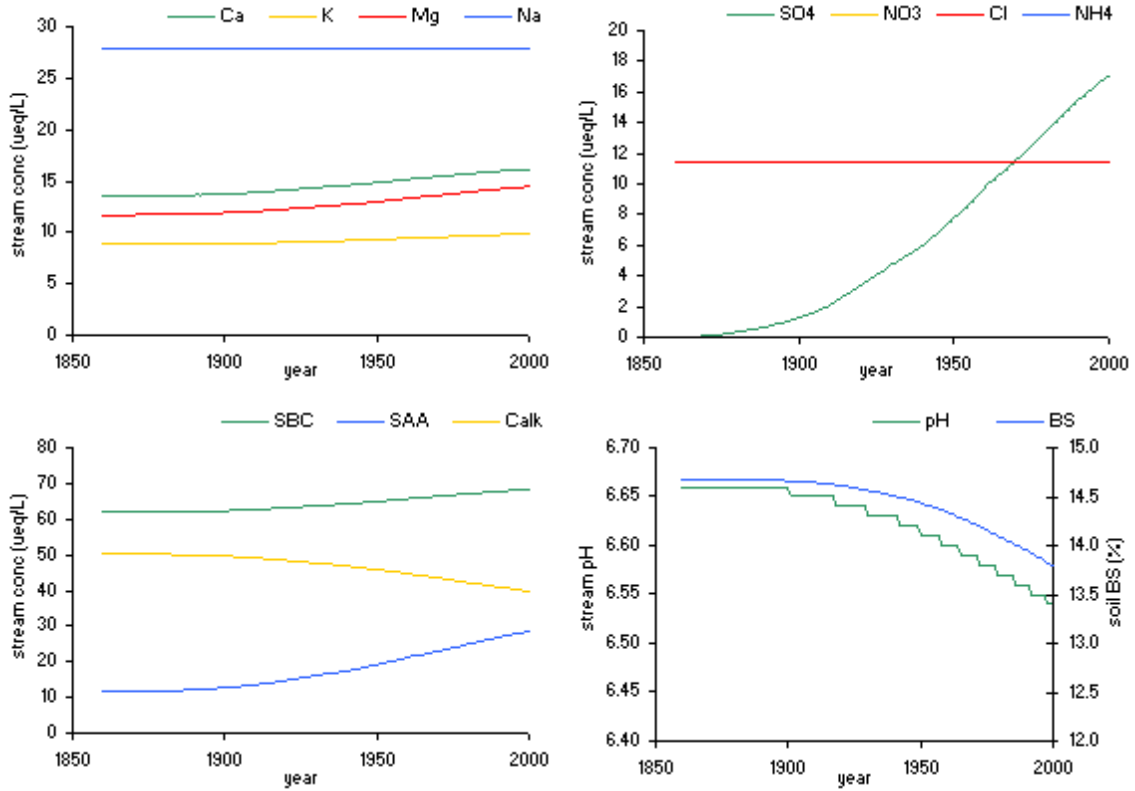
## APPENDIX C

Time Traces of Simulated Values for Major Ions in Each of the 66 Study Watersheds

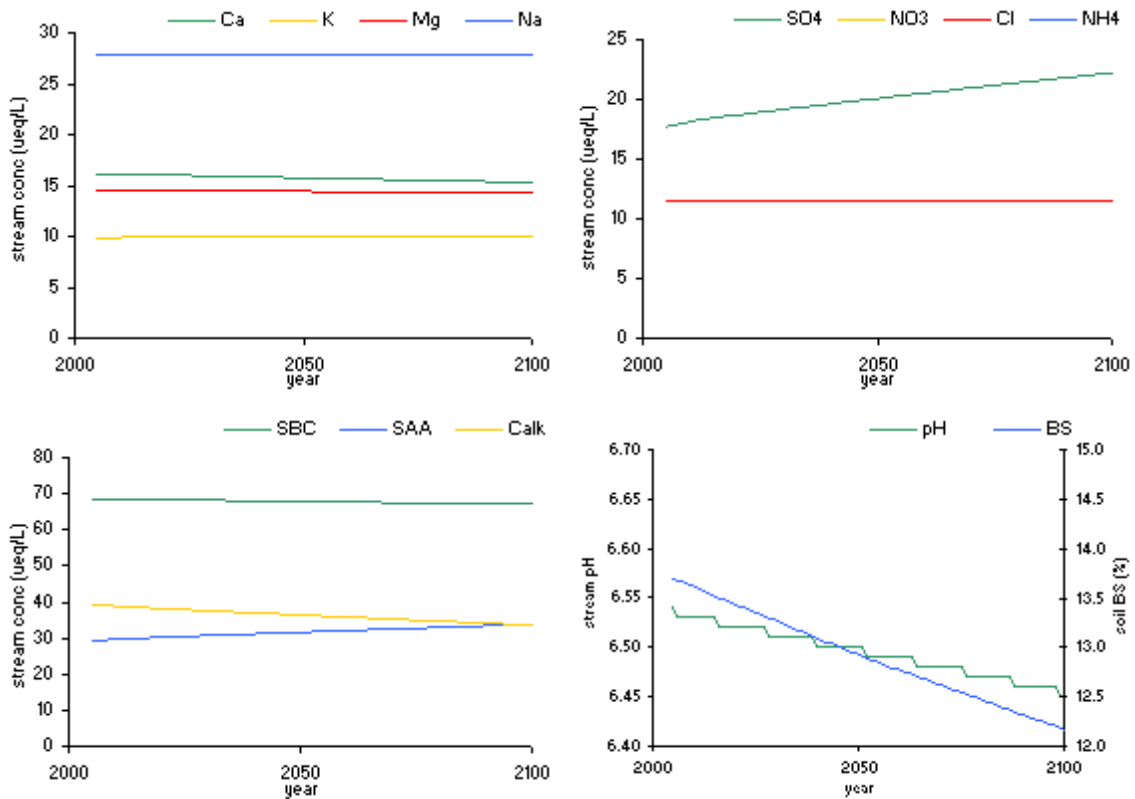


**Stream ID 237 - Adam Camp Branch**

**Hindcast**

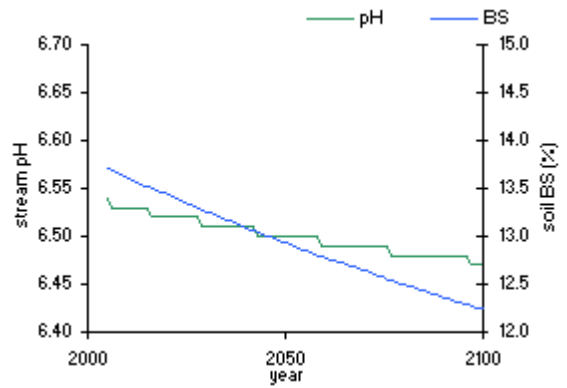
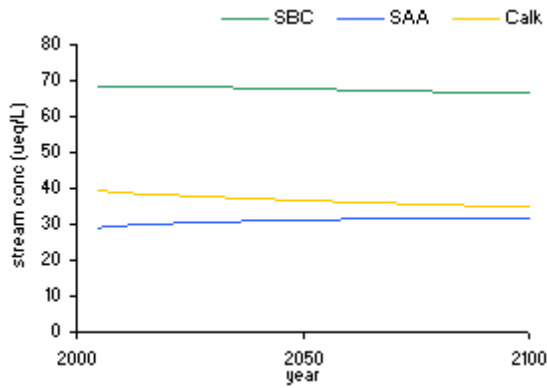
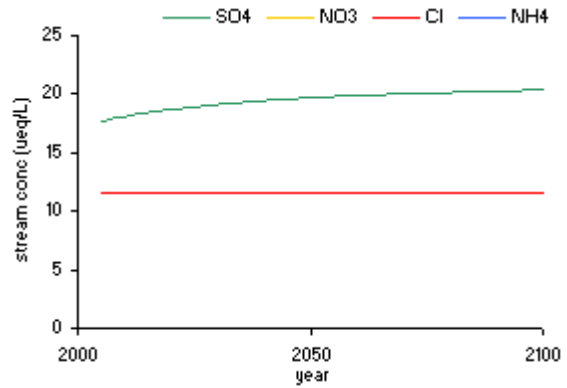
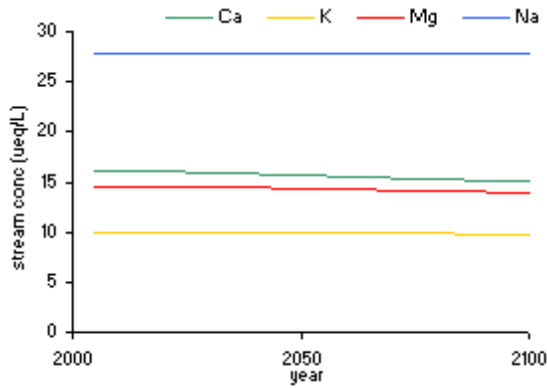


**Base**

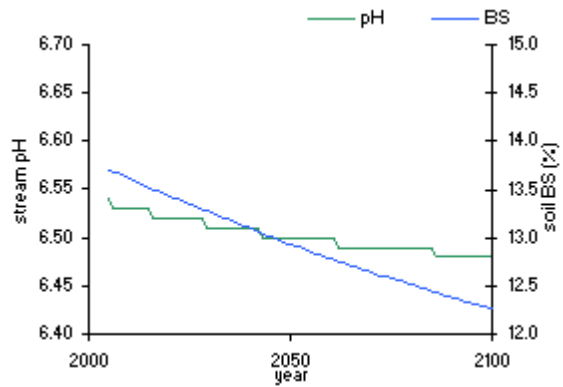
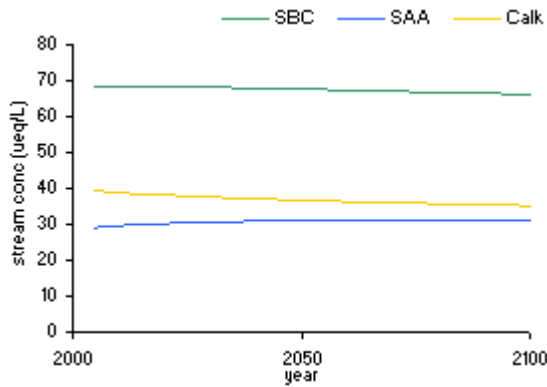
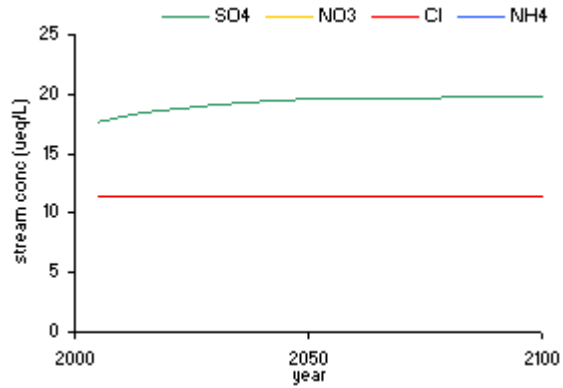
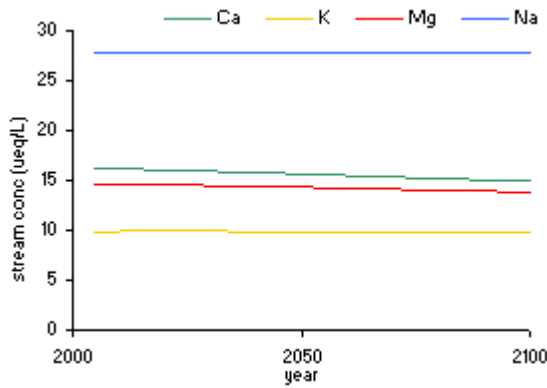


**Stream ID 237 - Adam Camp Branch**

**Moderate**



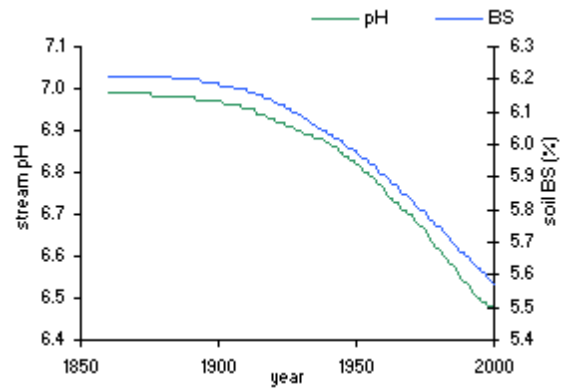
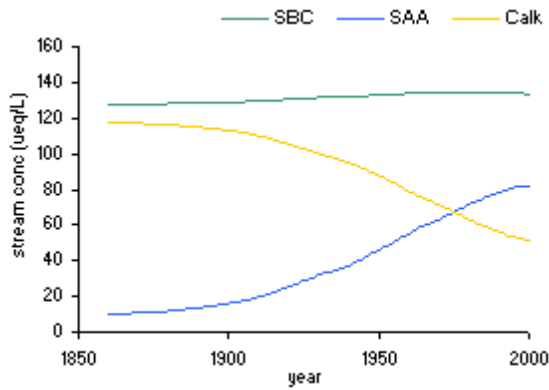
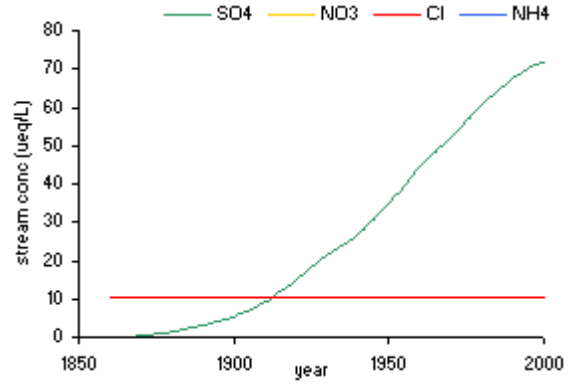
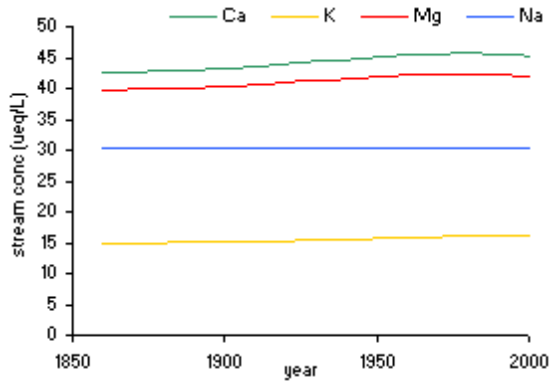
**Aggressive**



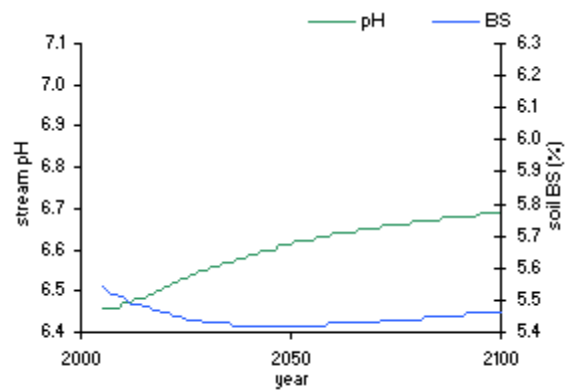
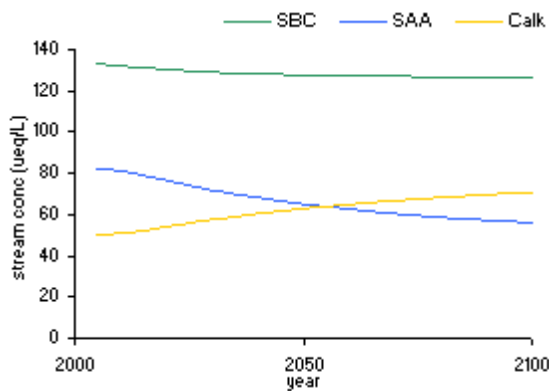
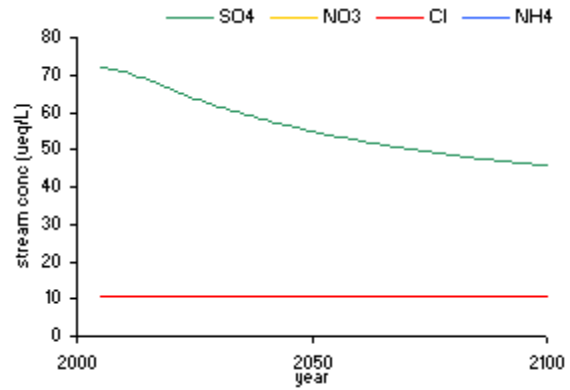
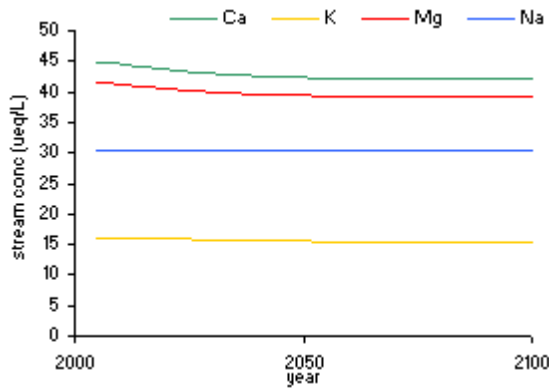


**Stream ID 195 - Bear Branch**

**Hindcast**

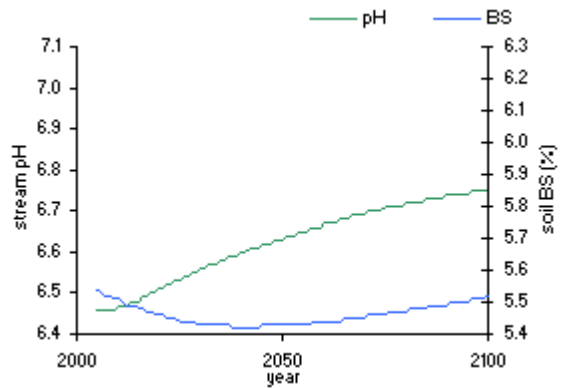
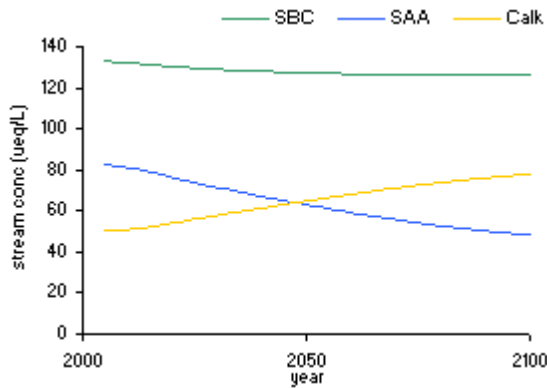
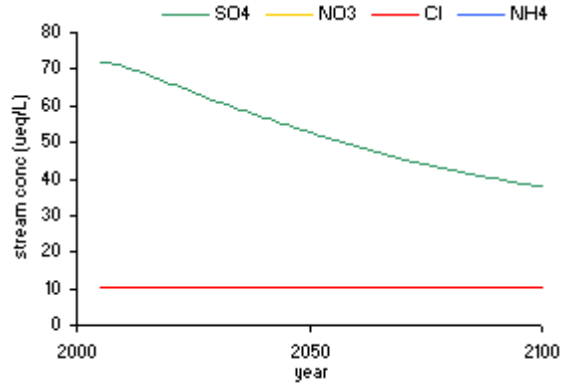
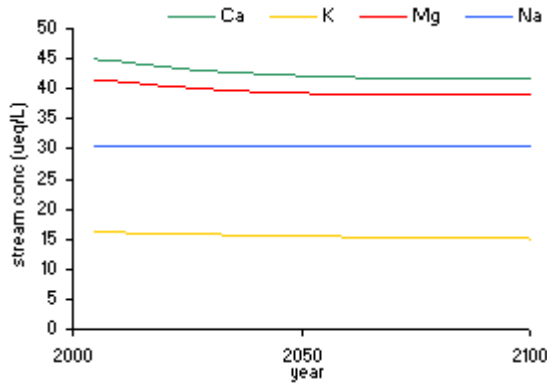


**Base**

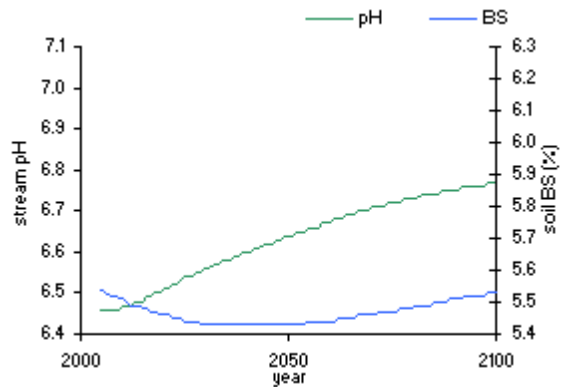
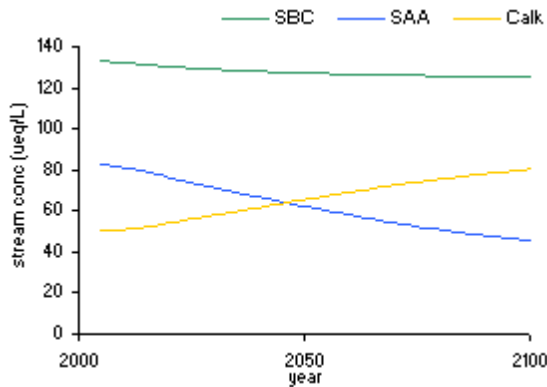
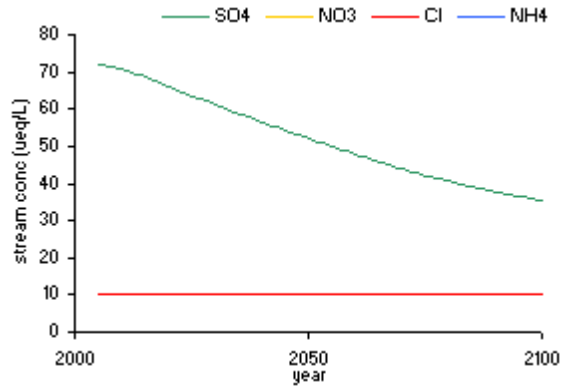
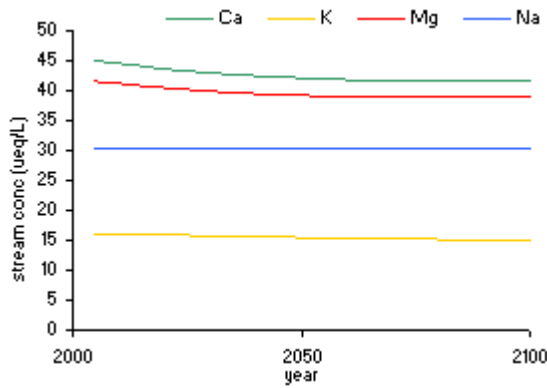


**Stream ID 195 - Bear Branch**

**Moderate**

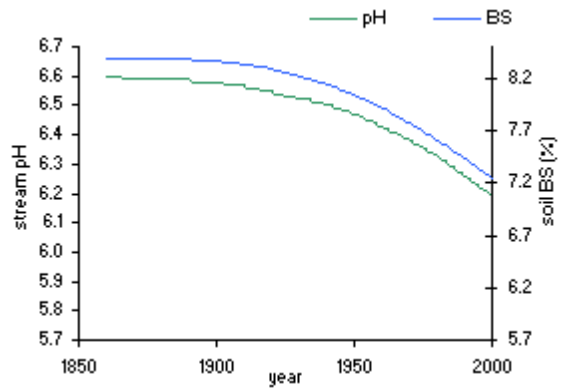
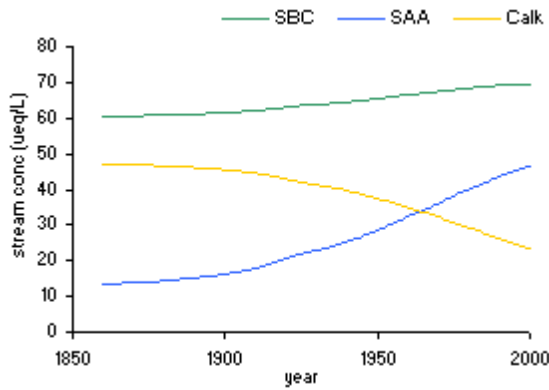
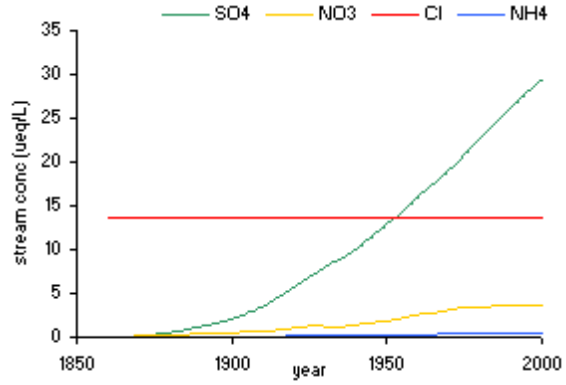
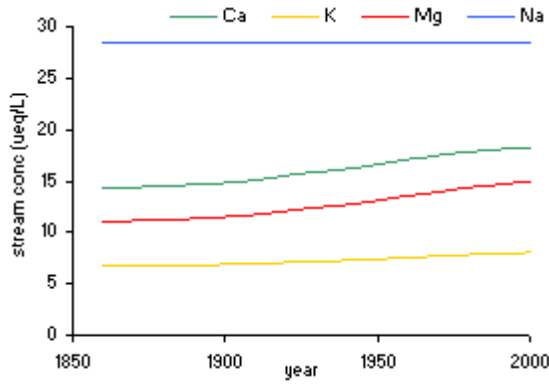


**Aggressive**

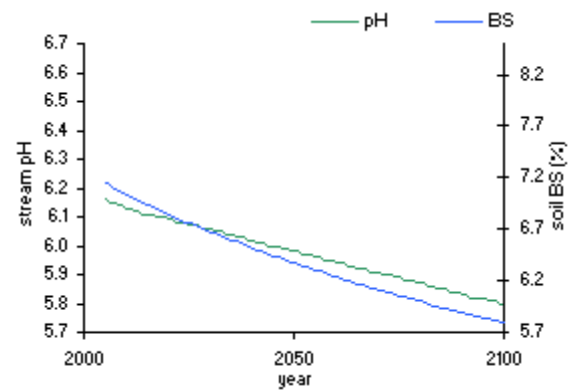
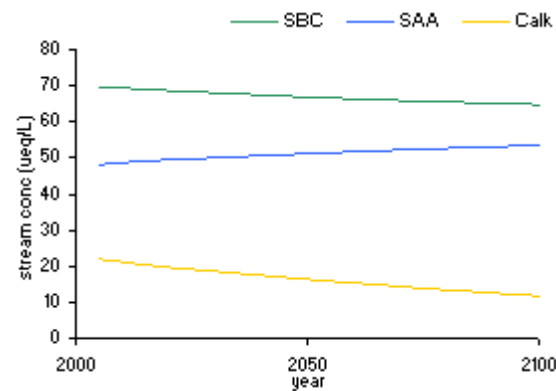
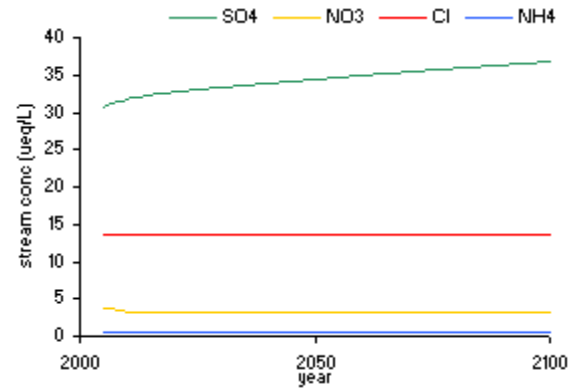
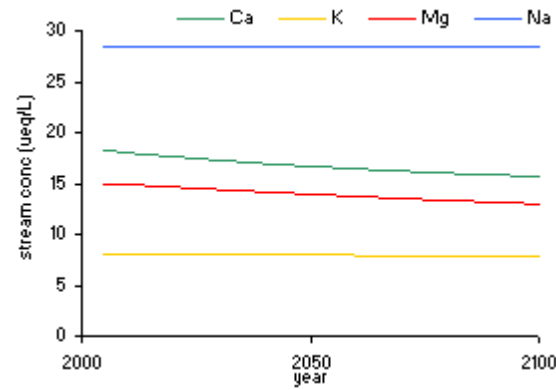


**Stream ID 253 - Bearpen Branch**

**Hindcast**

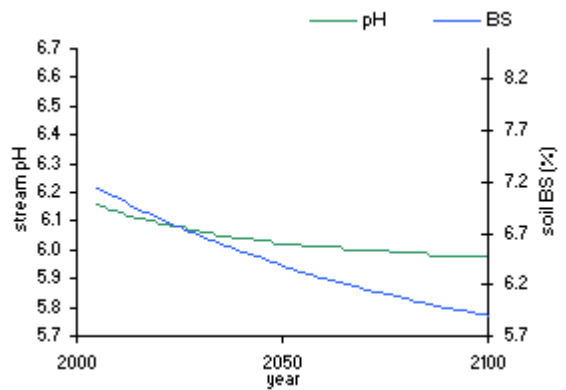
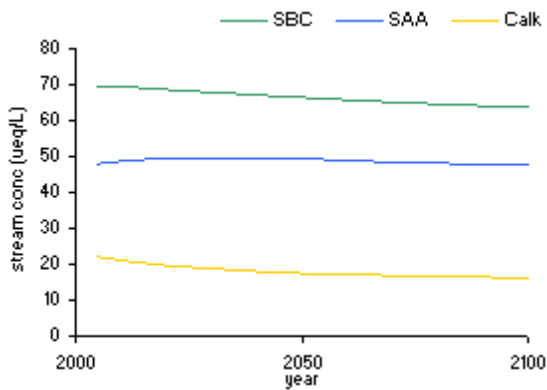
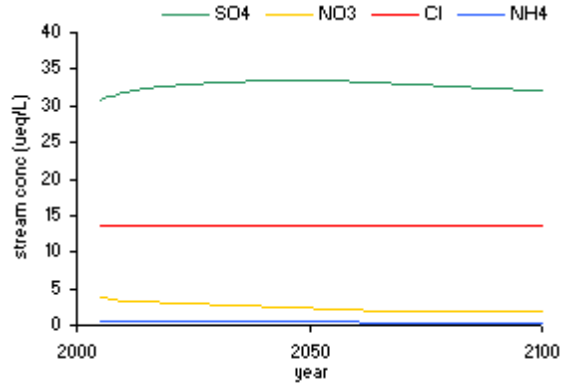
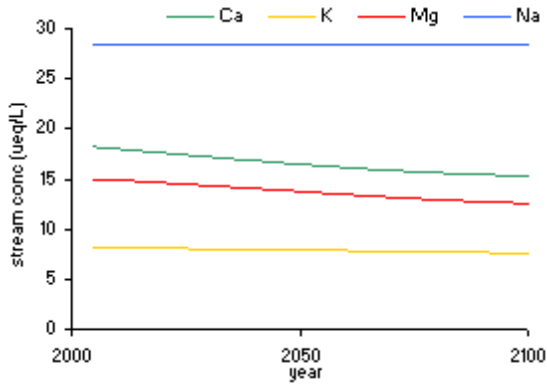


**Base**

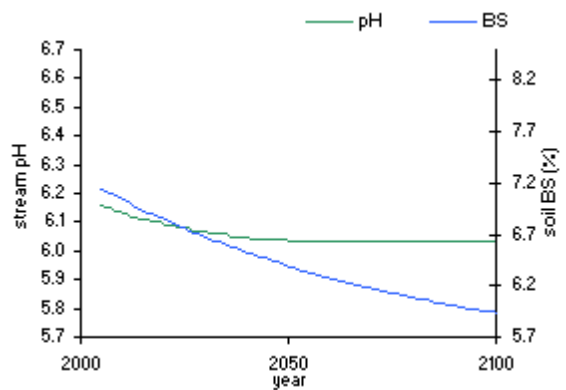
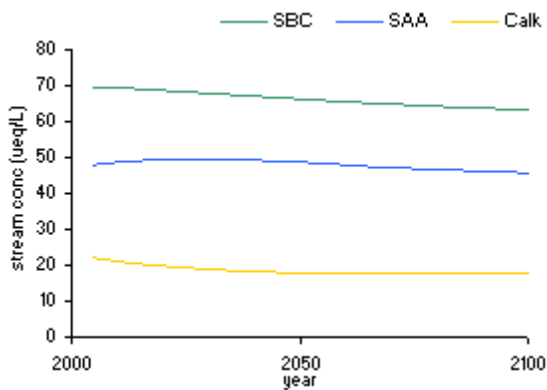
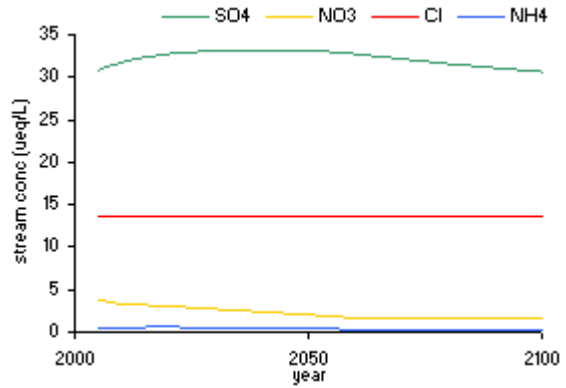
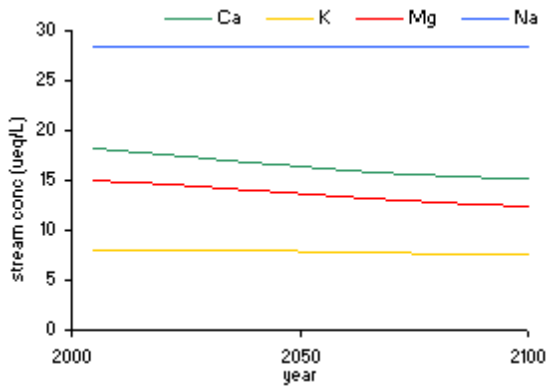


**Stream ID 253 - Bearpen Branch**

**Moderate**

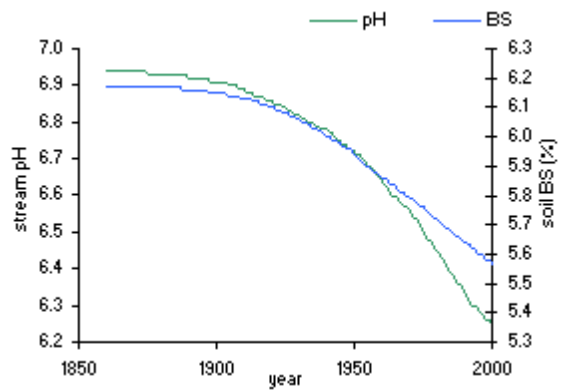
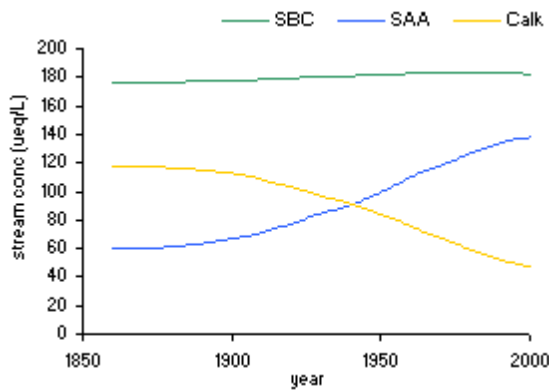
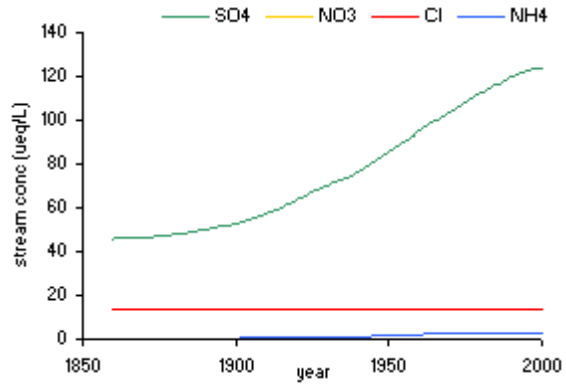
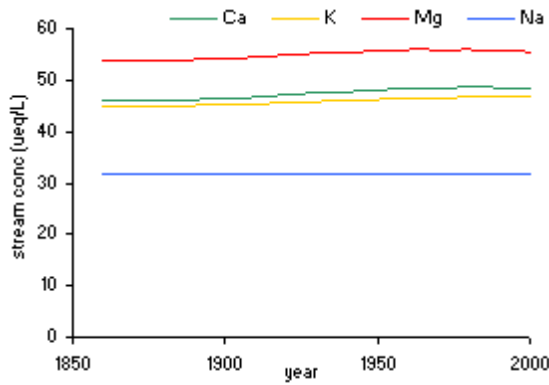


**Aggressive**

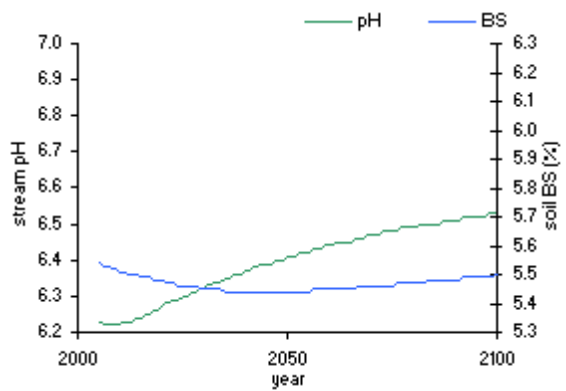
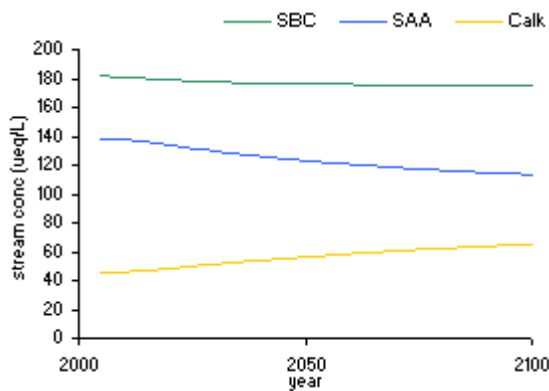
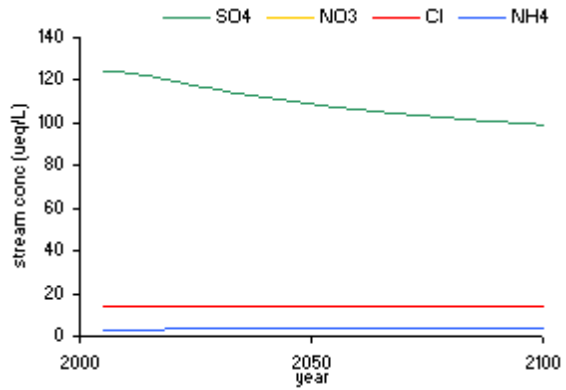
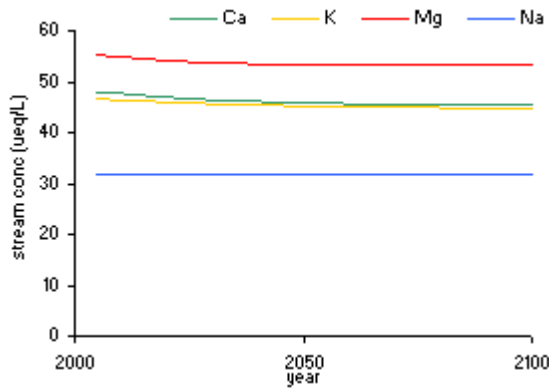


**Stream ID 190 - Beetree Branch**

**Hindcast**

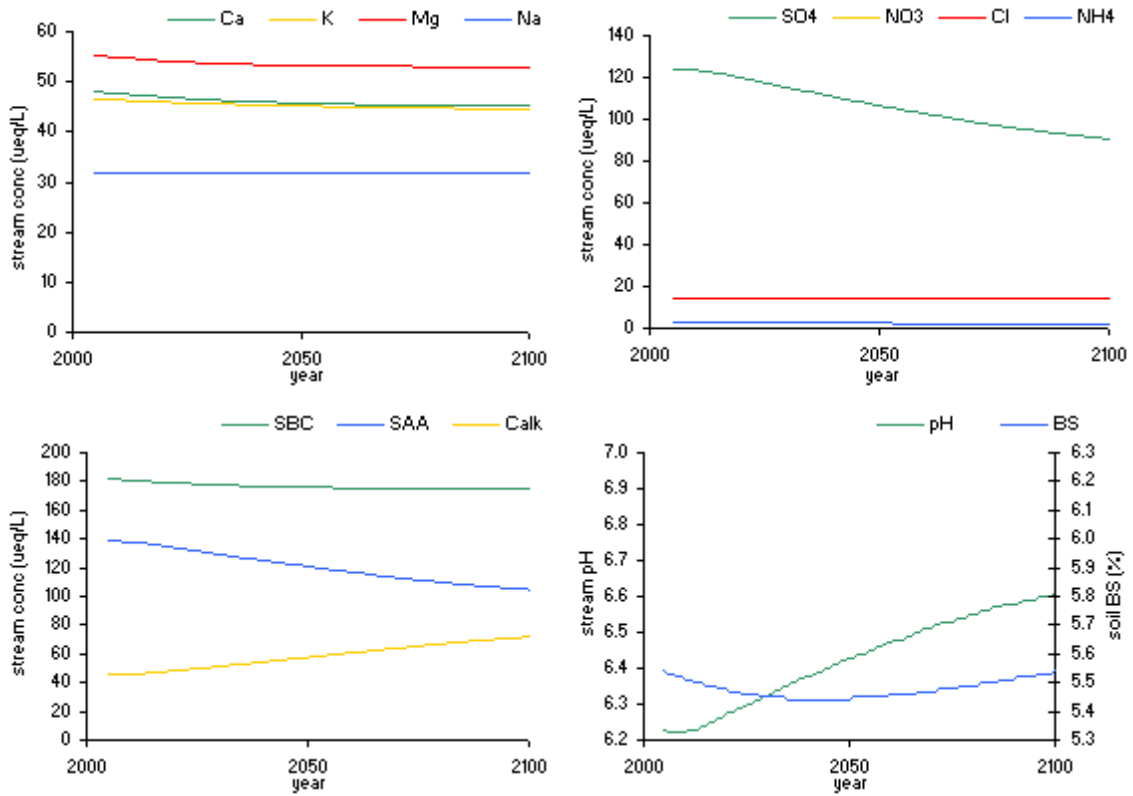


**Base**

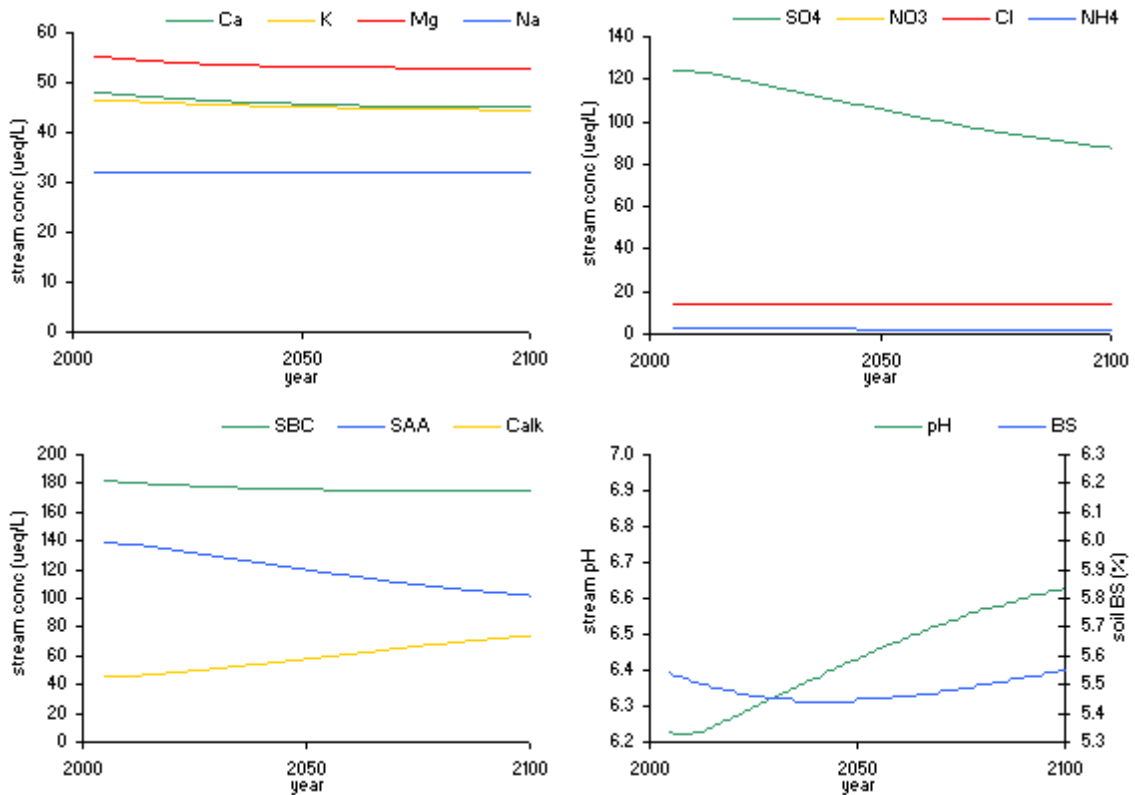


**Stream ID 190 - Beetree Branch**

**Moderate**

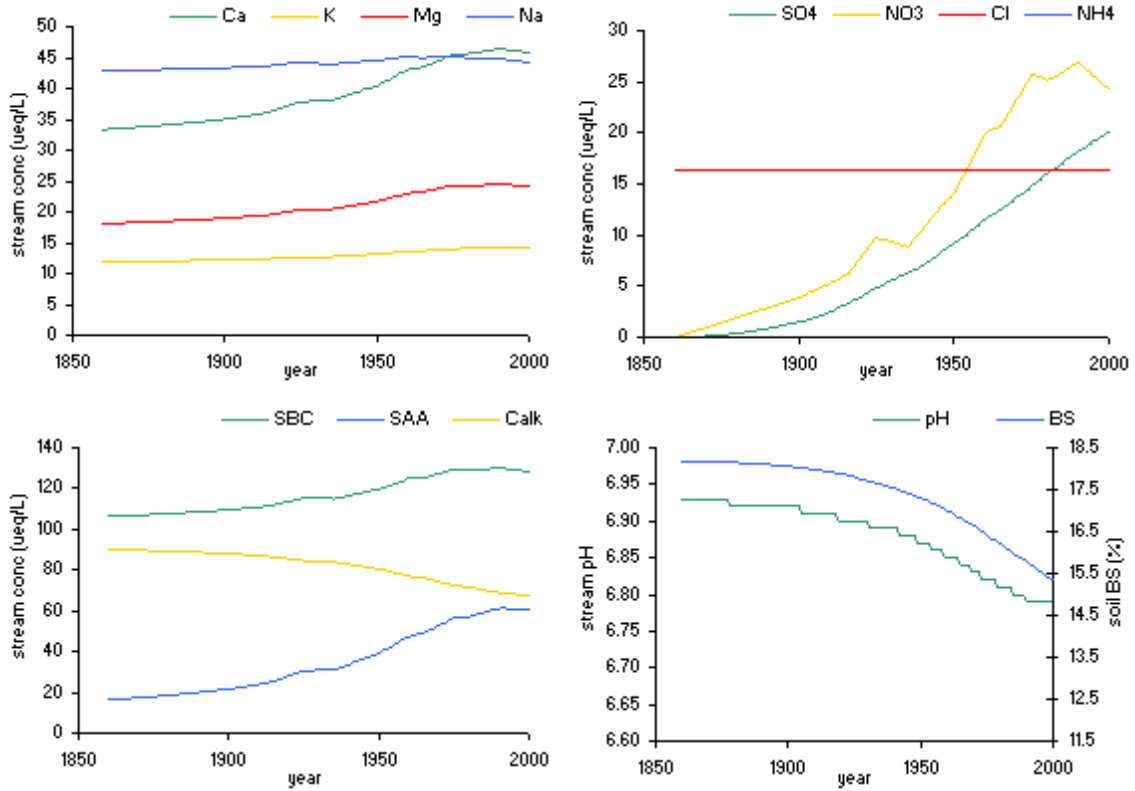


**Aggressive**

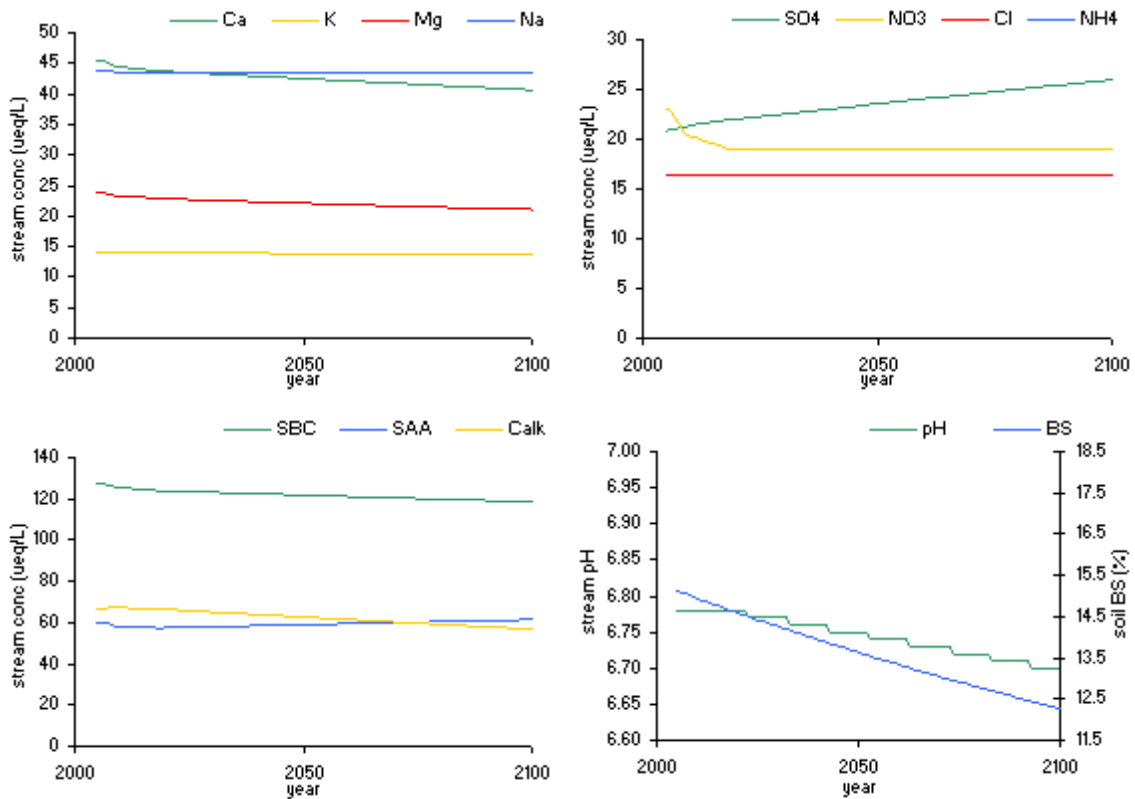


**Stream ID 259 - Big Cove Branch**

**Hindcast**

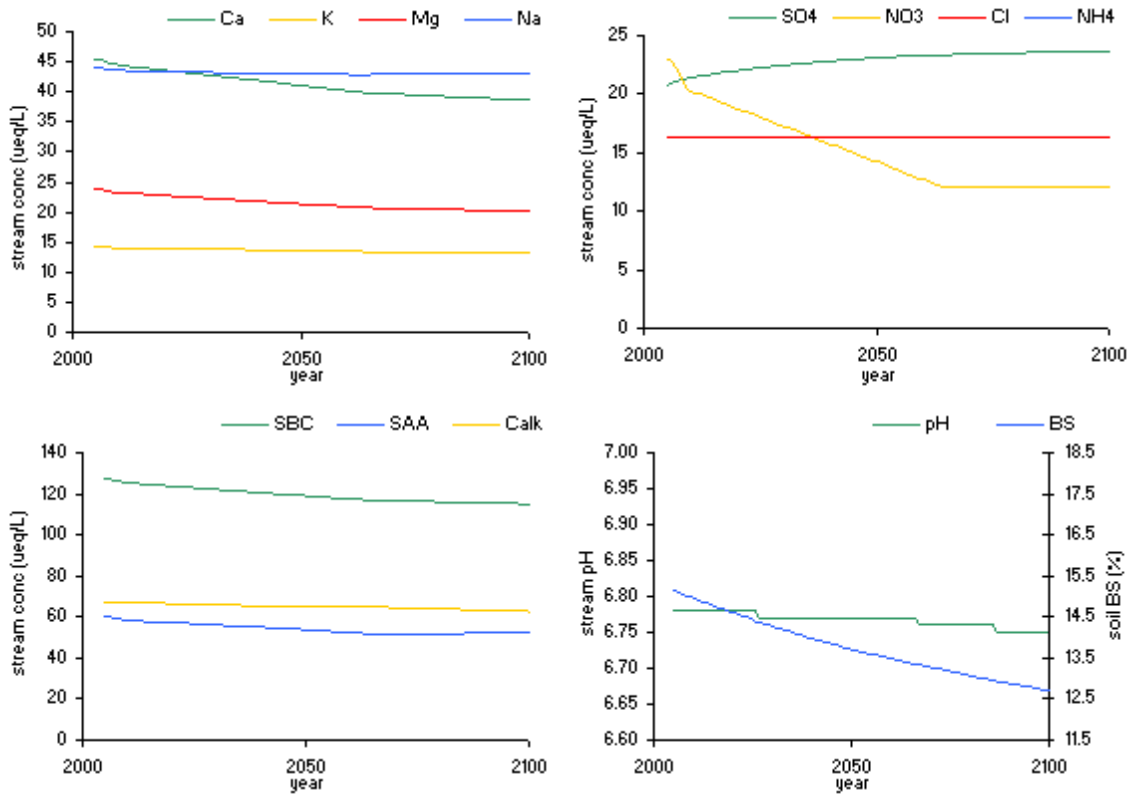


**Base**

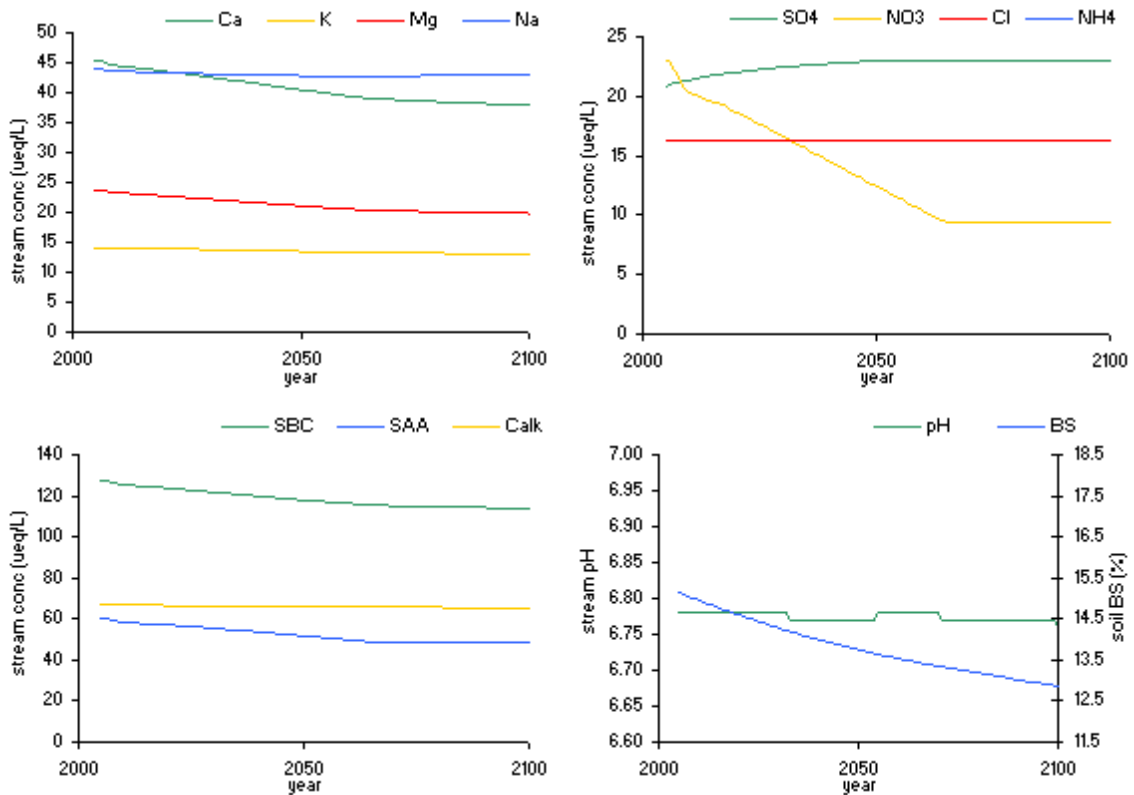


**Stream ID 259 - Big Cove Branch**

**Moderate**



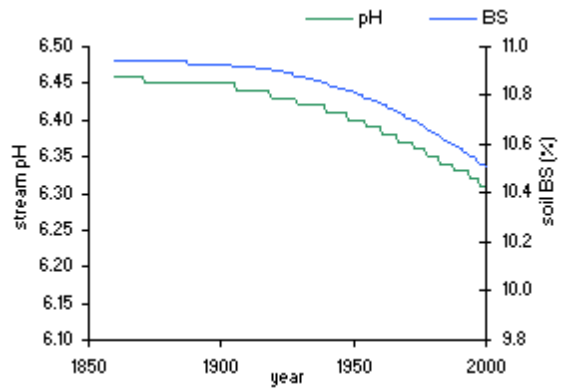
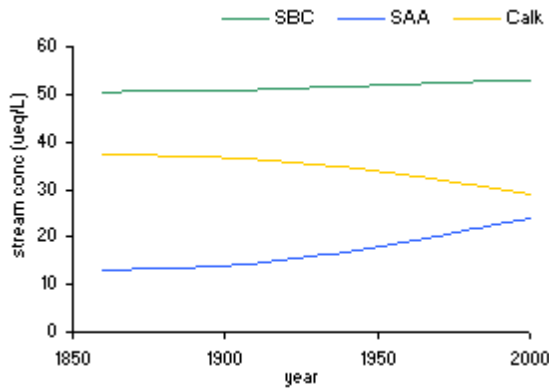
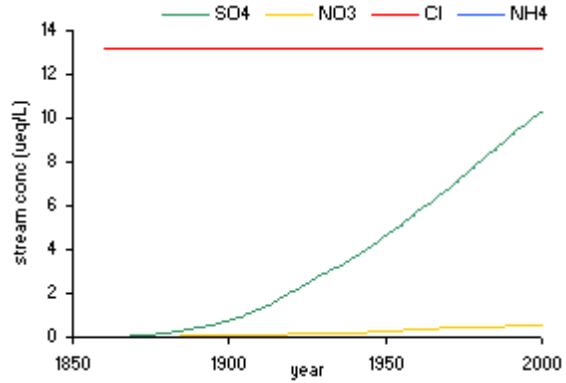
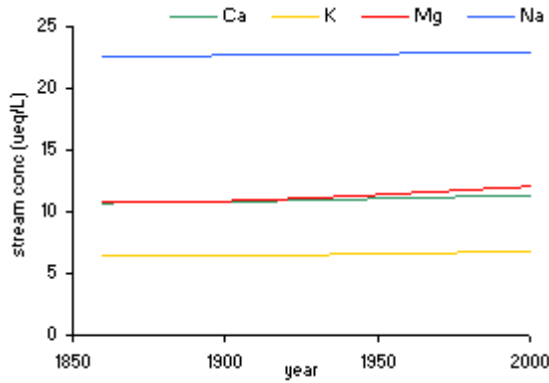
**Aggressive**



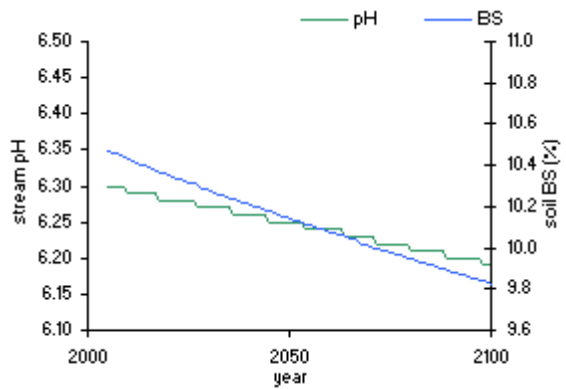
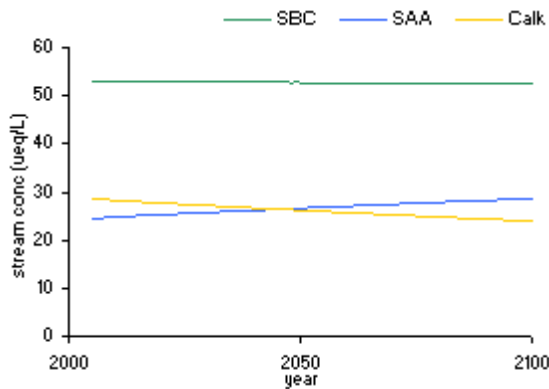
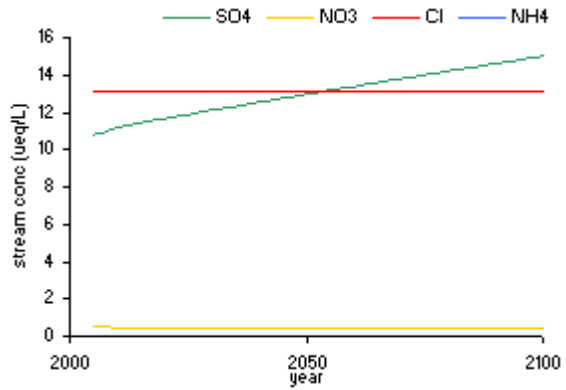
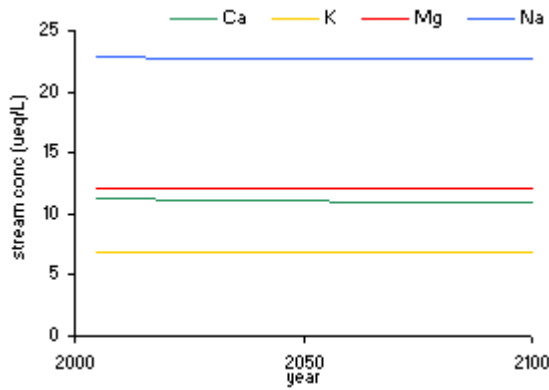


**Stream ID 215 - Big Laurel Brook**

**Hindcast**

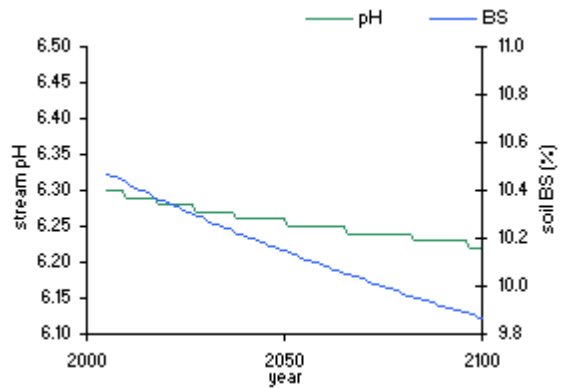
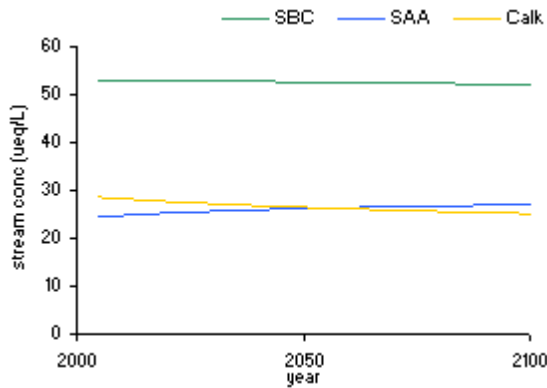
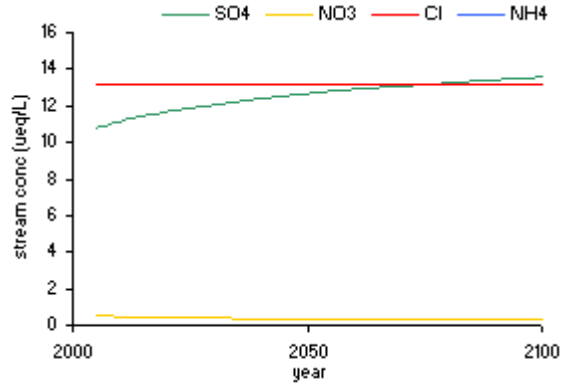
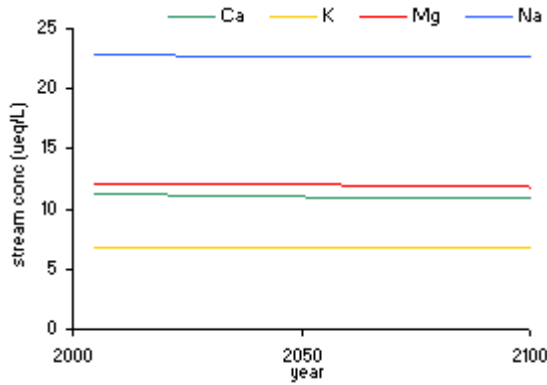


**Base**

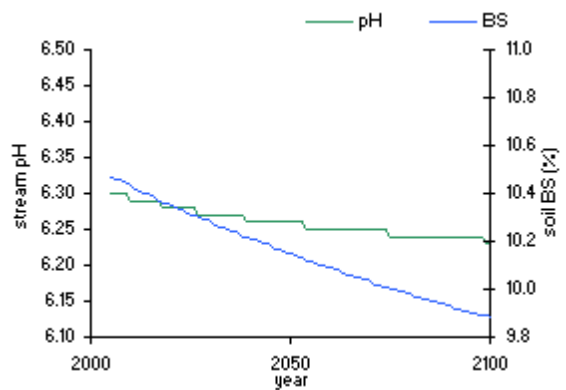
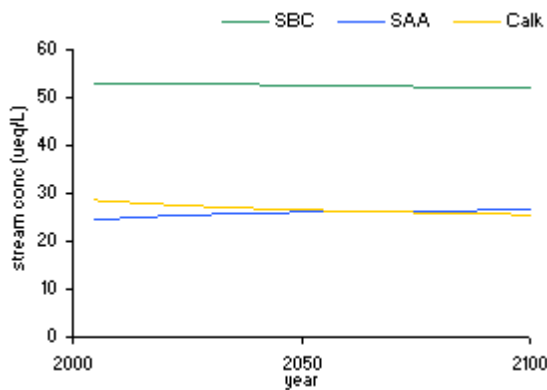
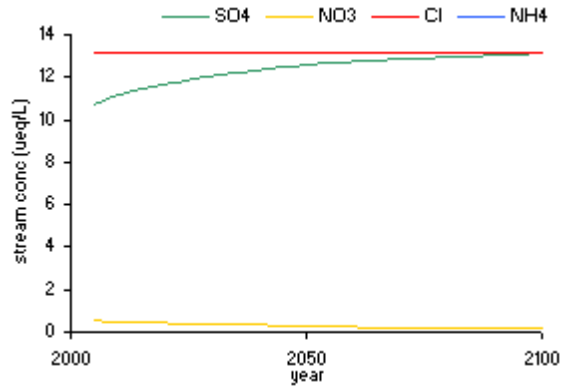
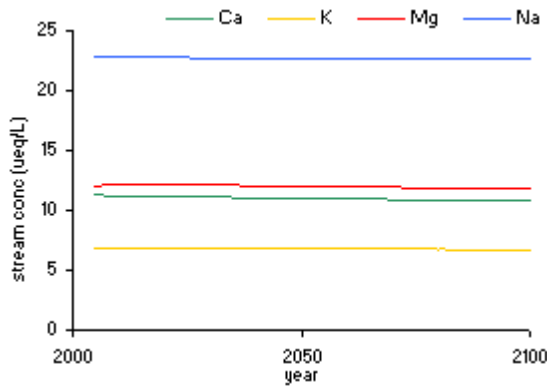


Stream ID 215 - Big Laurel Brook

Moderate

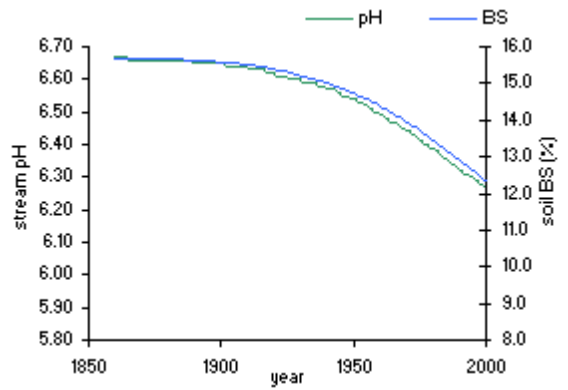
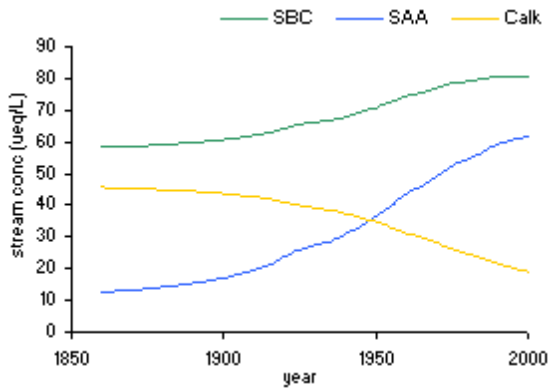
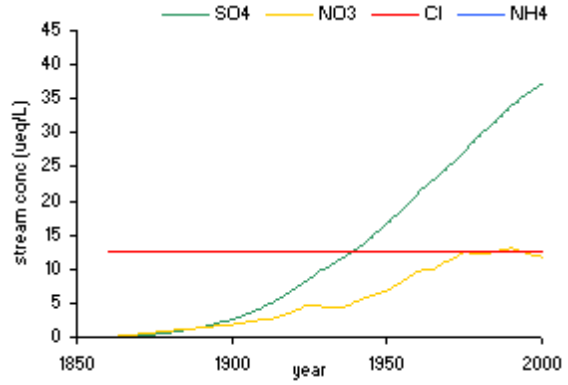
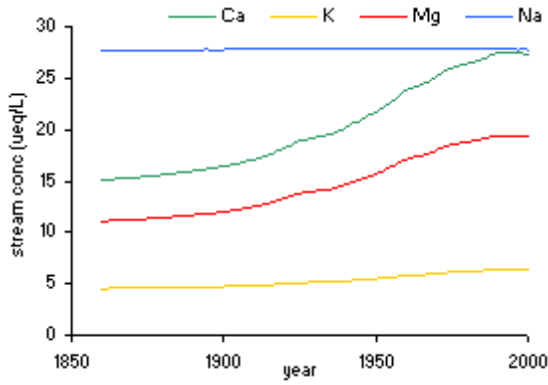


Aggressive

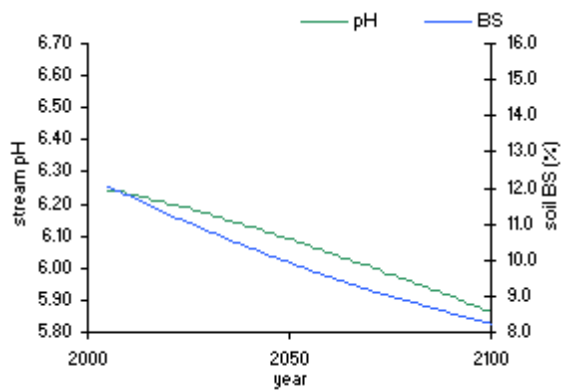
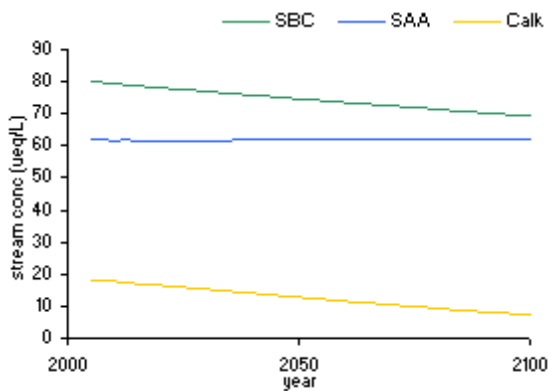
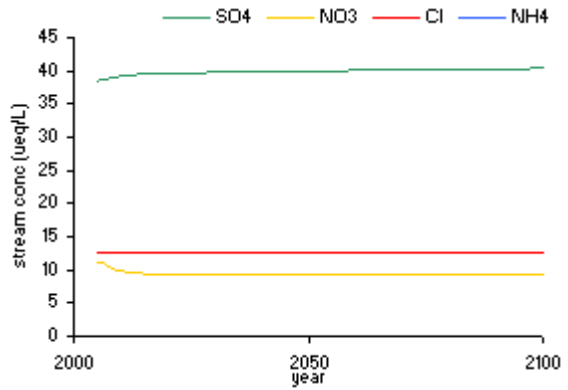
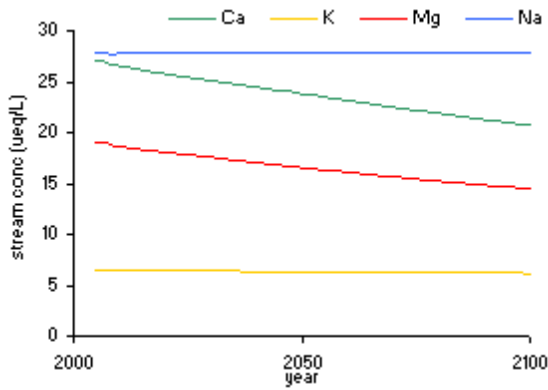


**Stream ID 261 - Big Oak Cove Creek**

**Hindcast**

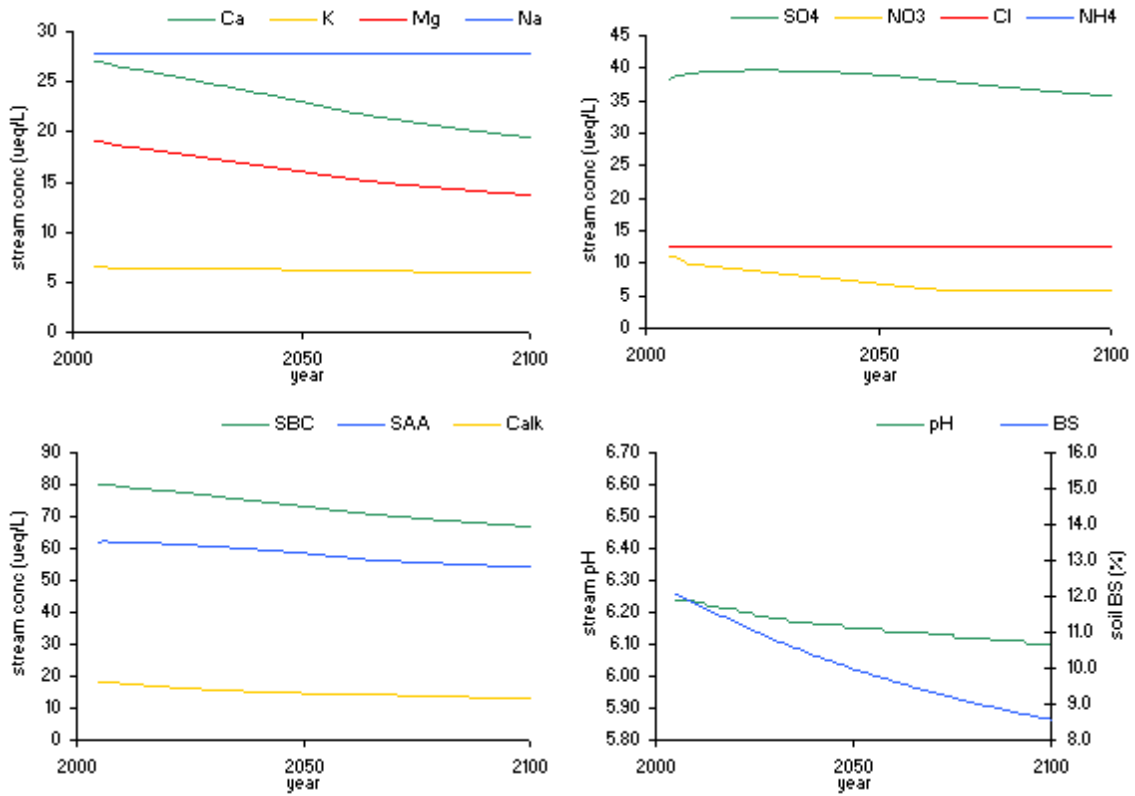


**Base**

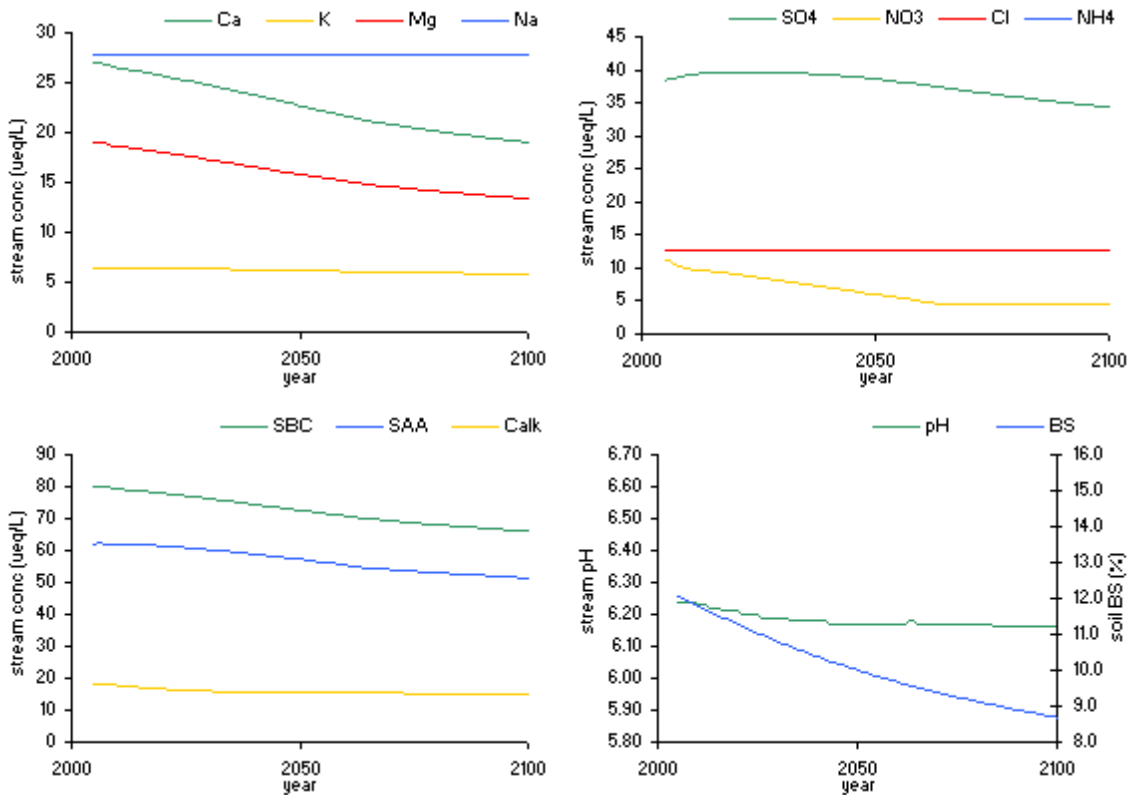


Stream ID 261 - Big Oak Cove Creek

Moderate

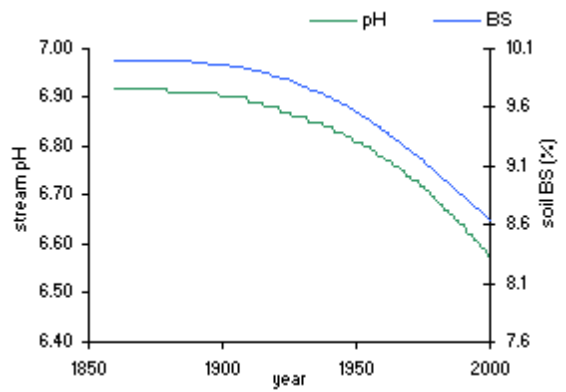
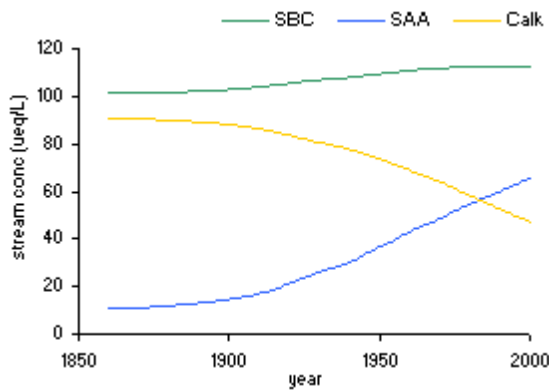
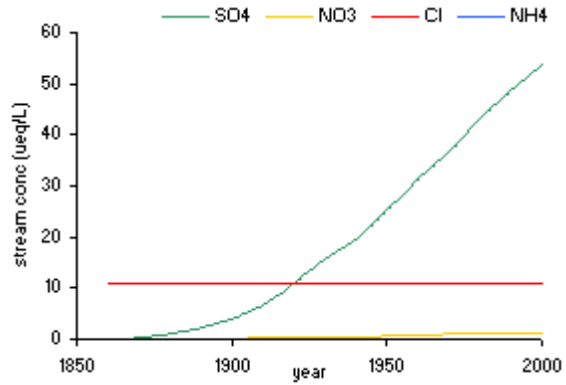
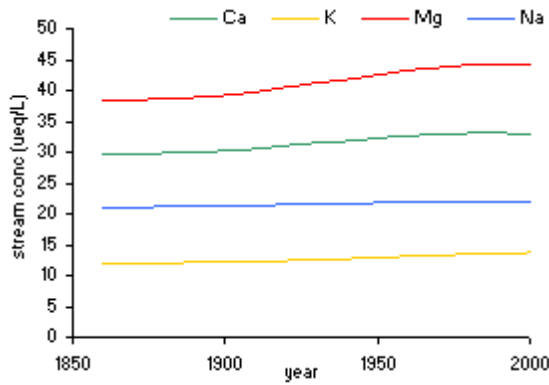


Aggressive

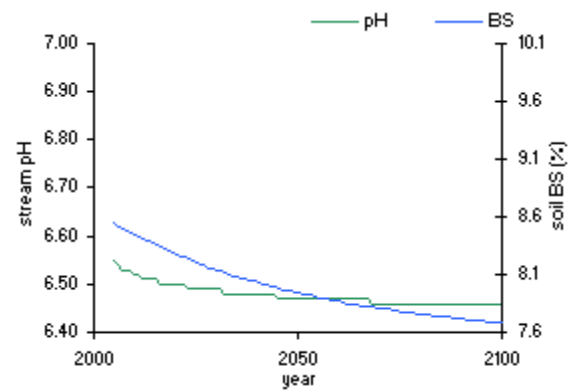
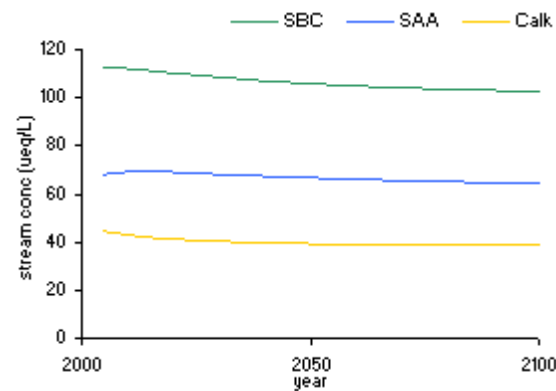
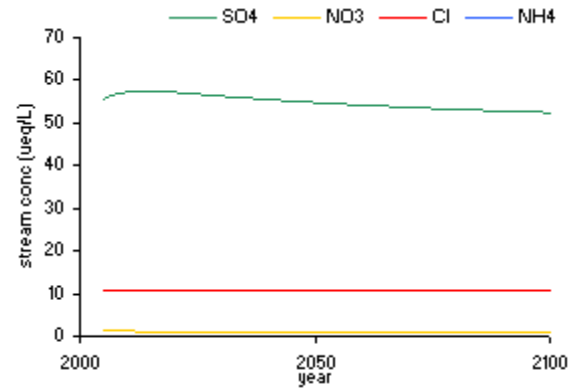
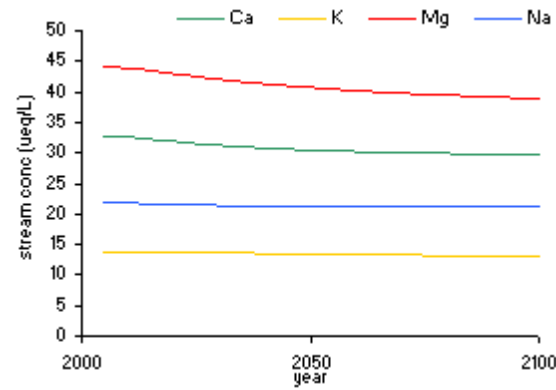


**Stream ID 72 - Briar Creek**

**Hindcast**

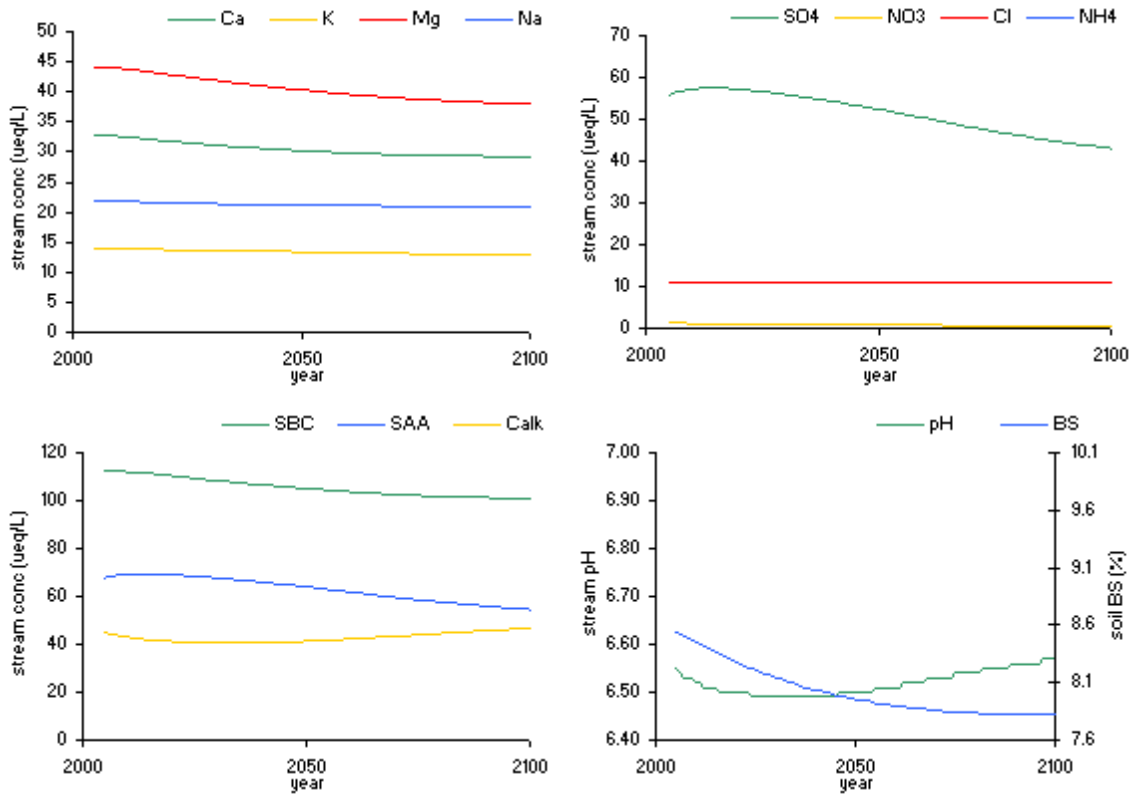


**Base**

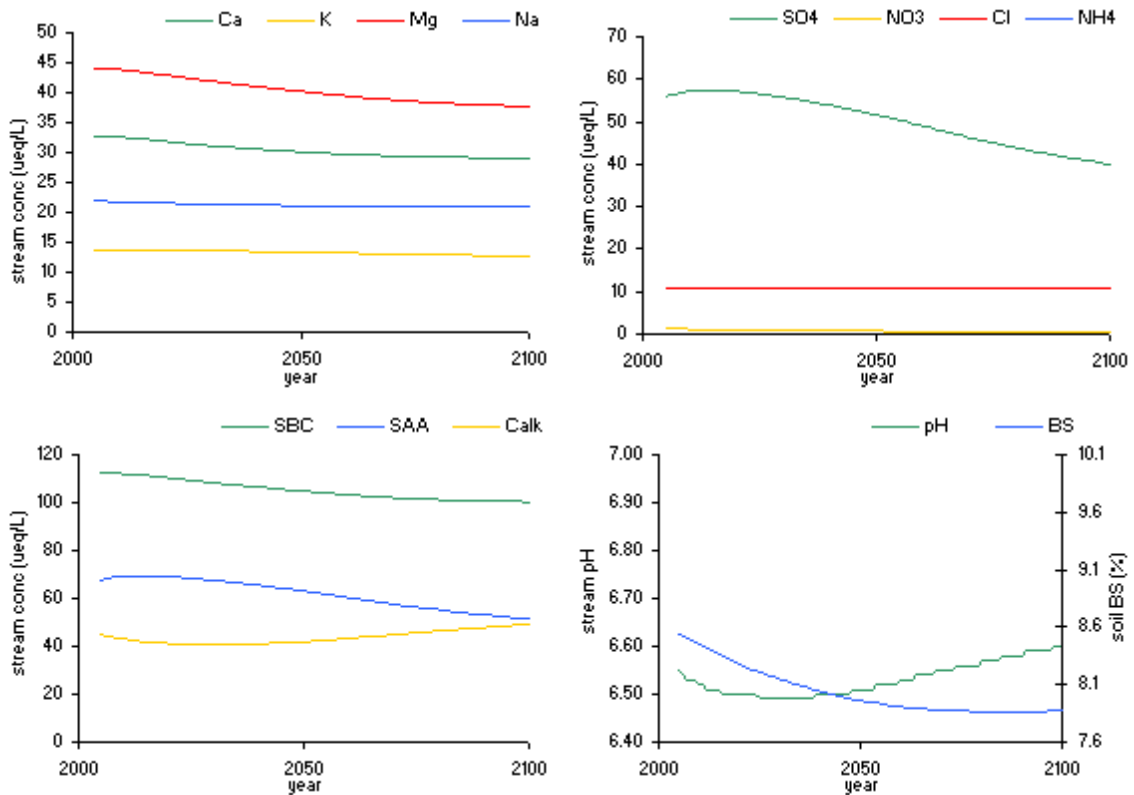


**Stream ID 72 - Briar Creek**

**Moderate**

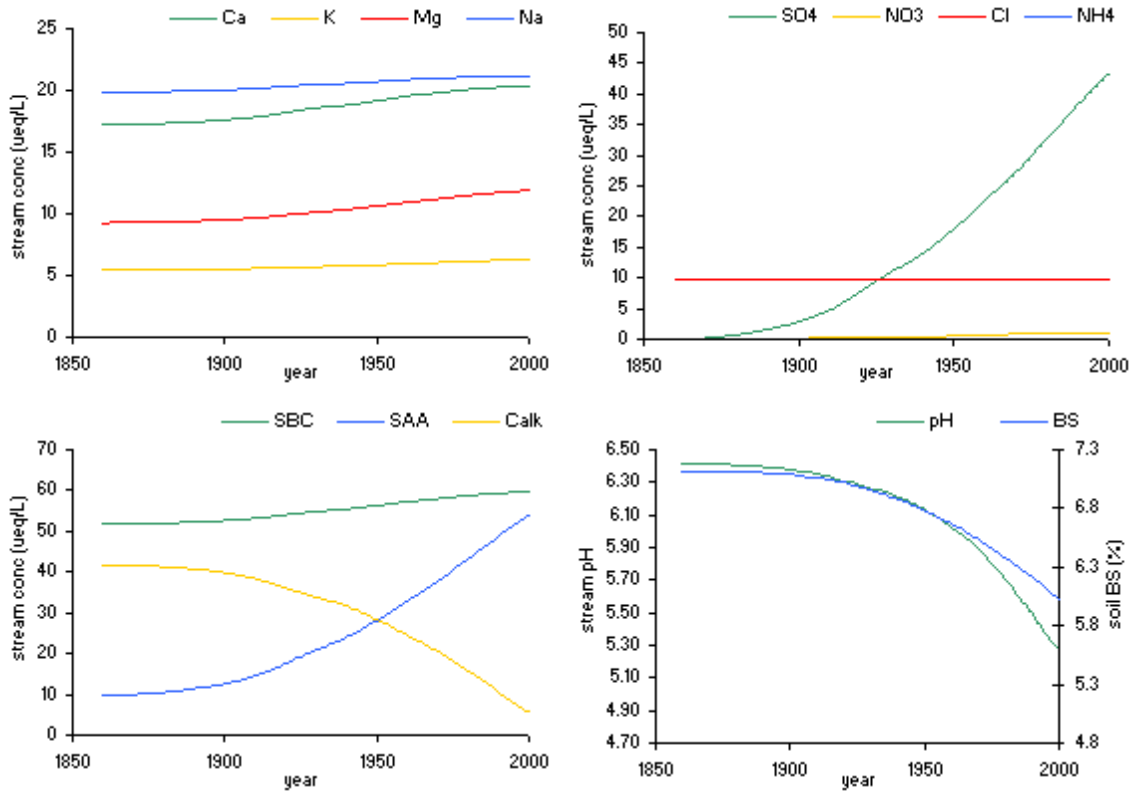


**Aggressive**

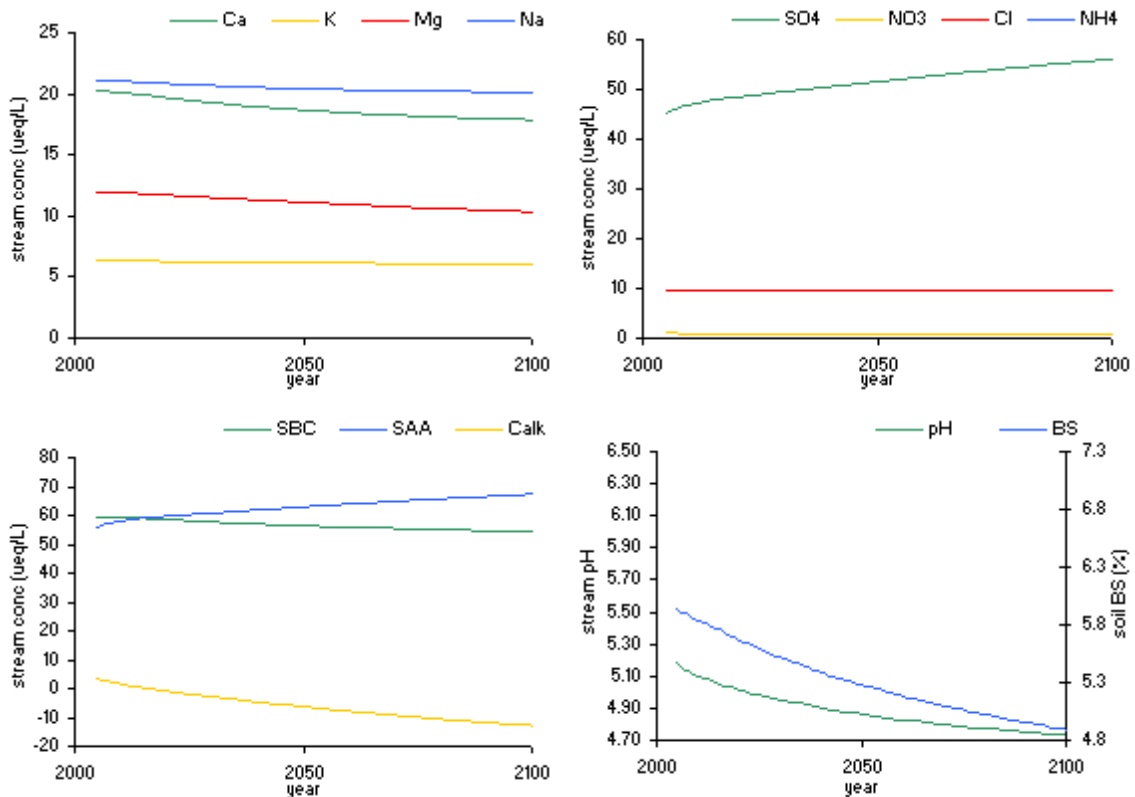


**Stream ID 129 - Bubbling Spring Branch**

**Hindcast**

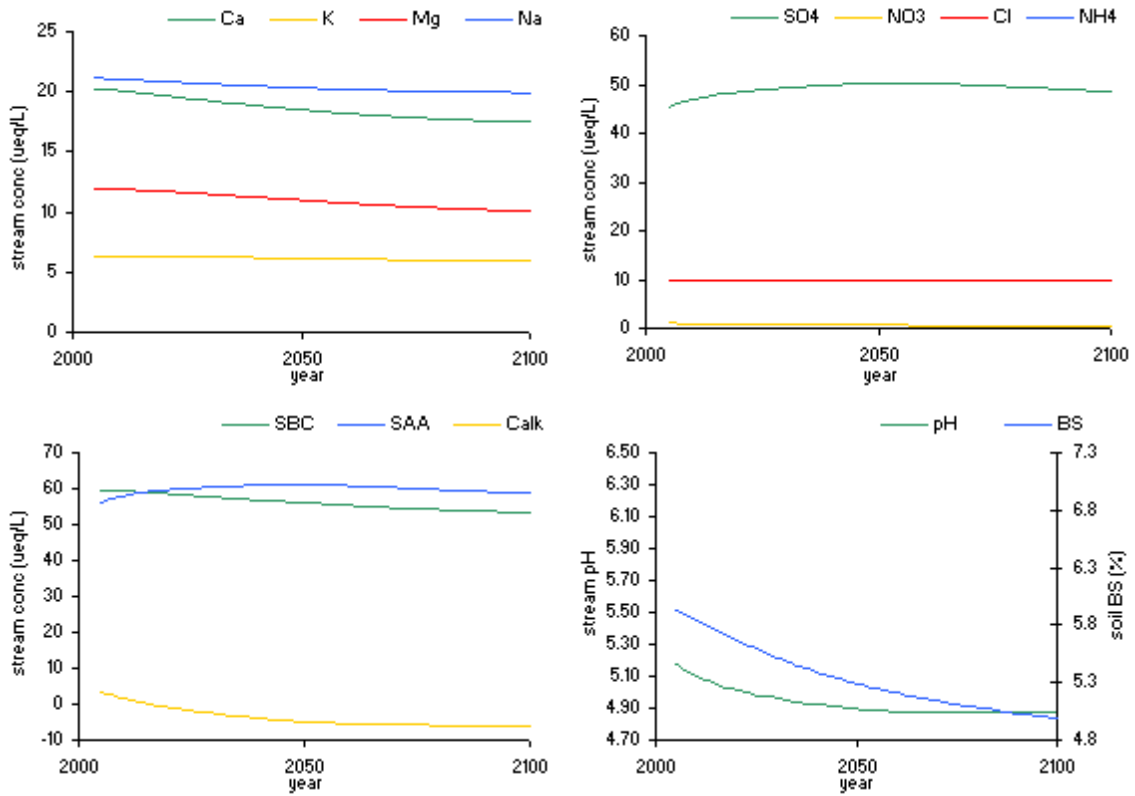


**Base**

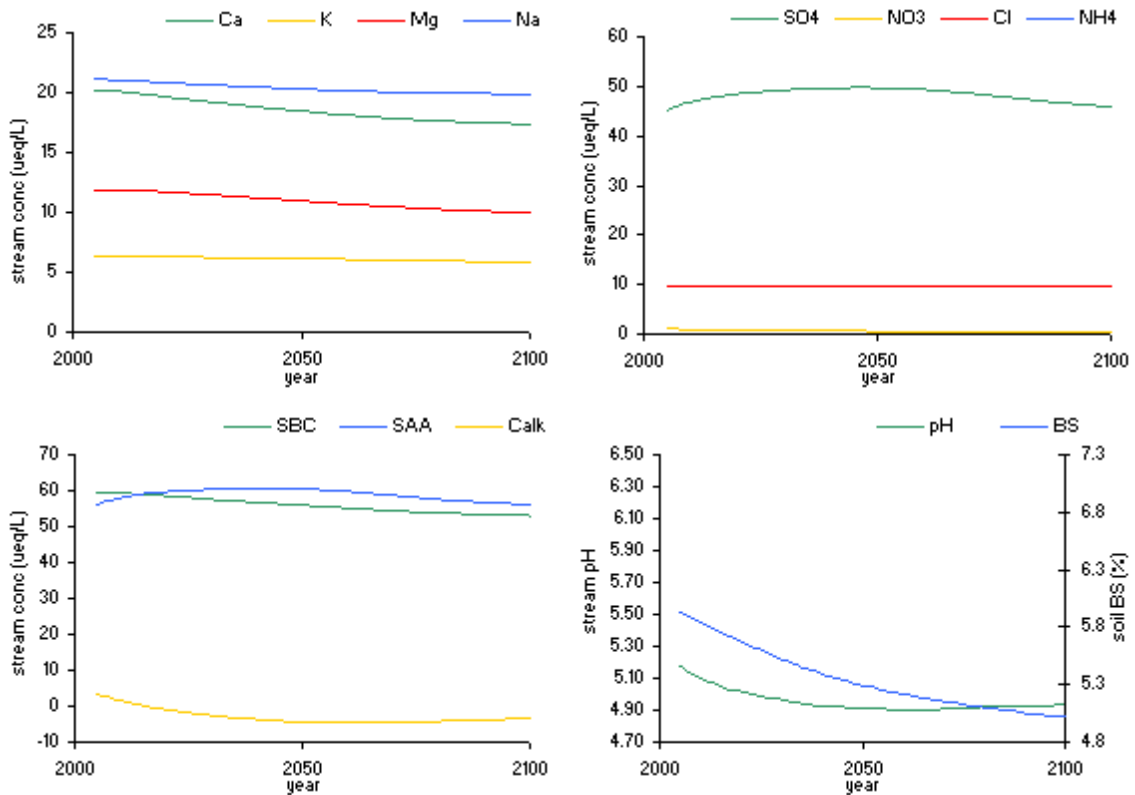


**Stream ID 129 - Bubbling Spring Branch**

**Moderate**

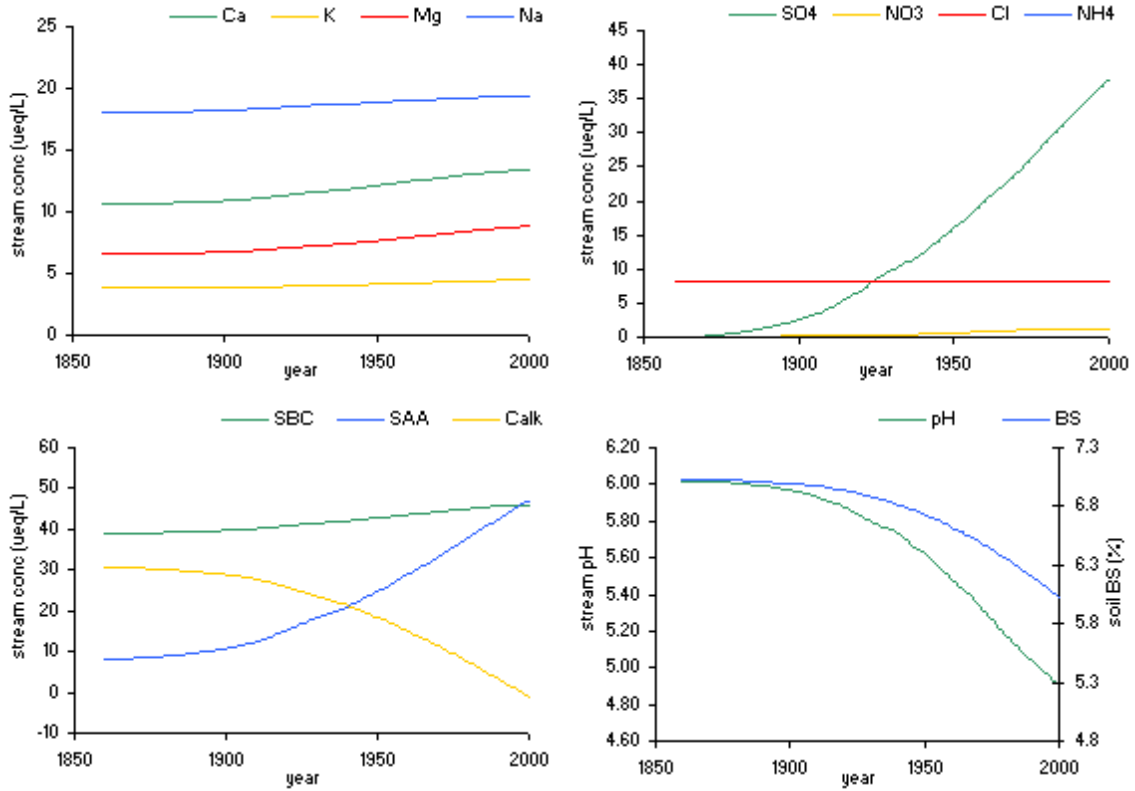


**Aggressive**

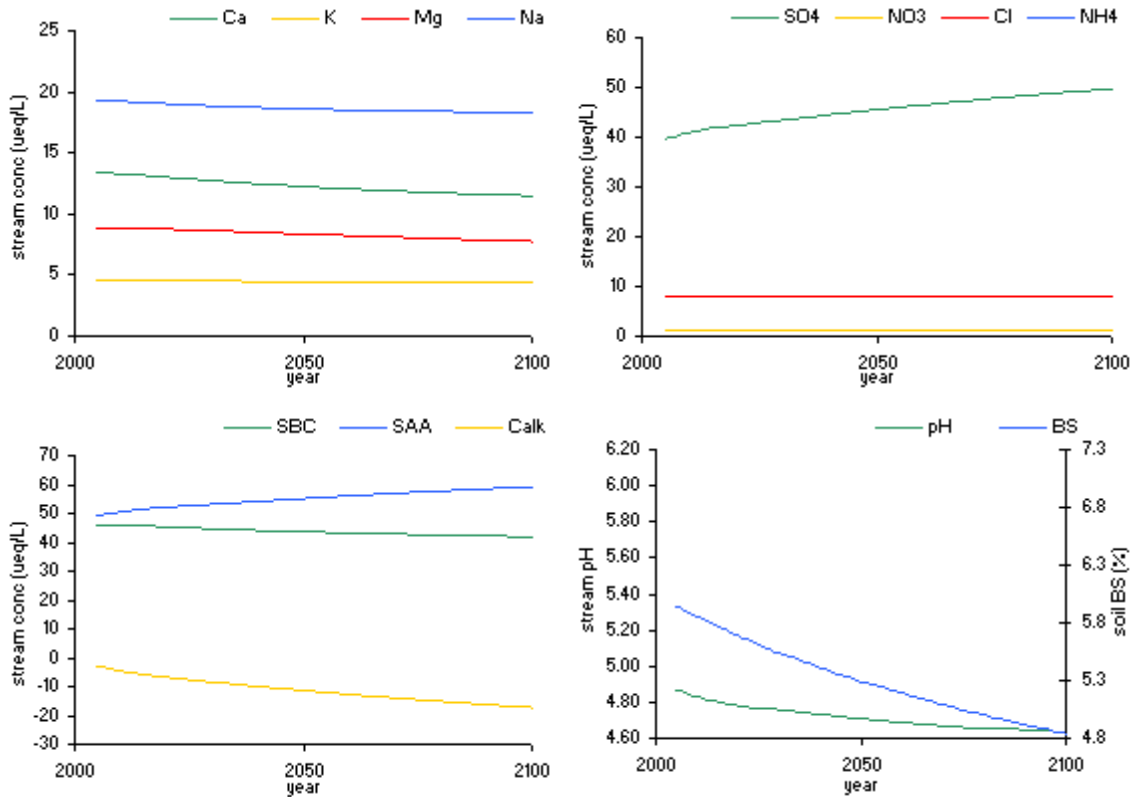




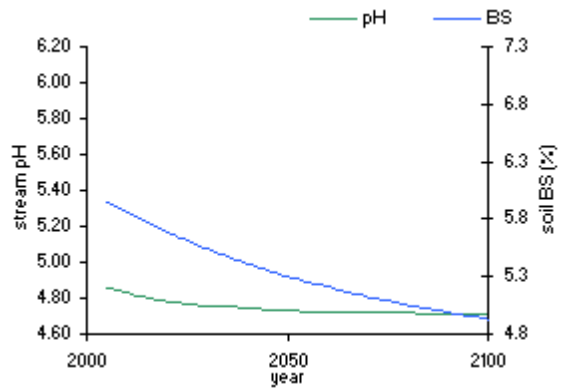
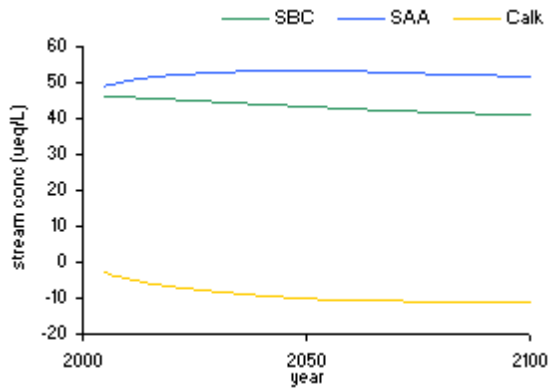
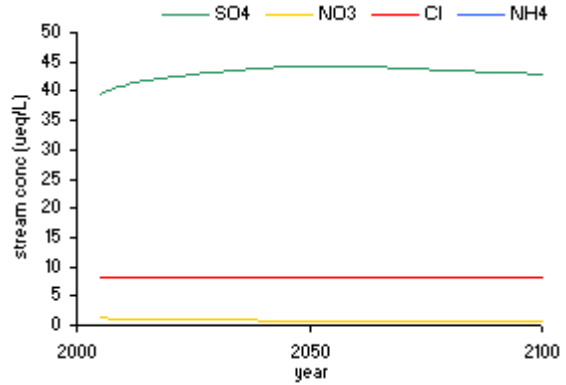
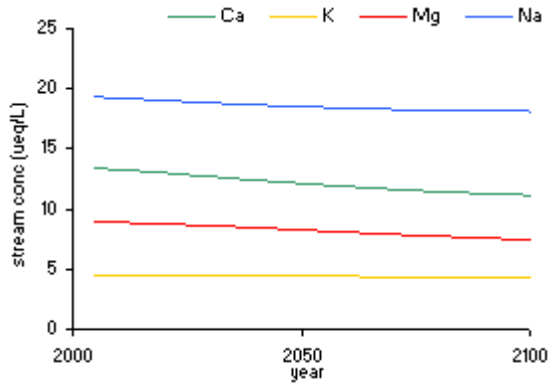
**Stream ID 131 - Bubbling Spring West Tributary  
Hindcast**



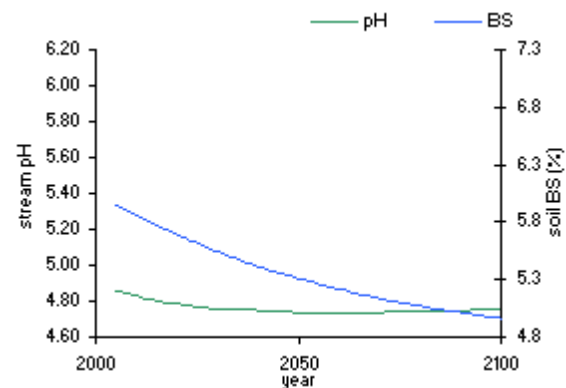
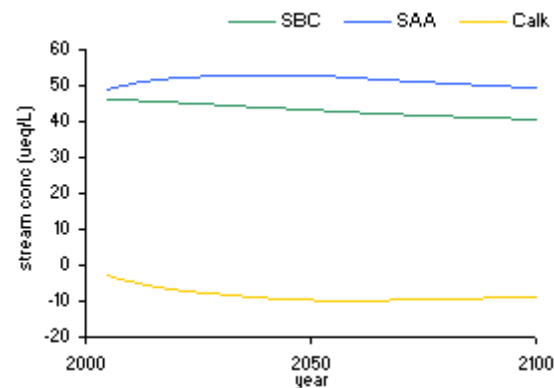
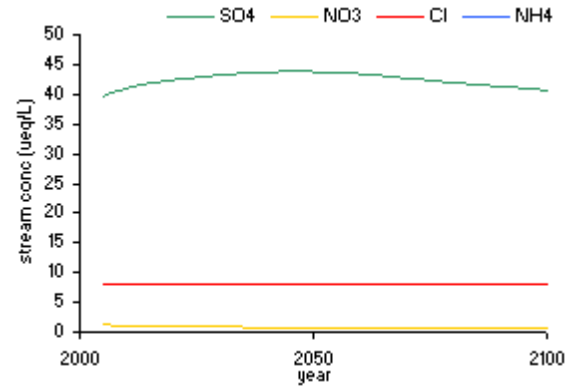
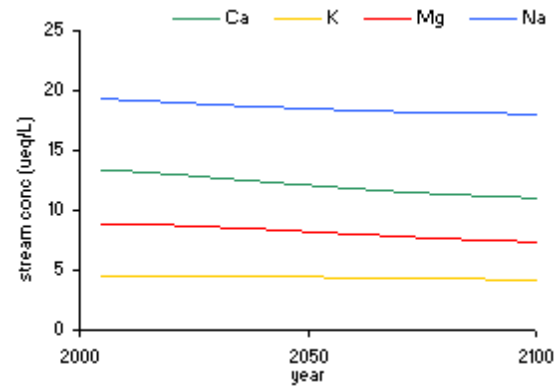
**Base**



**Stream ID 131 - Bubbling Spring West Tributary**  
**Moderate**

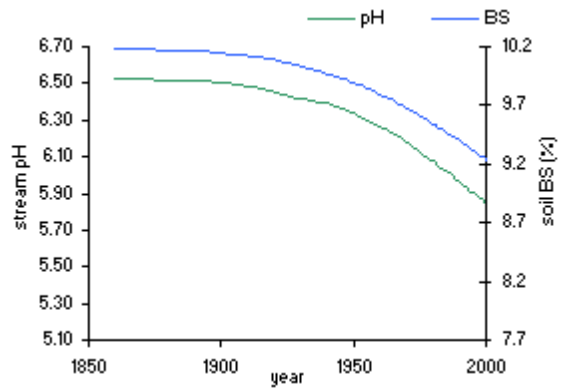
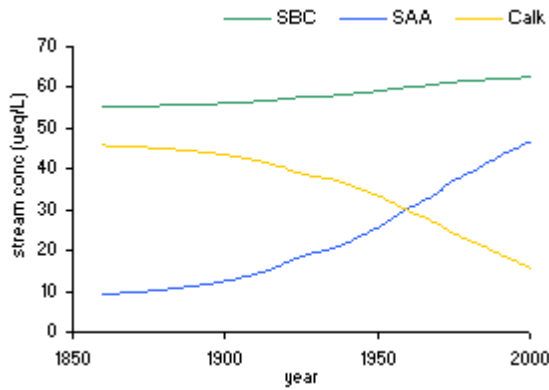
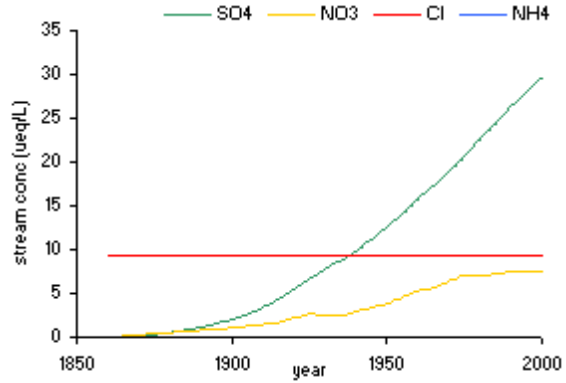
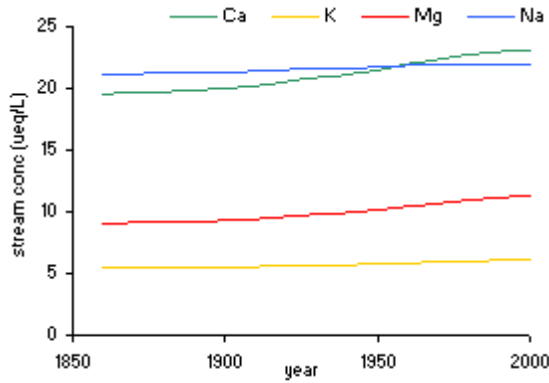


**Aggressive**

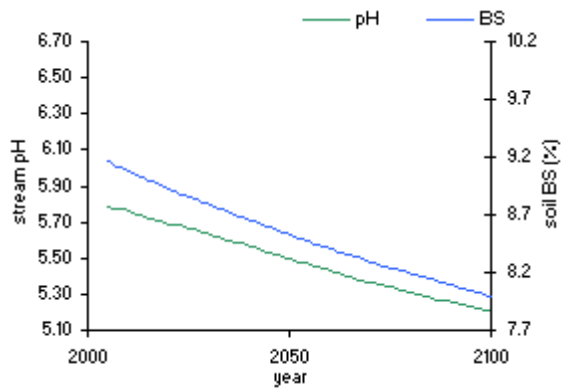
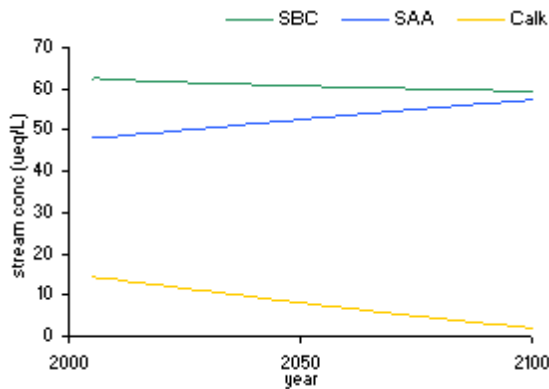
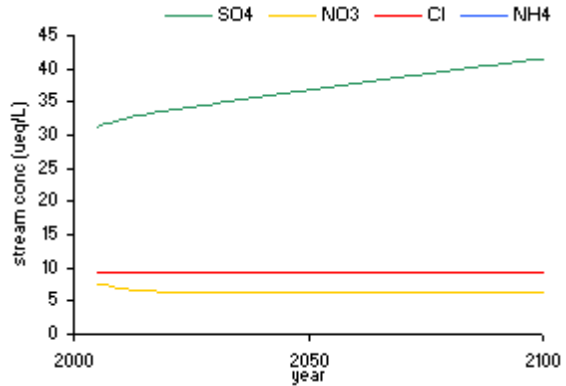
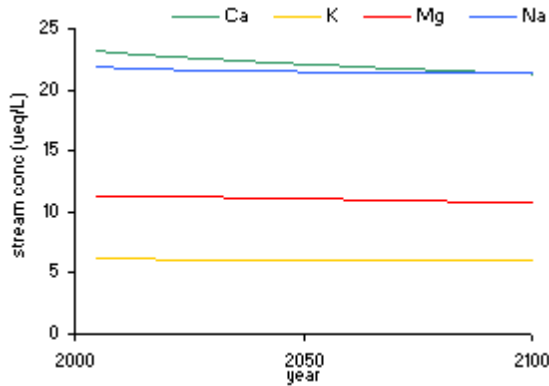


**Stream ID 133 - Buckeye Cove Creek**

**Hindcast**

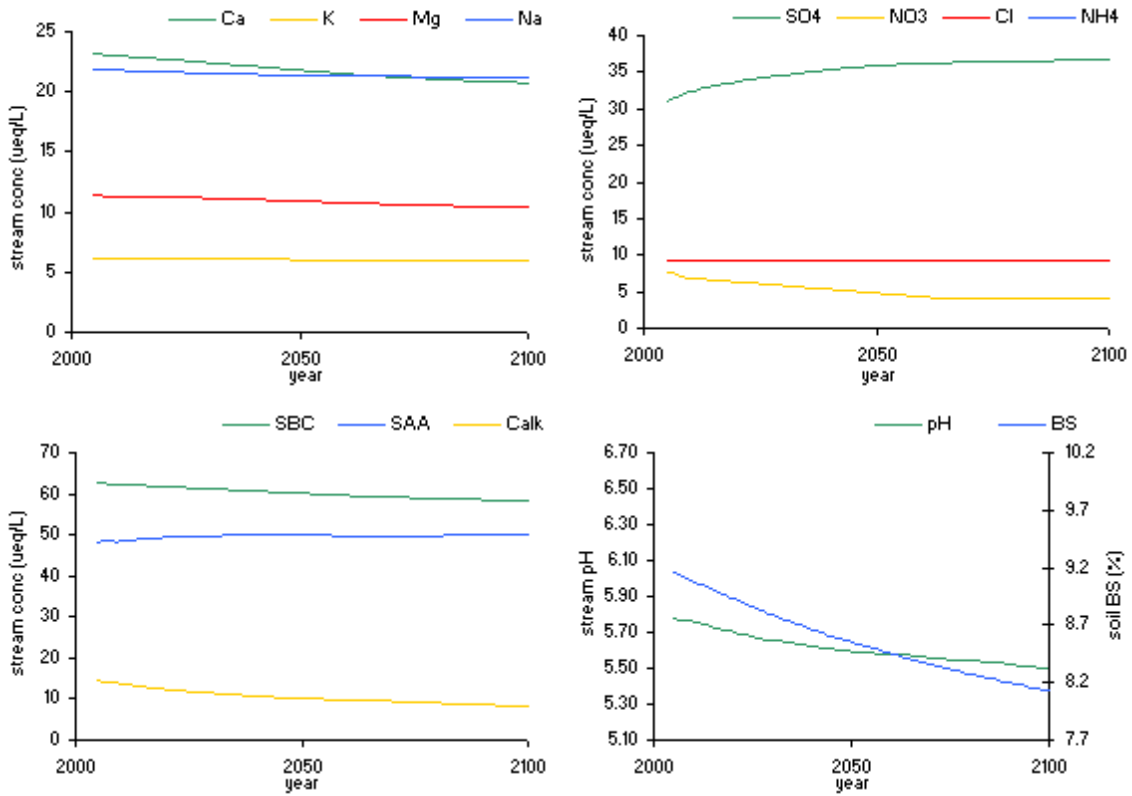


**Base**

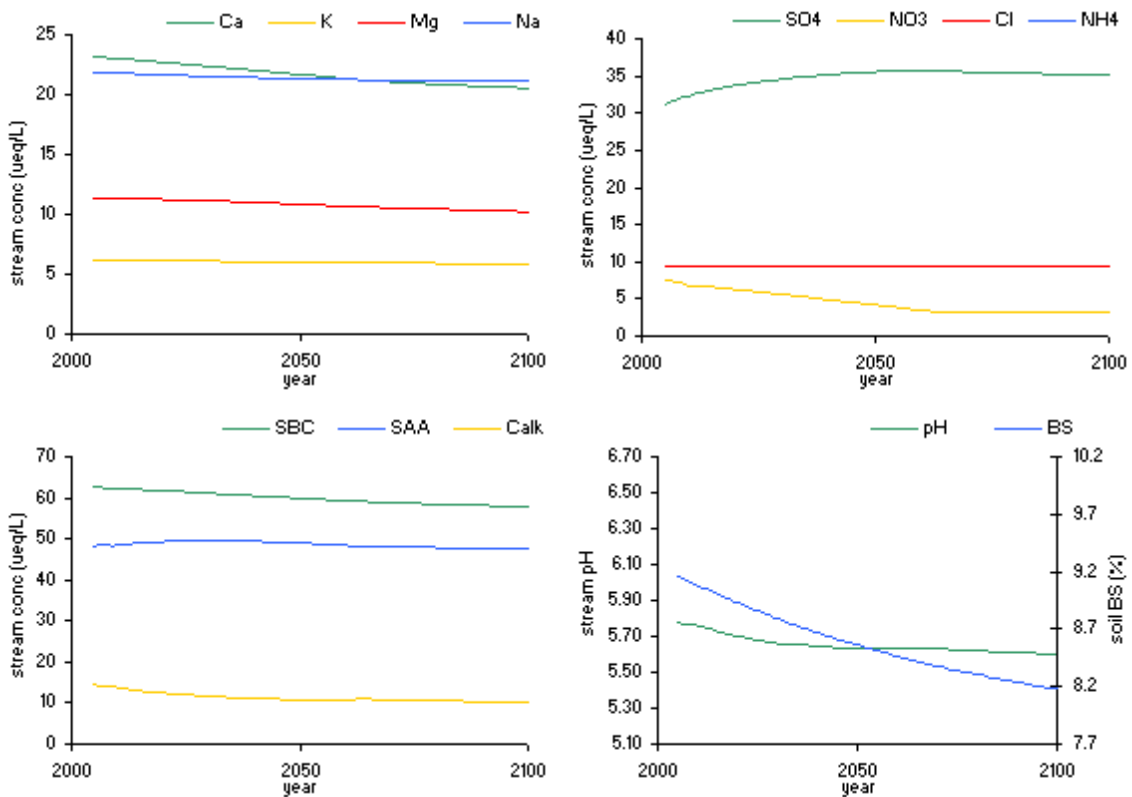


**Stream ID 133 - Buckeye Cove Creek**

**Moderate**

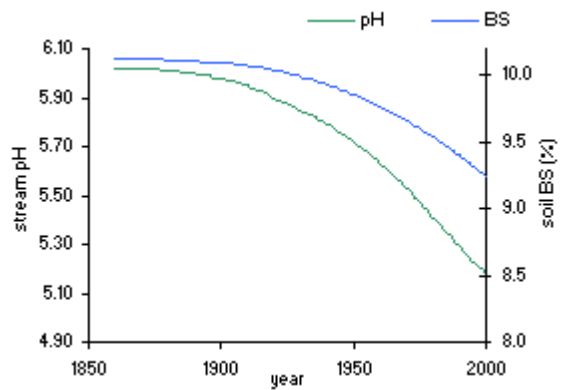
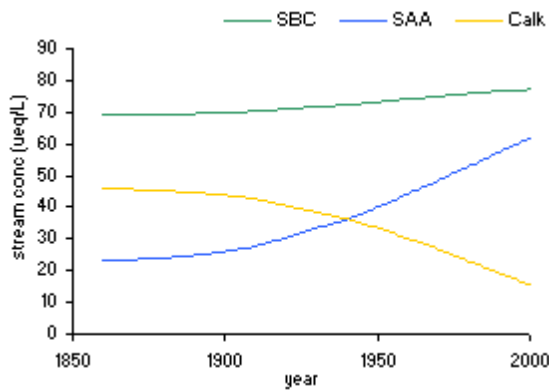
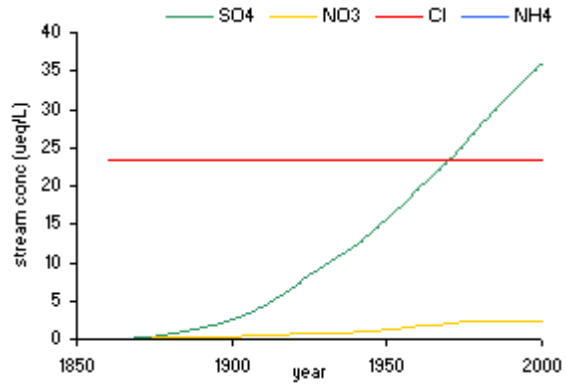
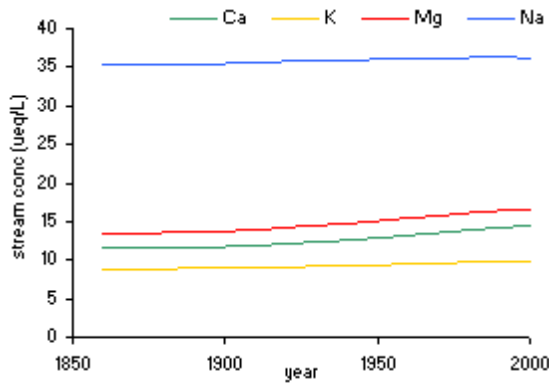


**Aggressive**

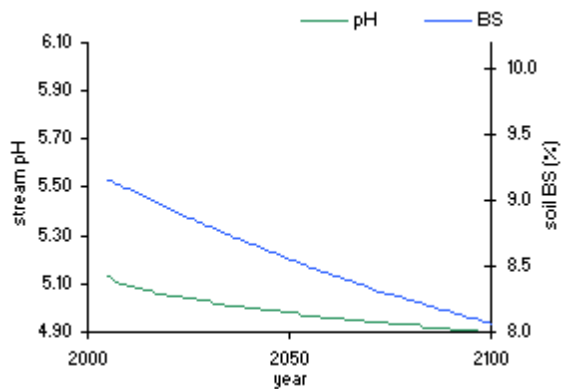
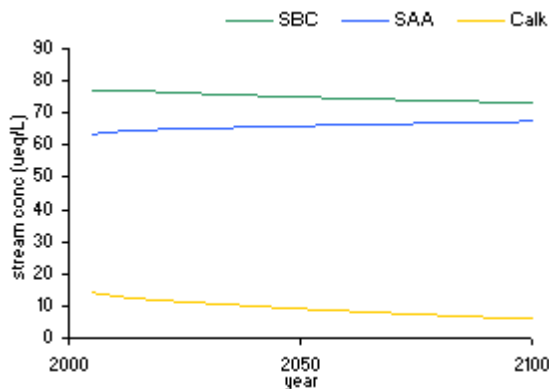
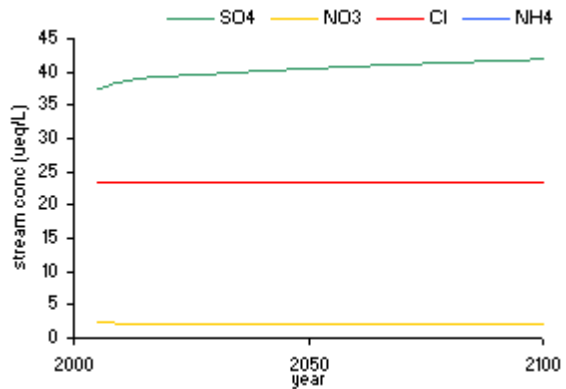
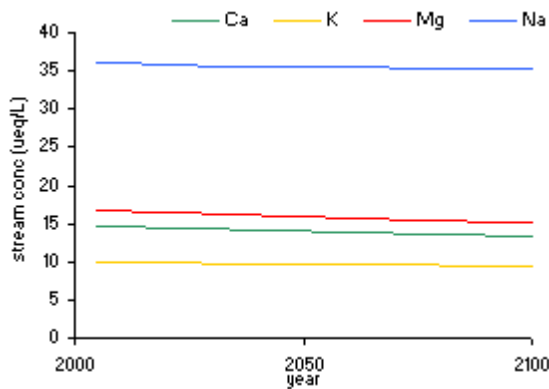


**Stream ID 204 - Cane Creek Tributary**

**Hindcast**

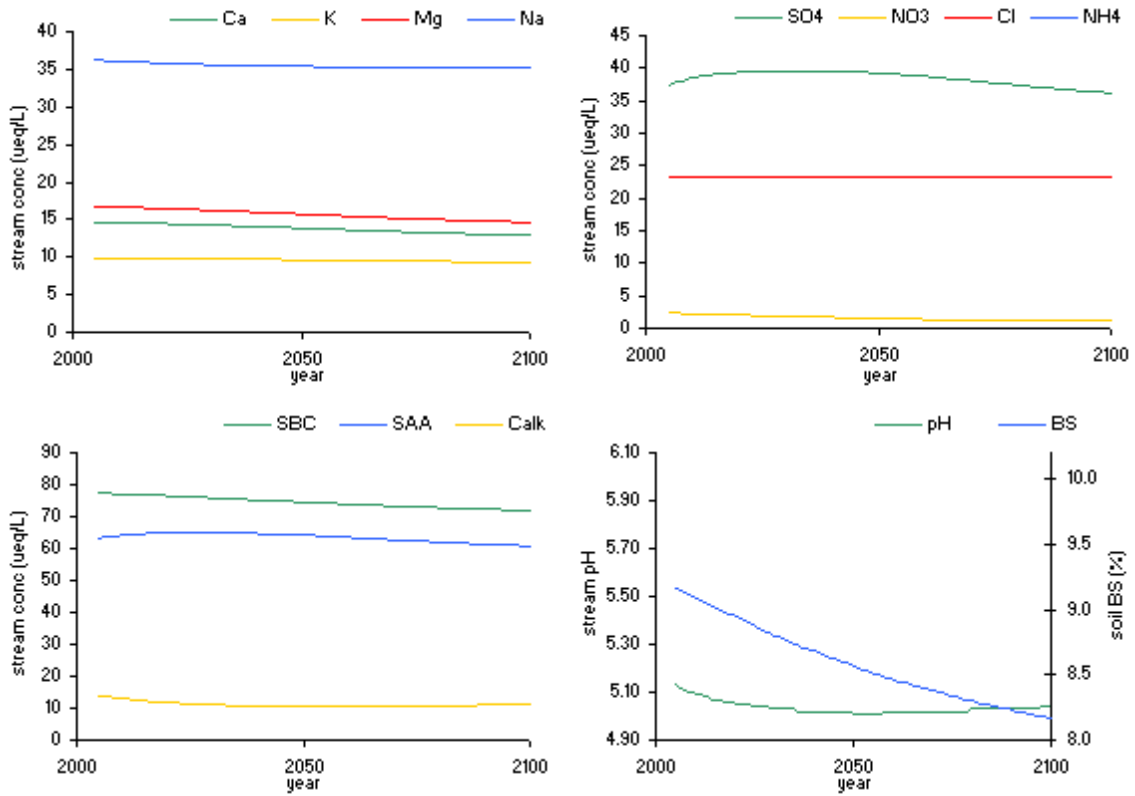


**Base**

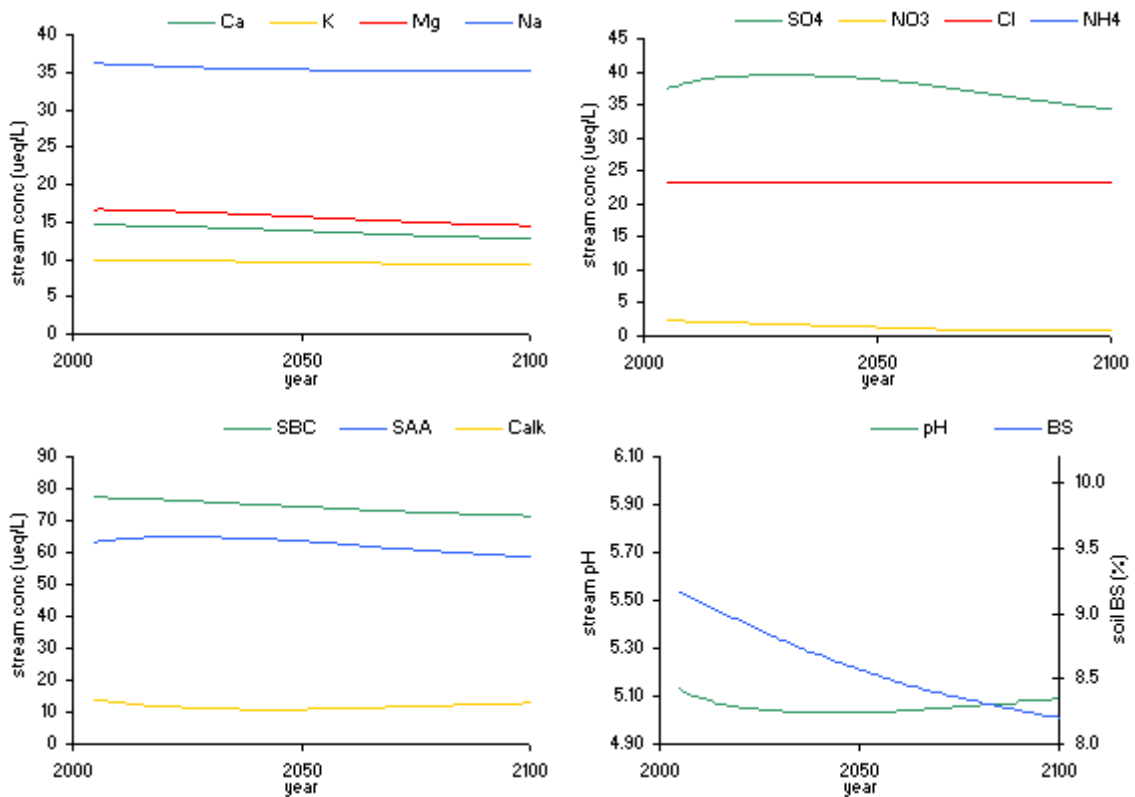


**Stream ID 204 - Cane Creek Tributary**

**Moderate**

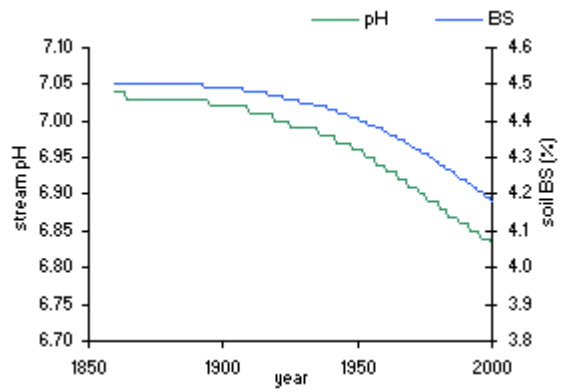
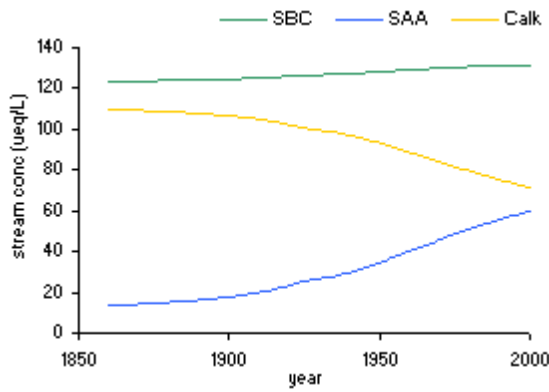
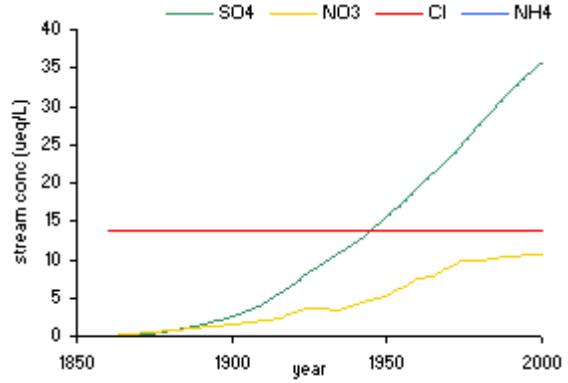
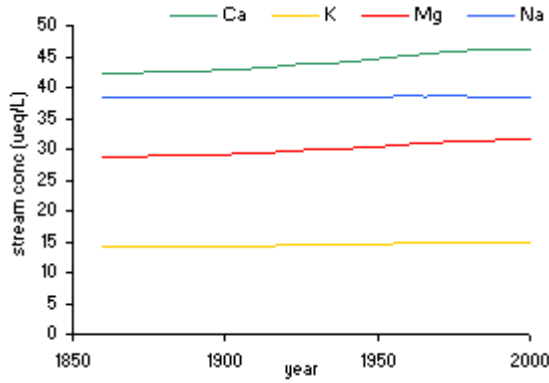


**Aggressive**

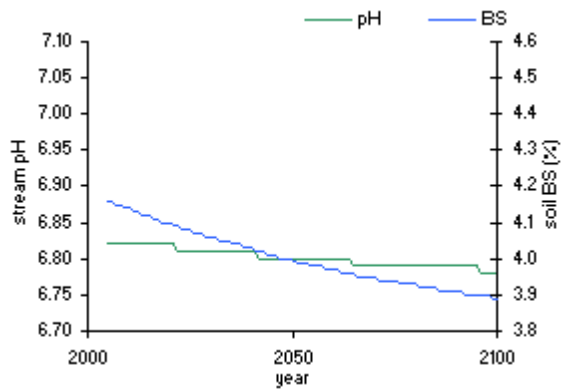
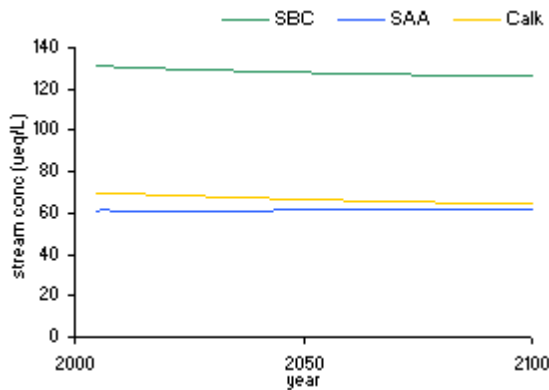
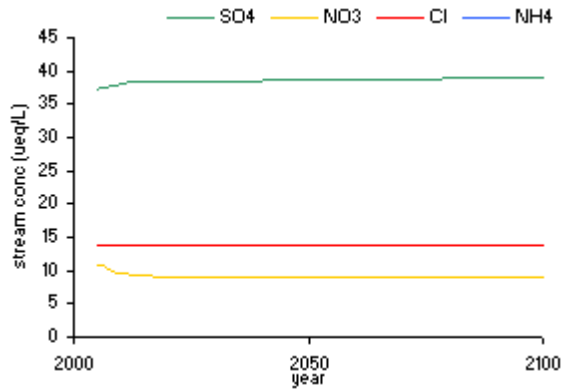
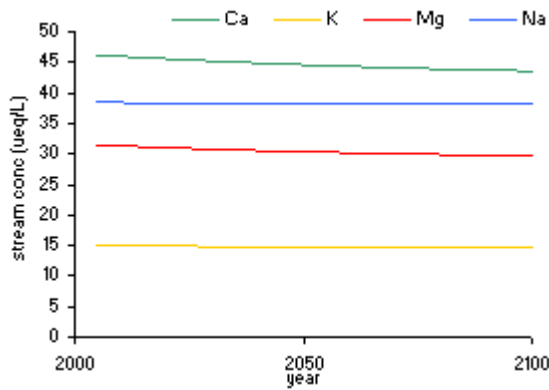


Stream ID 122 – Cathey Creek

Hindcast

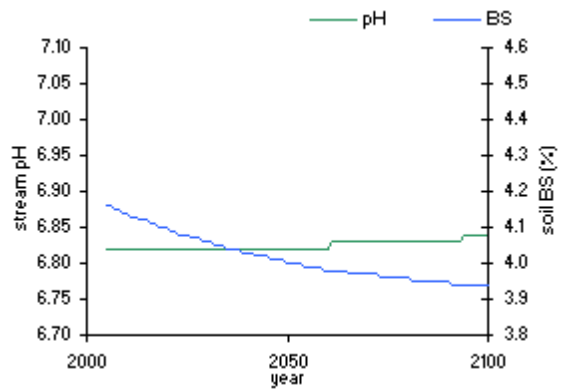
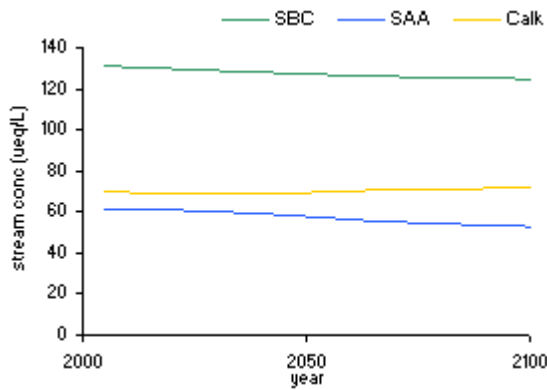
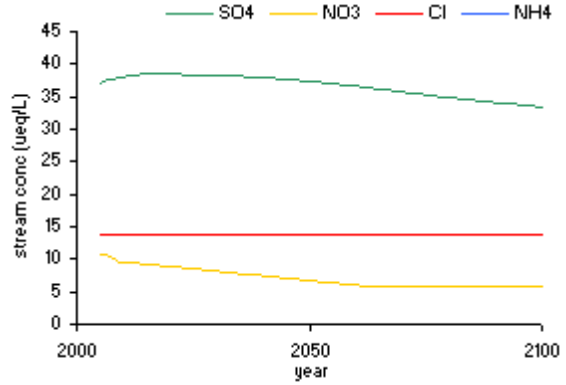
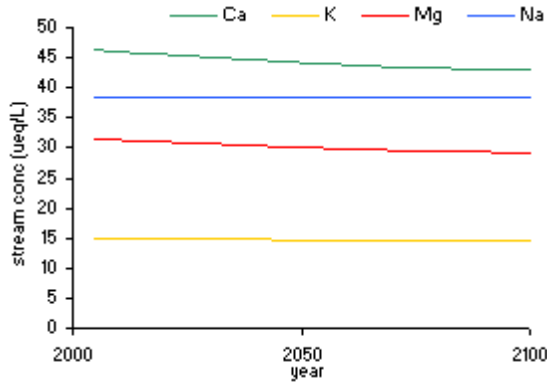


Base

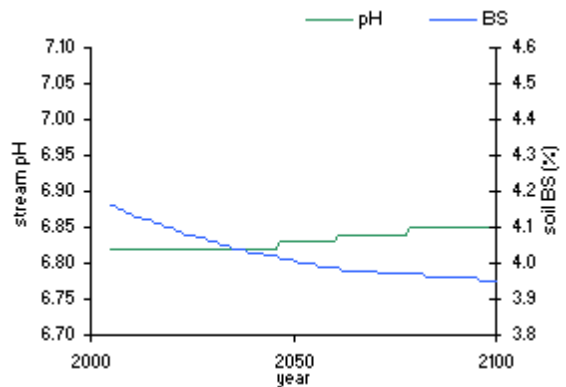
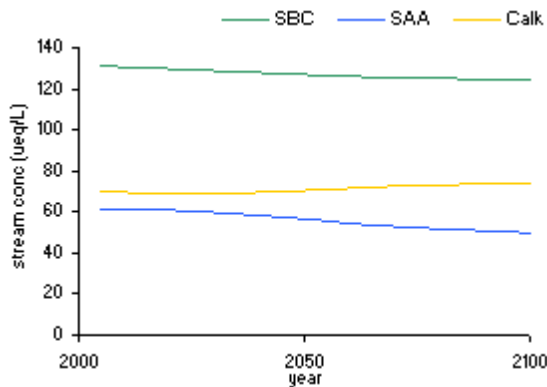
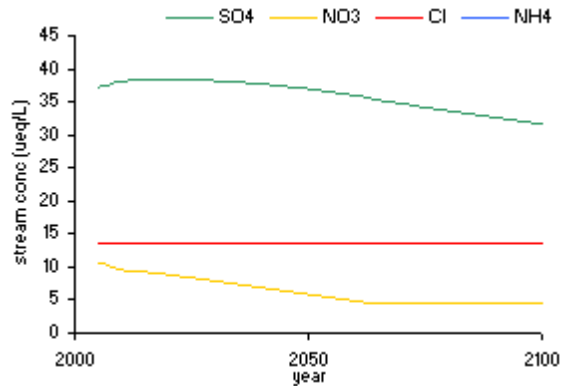
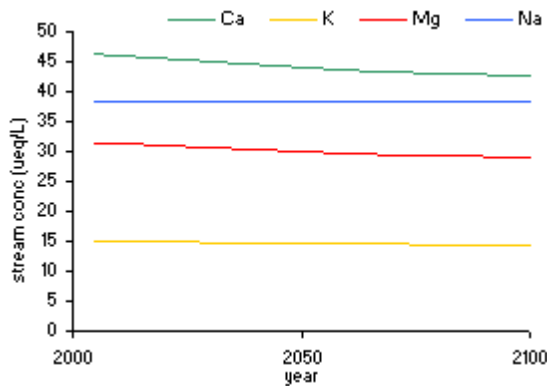


Stream ID 122 – Cathey Creek

Moderate



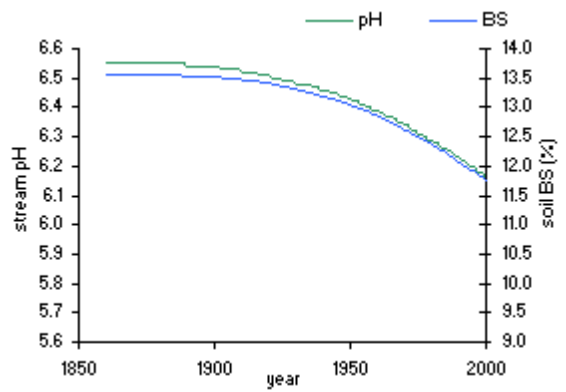
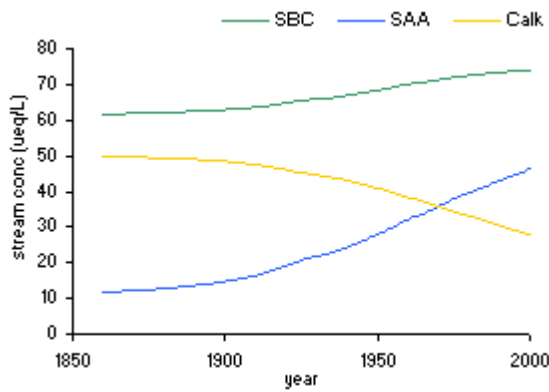
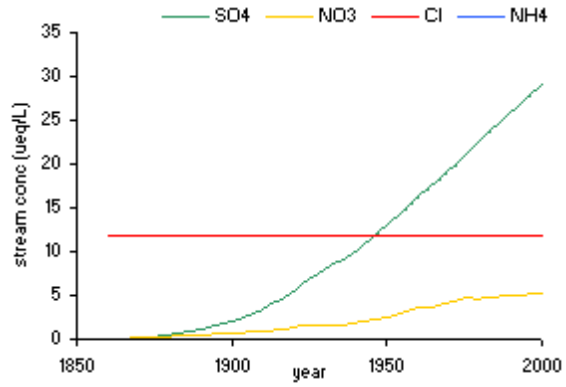
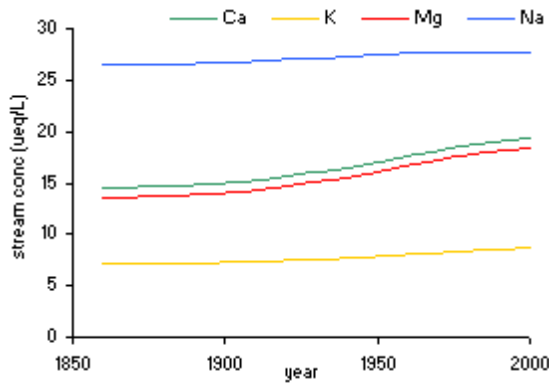
Aggressive



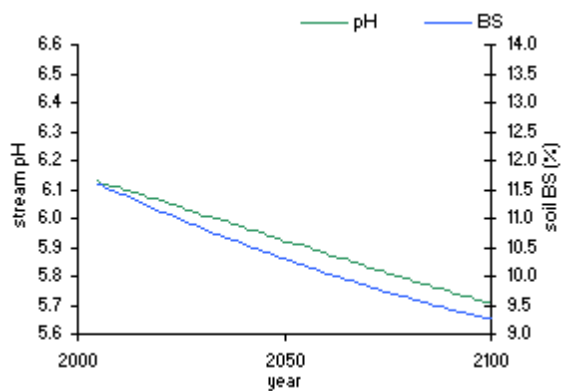
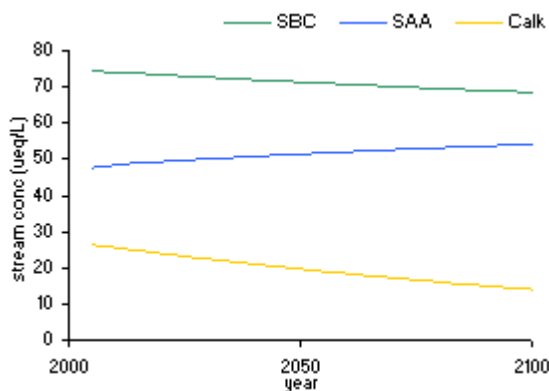
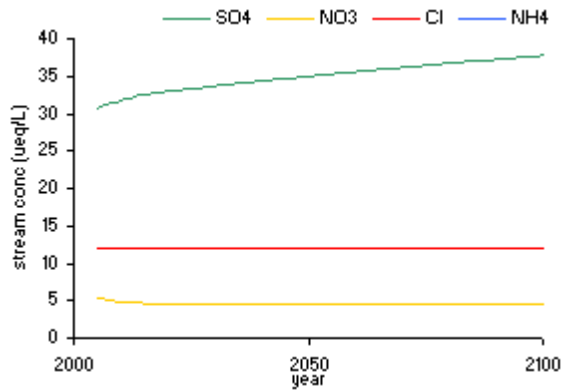
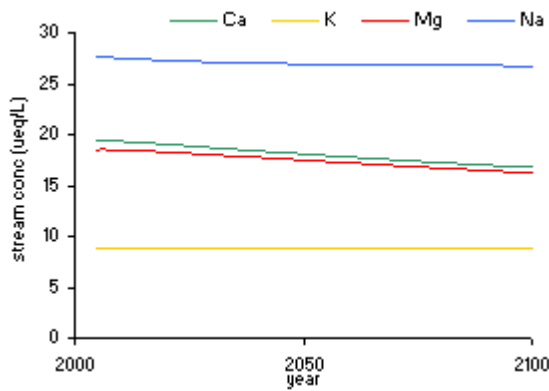


# Stream ID 53 - Colberts Creek

## Hindcast

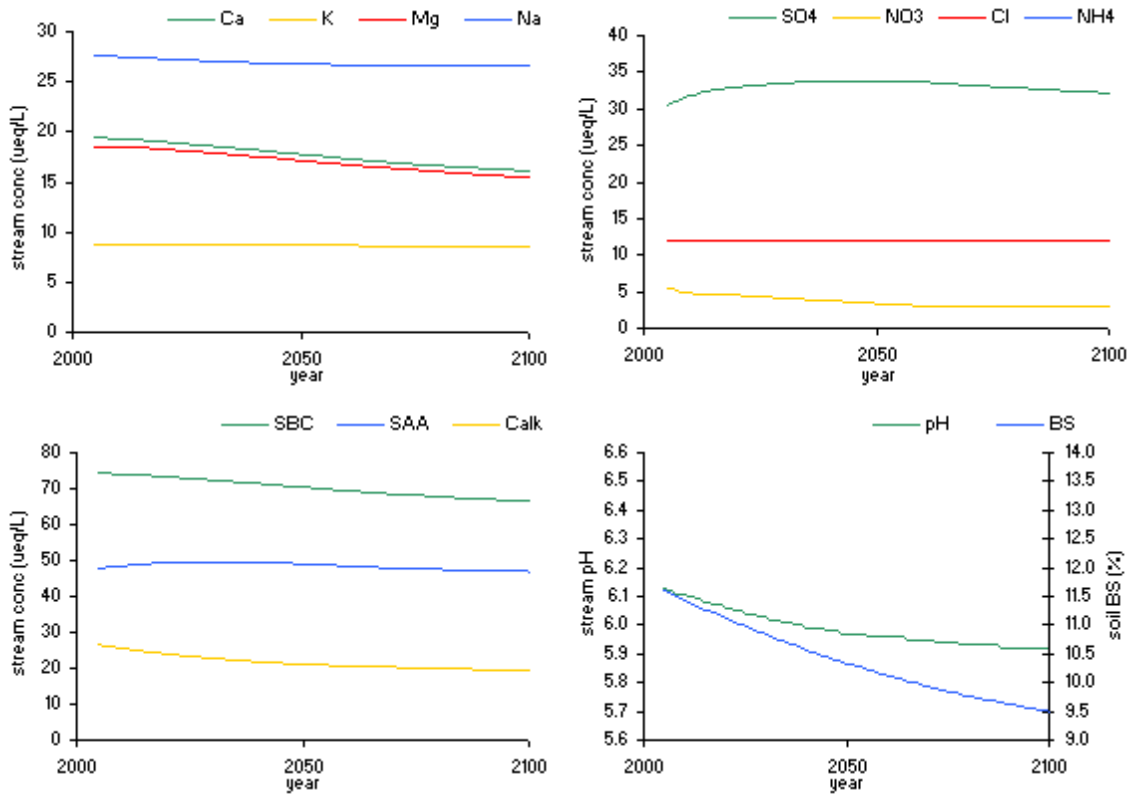


## Base

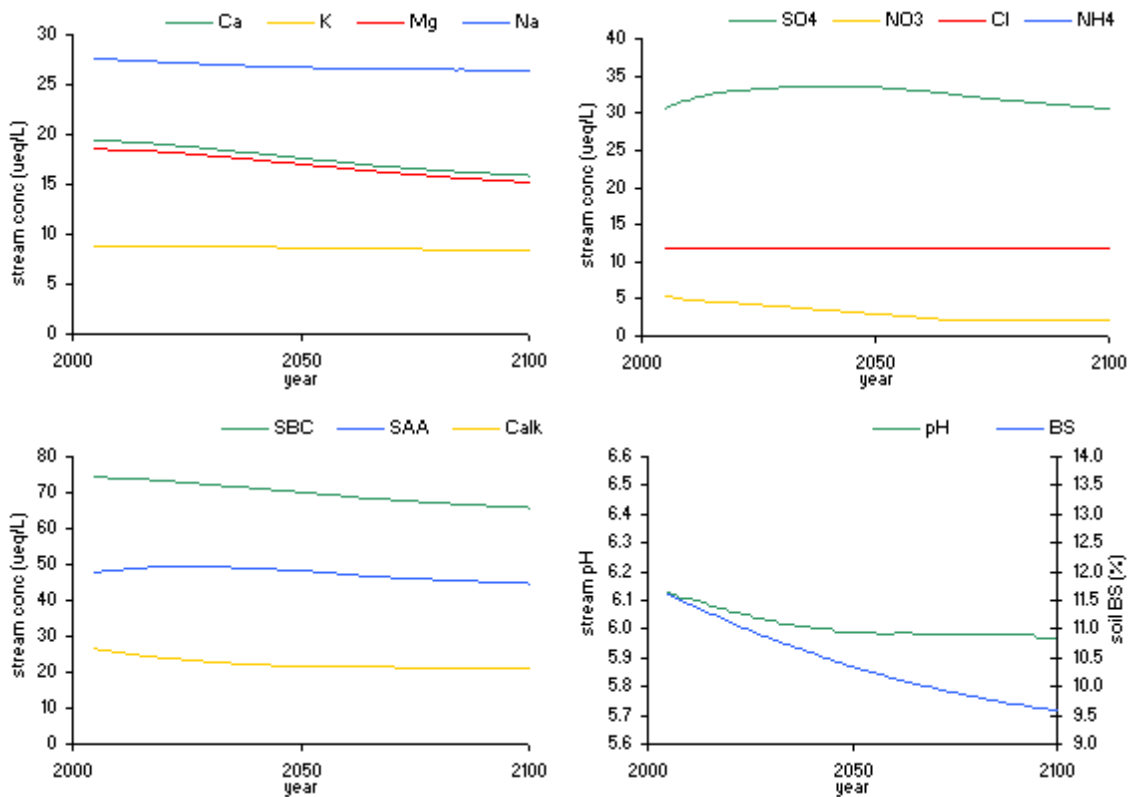


**Stream ID 53 - Colberts Creek**

**Moderate**

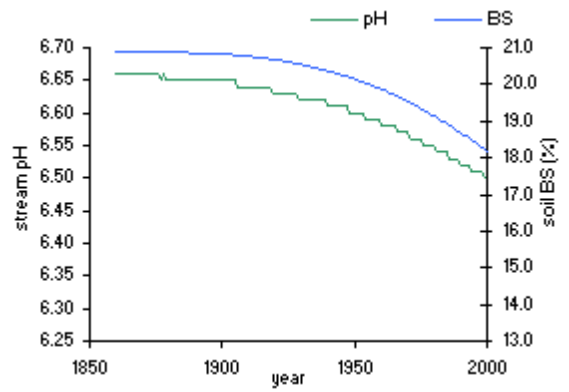
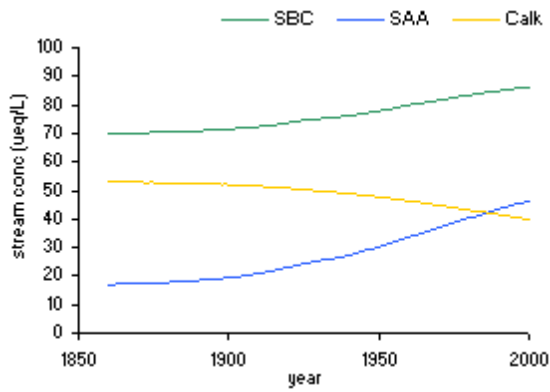
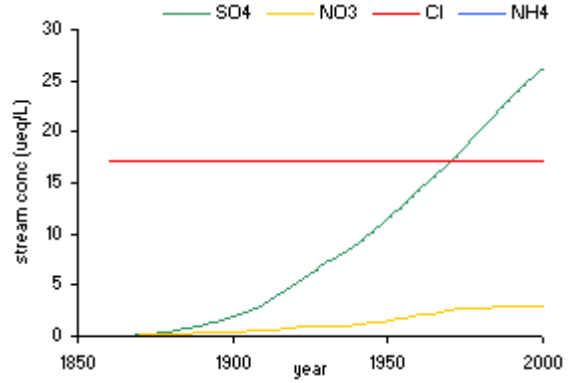
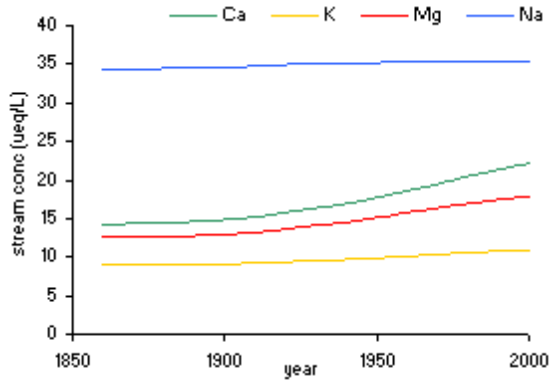


**Aggressive**

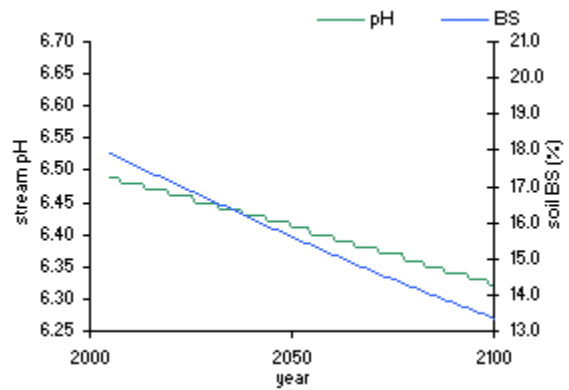
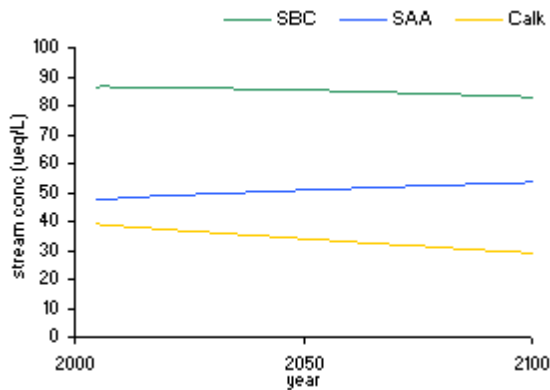
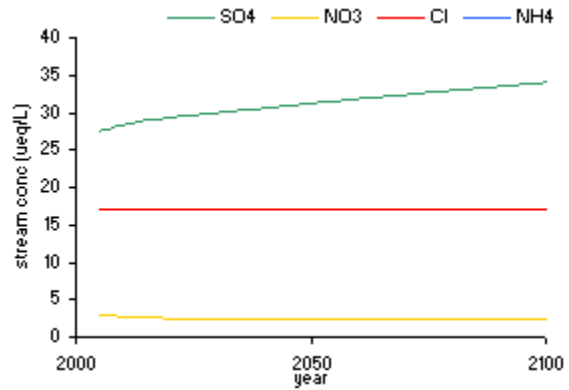
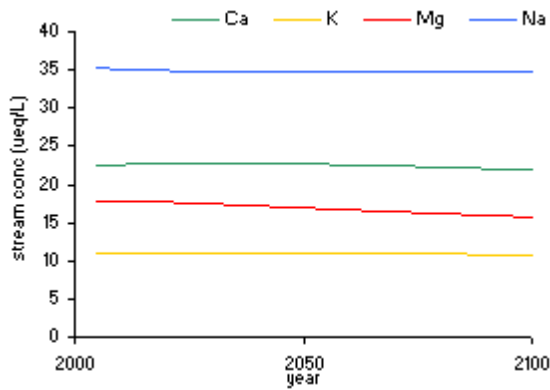


Stream ID 121 - Courthouse Creek

Hindcast

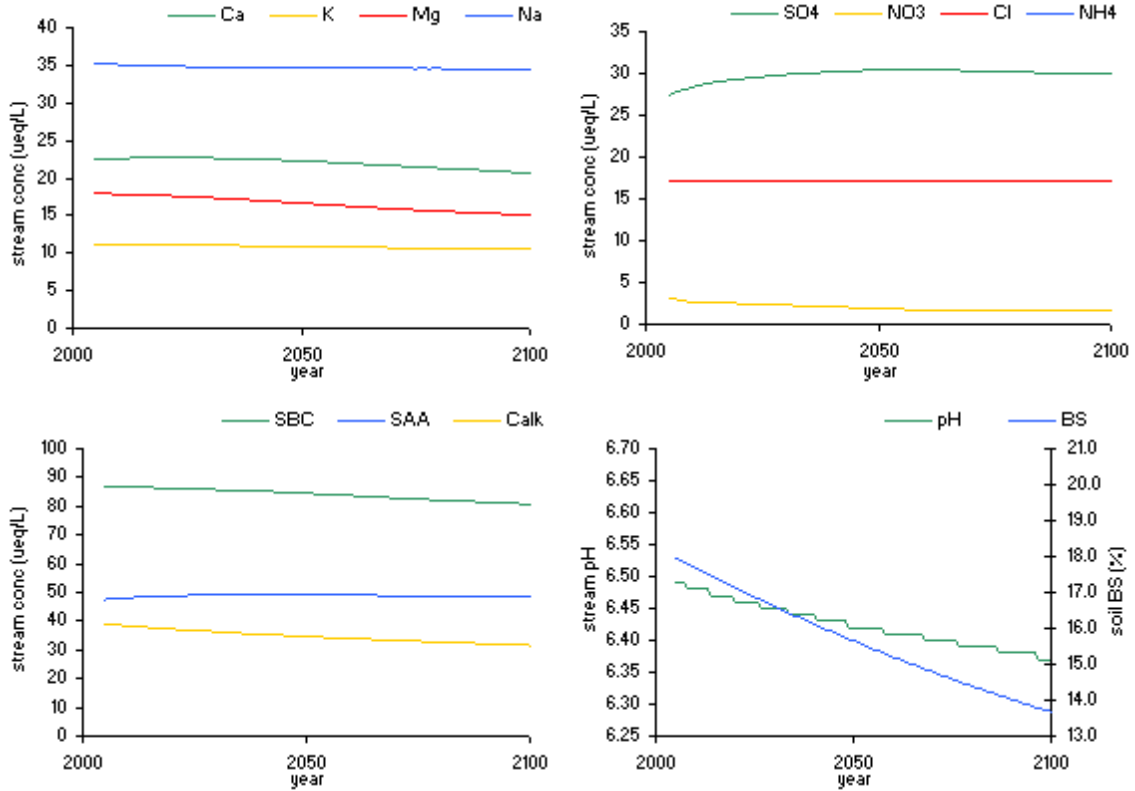


Base

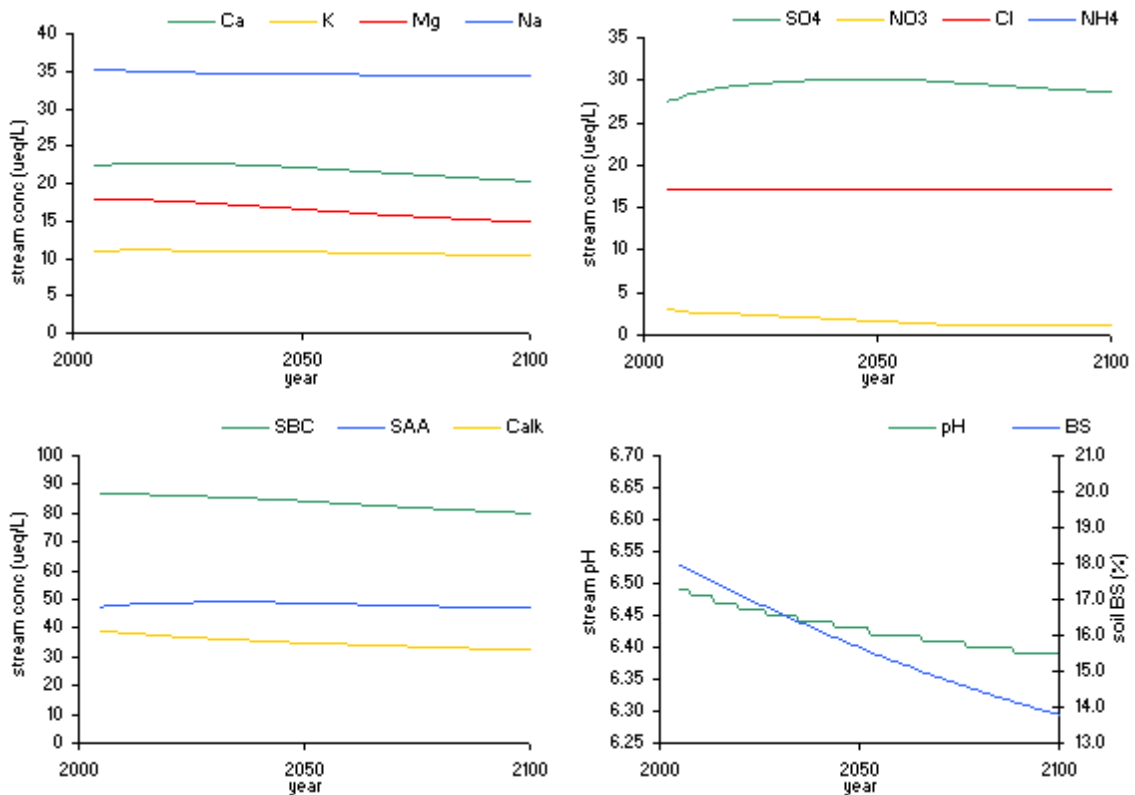


**Stream ID 121 - Courthouse Creek**

**Moderate**

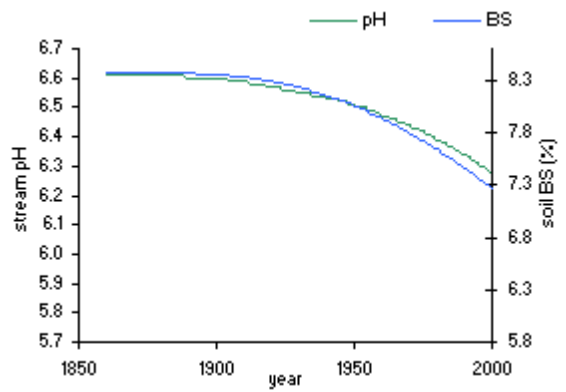
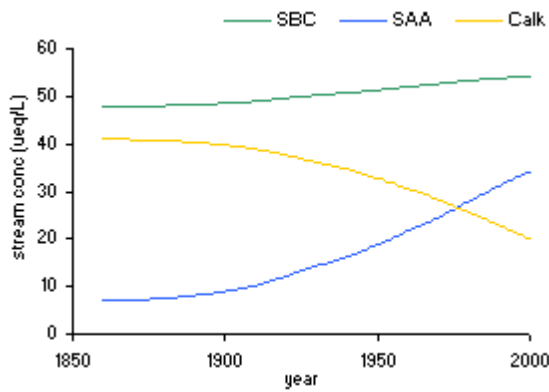
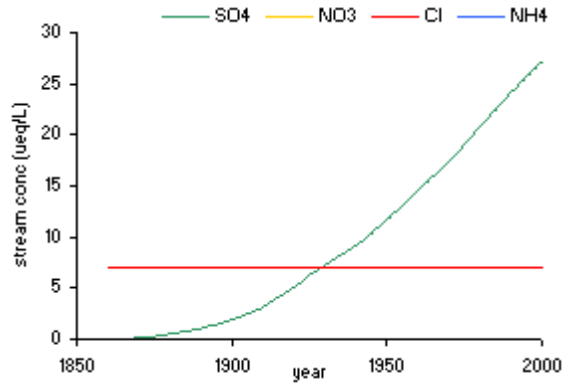
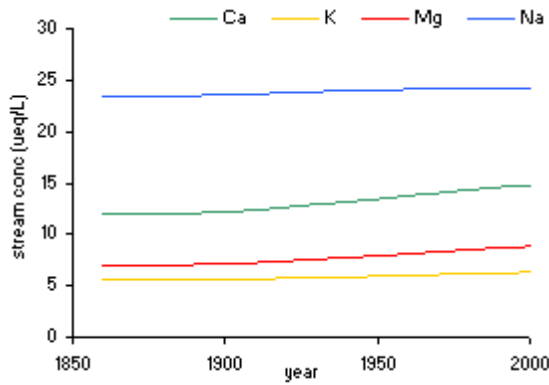


**Aggressive**

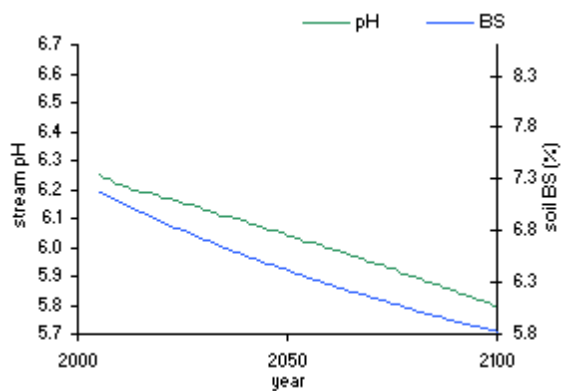
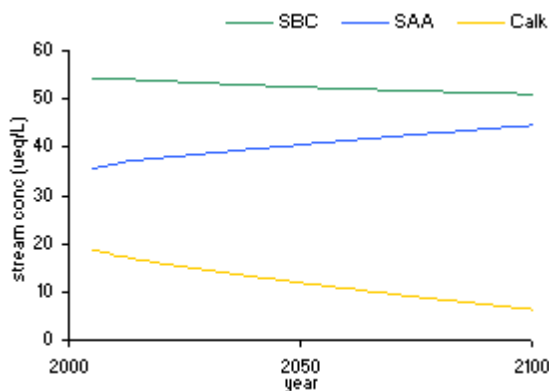
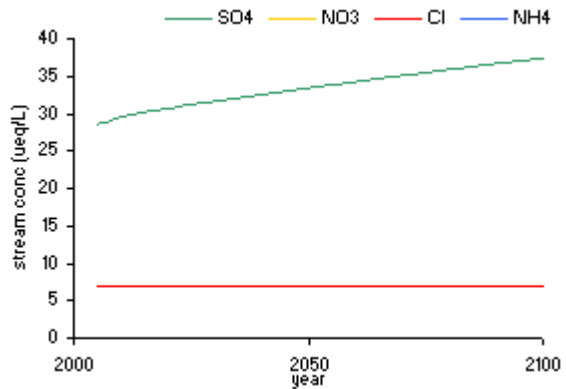
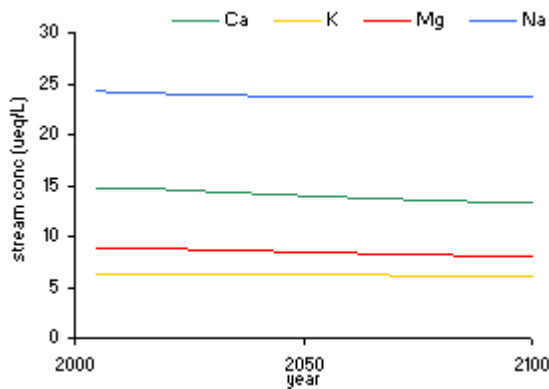


**Stream ID 114 - Dark Prong**

**Hindcast**

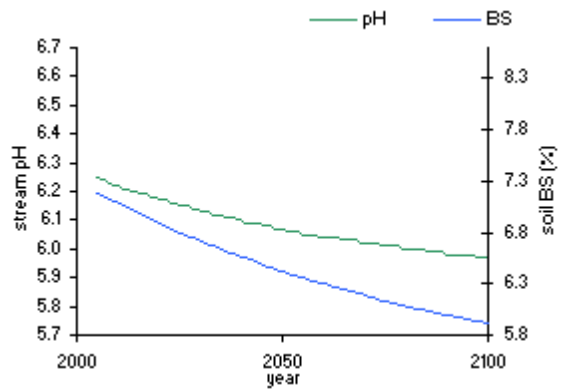
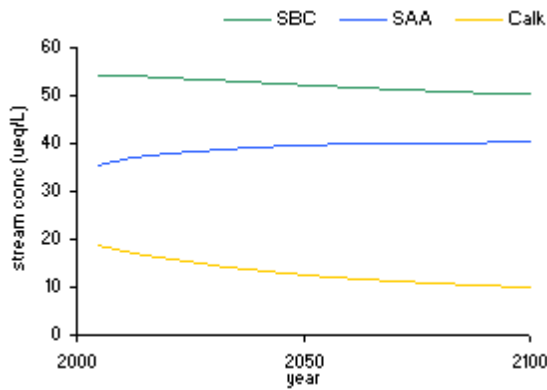
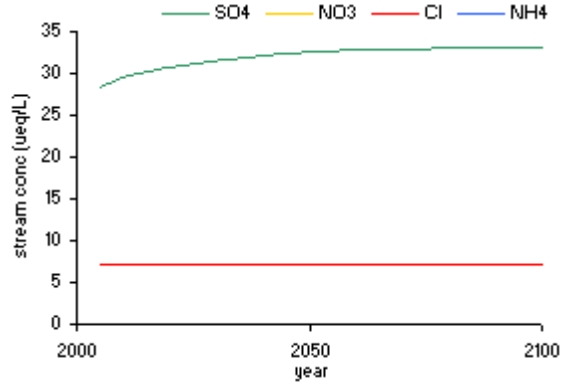
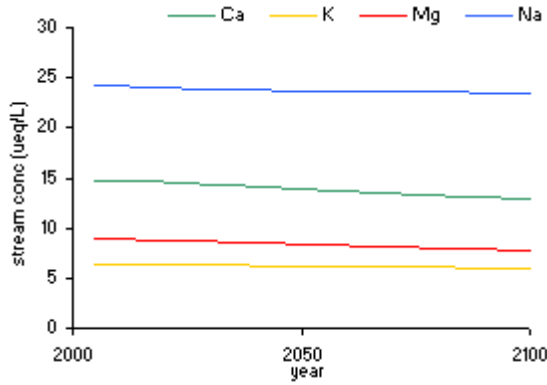


**Base**

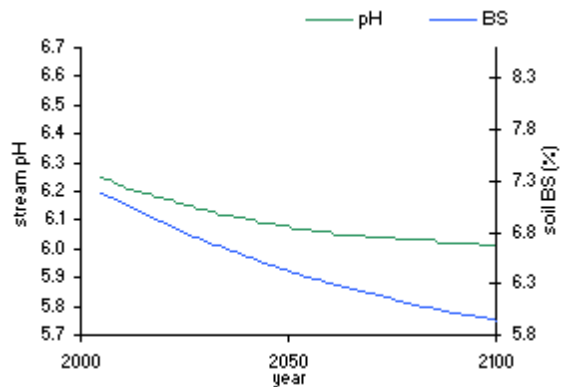
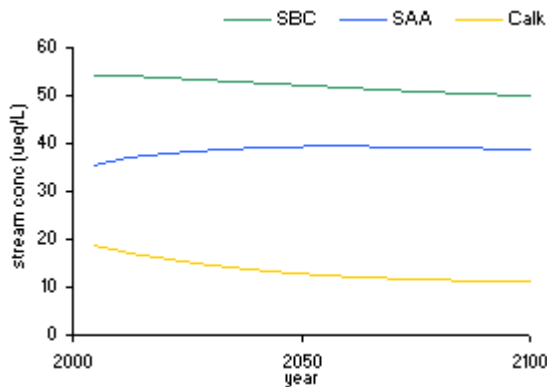
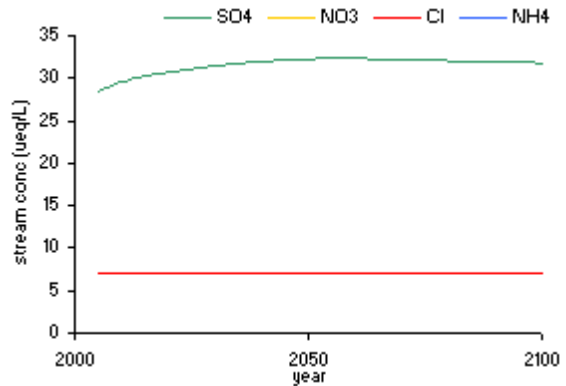
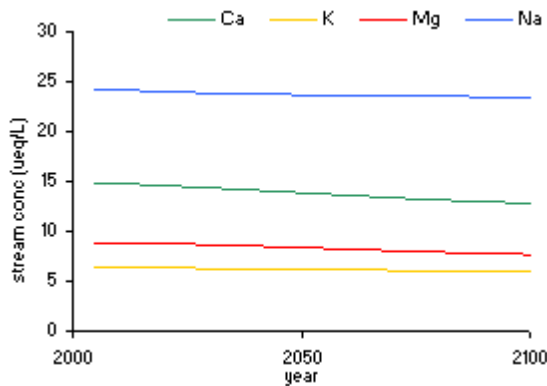


**Stream ID 114 - Dark Prong**

**Moderate**

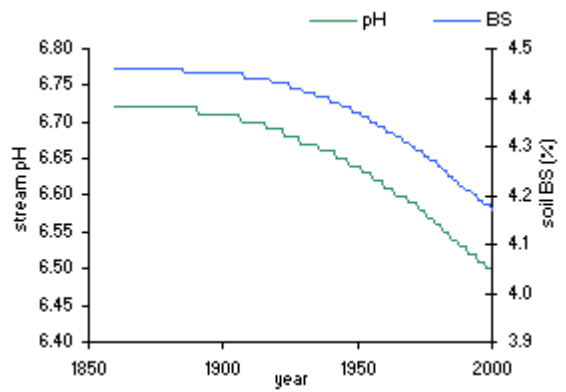
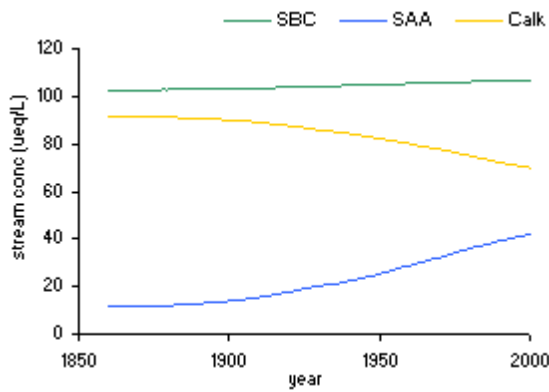
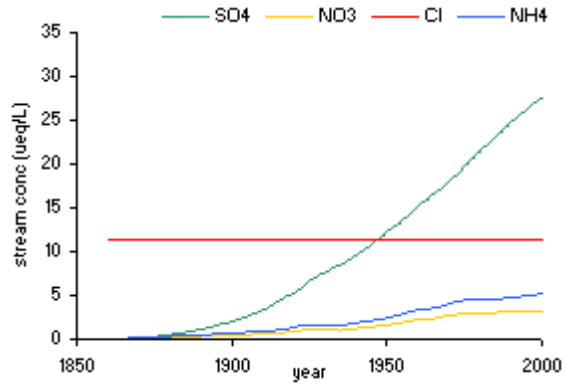
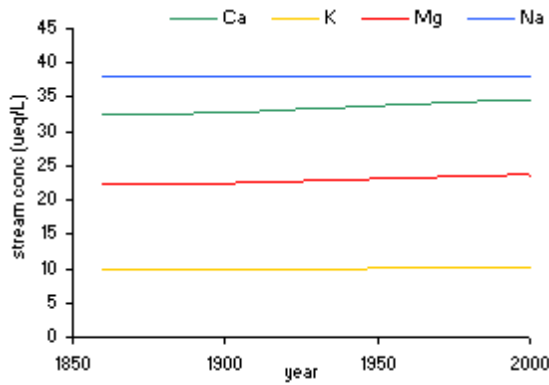


**Aggressive**

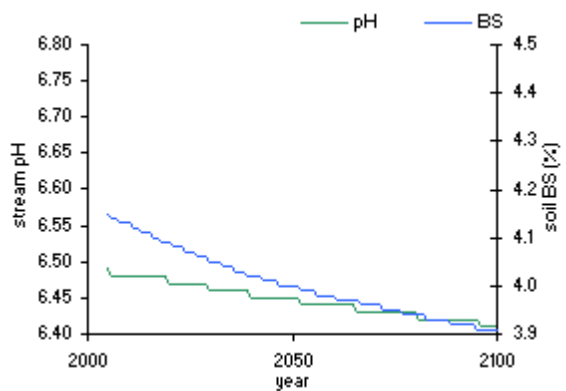
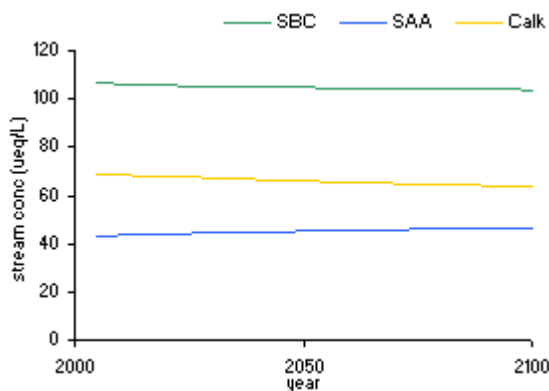
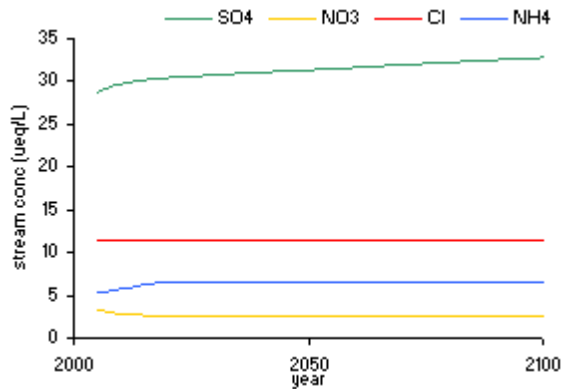
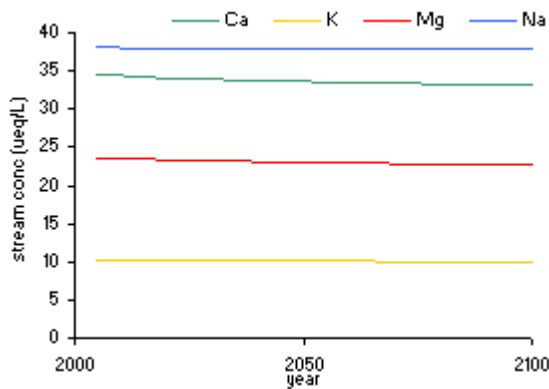


*Stream ID 102 - Davidson River*

**Hindcast**

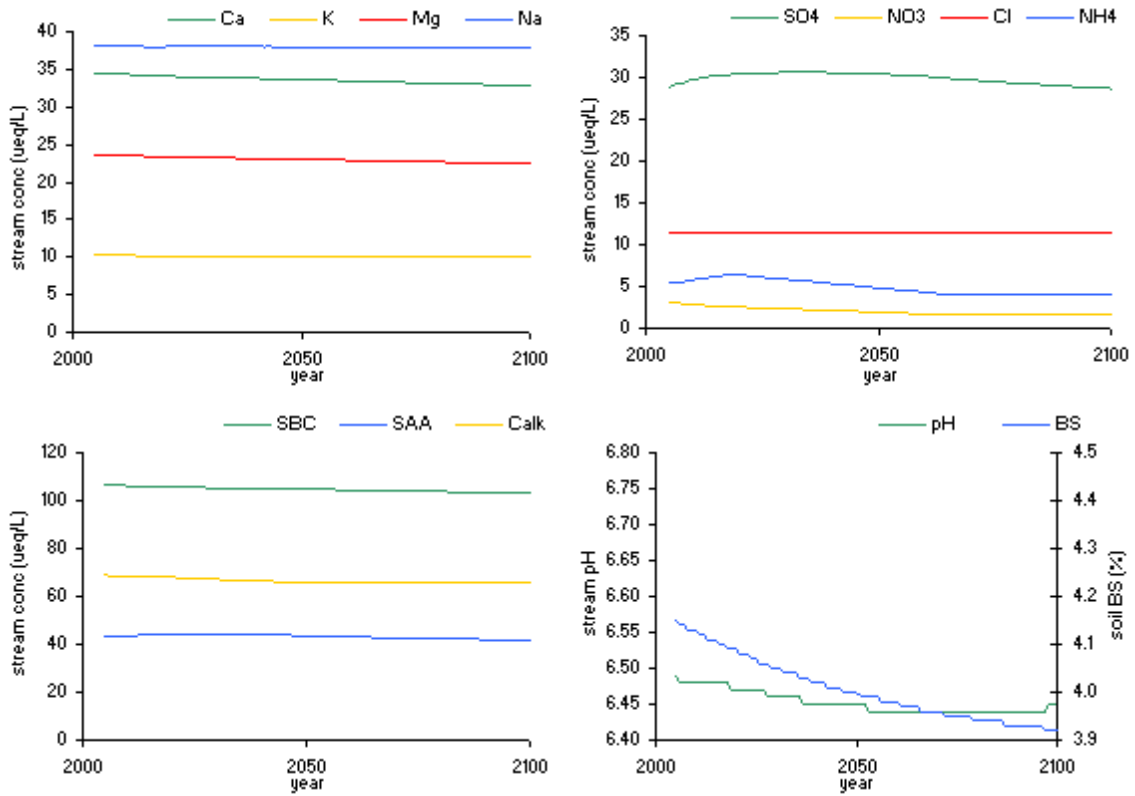


**Base**

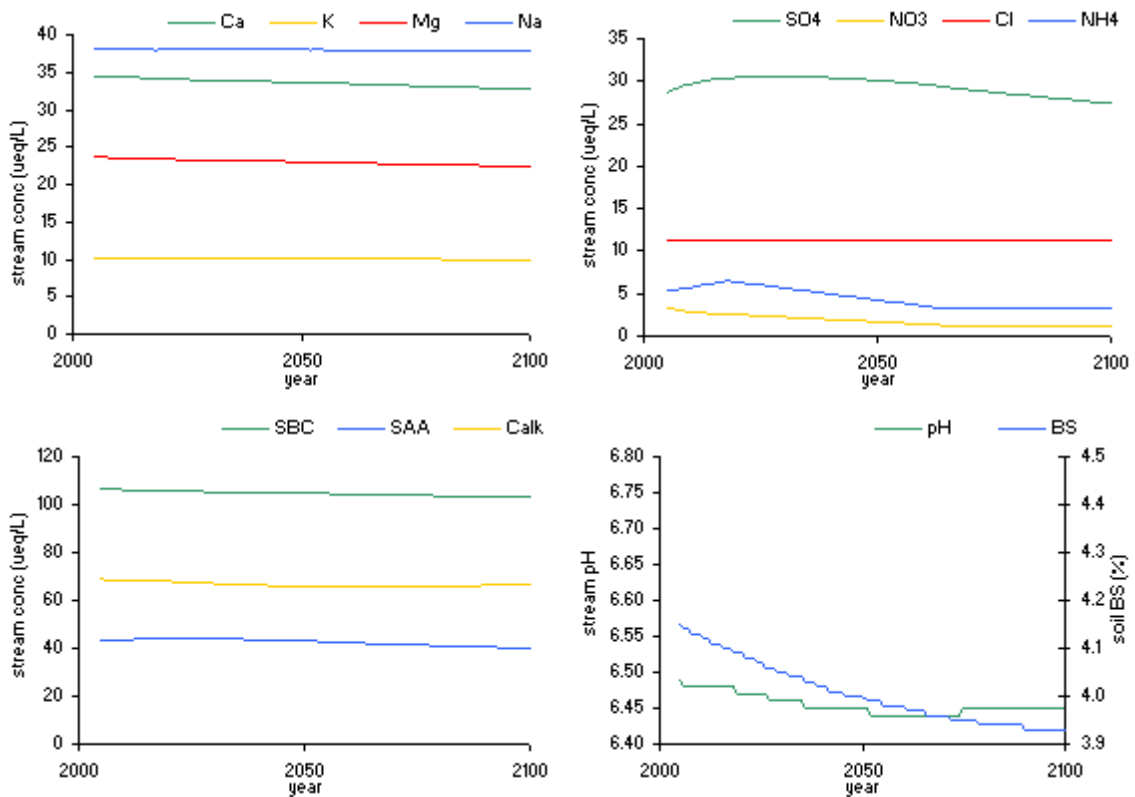


Stream ID 102 - Davidson River

Moderate



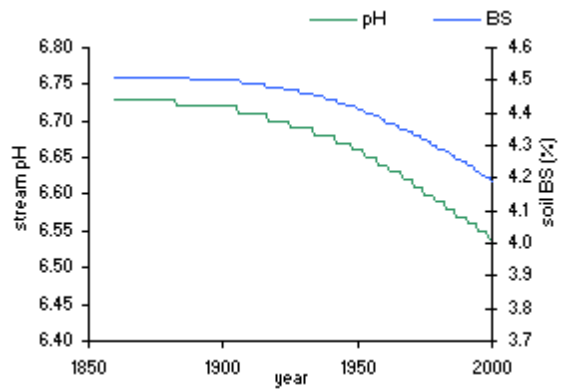
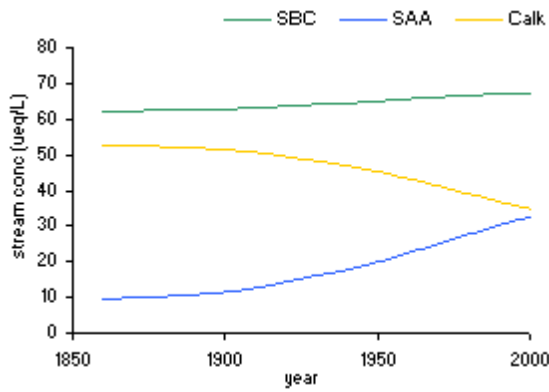
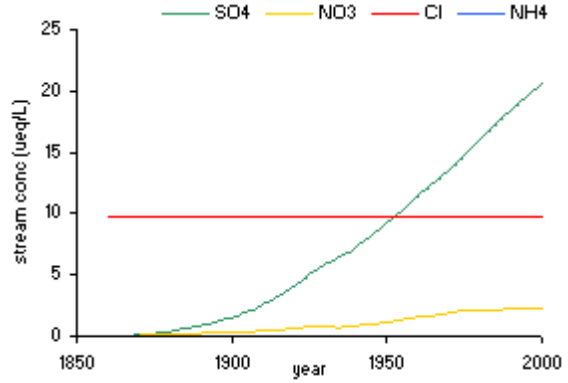
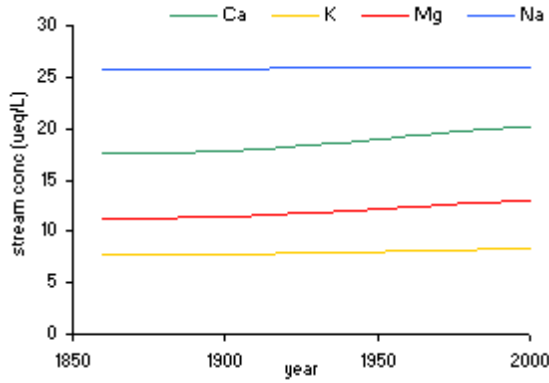
Aggressive



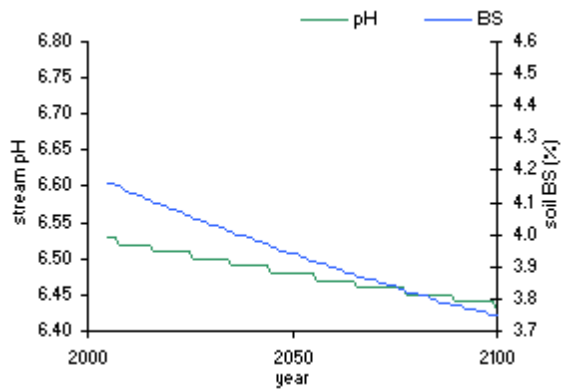
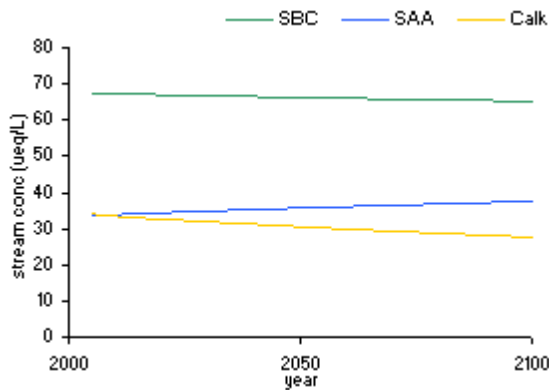
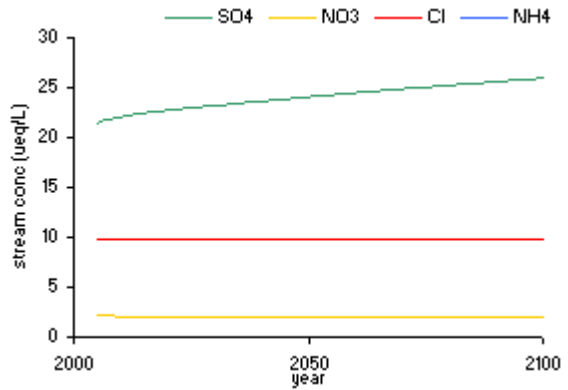
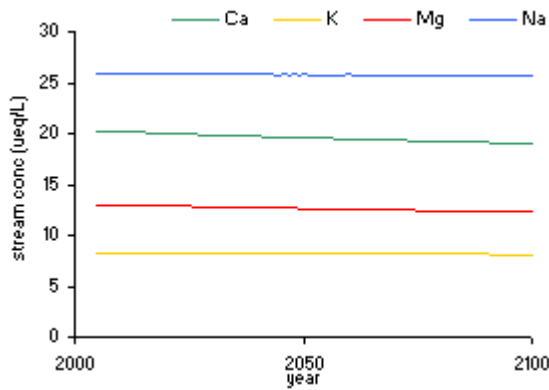


*Stream ID 101 - East Fork Pigeon*

**Hindcast**

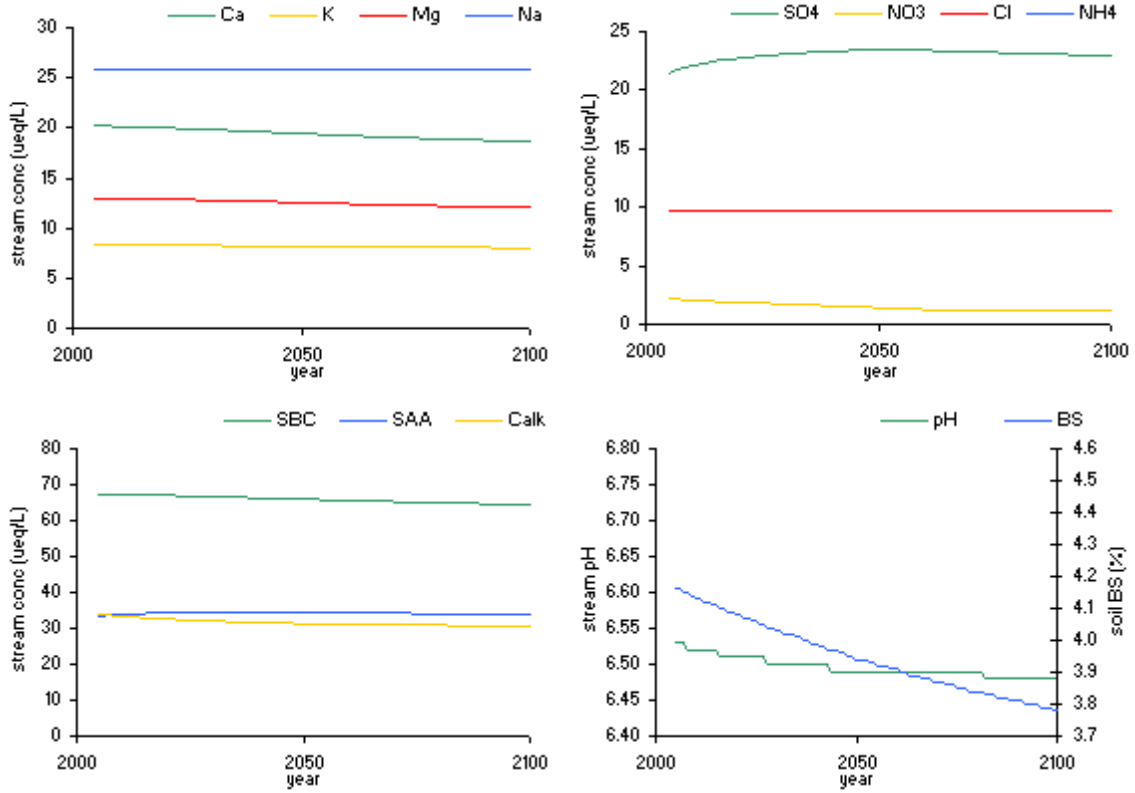


**Base**

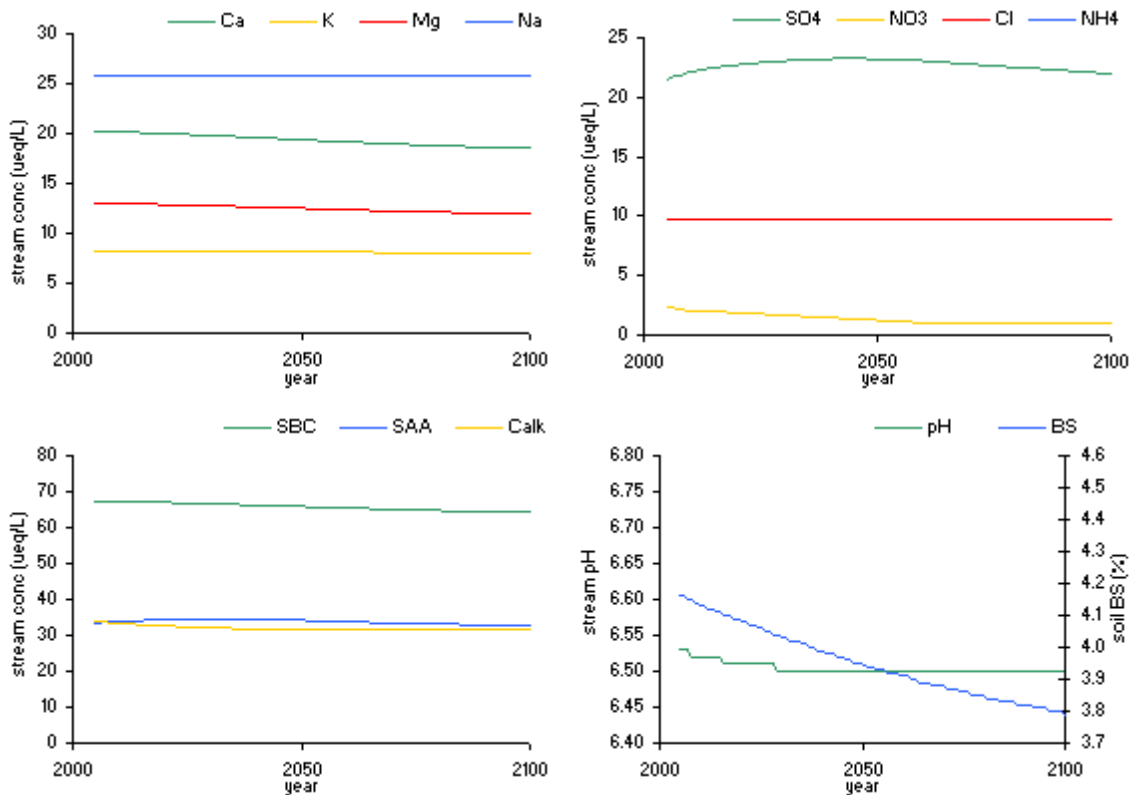


*Stream ID 101 - East Fork Pigeon*

**Moderate**

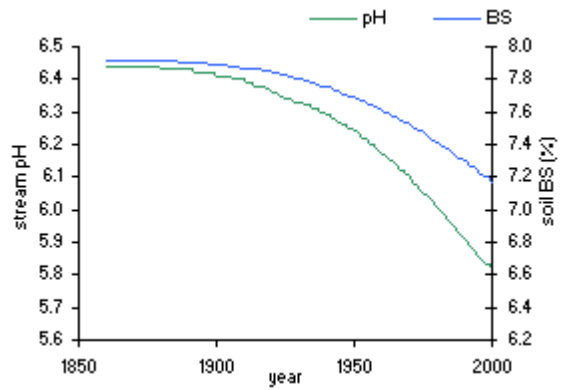
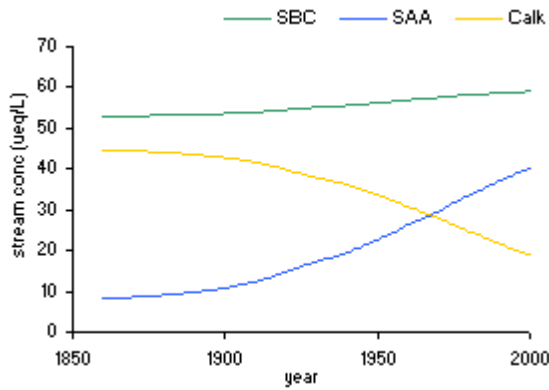
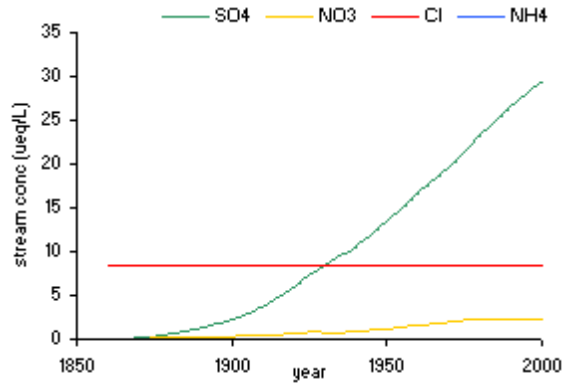
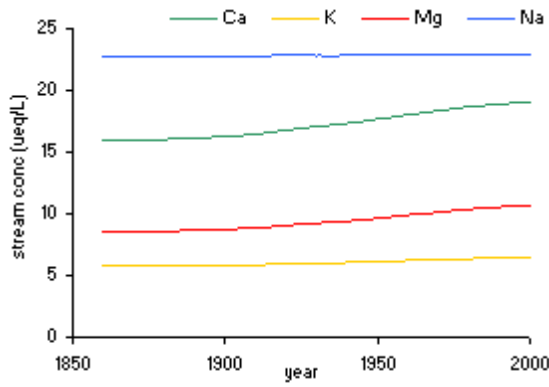


**Aggressive**

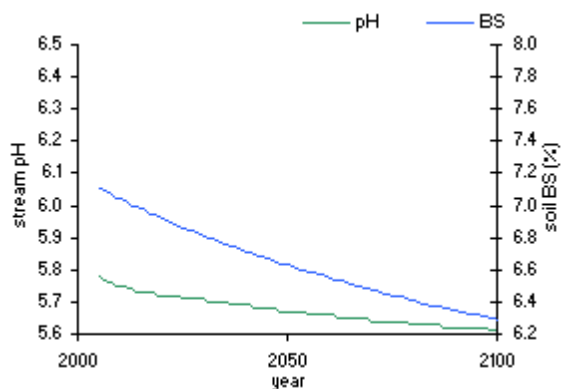
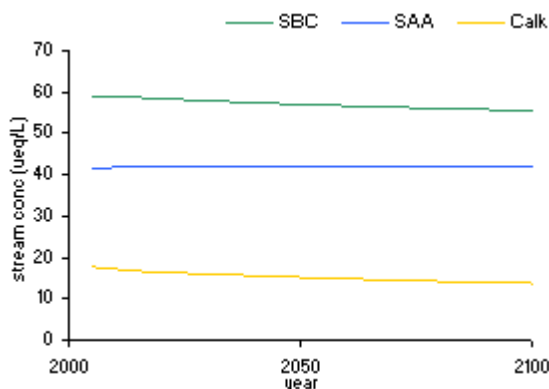
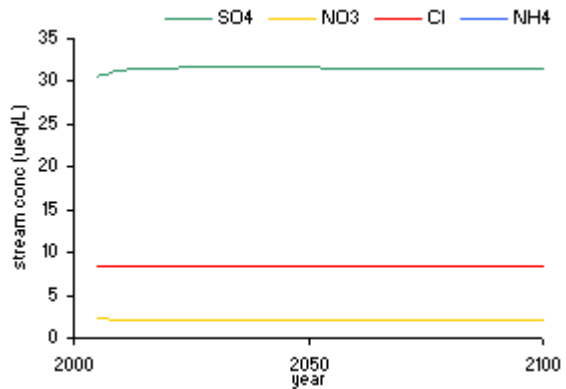
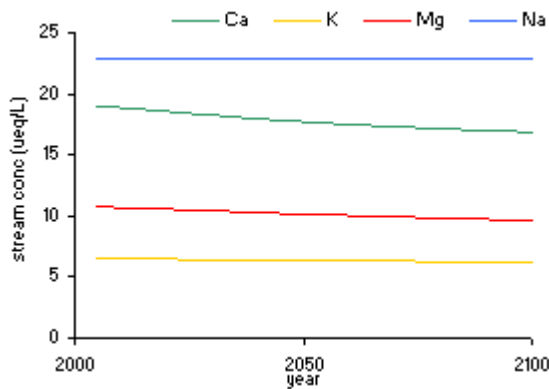


Stream ID 127 - Flat Laurel Creek

Hindcast

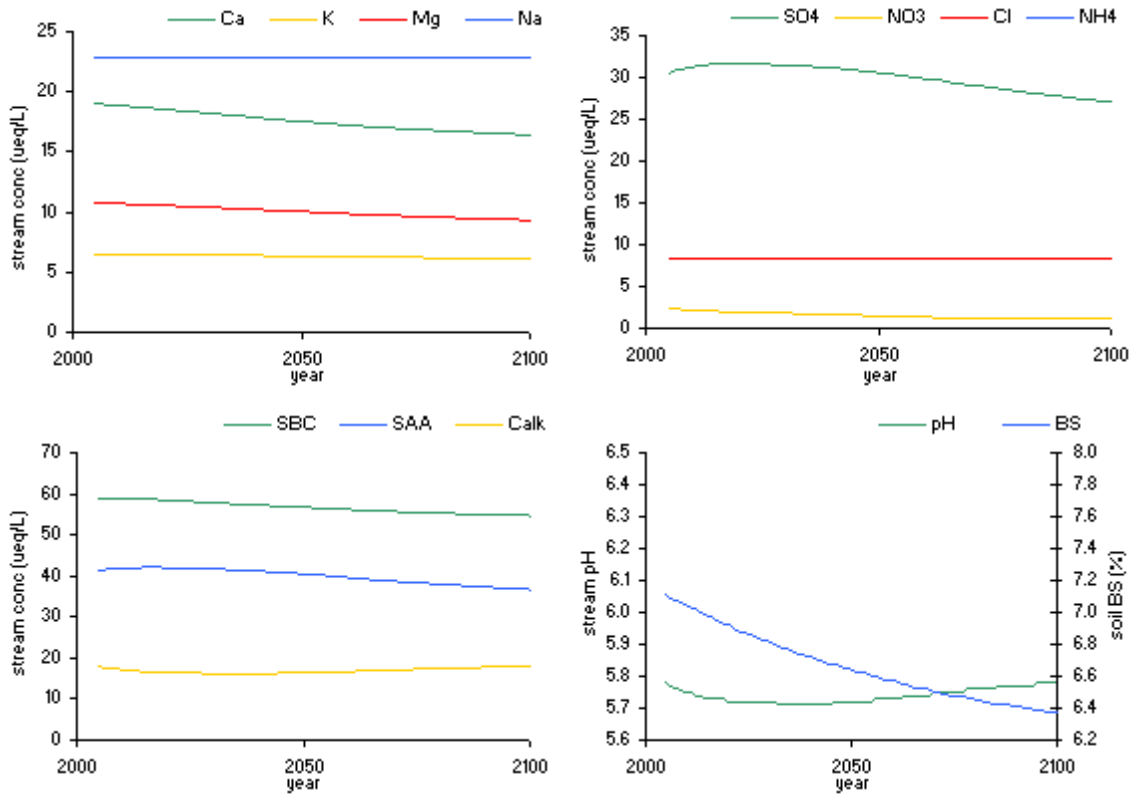


Base

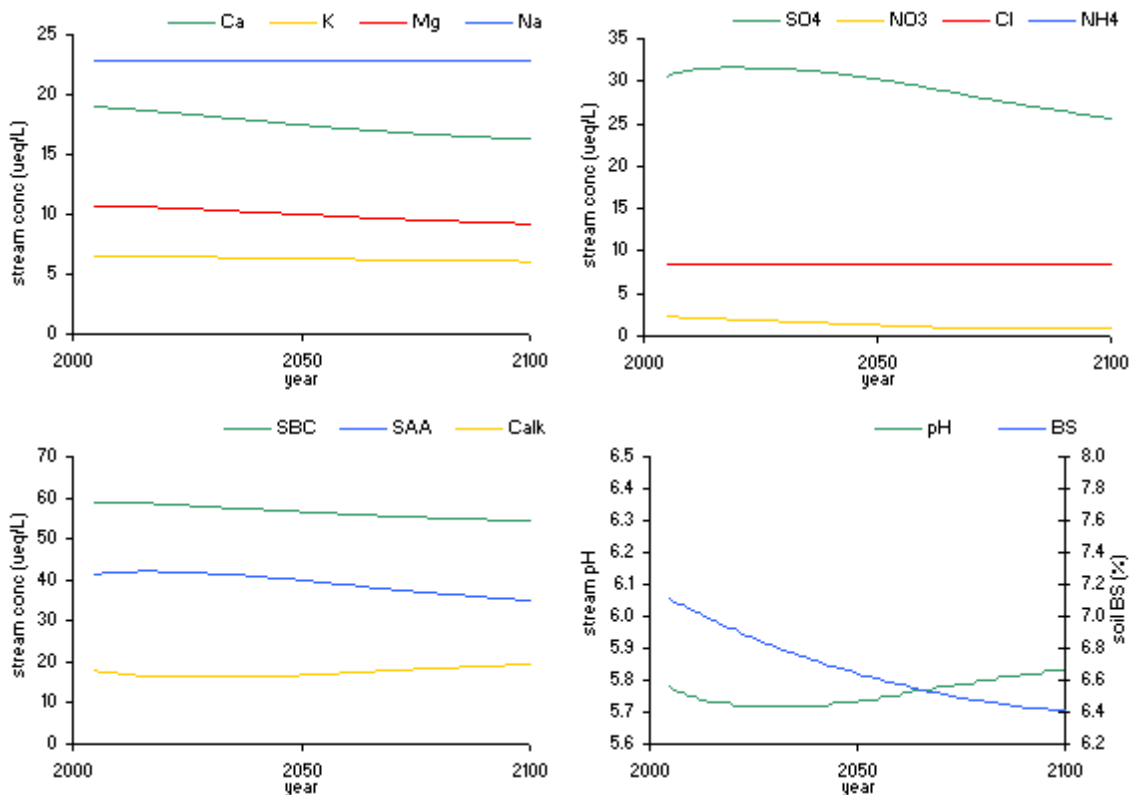


Stream ID 127 - Flat Laurel Creek

Moderate

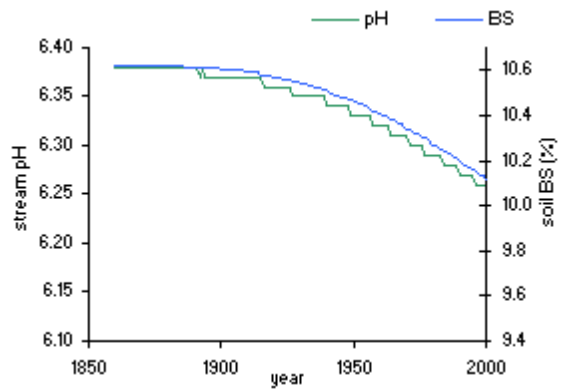
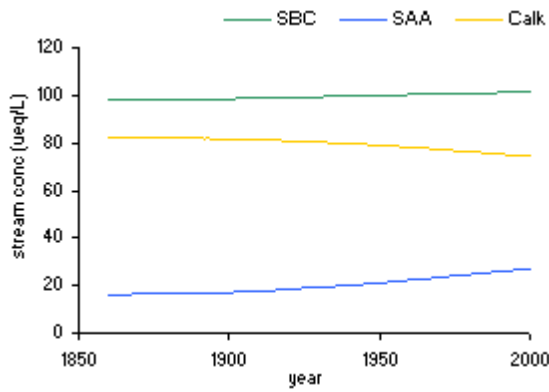
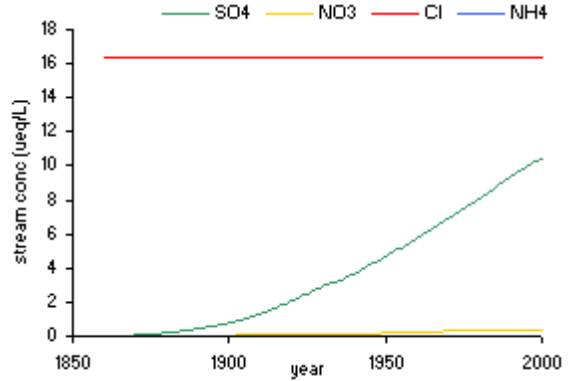
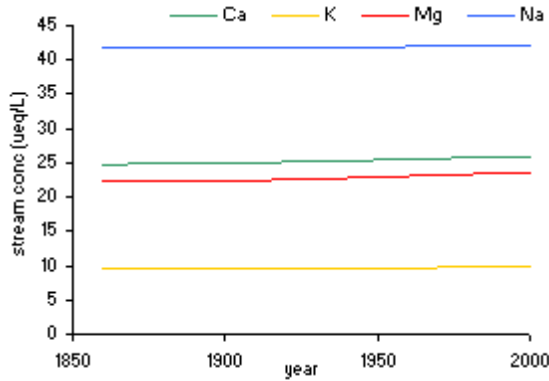


Aggressive

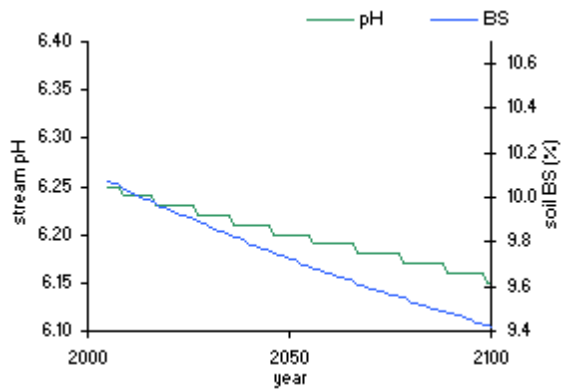
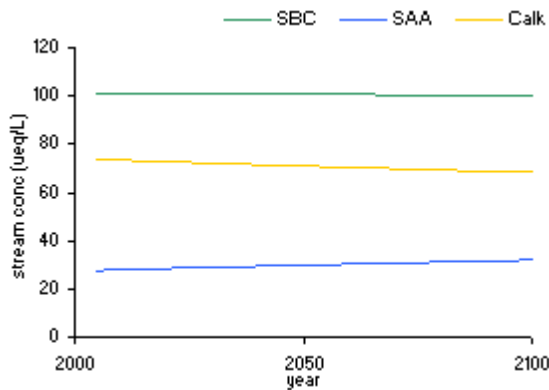
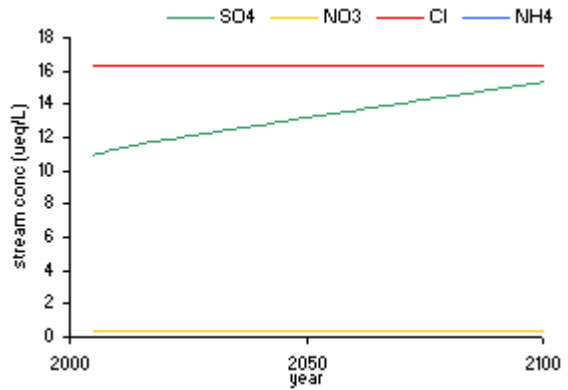
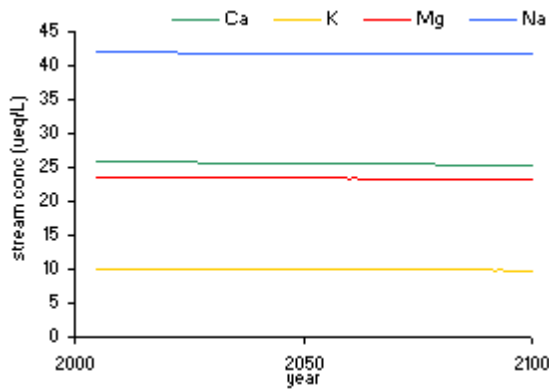


Stream ID 198 - Glade Creek

Hindcast

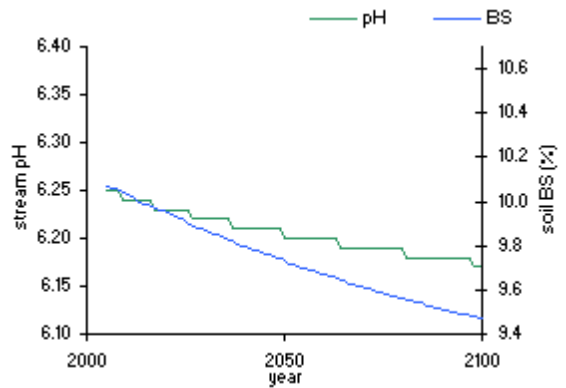
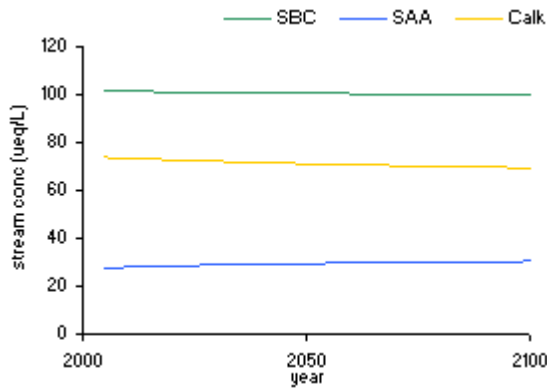
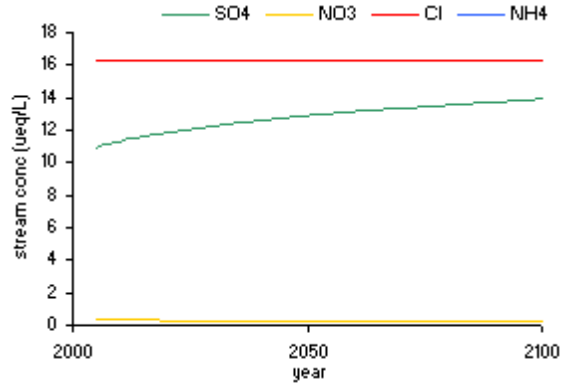
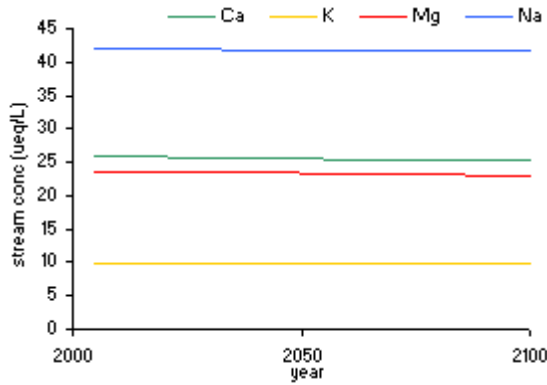


Base

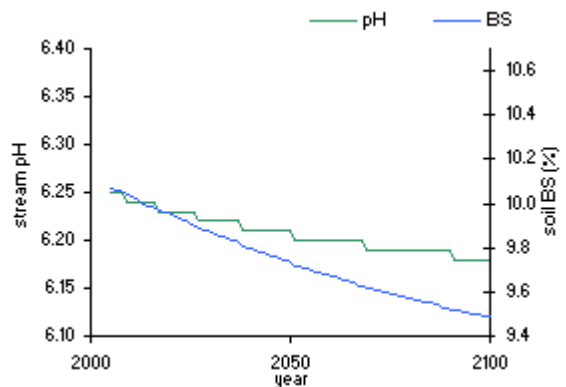
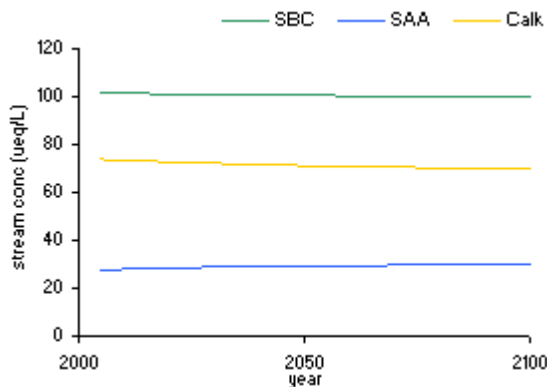
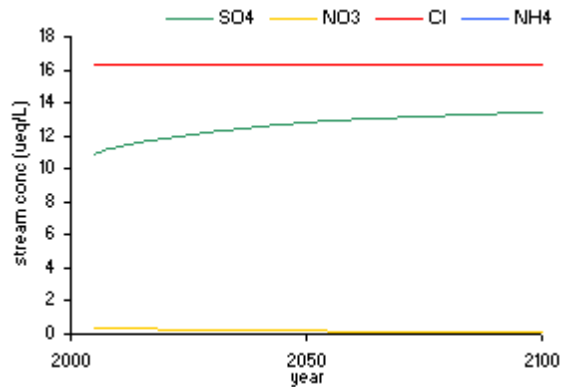
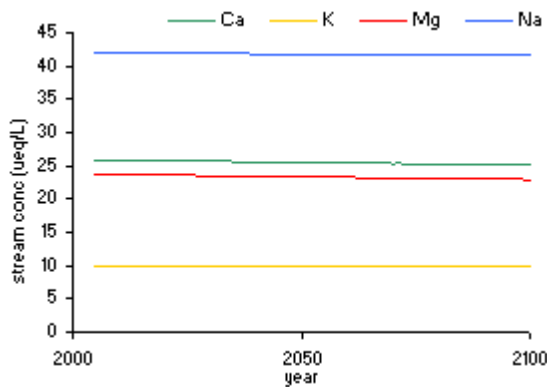


**Stream ID 198 - Glade Creek**

**Moderate**

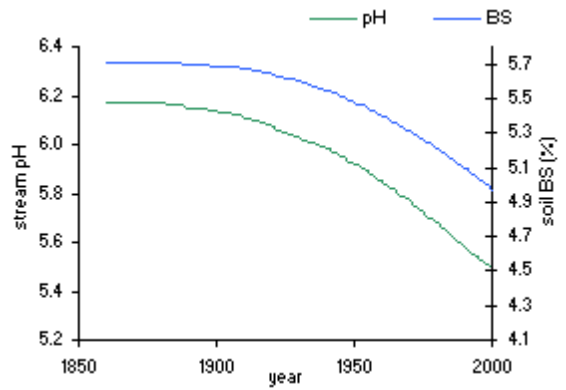
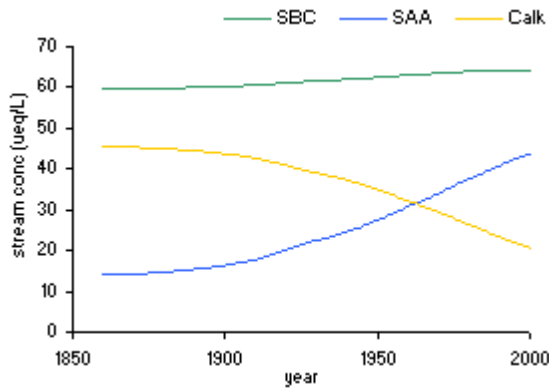
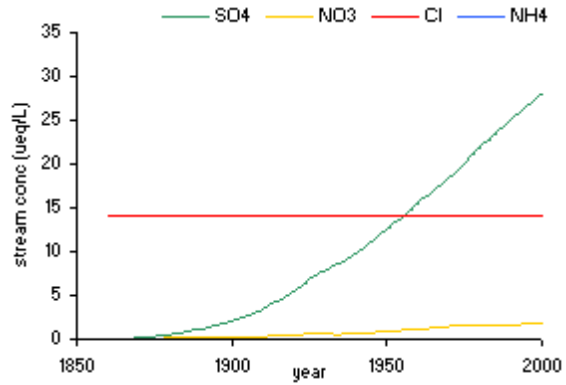
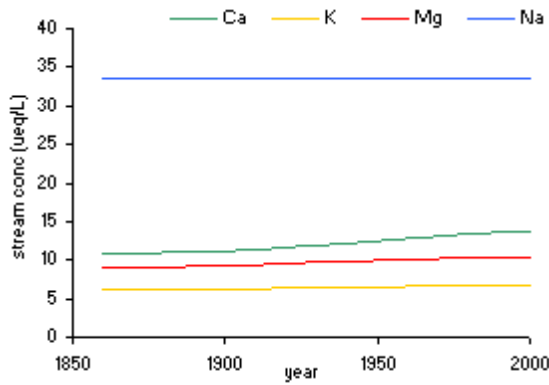


**Aggressive**

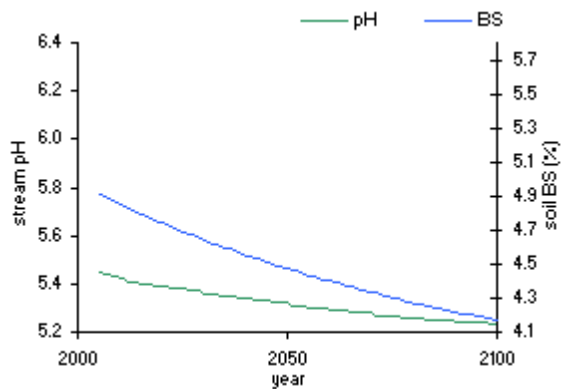
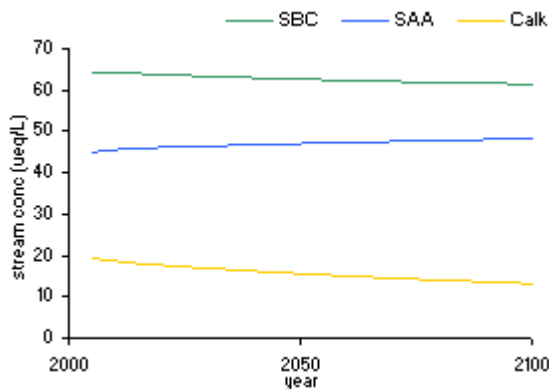
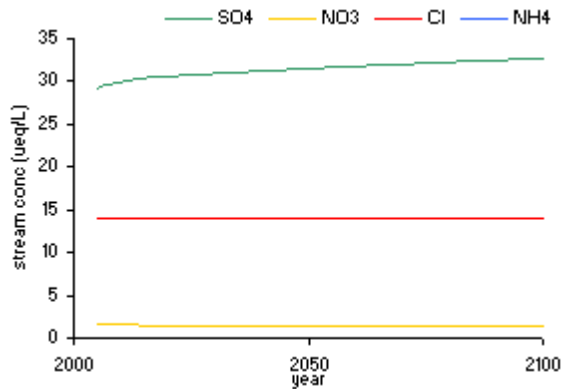
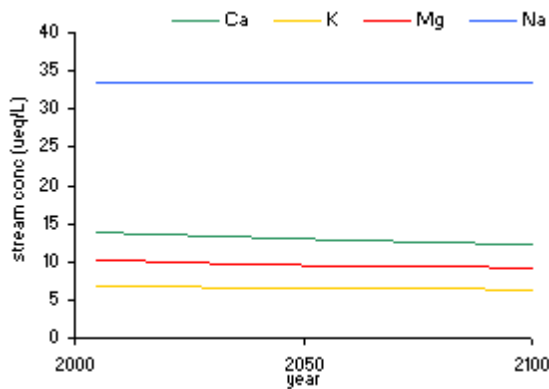


**Stream ID 160 - Greenland Creek**

**Hindcast**

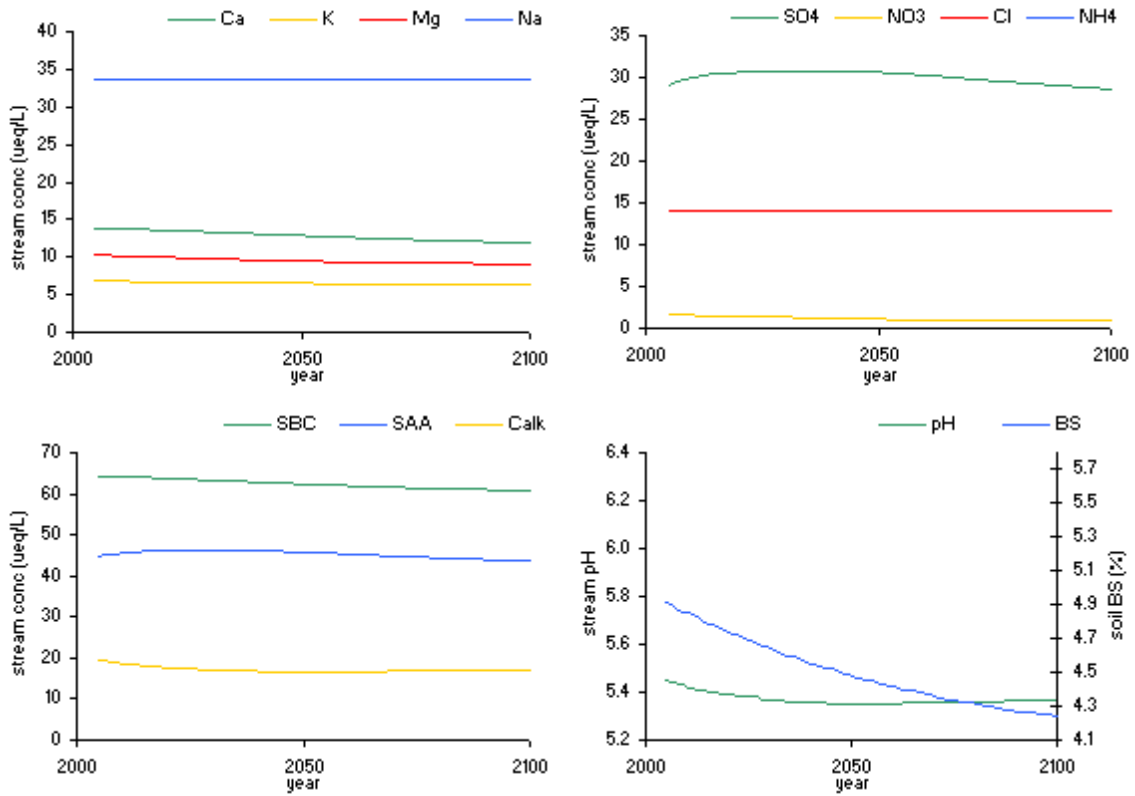


**Base**

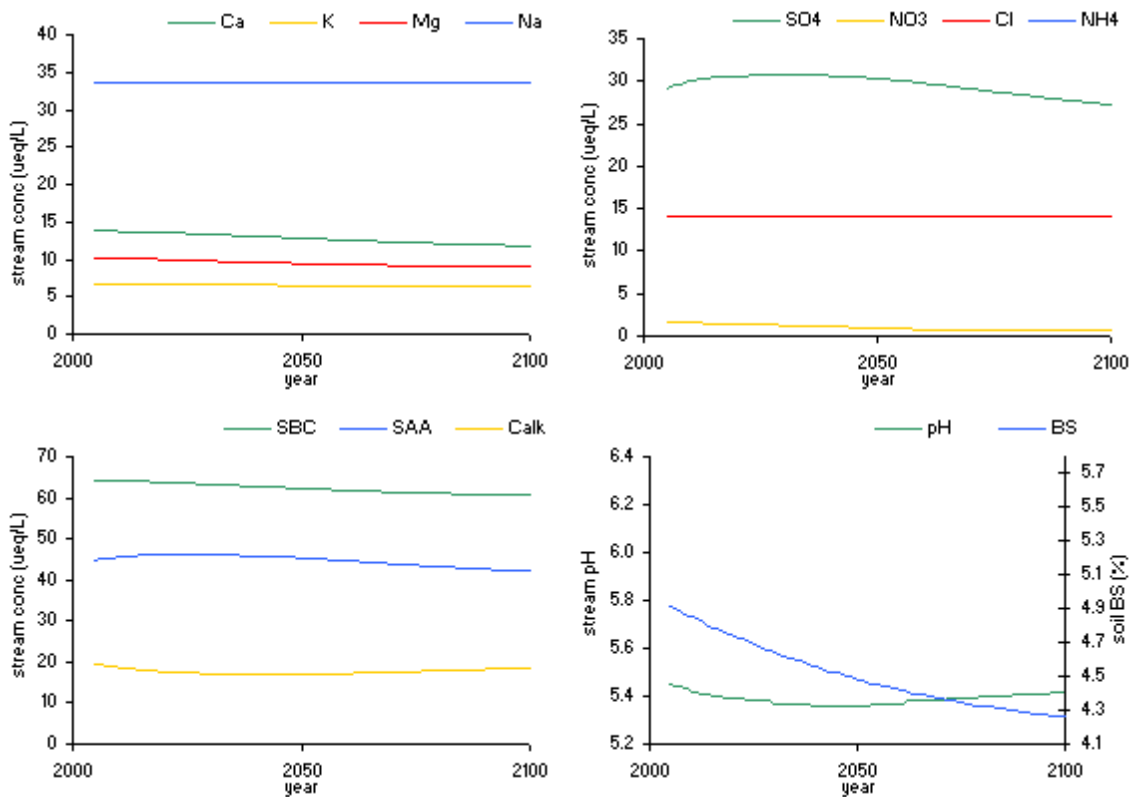


**Stream ID 160 - Greenland Creek**

**Moderate**



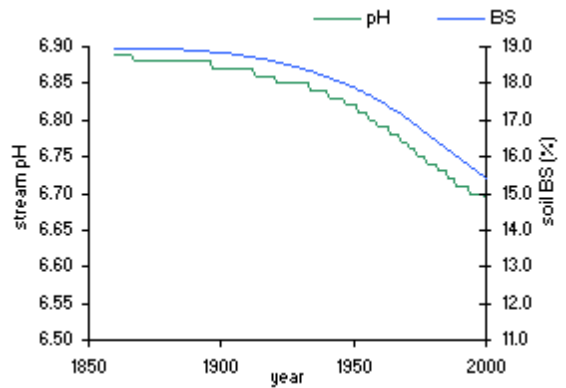
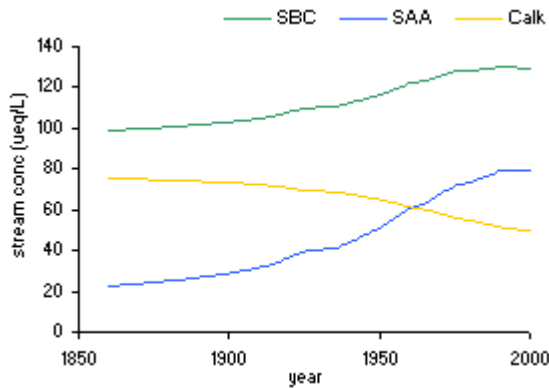
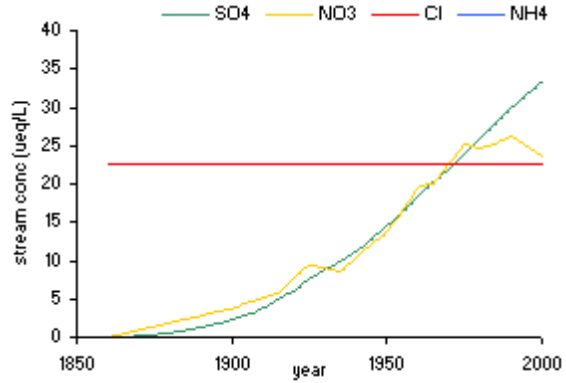
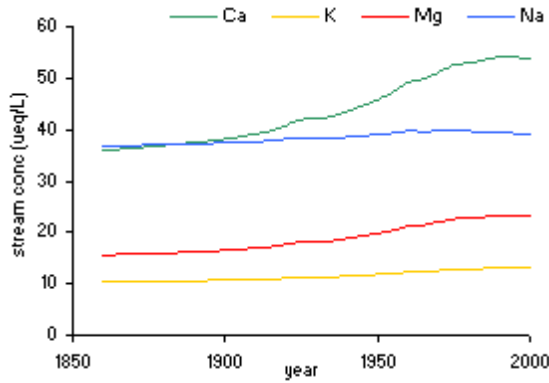
**Aggressive**



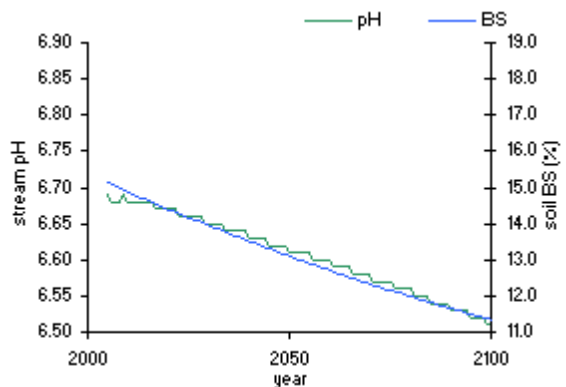
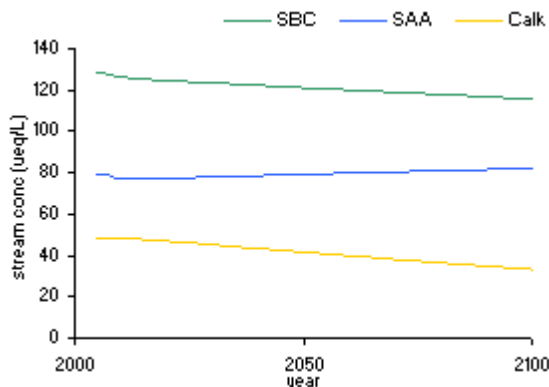
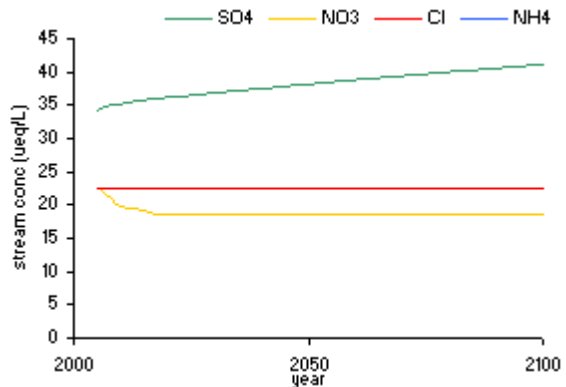
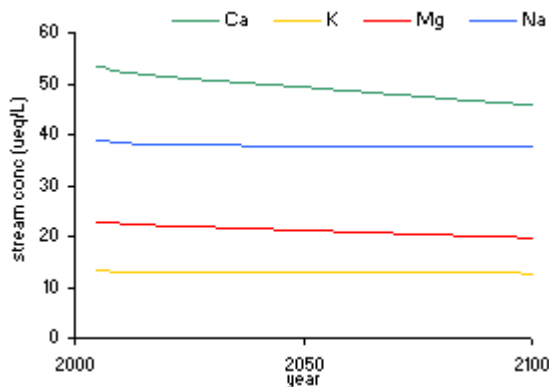


**Stream ID 255 - Indian Branch**

**Hindcast**

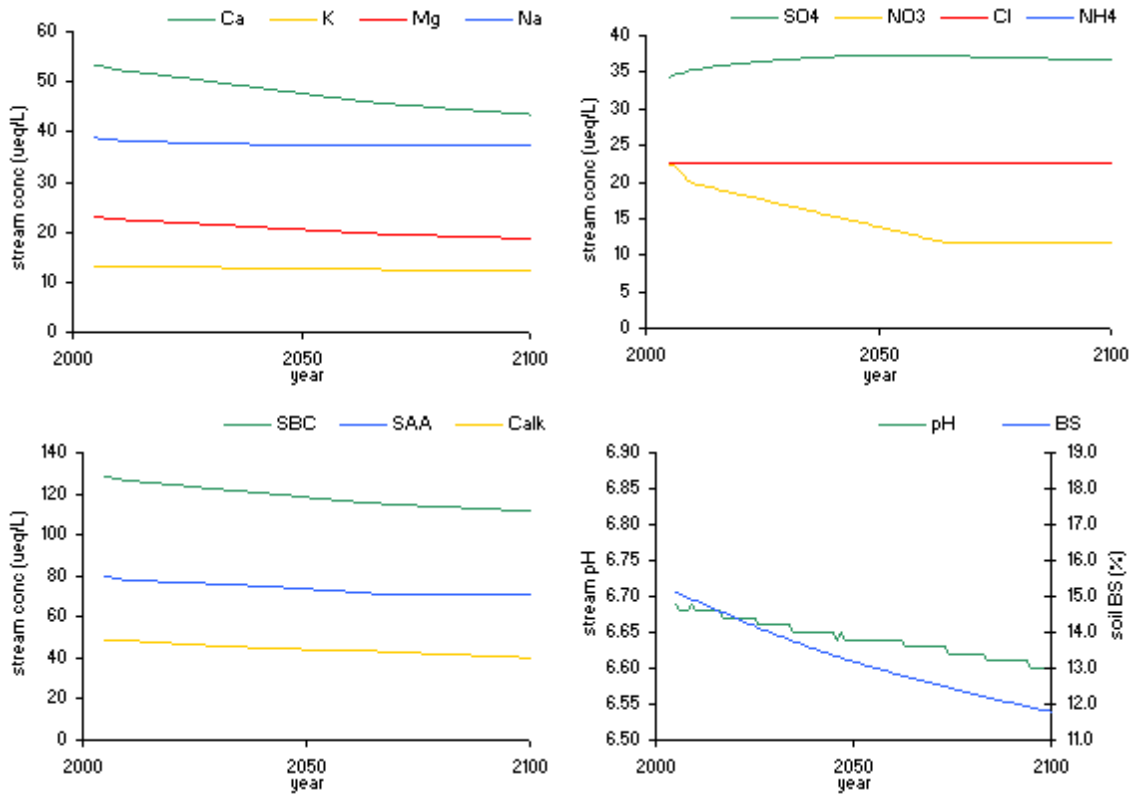


**Base**

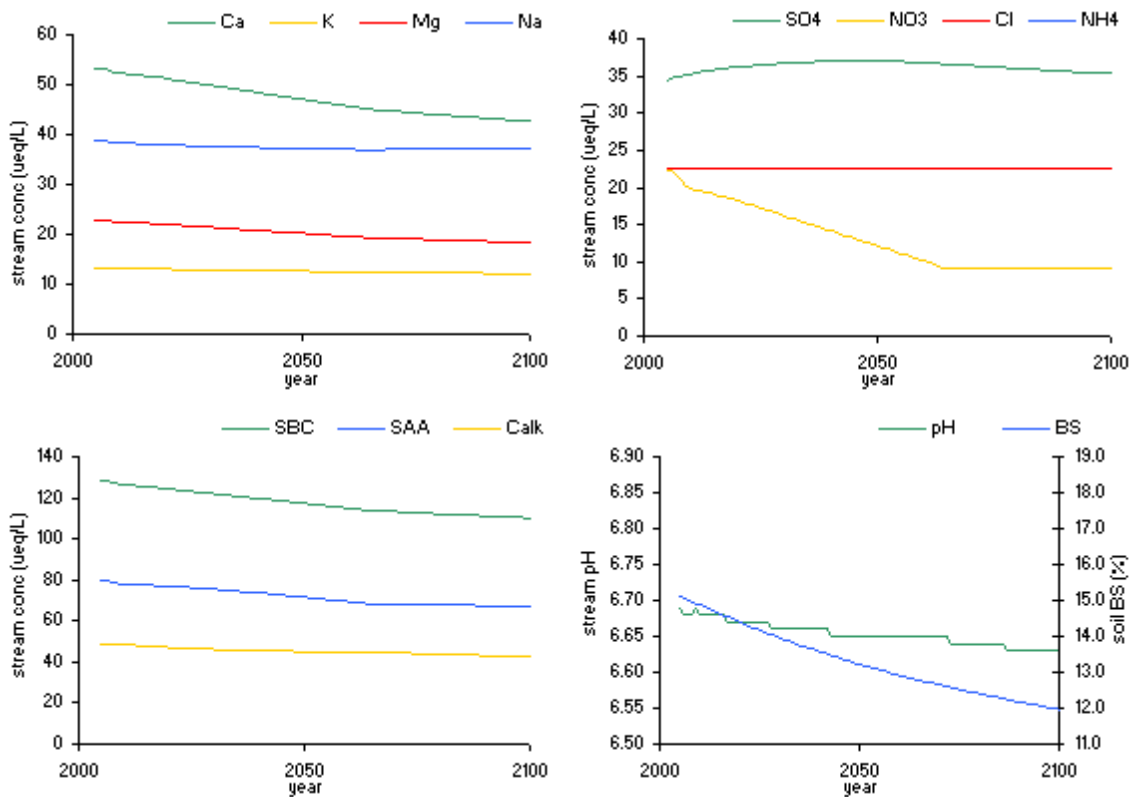


**Stream ID 255 - Indian Branch**

**Moderate**

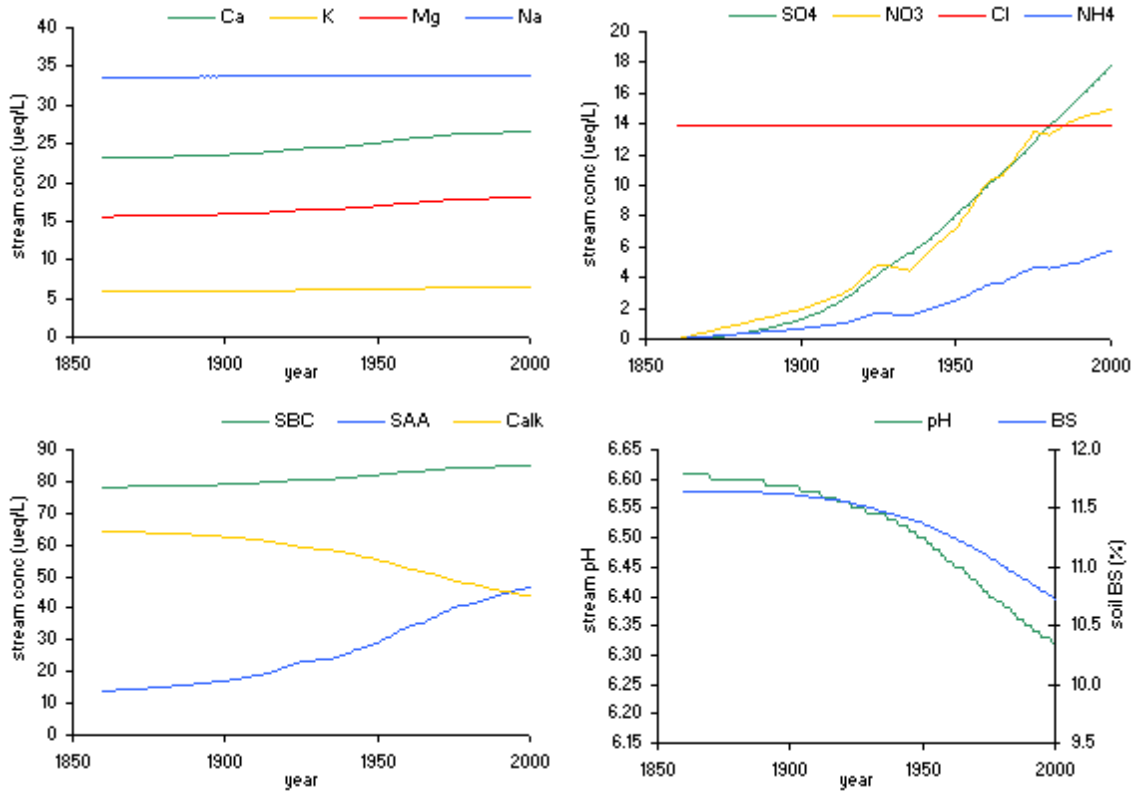


**Aggressive**

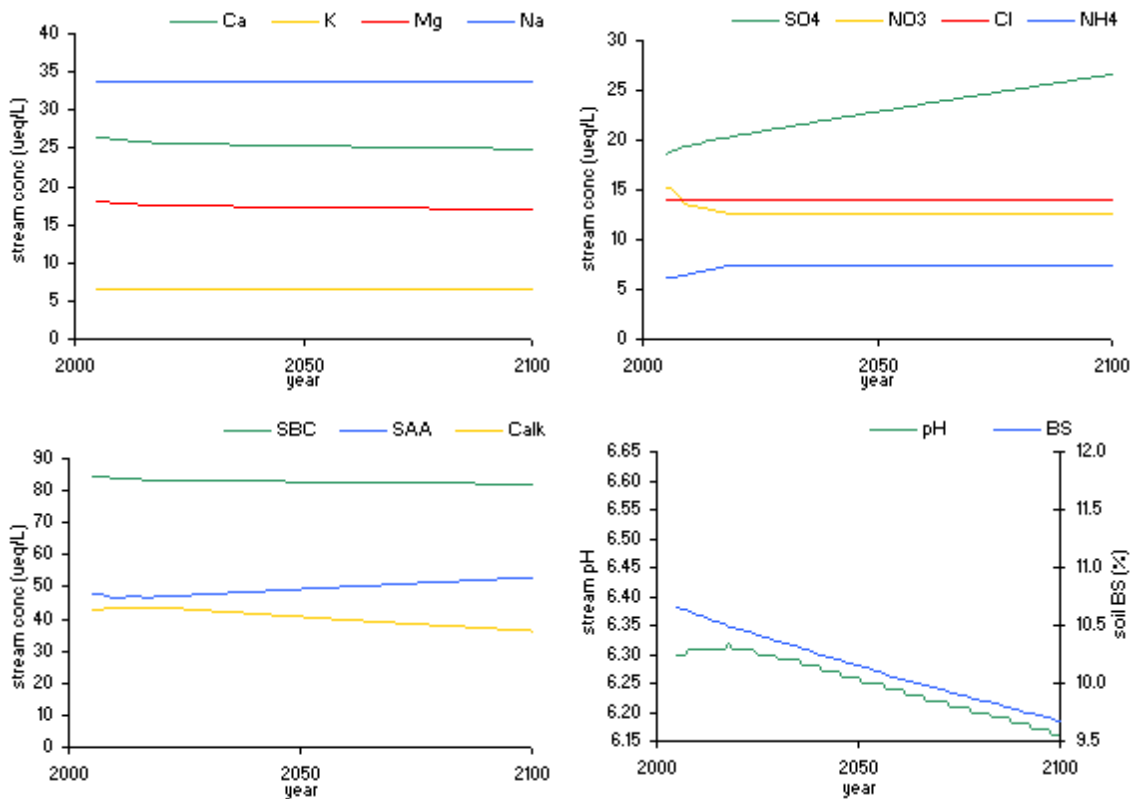


Stream ID 185 – Indian Camp

Hindcast

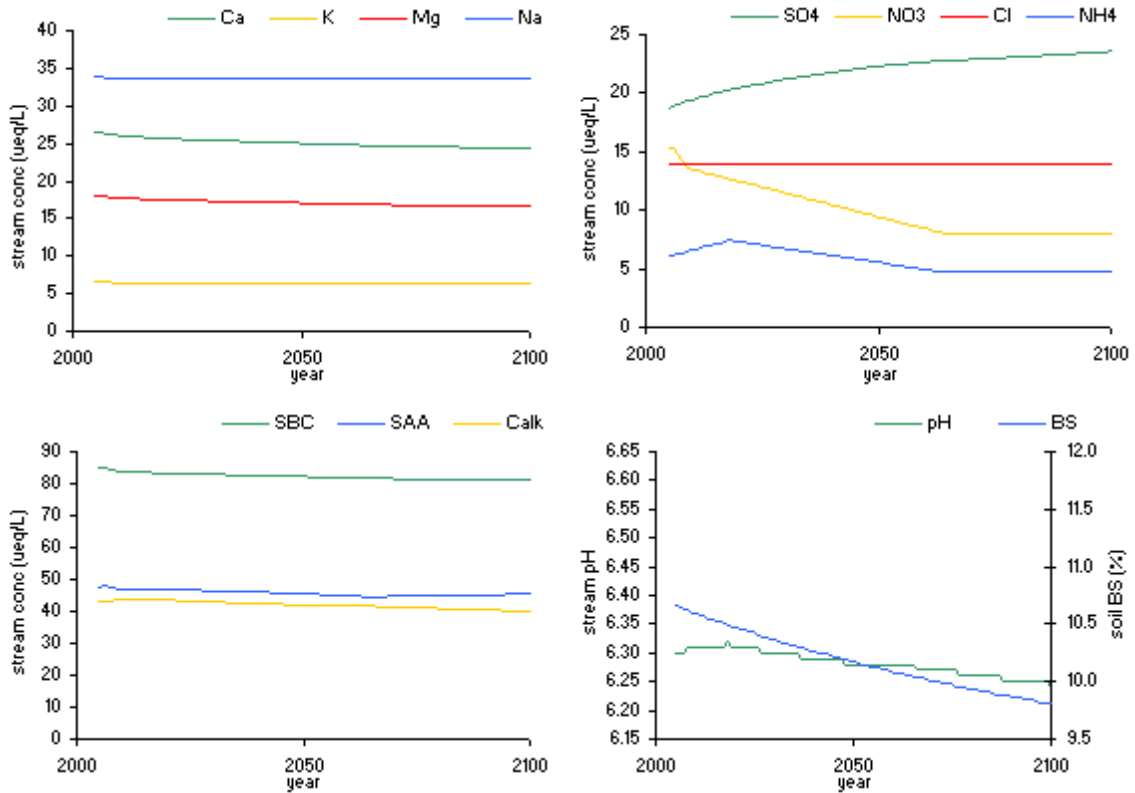


Base

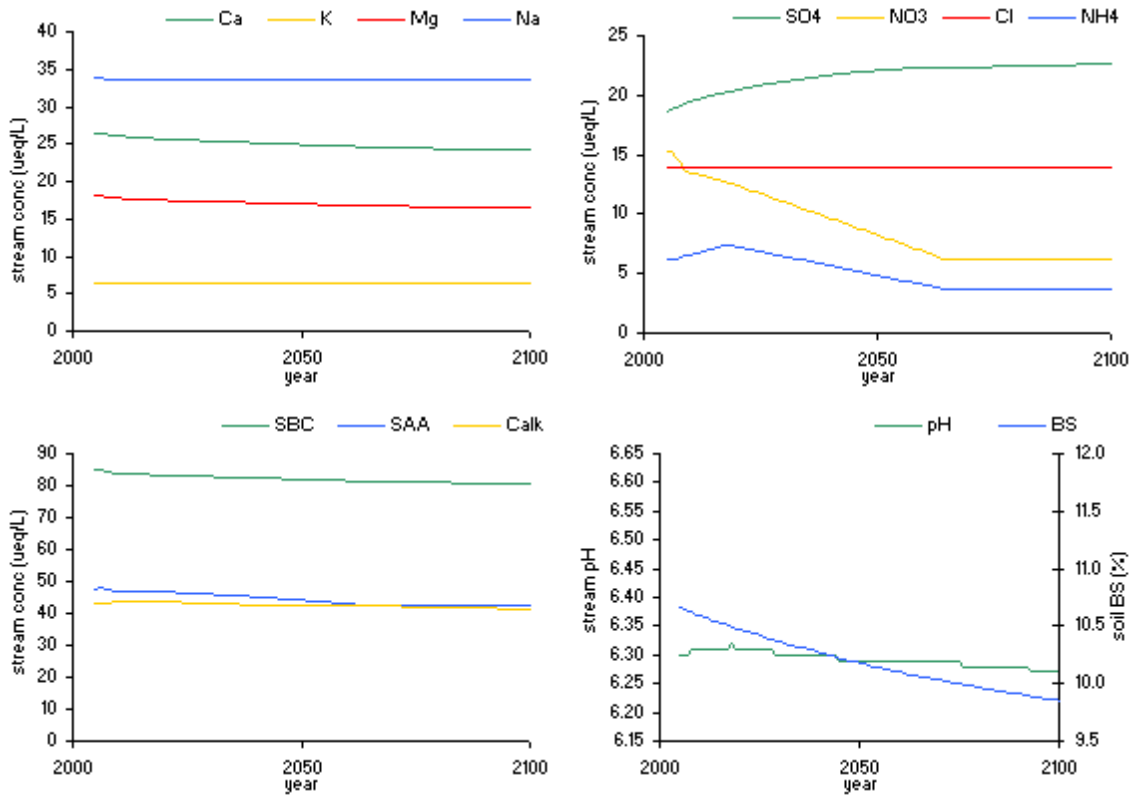


Stream ID 185 – Indian Camp

Moderate

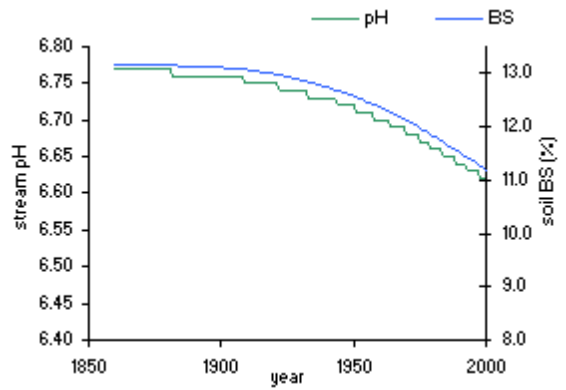
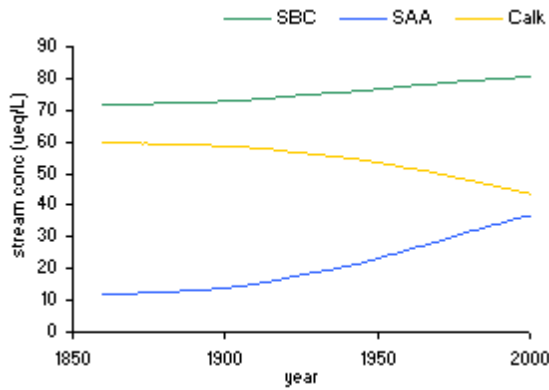
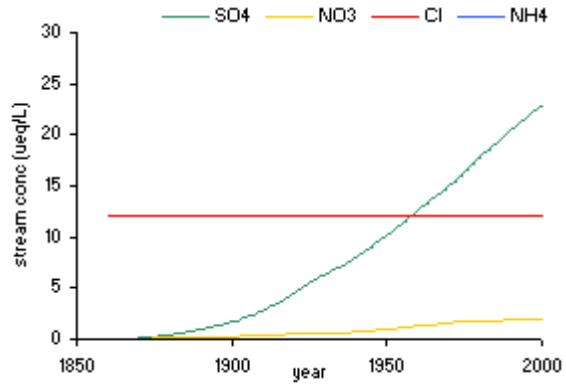
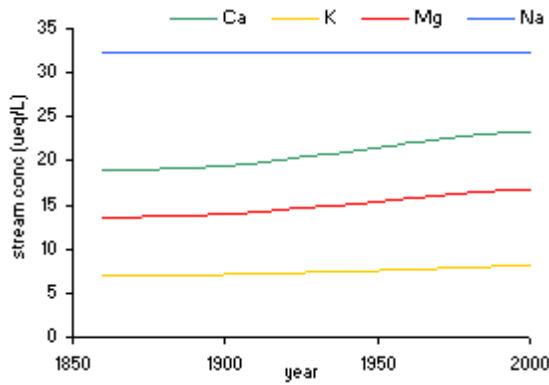


Aggressive

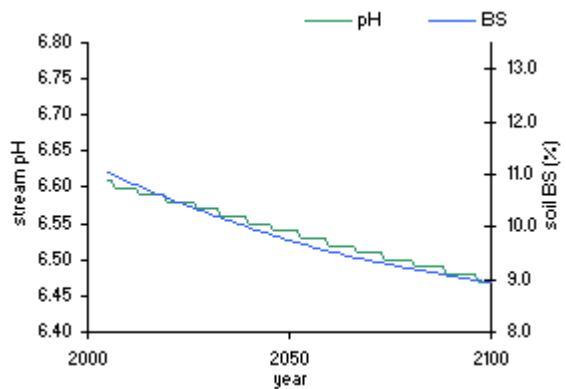
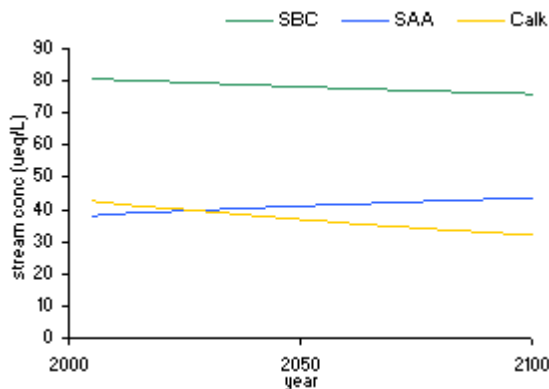
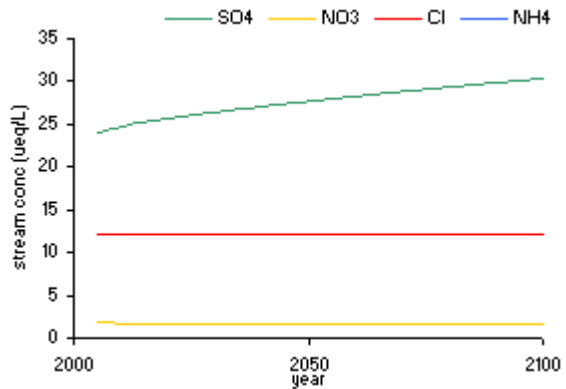
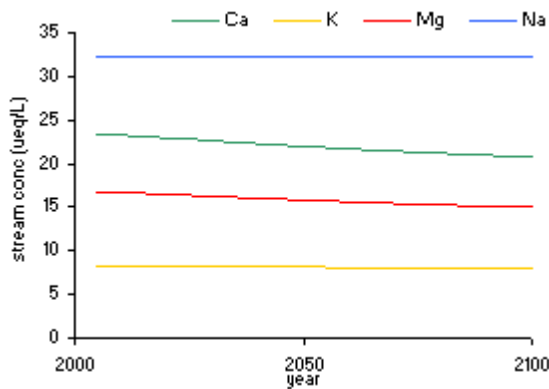


**Stream ID 239 - Indian Spring Branch**

**Hindcast**

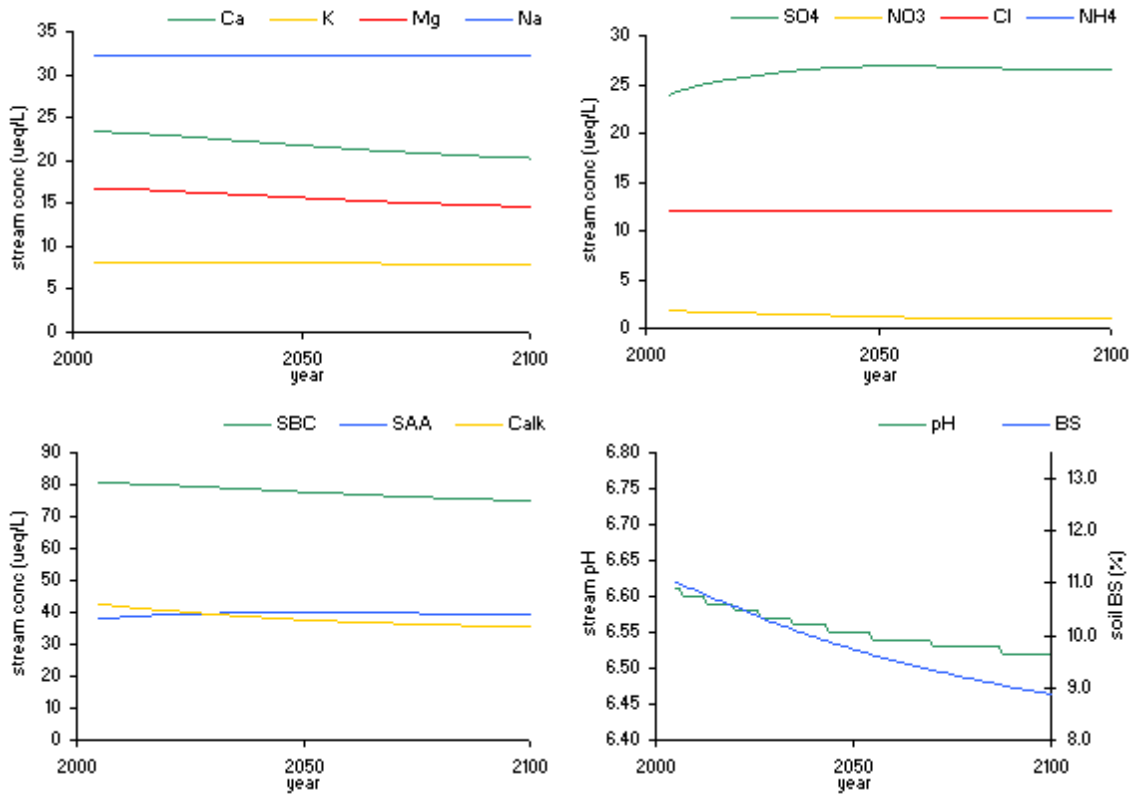


**Base**

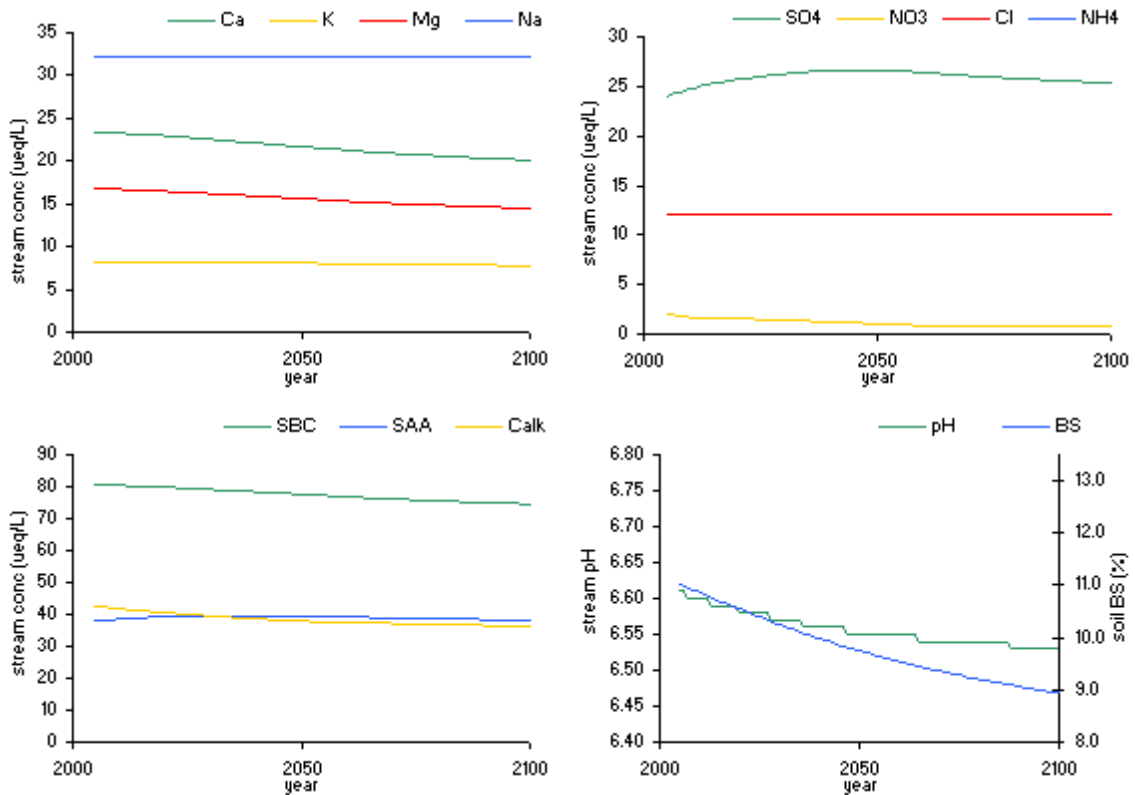


**Stream ID 239 - Indian Spring Branch**

**Moderate**

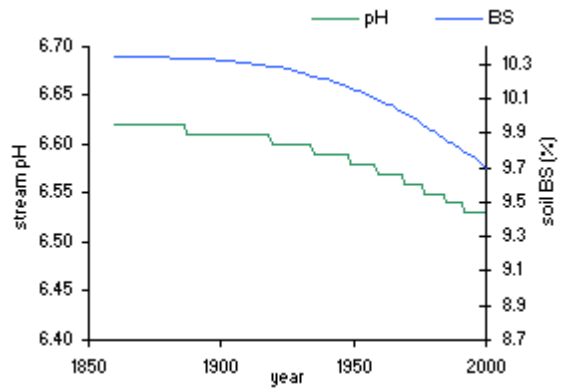
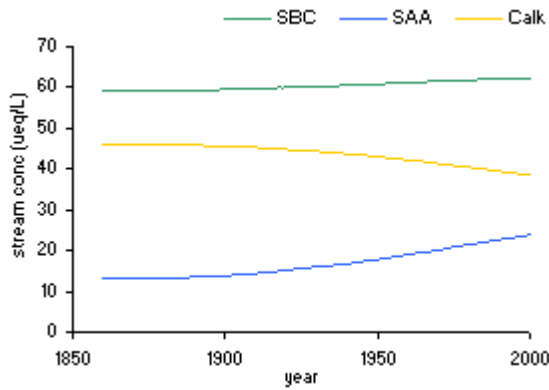
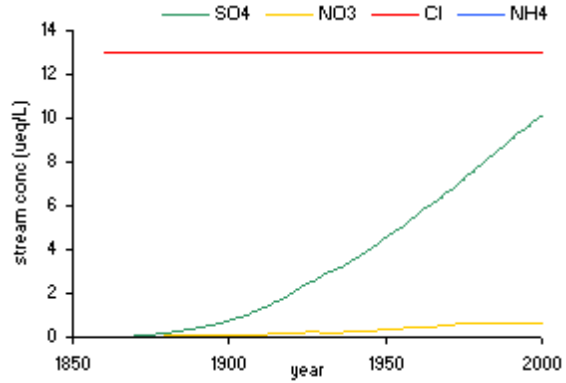
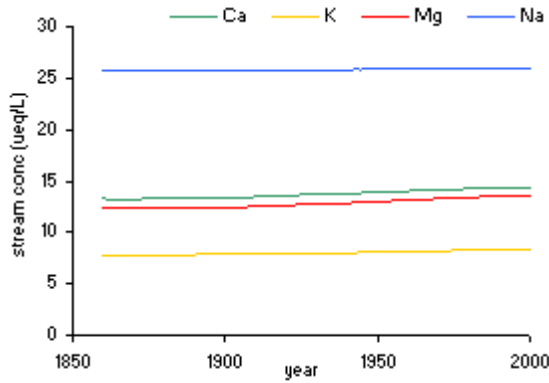


**Aggressive**

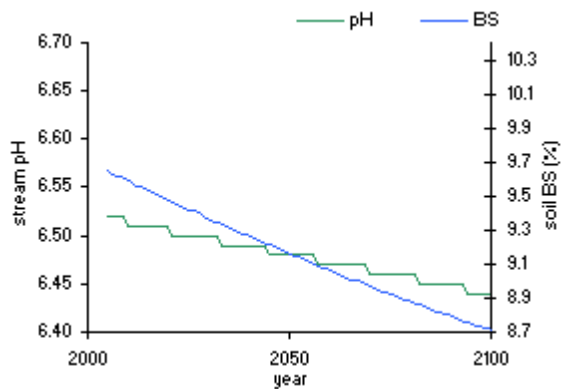
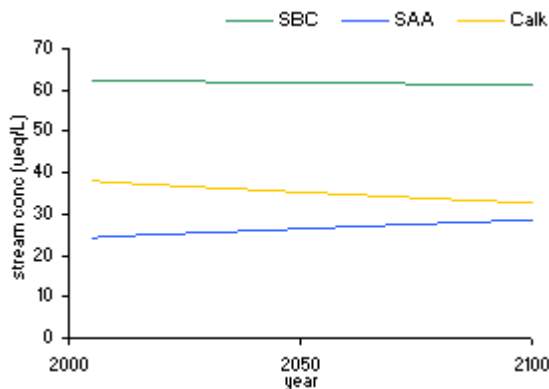
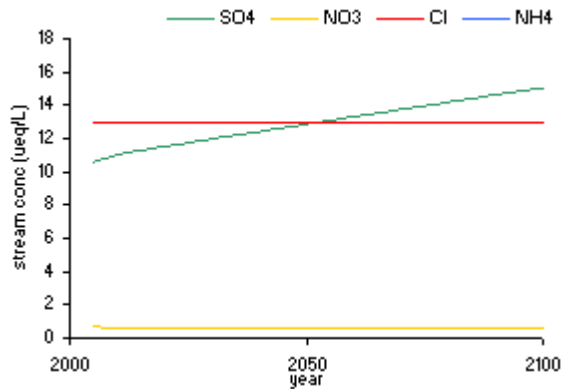
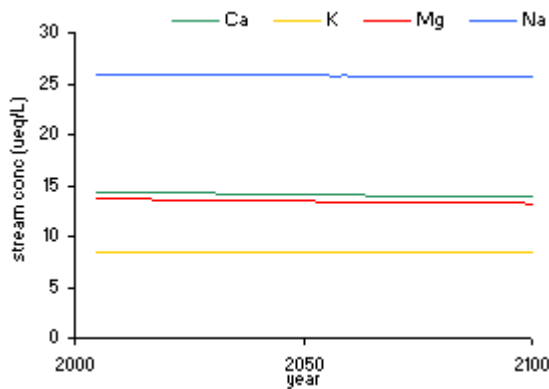


**Stream ID 217 - Kilby Creek**

**Hindcast**

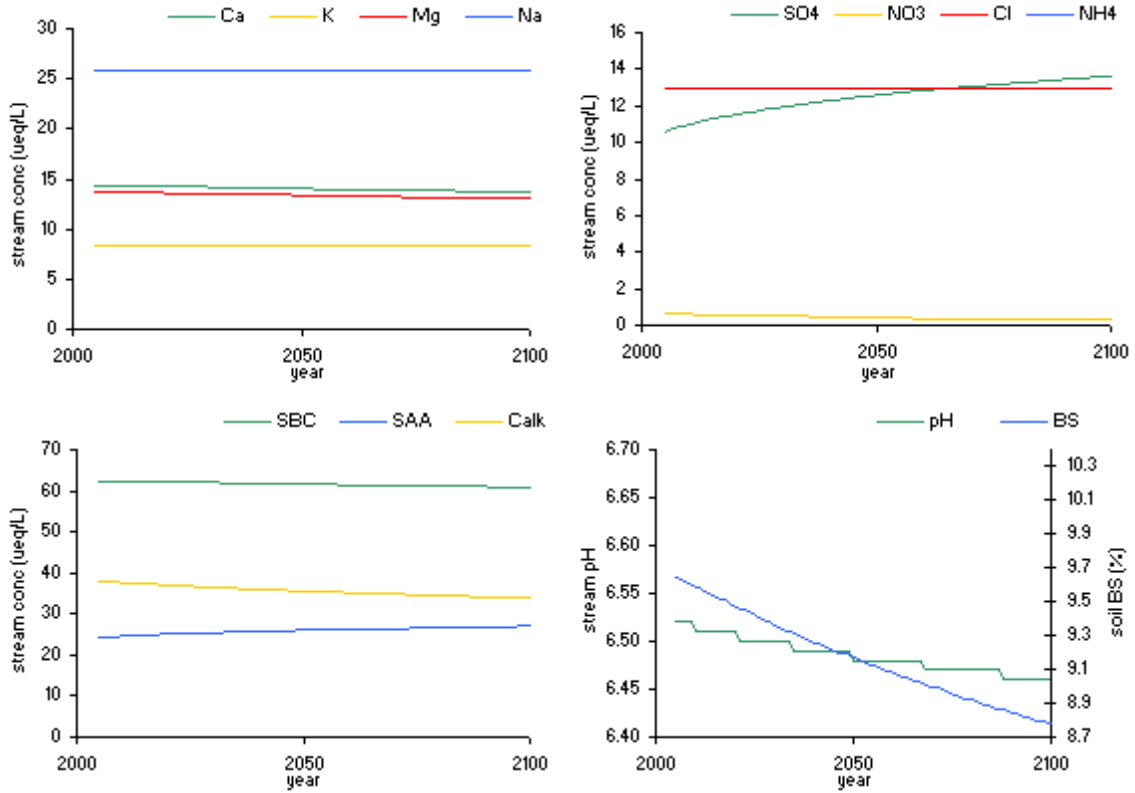


**Base**

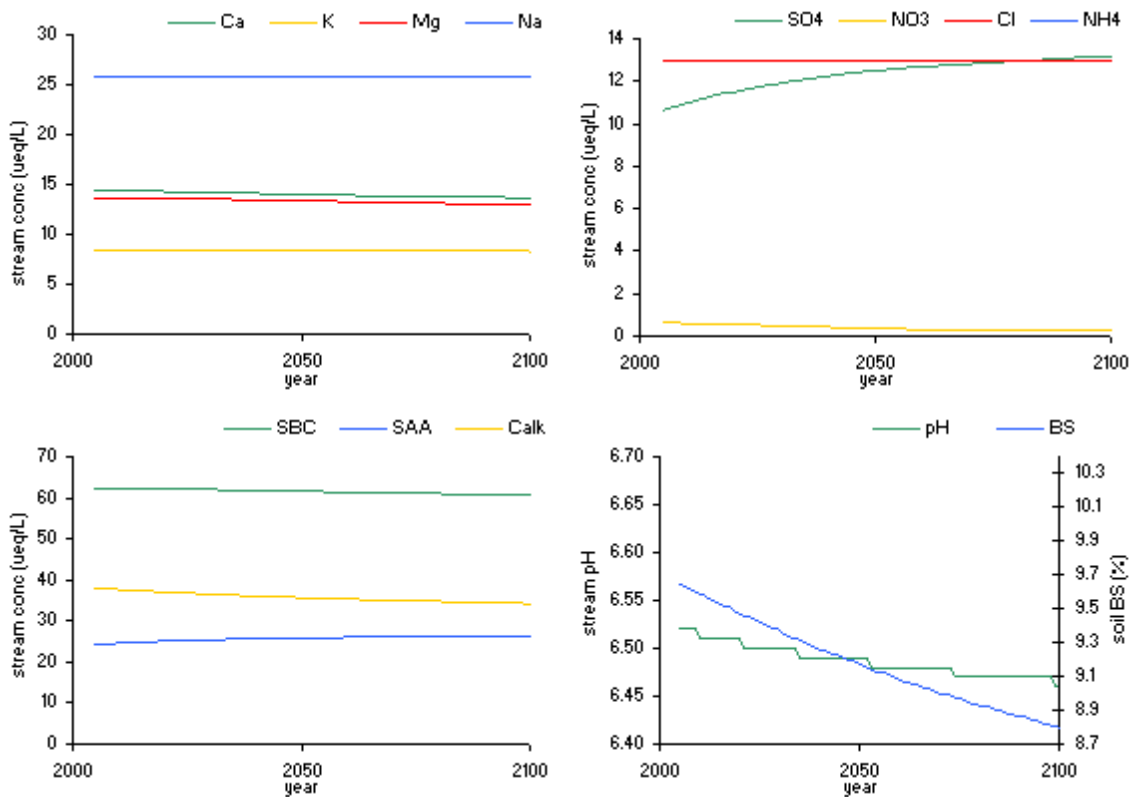


**Stream ID 217 - Kilby Creek**

**Moderate**



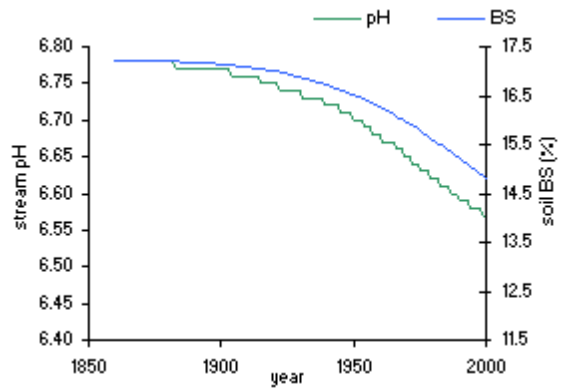
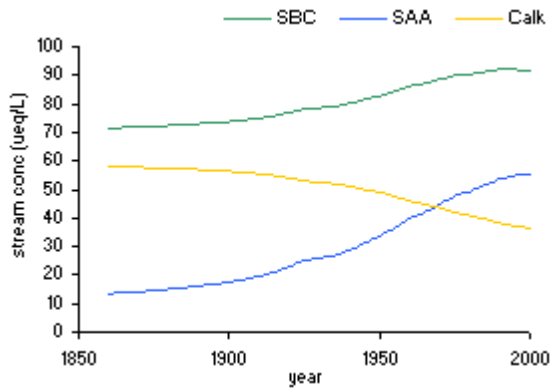
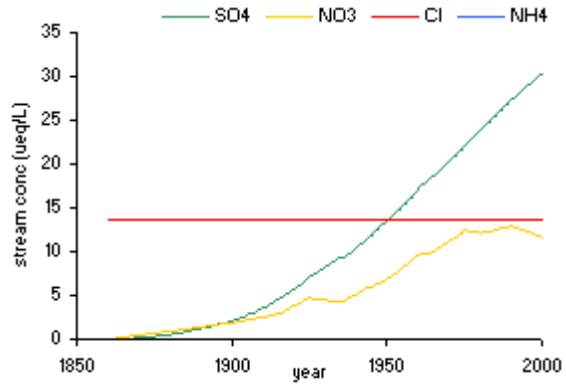
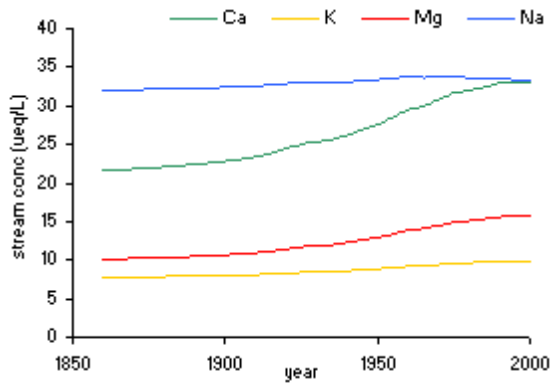
**Aggressive**



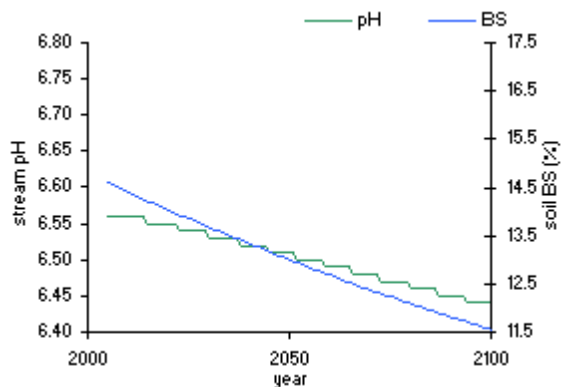
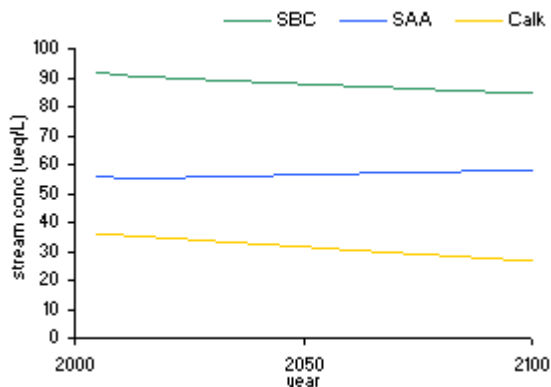
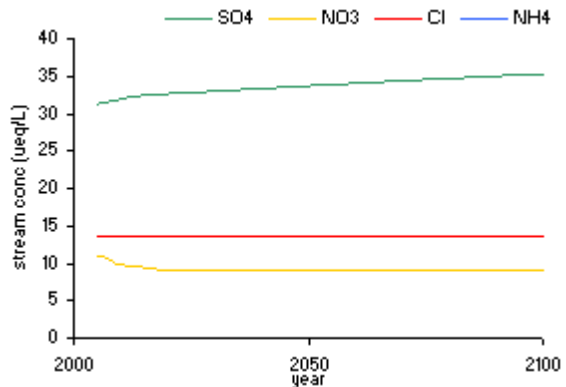
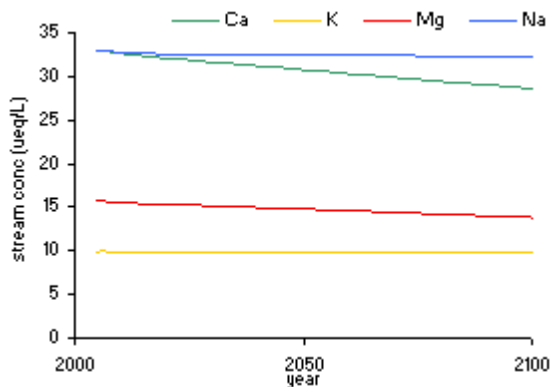


**Stream ID 260 - Kirkland Cove**

**Hindcast**

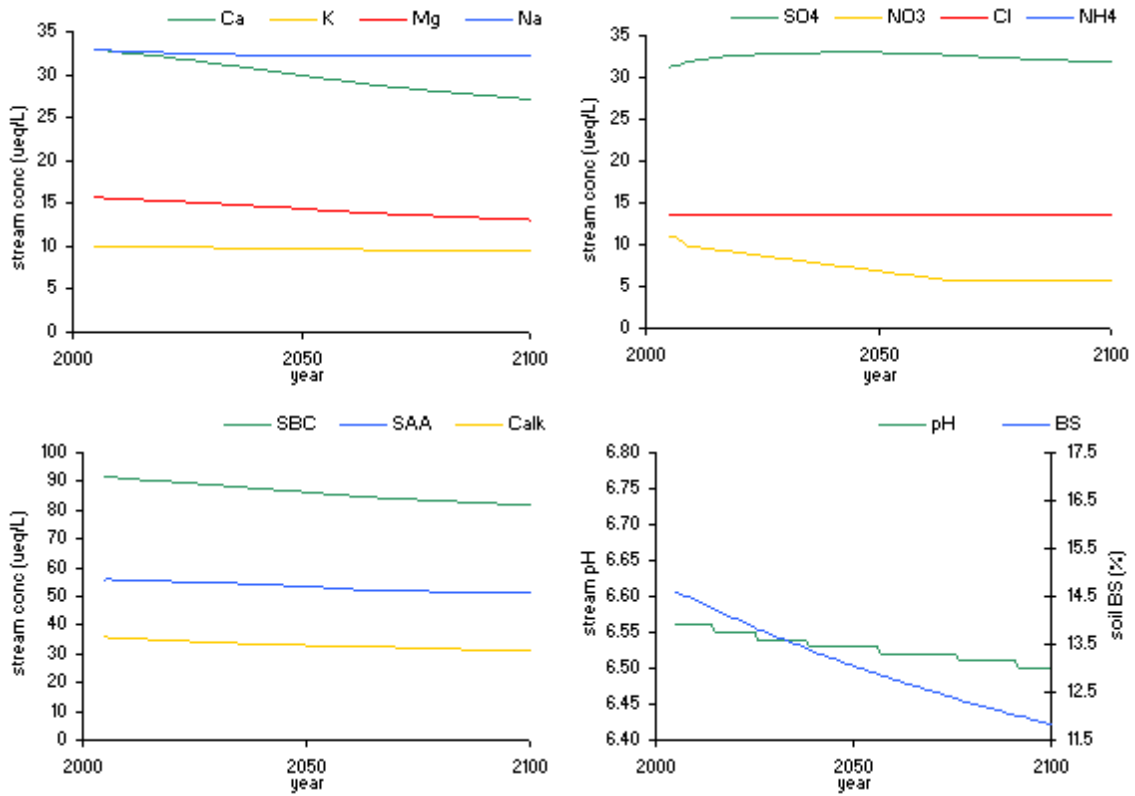


**Base**

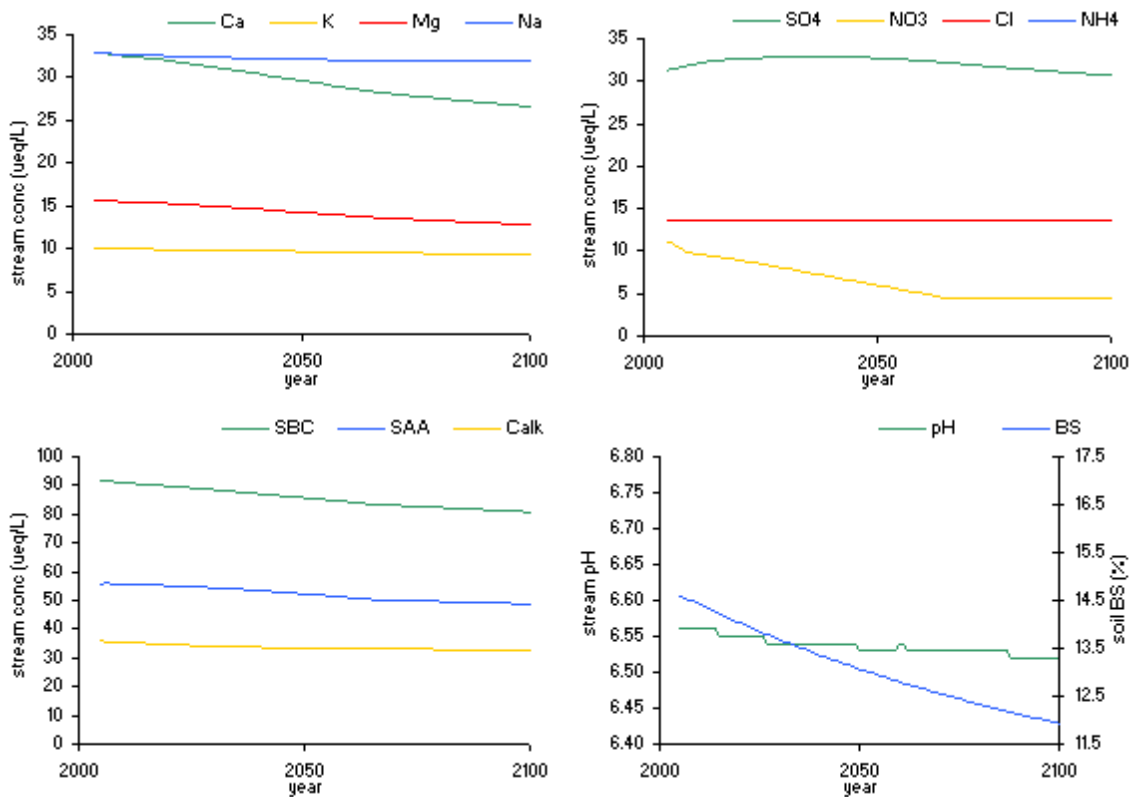


Stream ID 260 - Kirkland Cove

Moderate

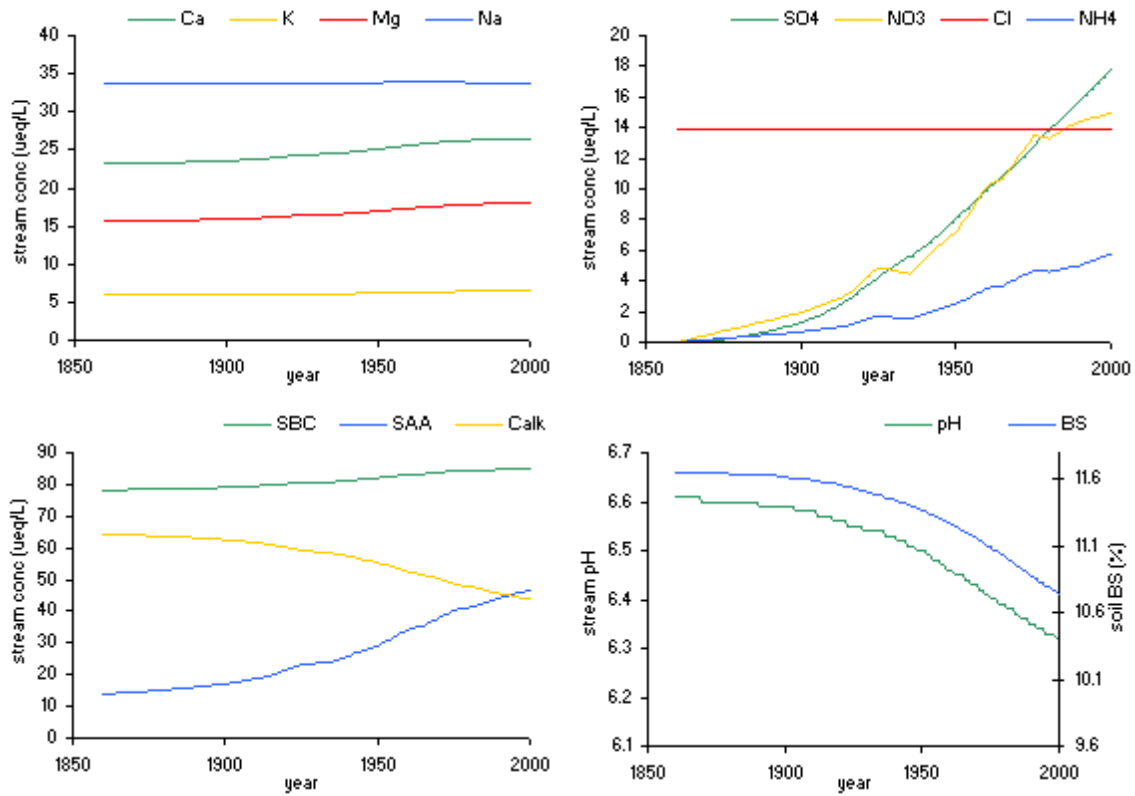


Aggressive

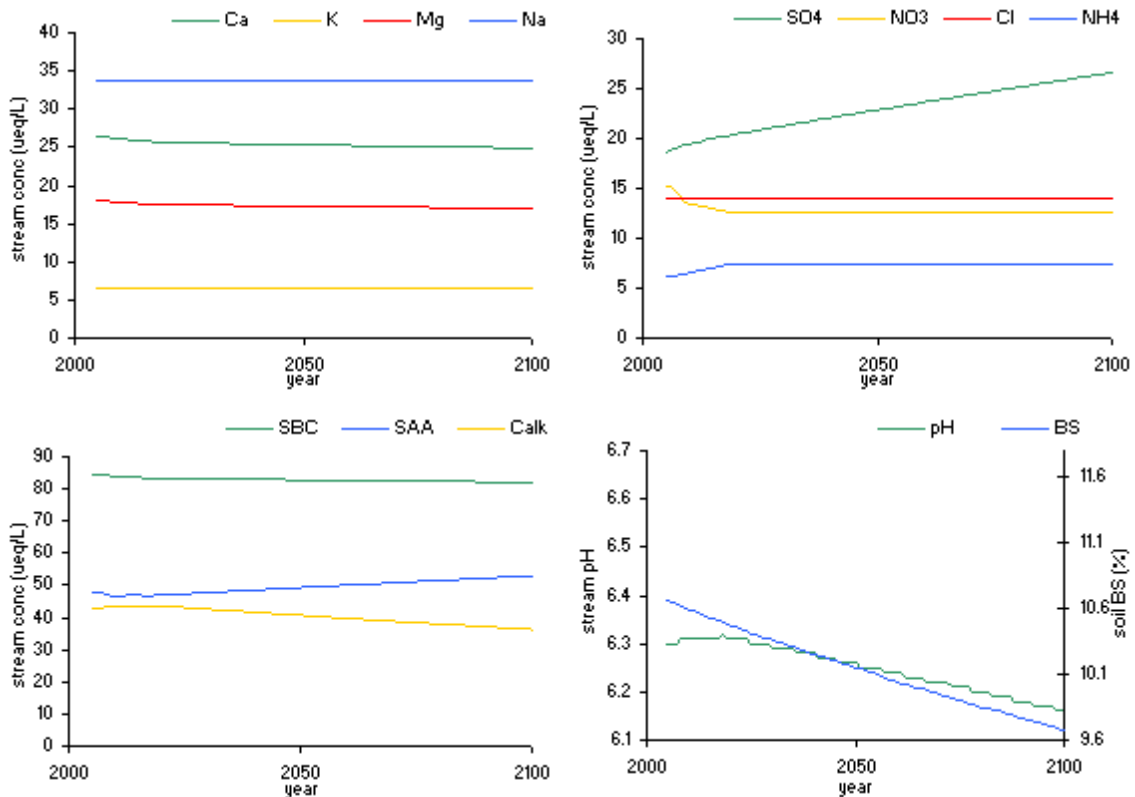


**Stream ID 61 - Left Prong South Toe River**

**Hindcast**

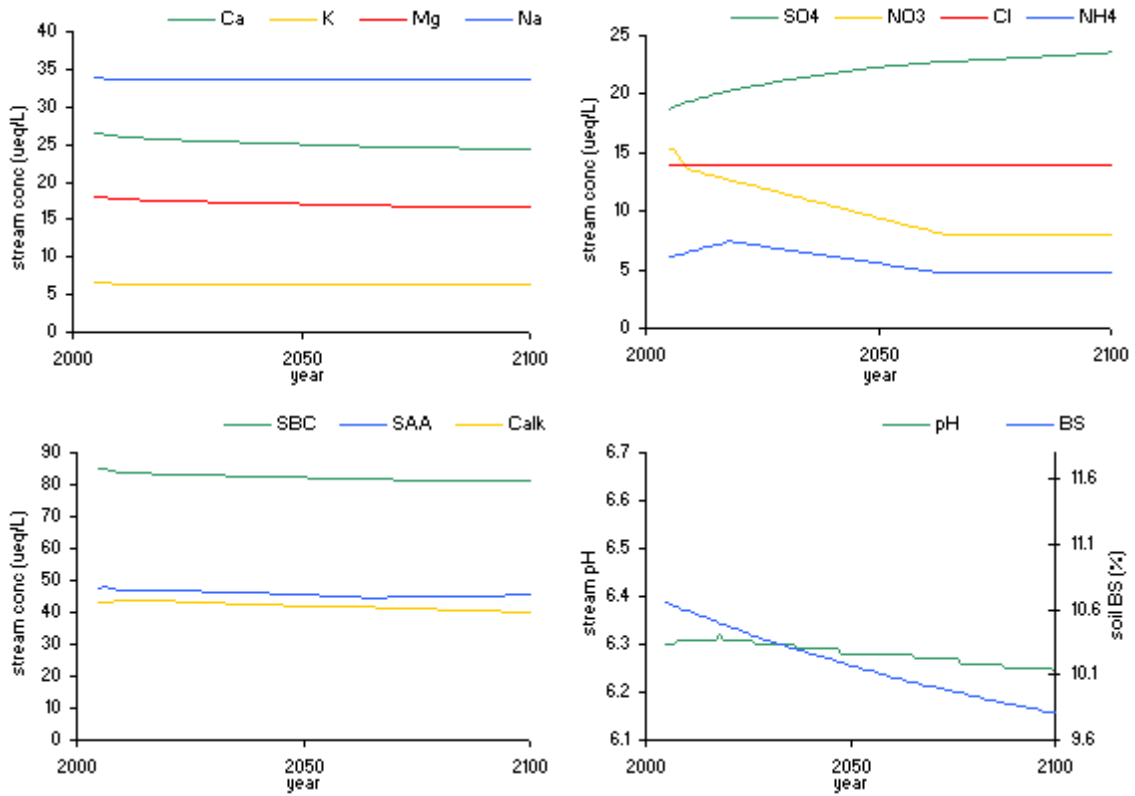


**Base**

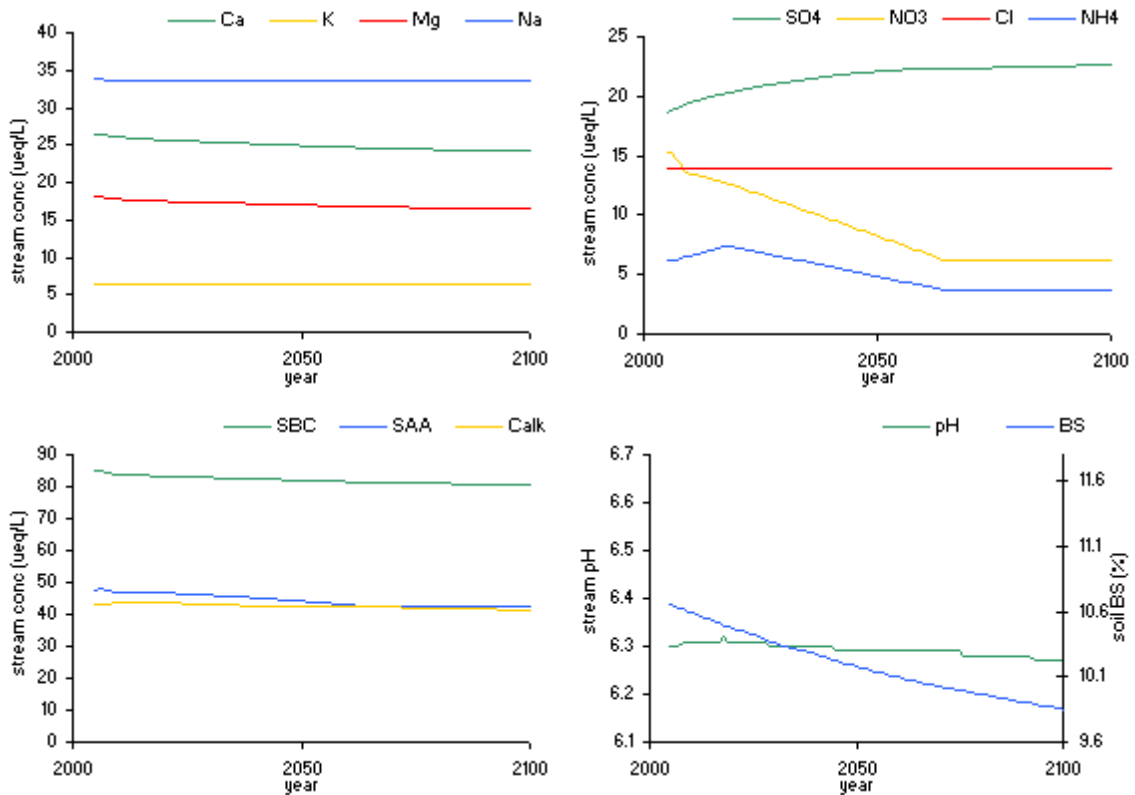


**Stream ID 61 - Left Prong South Toe River**

**Moderate**

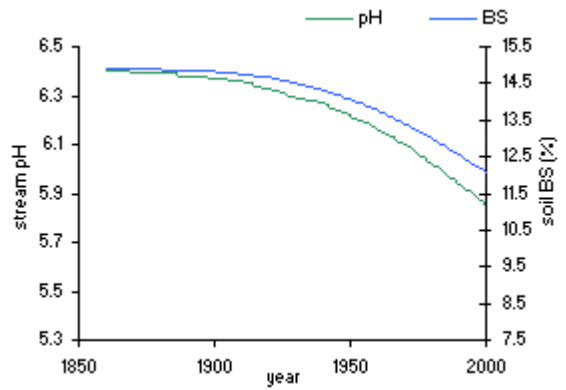
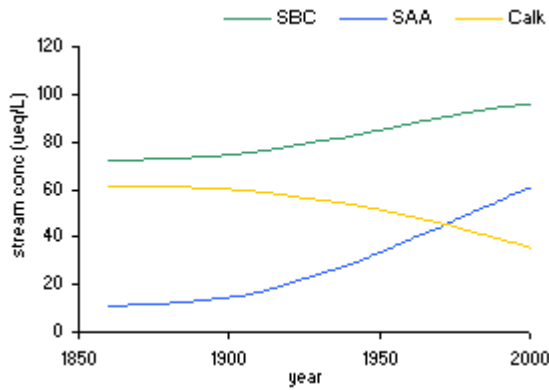
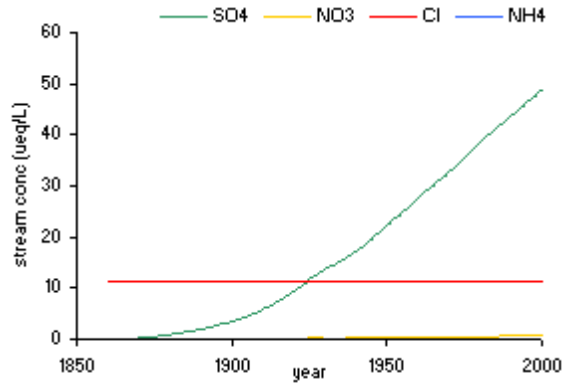
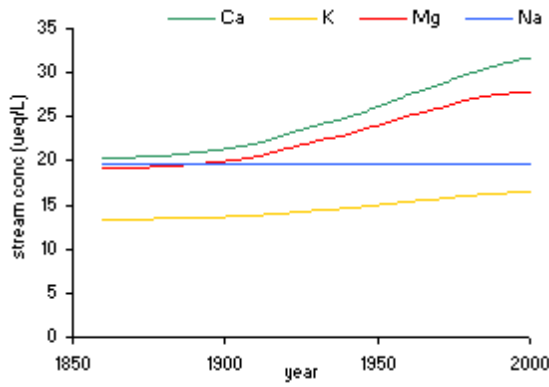


**Aggressive**

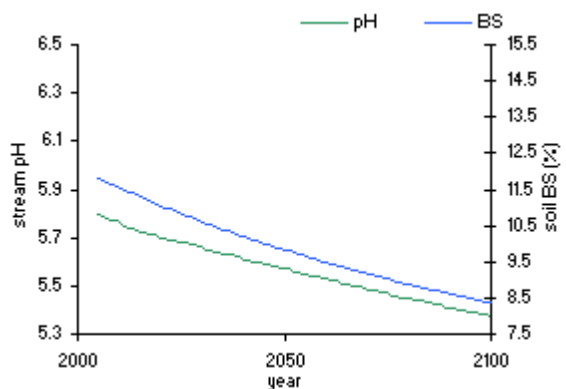
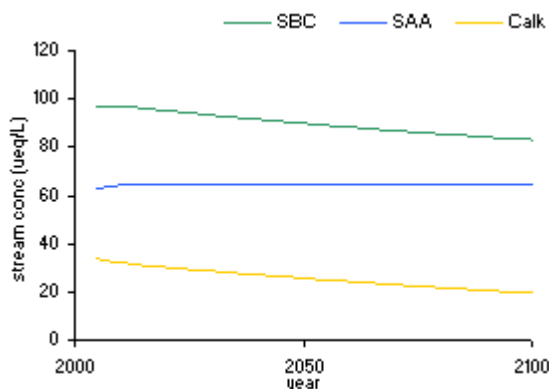
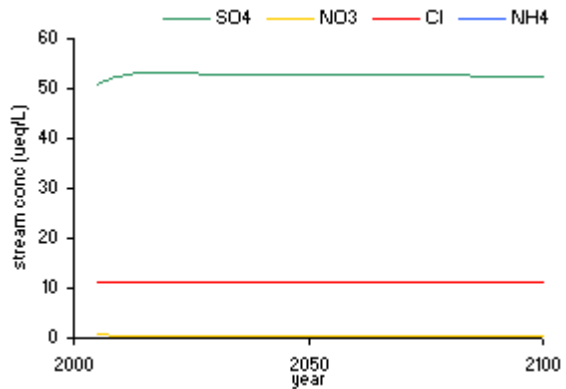
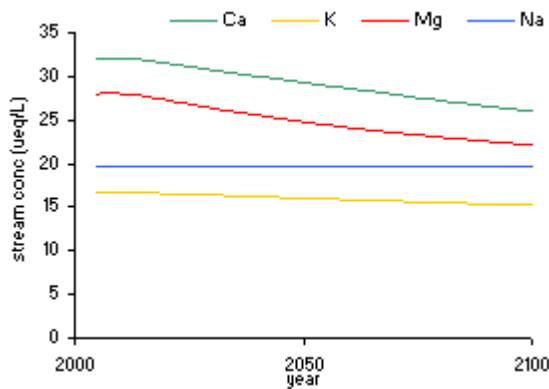


# Stream ID 35 – Lindy Camp Branch

## Hindcast

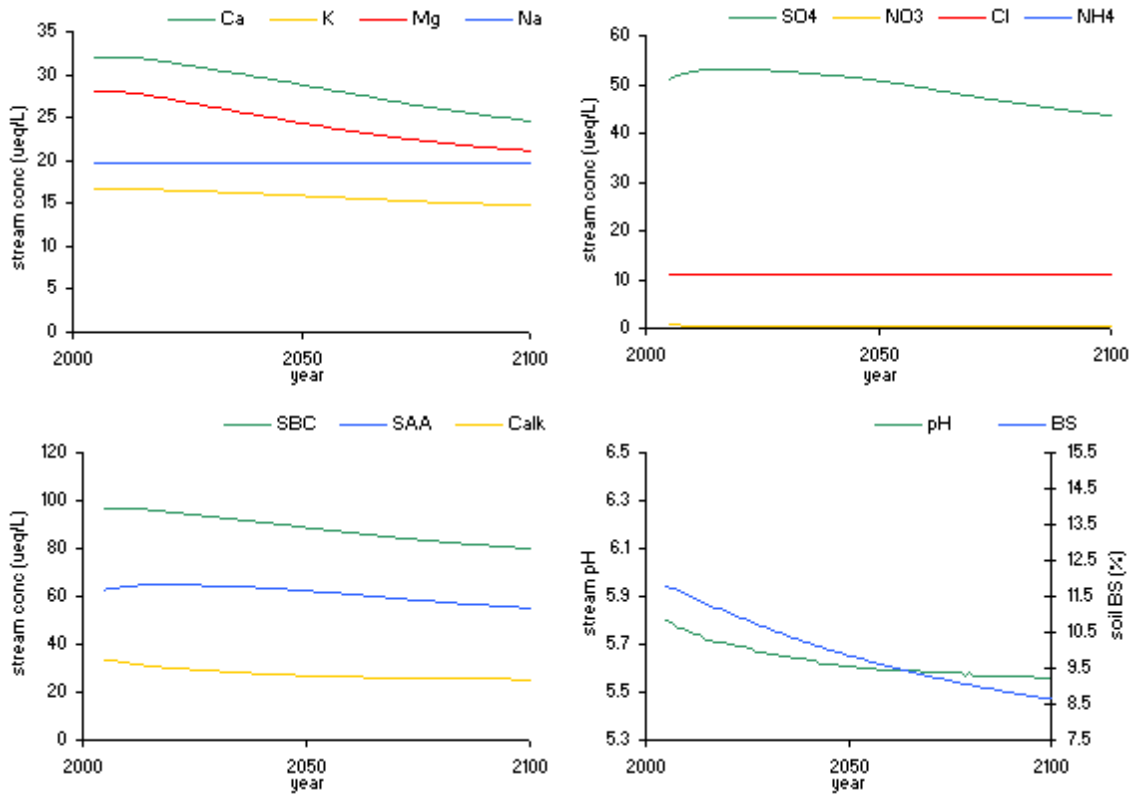


## Base

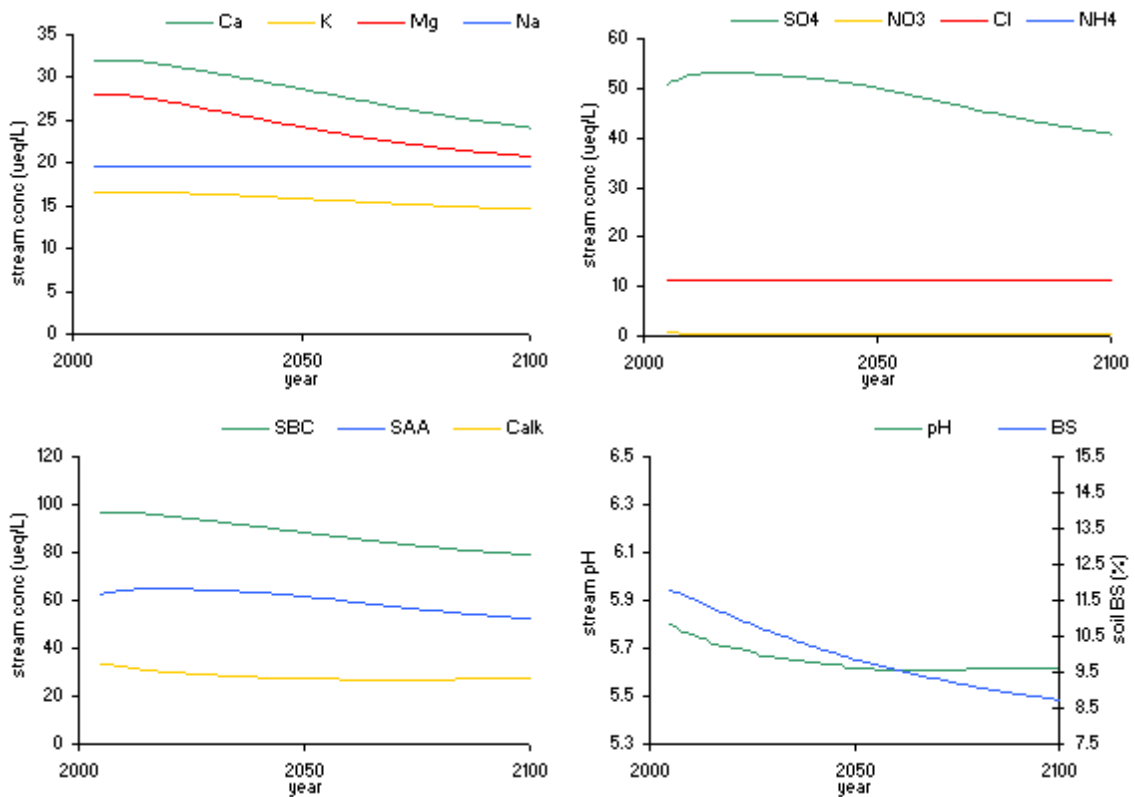


**Stream ID 35 – Lindy Camp Branch**

**Moderate**

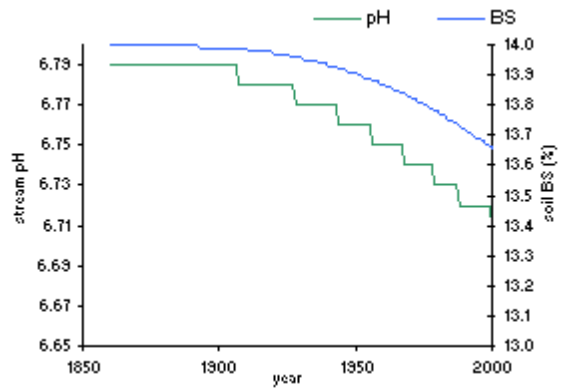
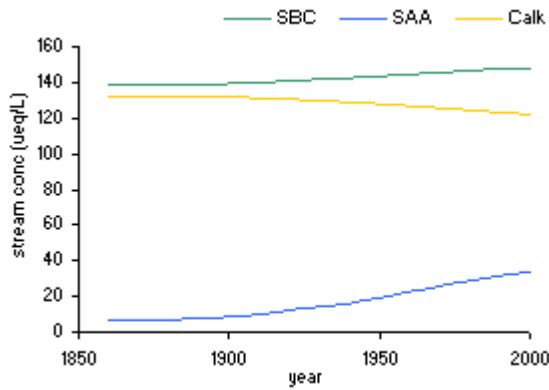
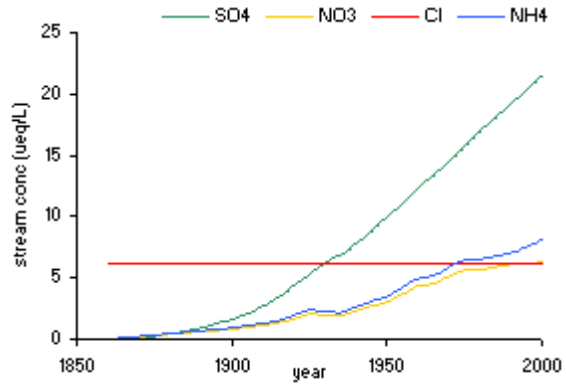
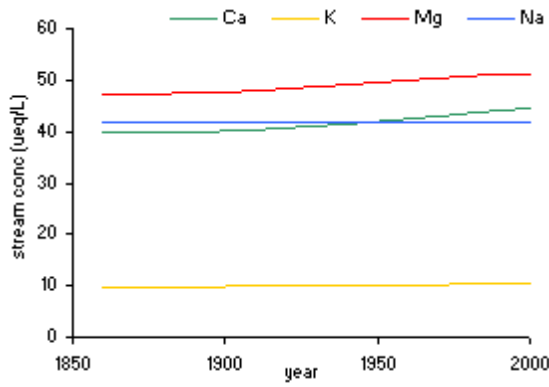


**Aggressive**

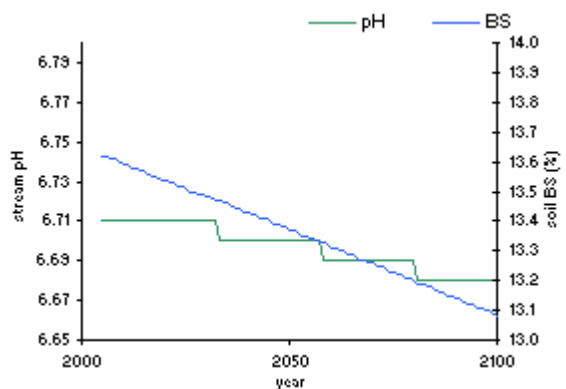
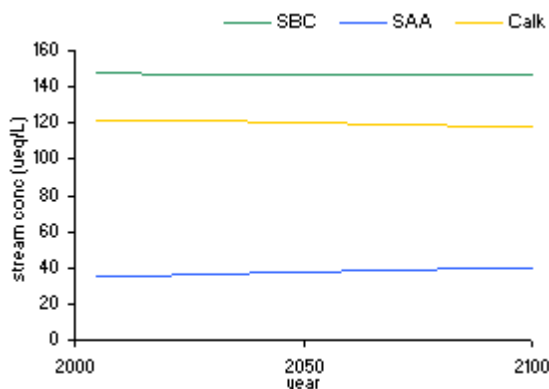
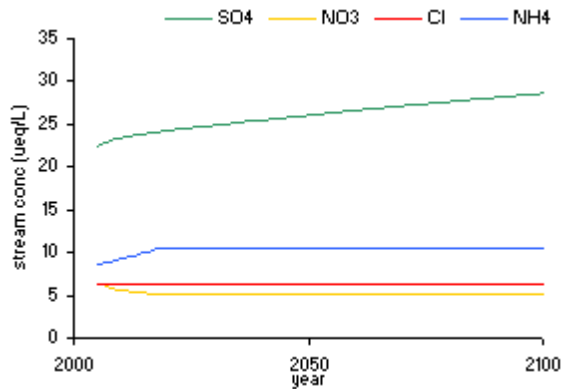
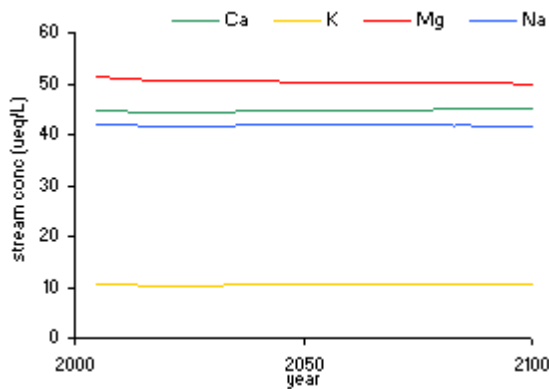


**Stream ID 91 - Little Prong Hickey Fork**

**Hindcast**

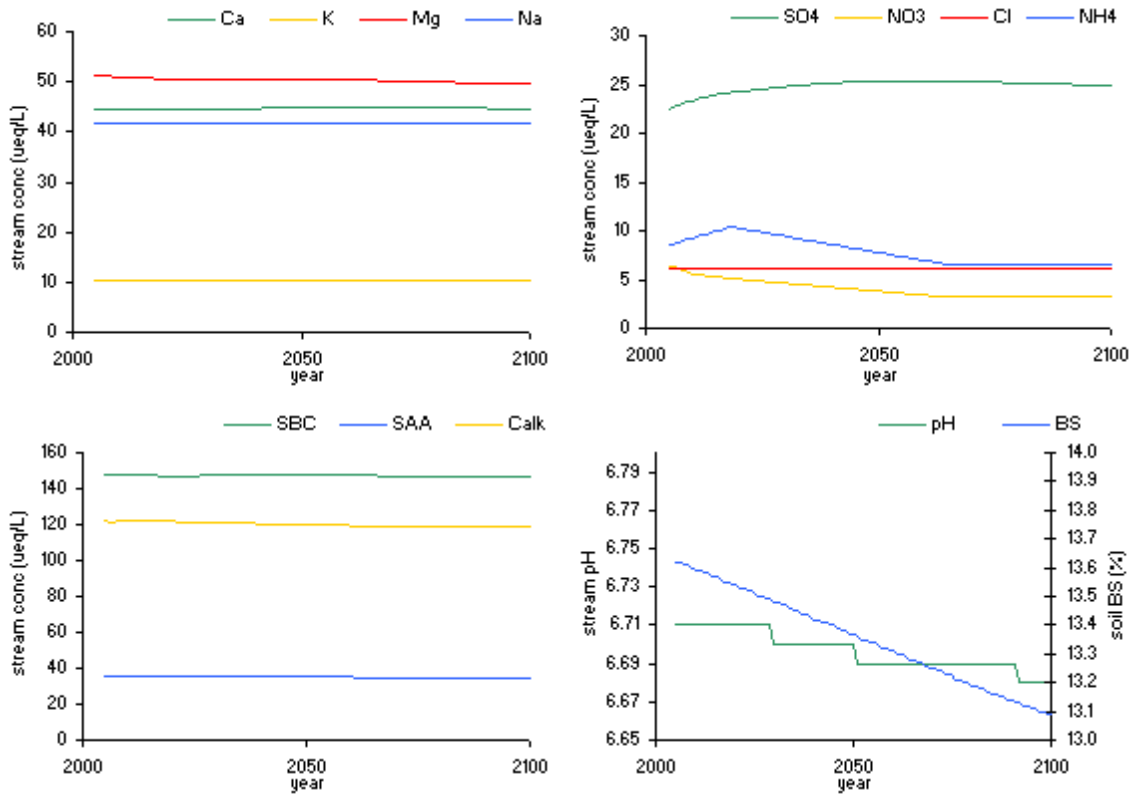


**Base**

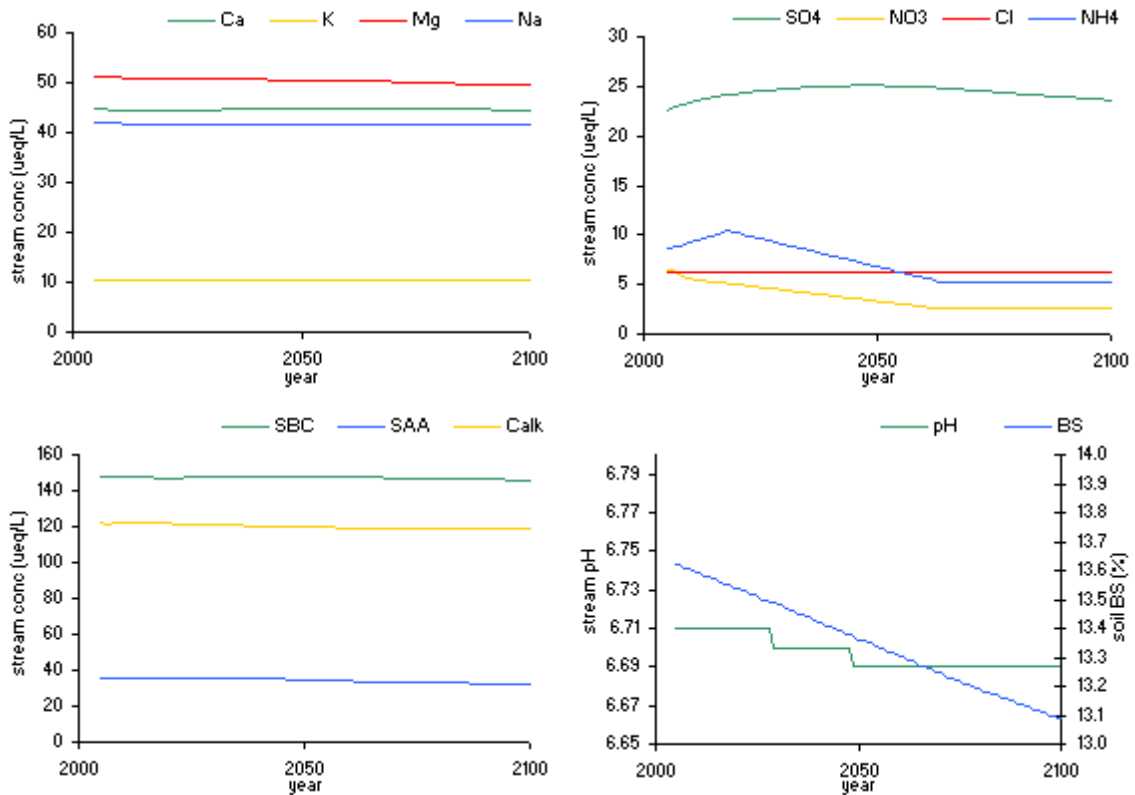


**Stream ID 91 - Little Prong Hickey Fork**

**Moderate**



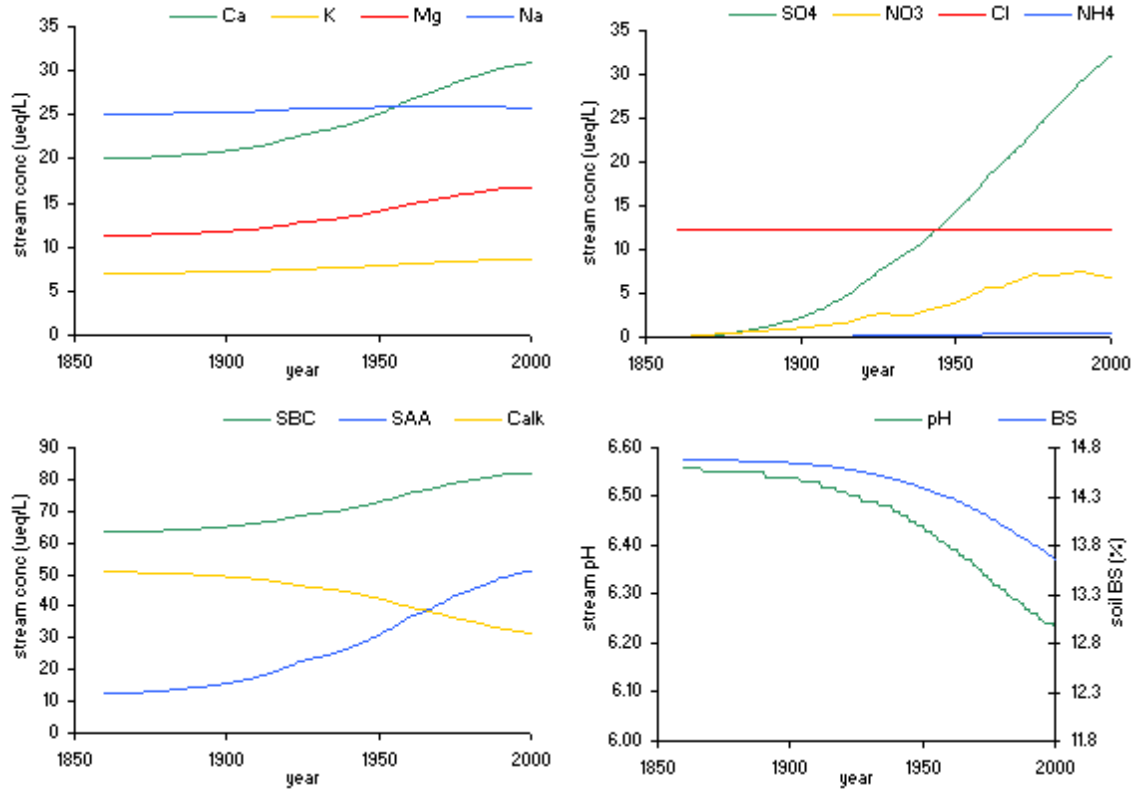
**Aggressive**



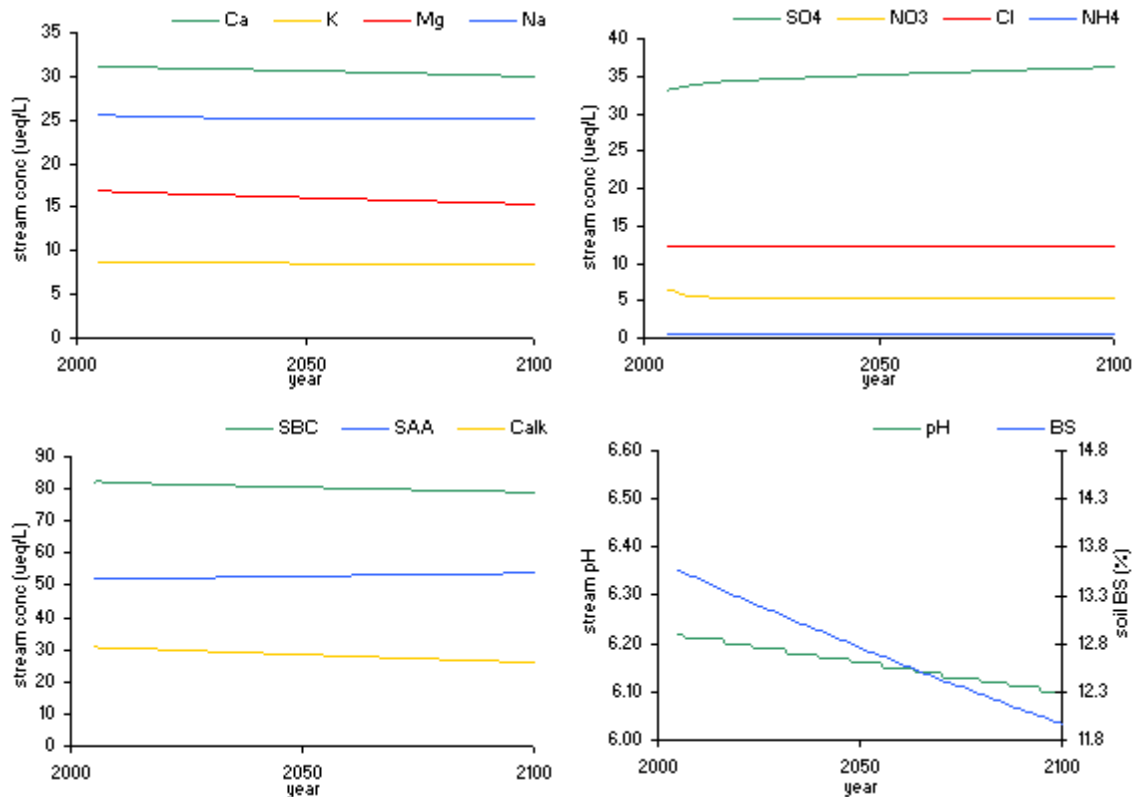


**Stream ID 281 – Little Santetlah Creek (NuCM site)**

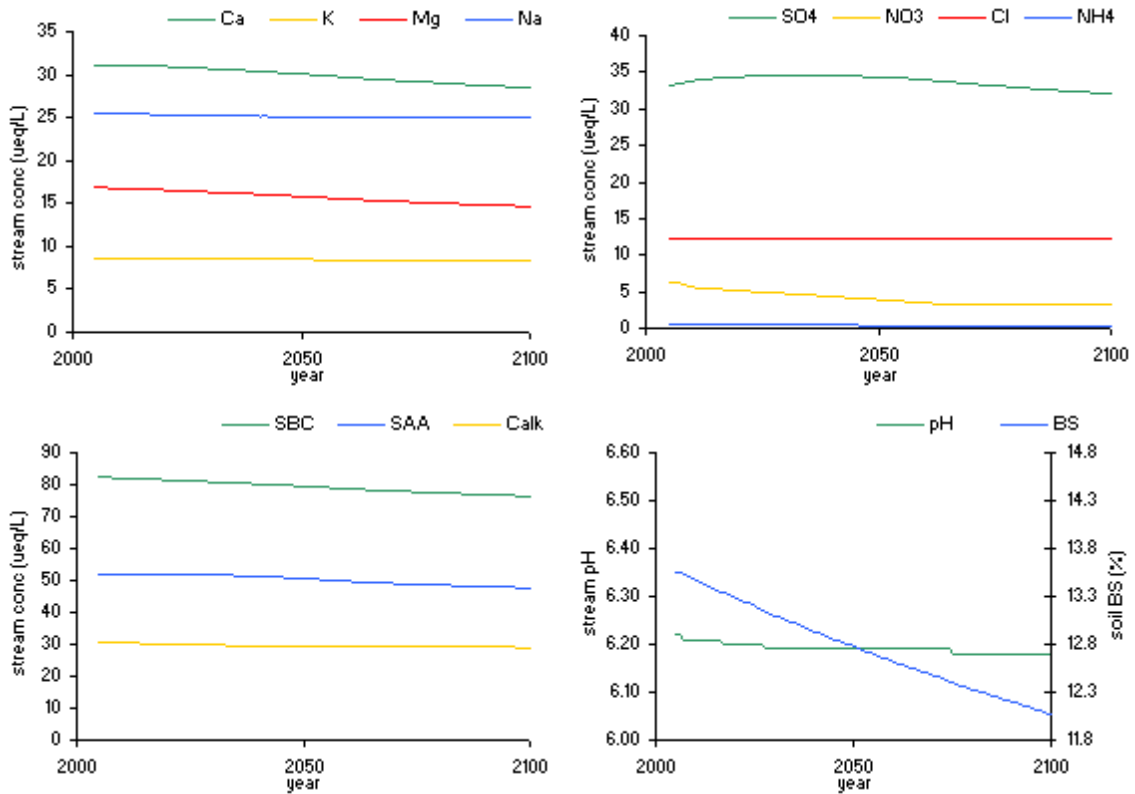
**Hindcast**



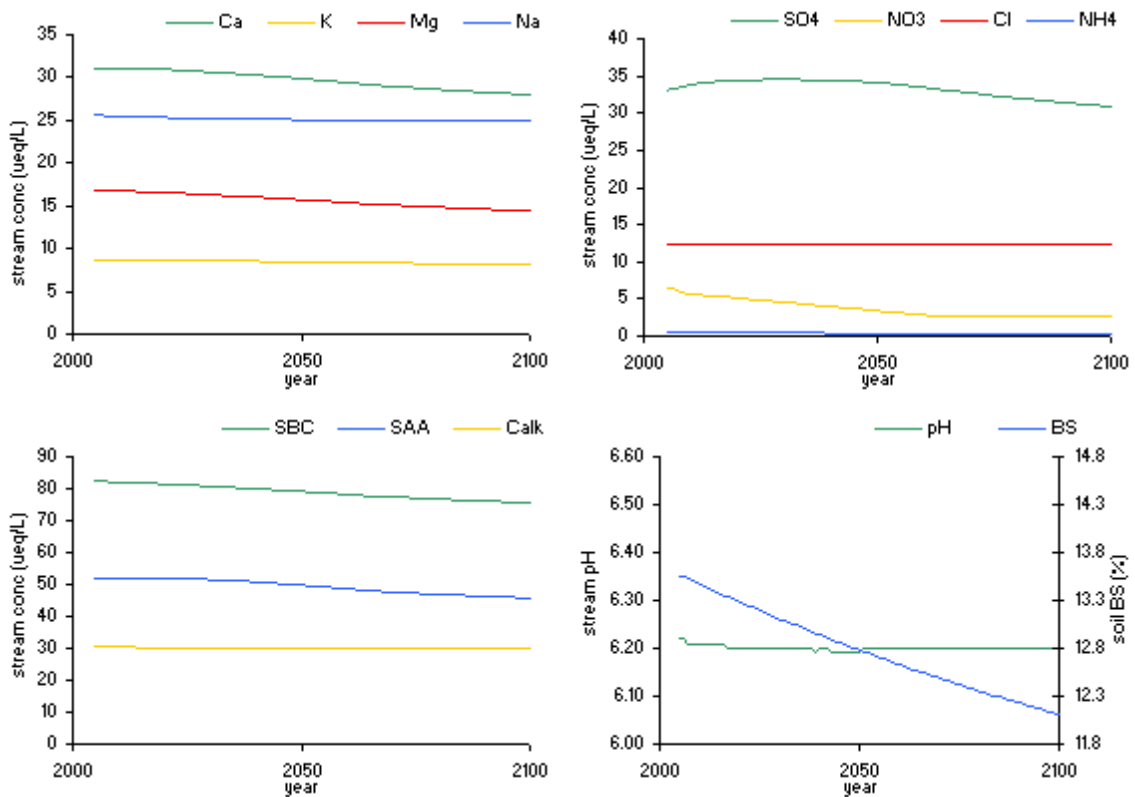
**Base**



**Stream ID 281 - Little Santetlah Creek (NuCM site)**  
**Moderate**

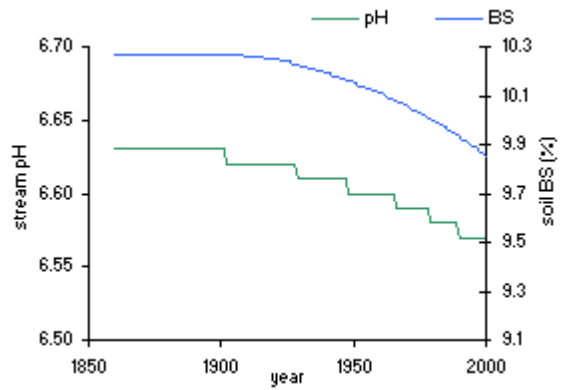
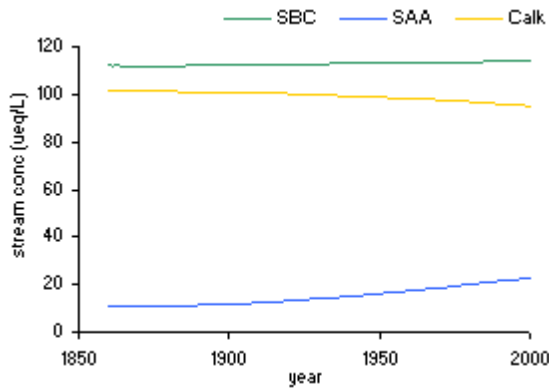
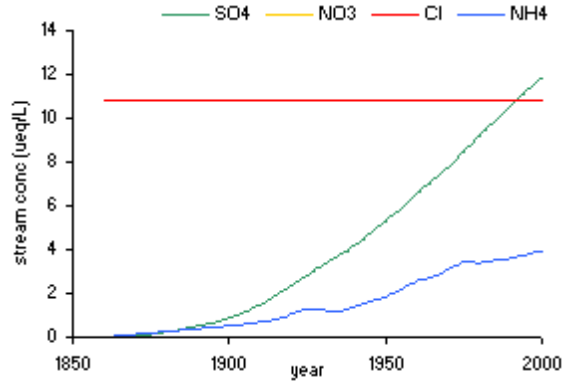
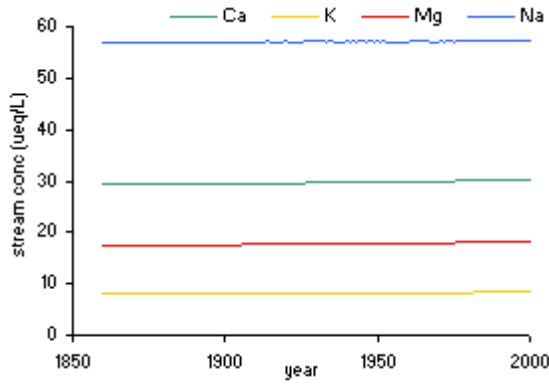


**Aggressive**

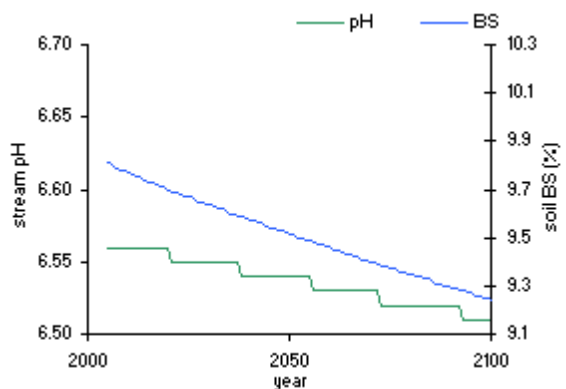
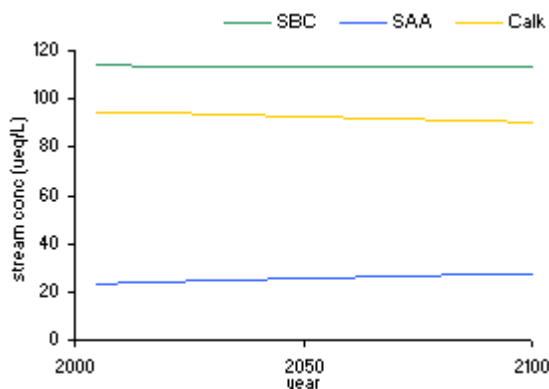
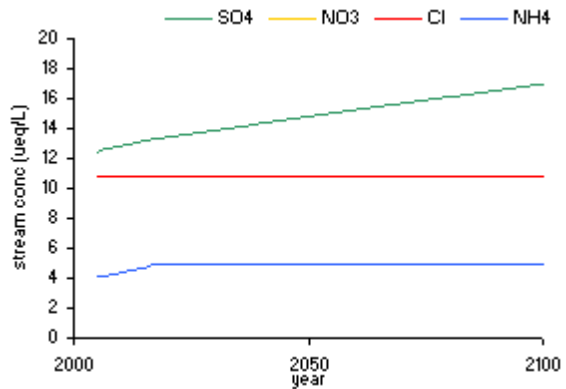
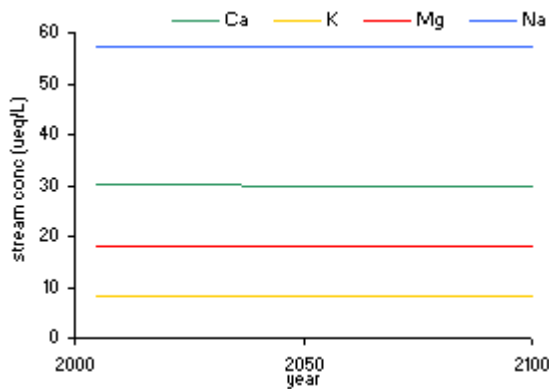


# Stream ID 103 - Long Branch

## Hindcast

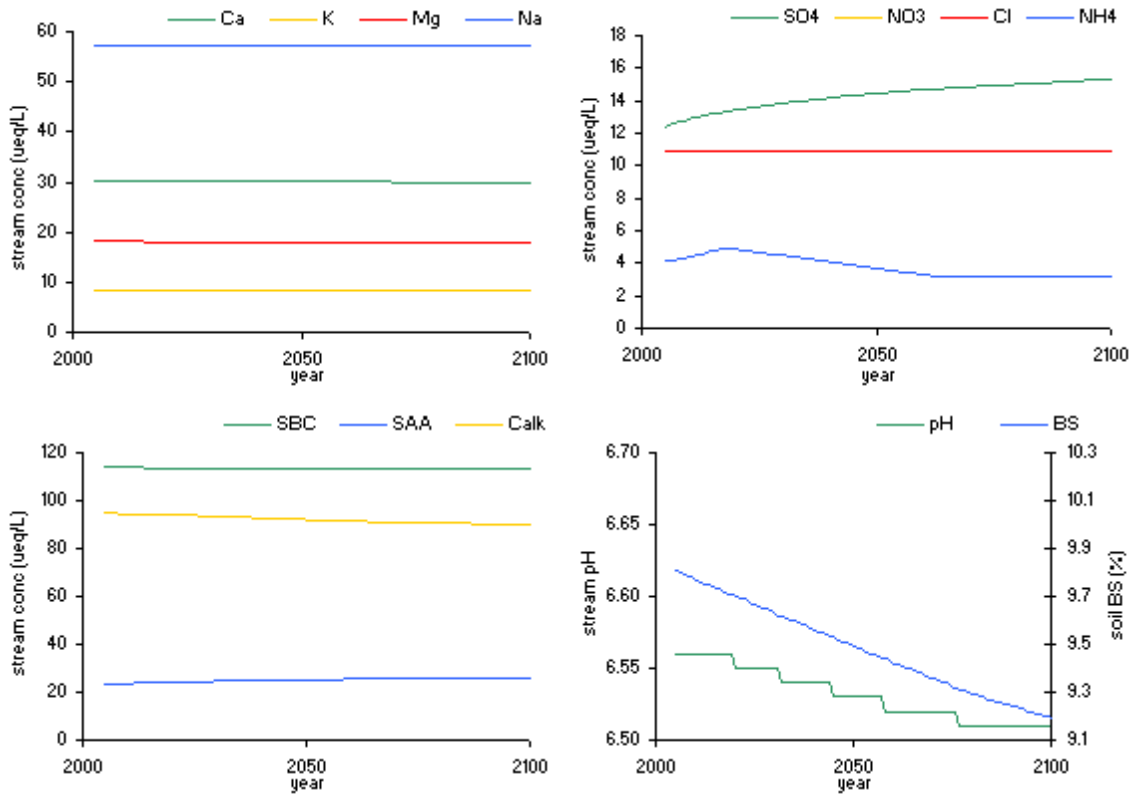


## Base

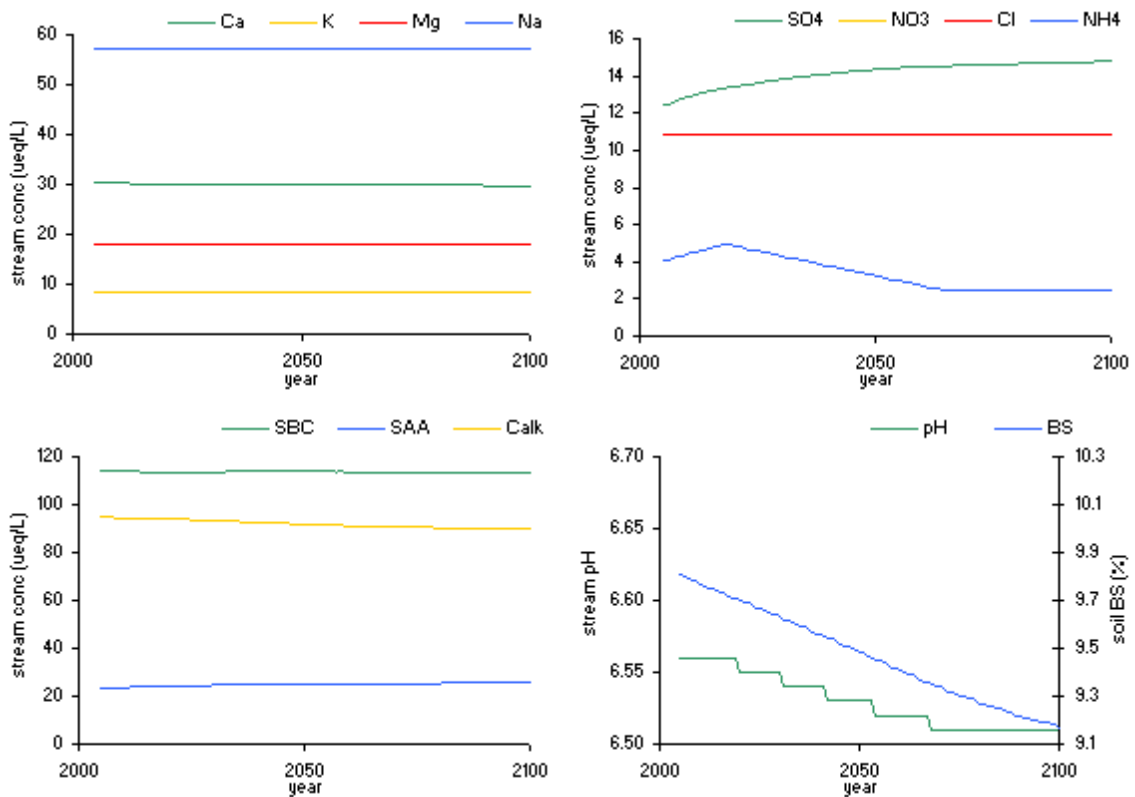


**Stream ID 103 - Long Branch**

**Moderate**

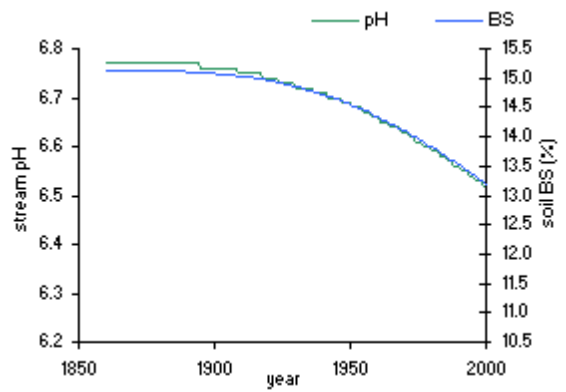
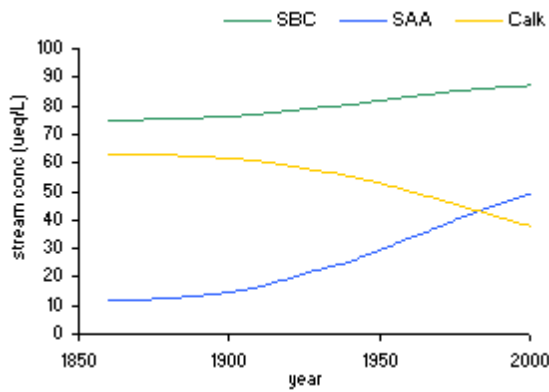
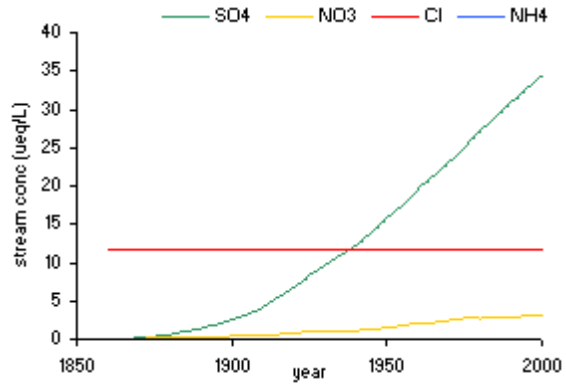
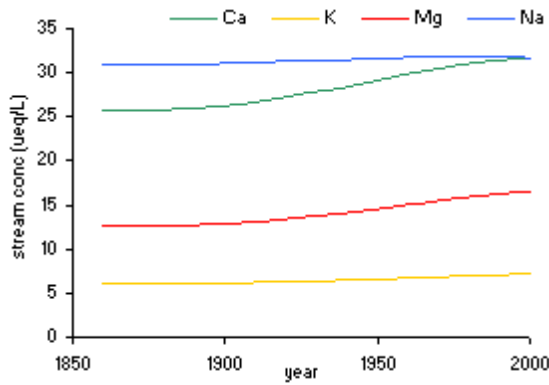


**Aggressive**

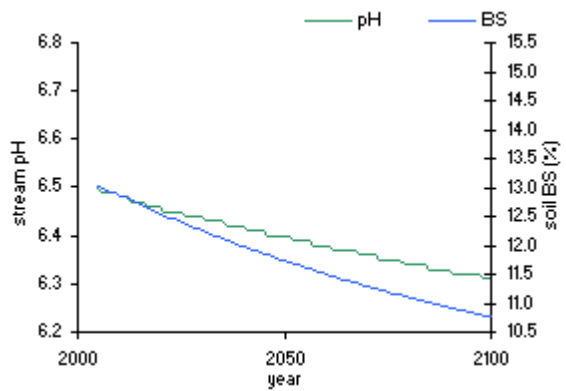
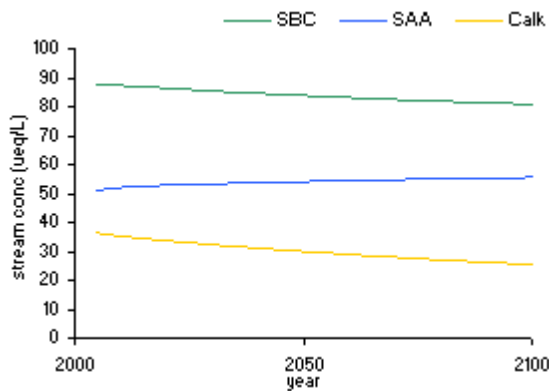
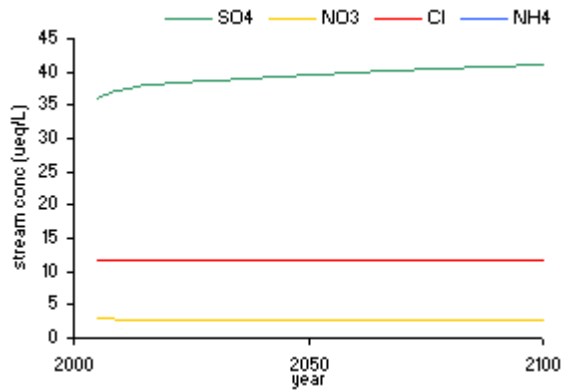
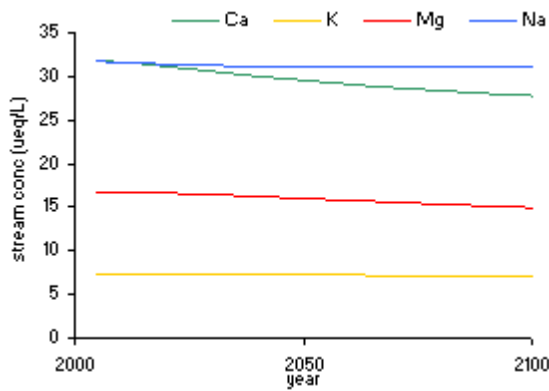


**Stream ID 56 - Lost Cove**

**Hindcast**

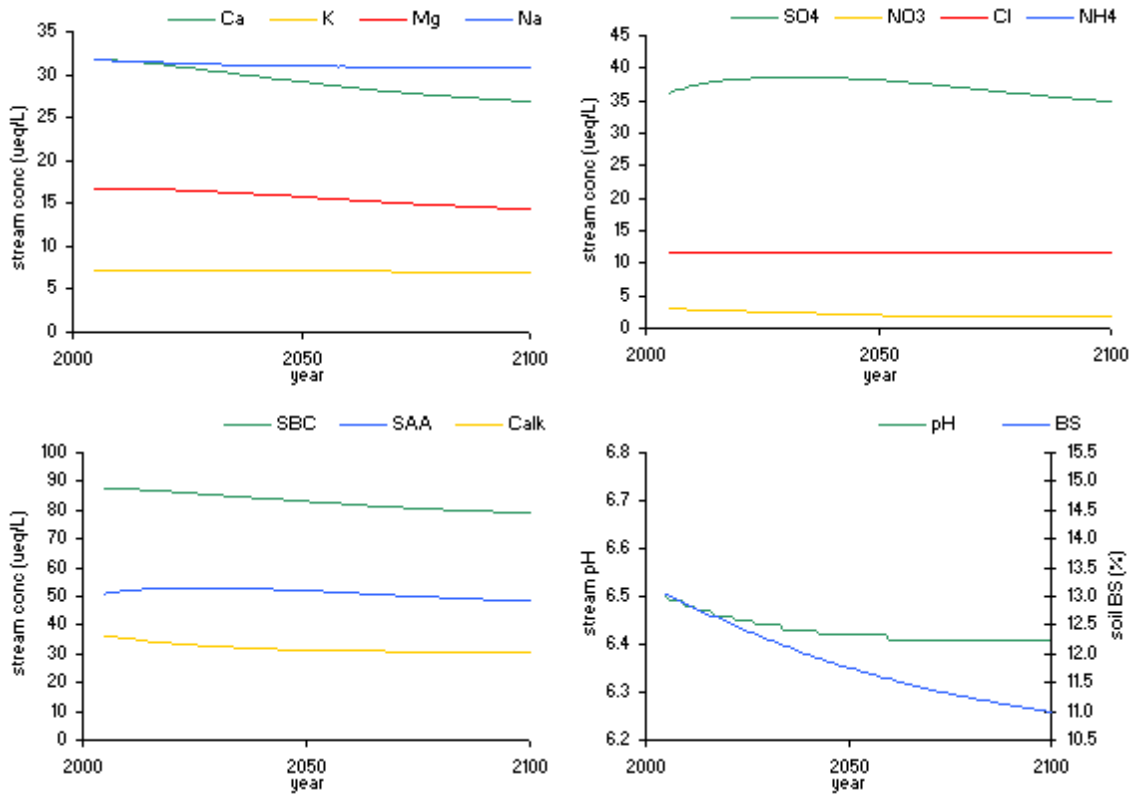


**Base**

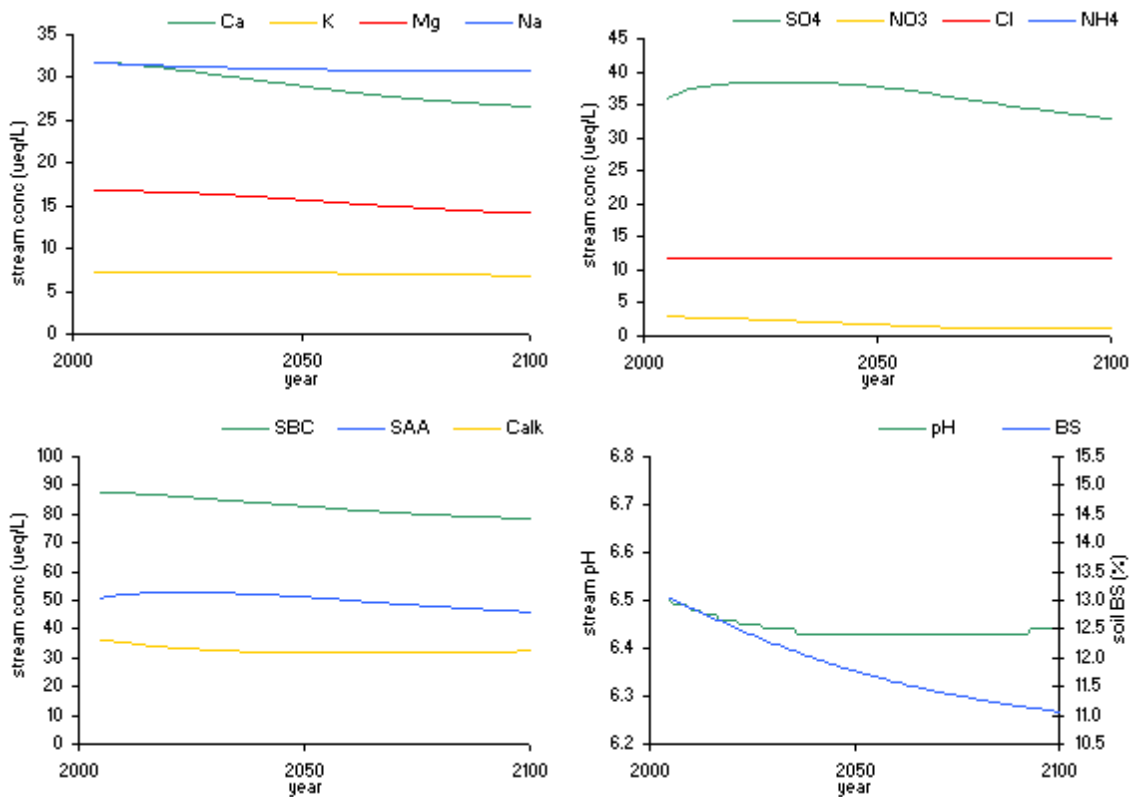


**Stream ID 56 - Lost Cove**

**Moderate**

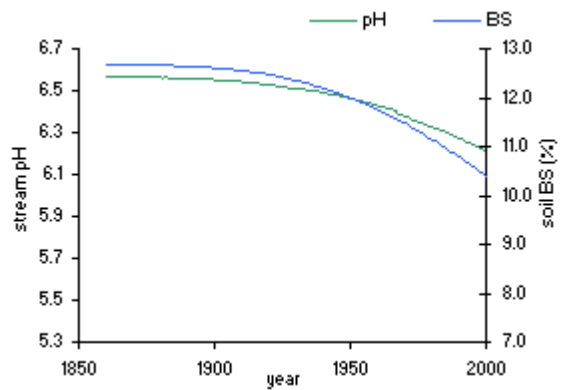
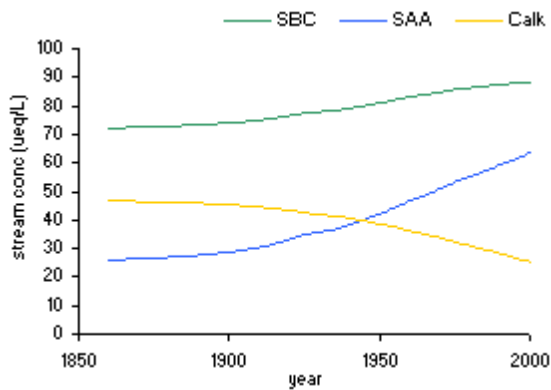
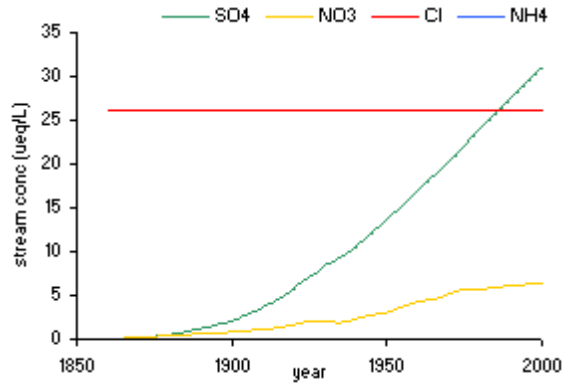
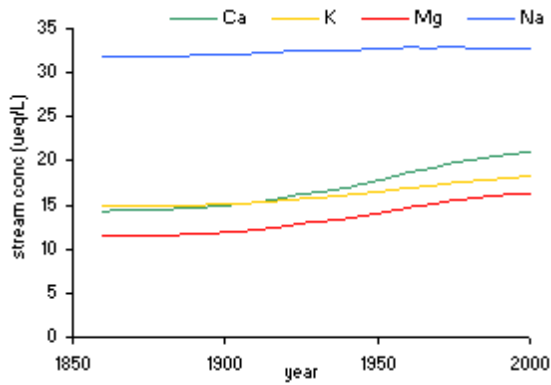


**Aggressive**

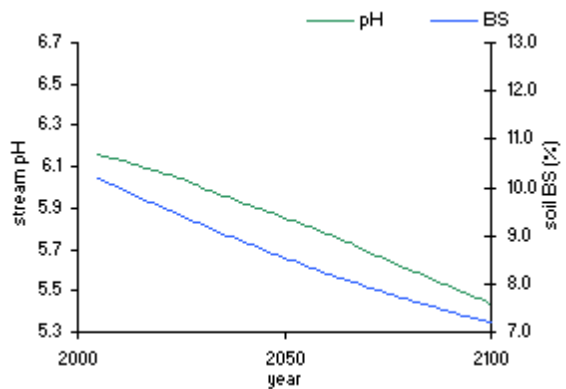
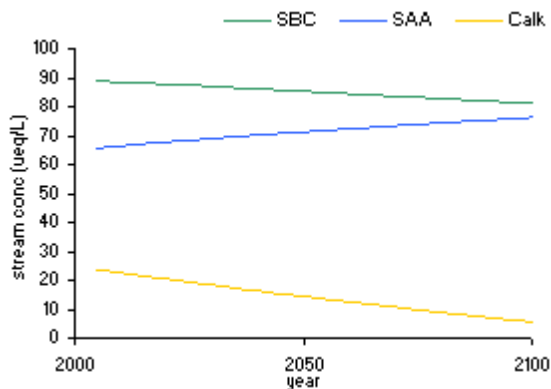
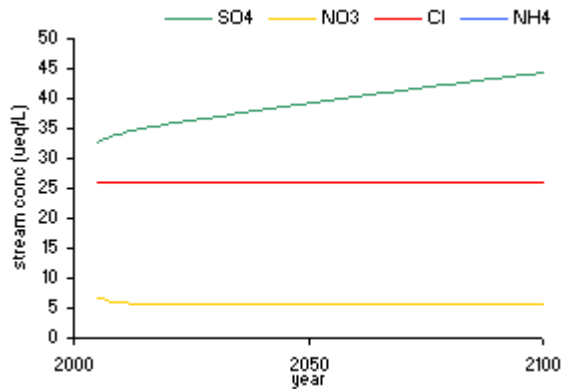
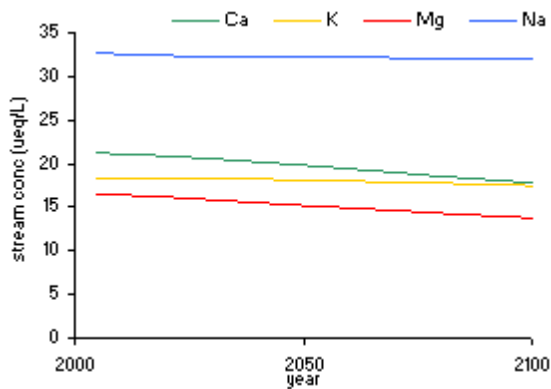


**Stream ID 59 - Lower Creek**

**Hindcast**

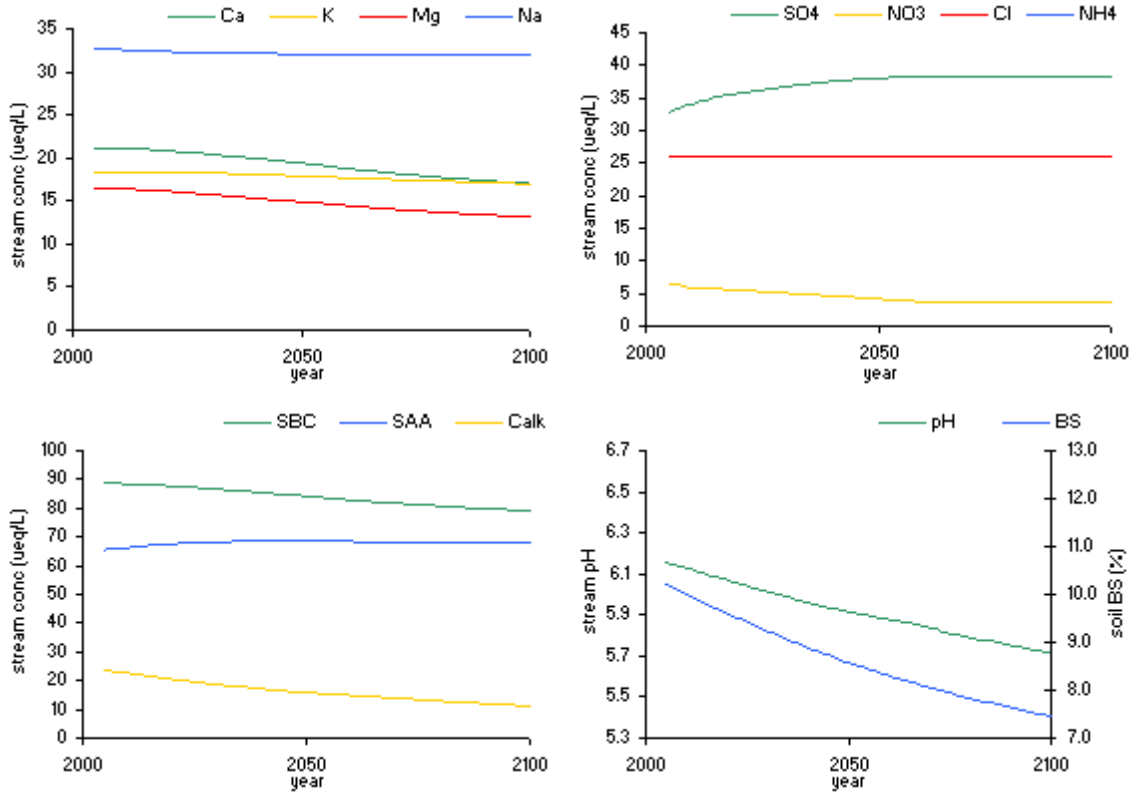


**Base**

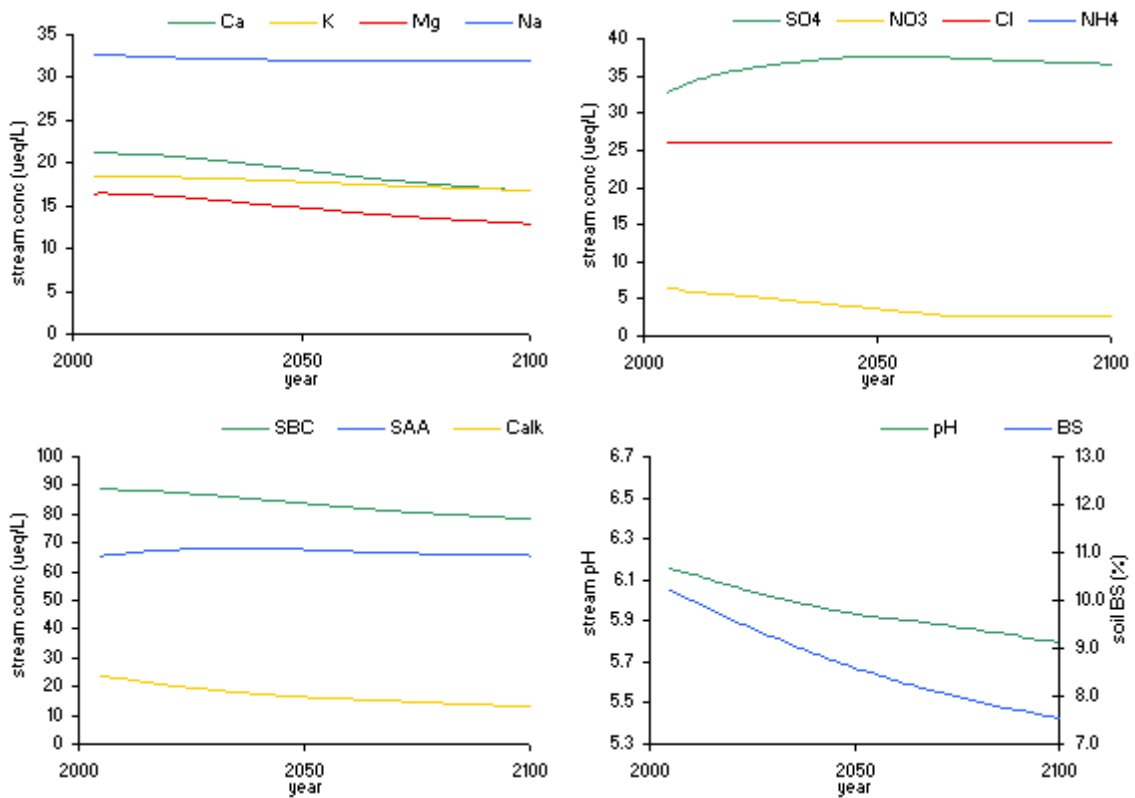


**Stream ID 59 - Lower Creek**

**Moderate**



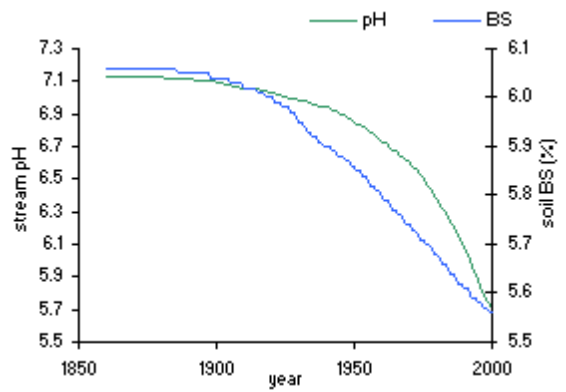
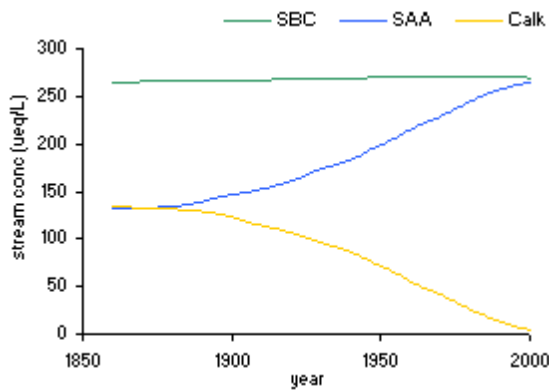
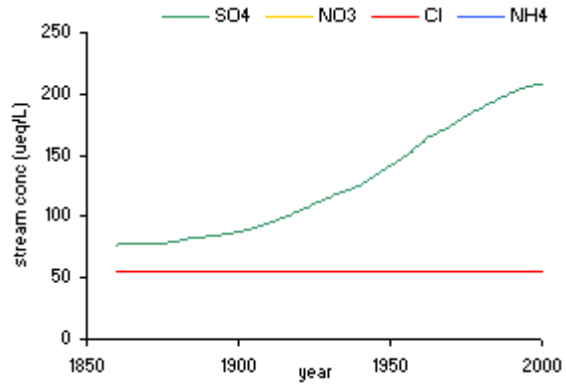
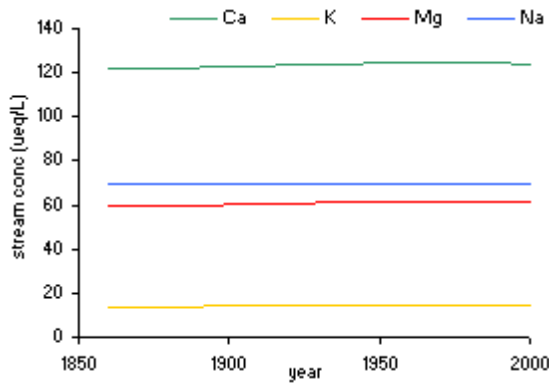
**Aggressive**



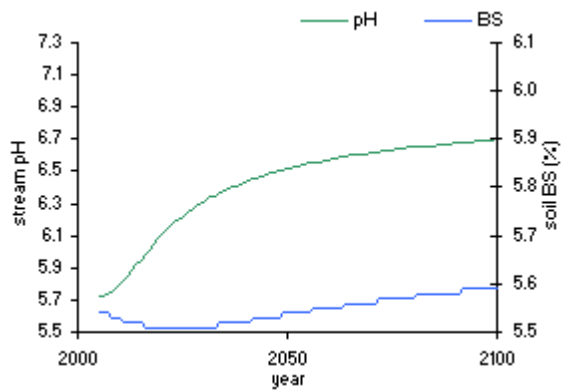
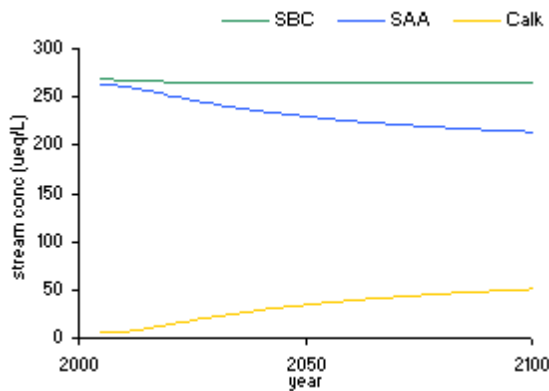
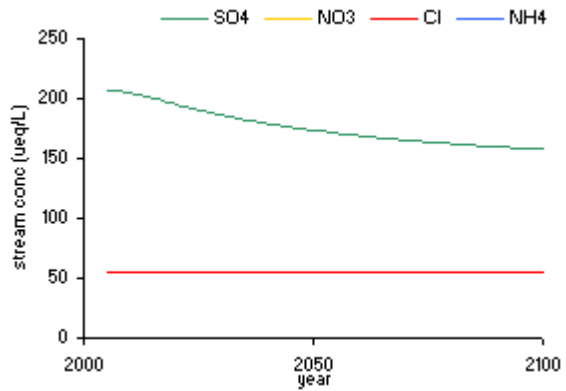
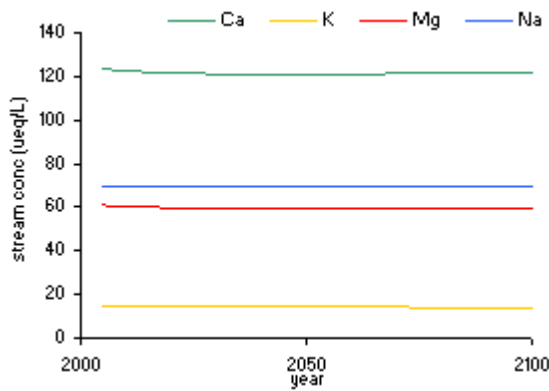


# Stream ID 270 - McNabb Creek

## Hindcast

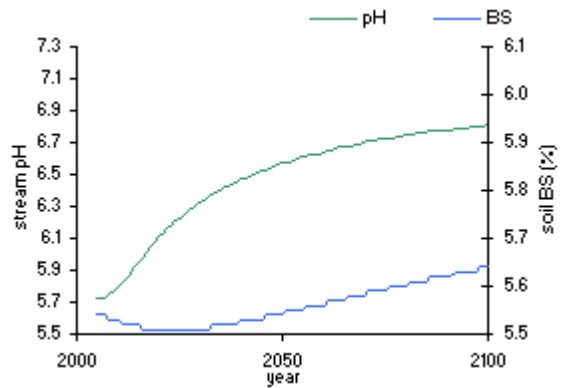
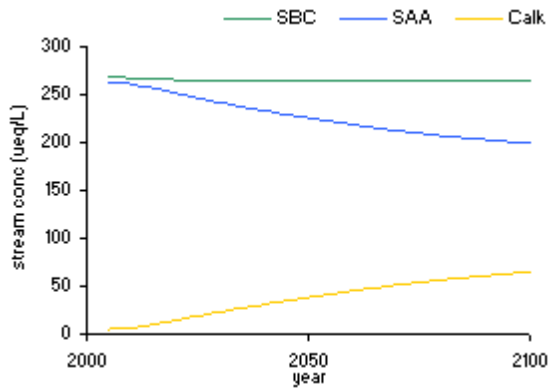
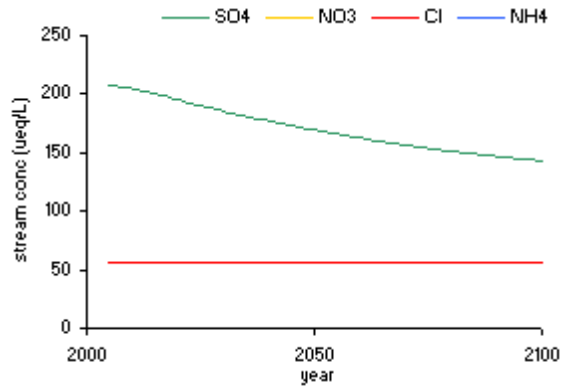
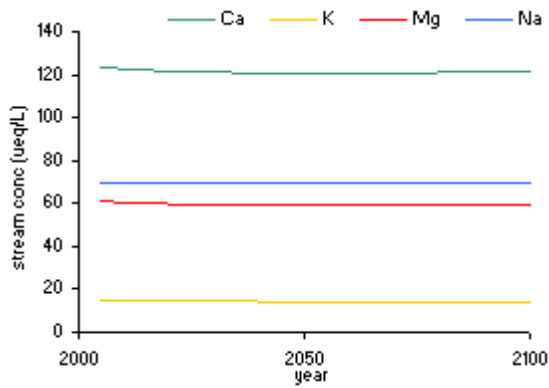


## Base

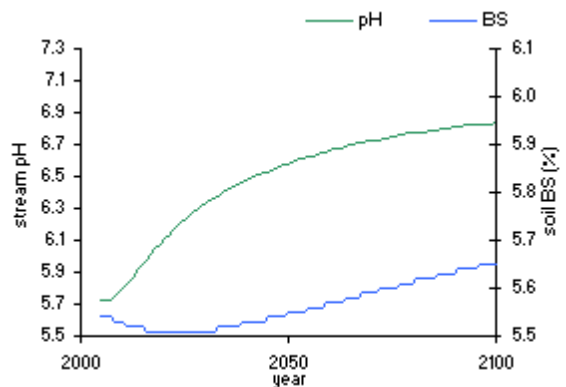
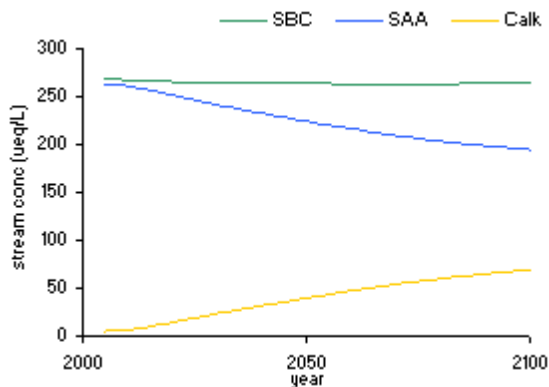
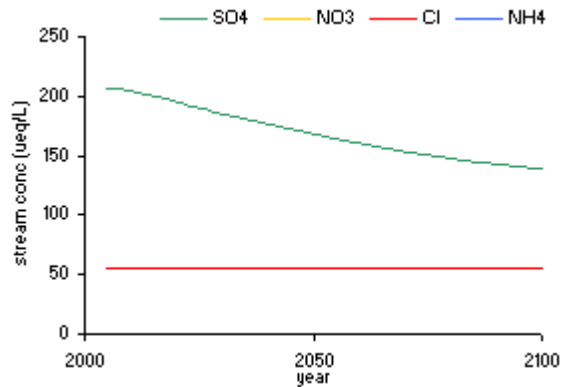
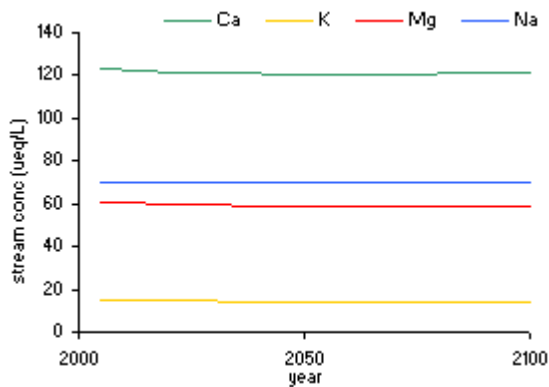


**Stream ID 270 - McNabb Creek**

**Moderate**

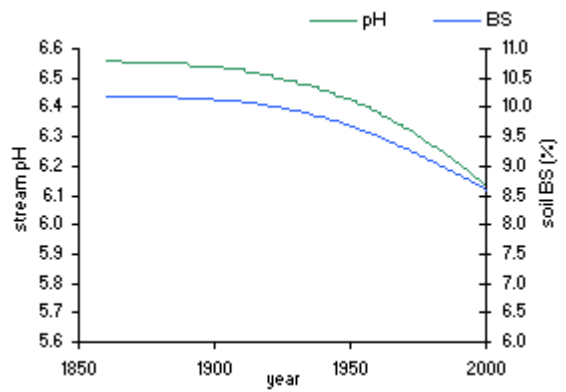
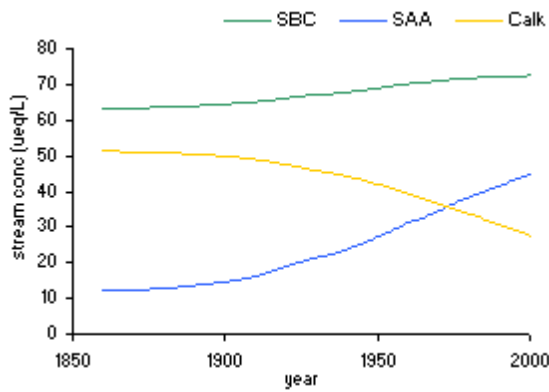
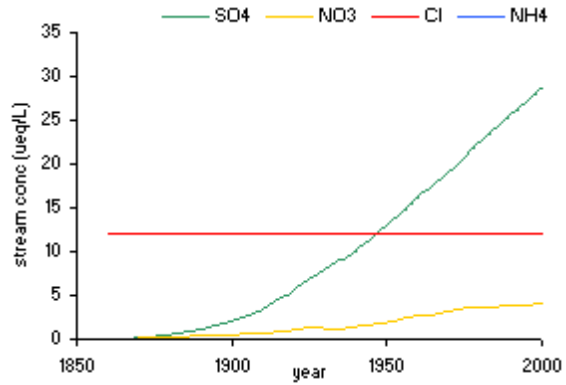
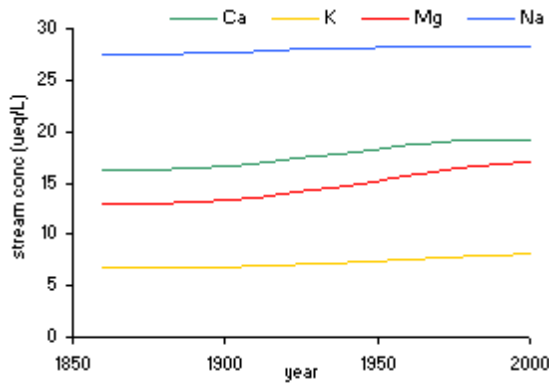


**Aggressive**

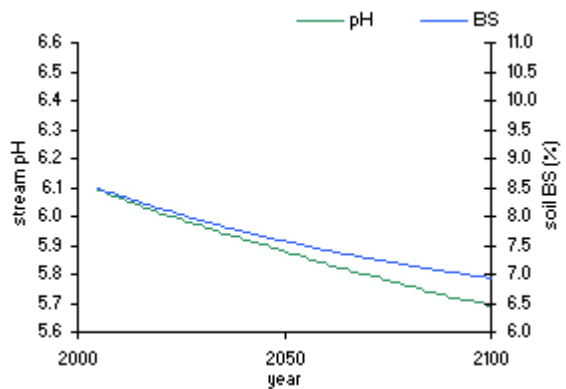
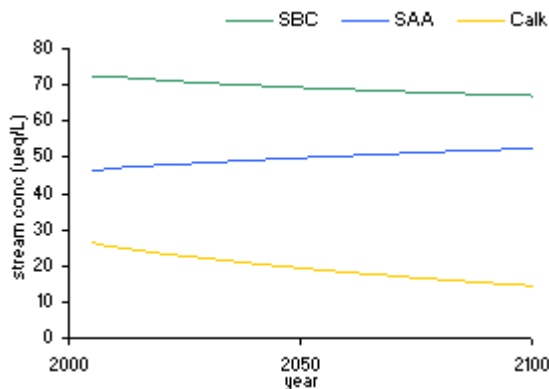
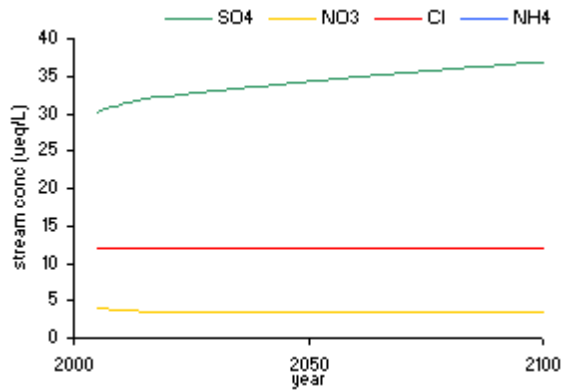
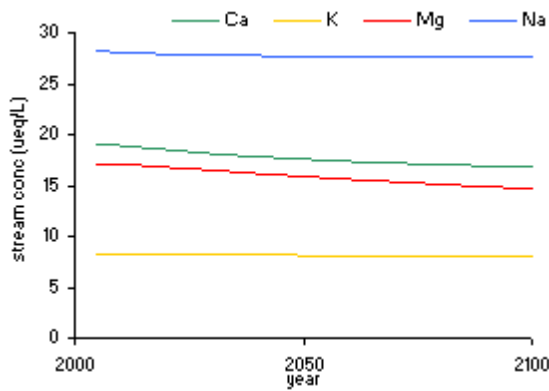


**Stream ID 55 - Middle Creek**

**Hindcast**

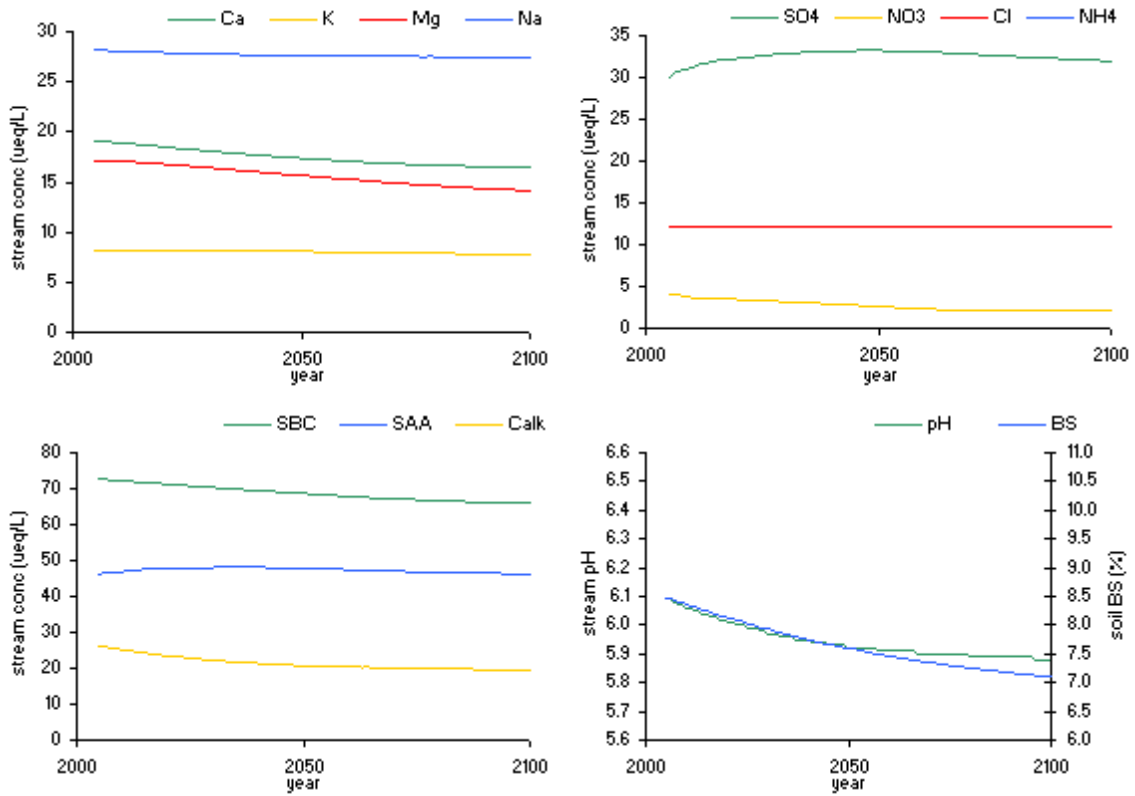


**Base**

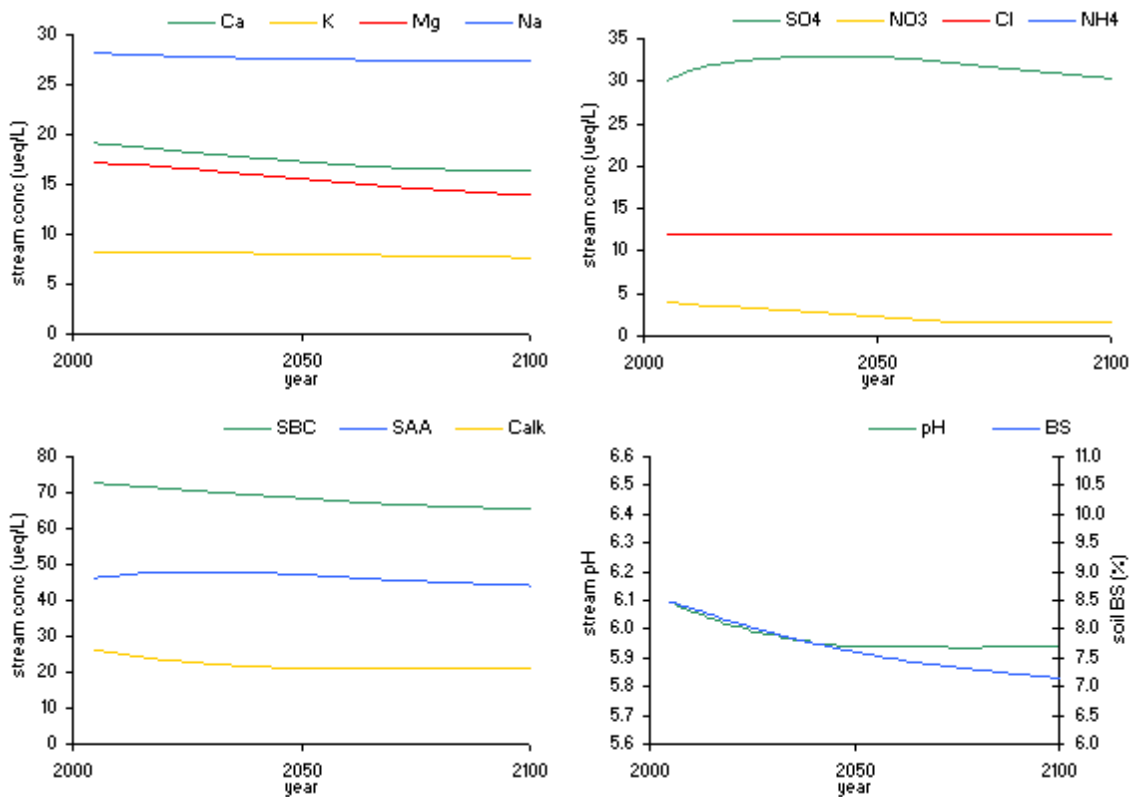


**Stream ID 55 - Middle Creek**

**Moderate**

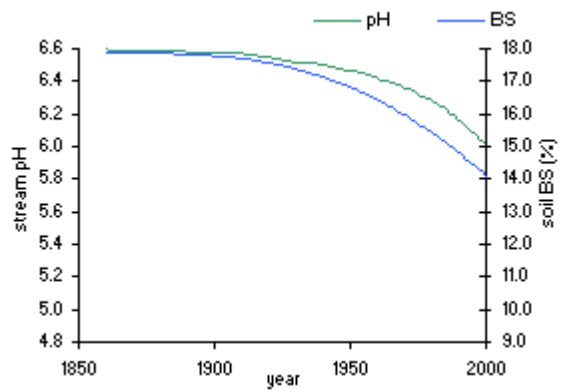
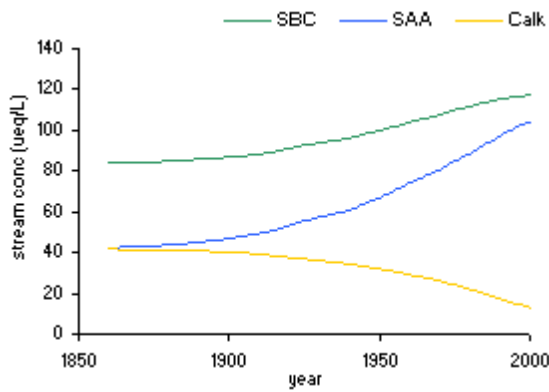
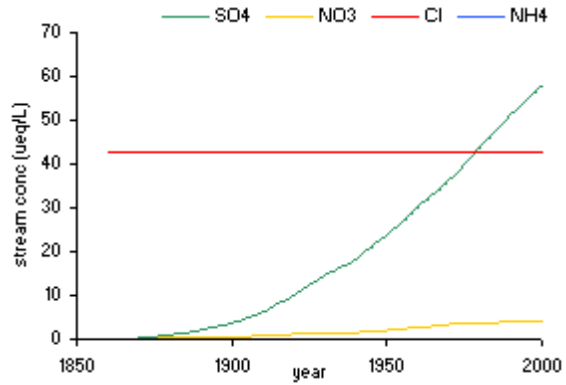
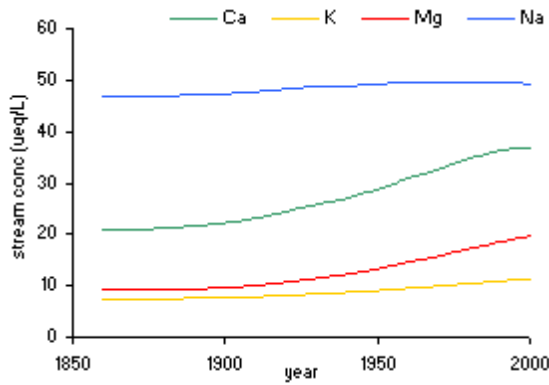


**Aggressive**

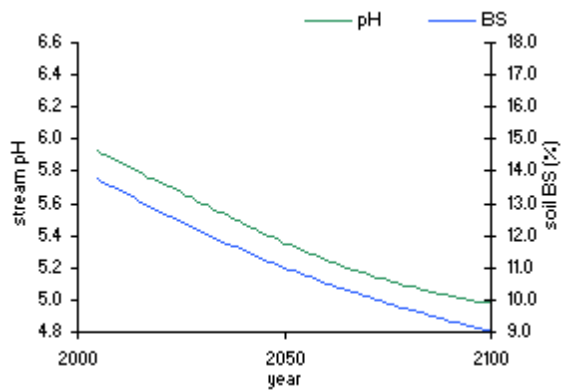
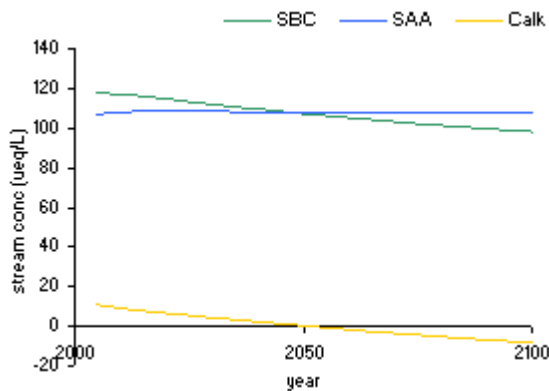
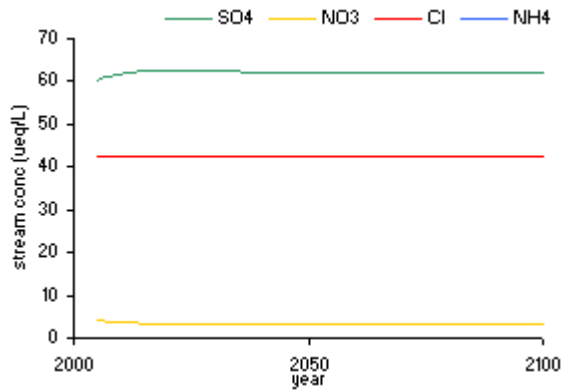
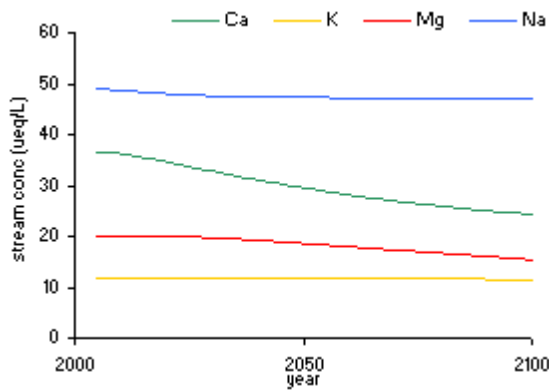


**Stream ID 132 - Mill Station Creek**

**Hindcast**

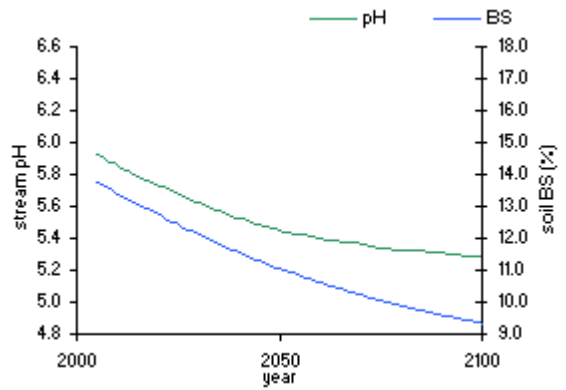
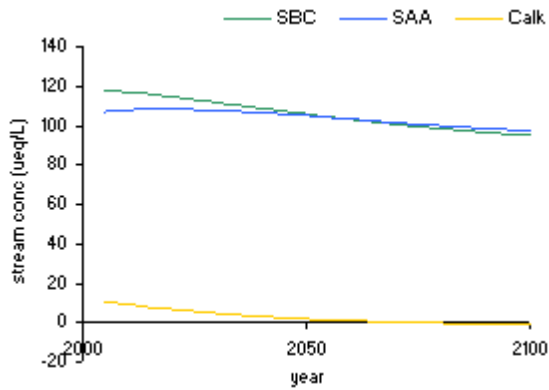
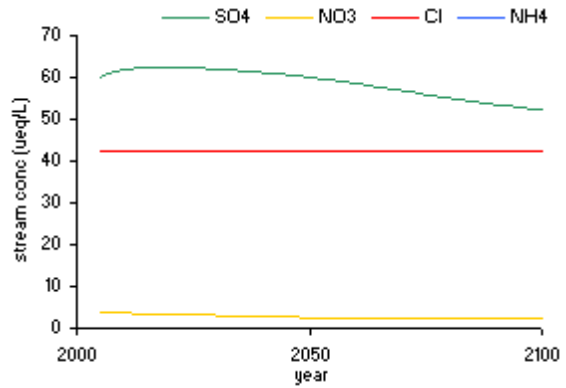
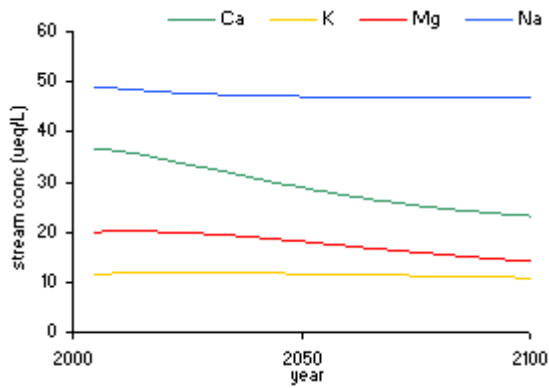


**Base**

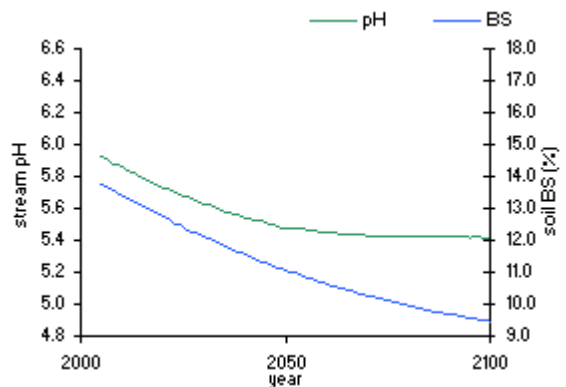
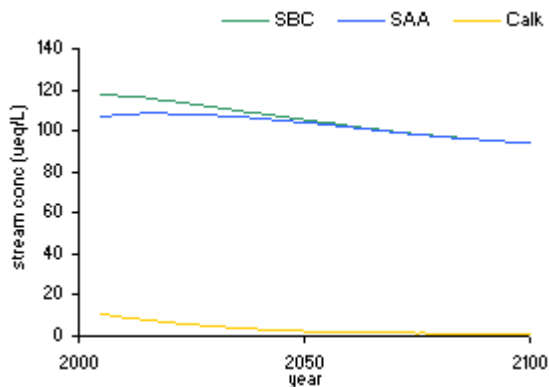
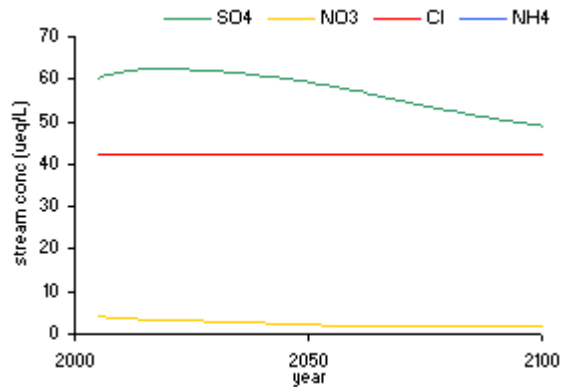
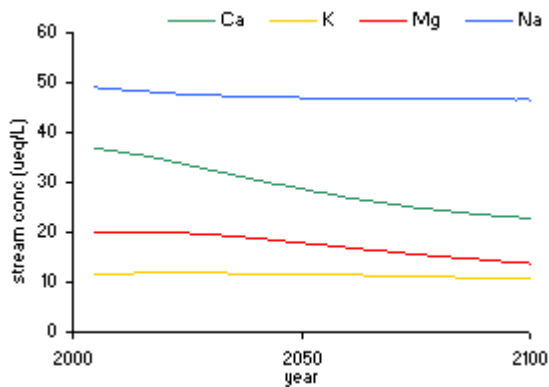


**Stream ID 132 - Mill Station Creek**

**Moderate**

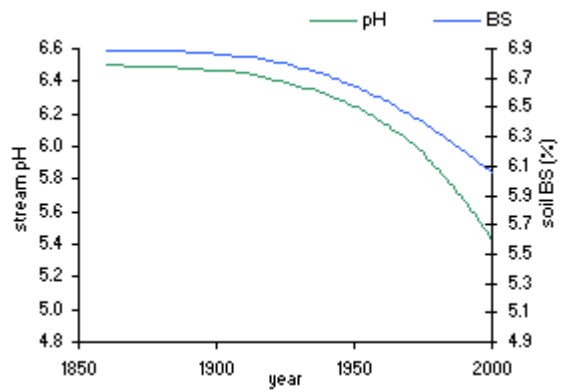
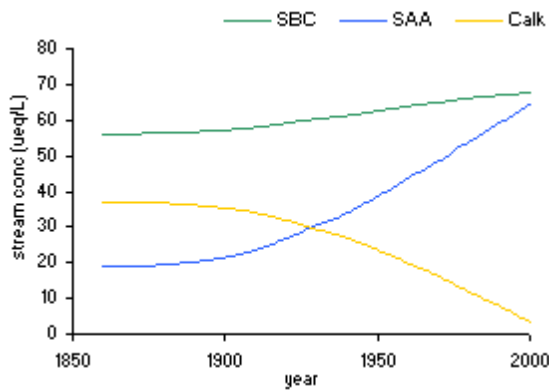
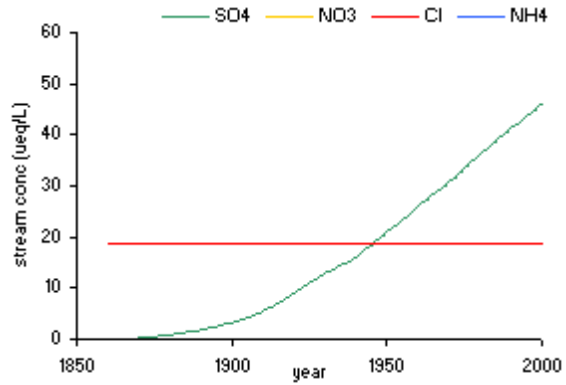
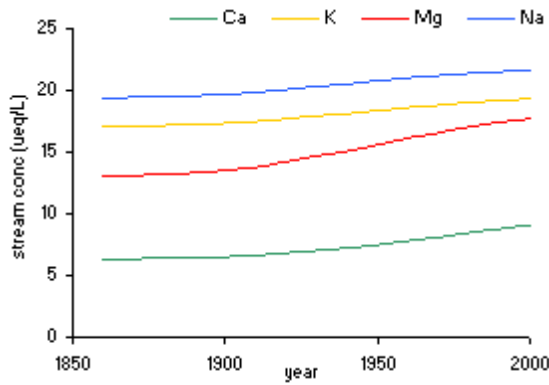


**Aggressive**

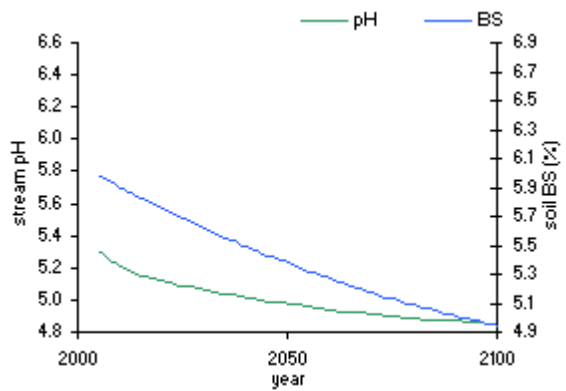
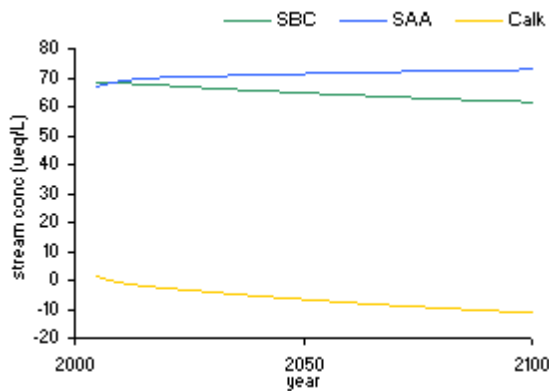
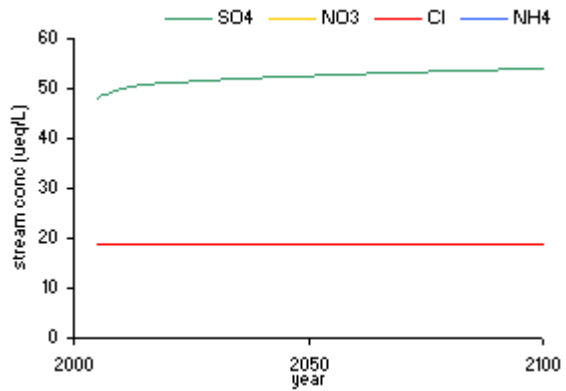
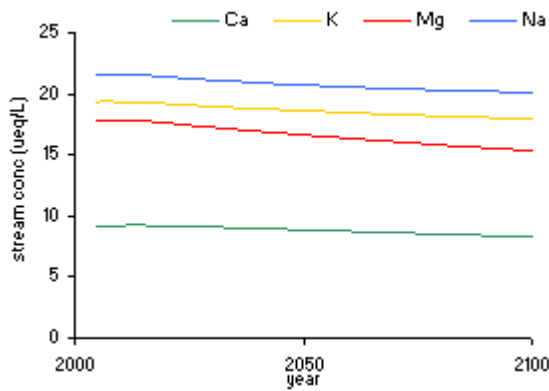


**Stream ID 26 - Paddy Creek**

**Hindcast**

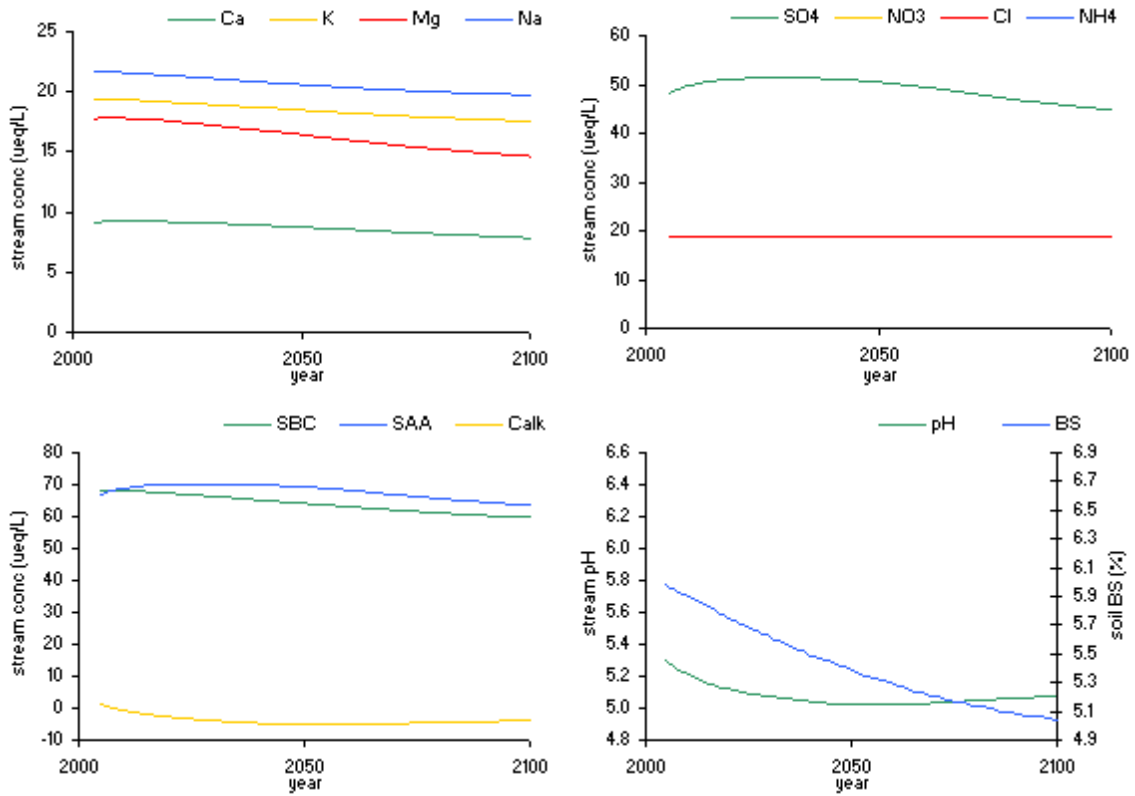


**Base**

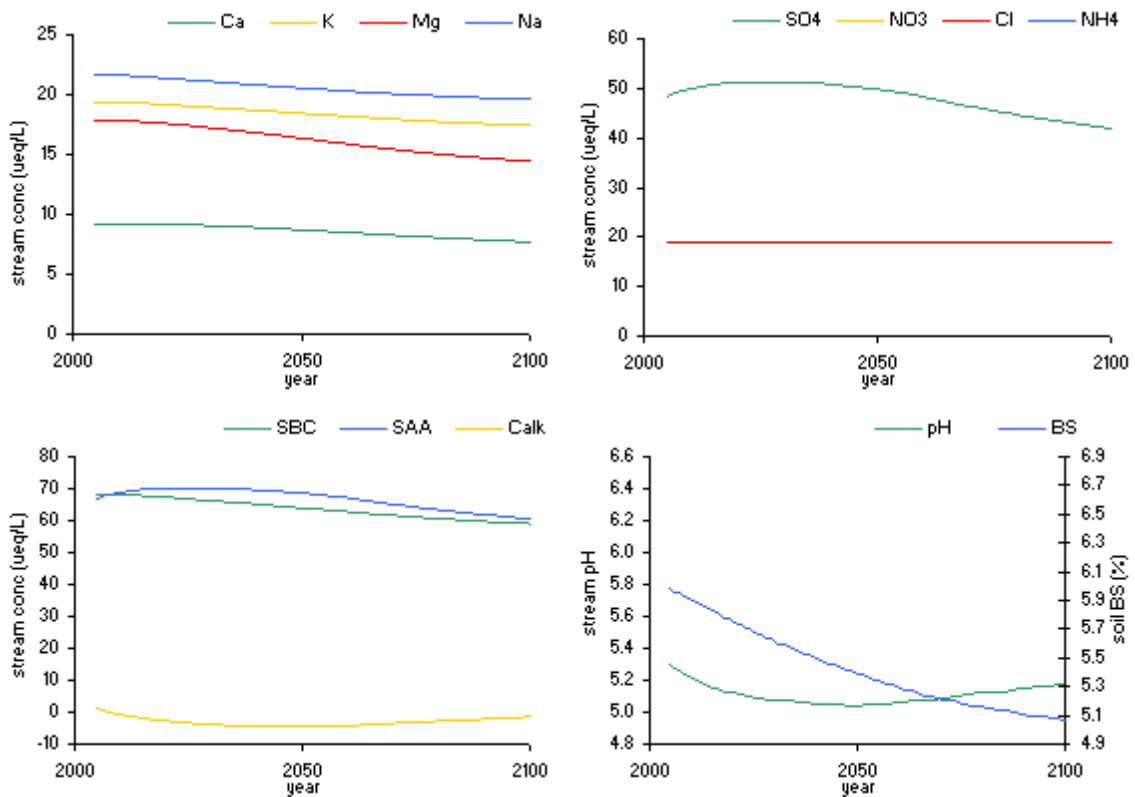


**Stream ID 26 - Paddy Creek**

**Moderate**



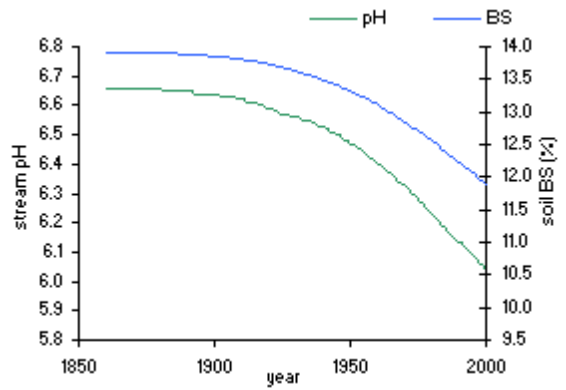
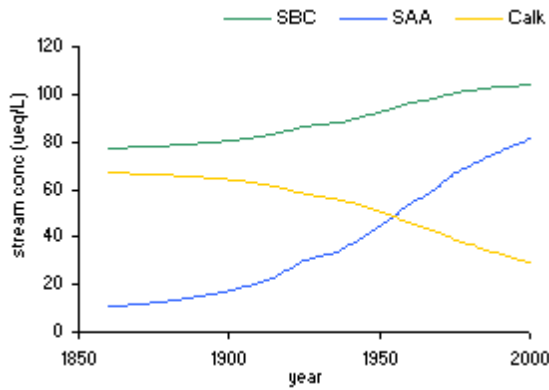
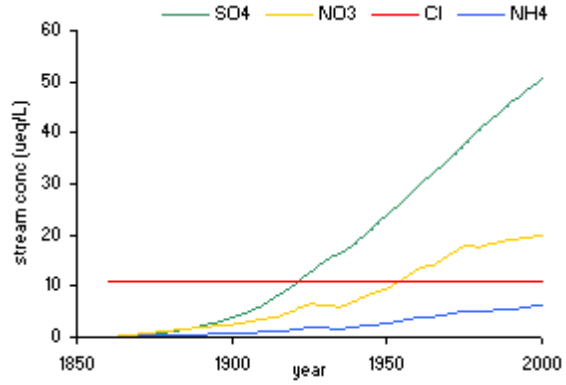
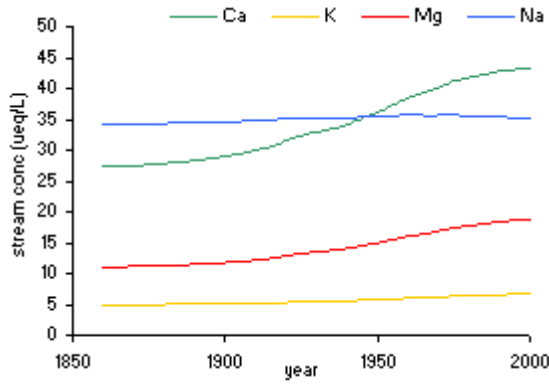
**Aggressive**



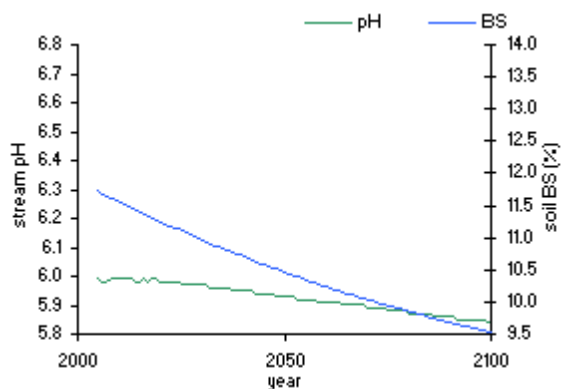
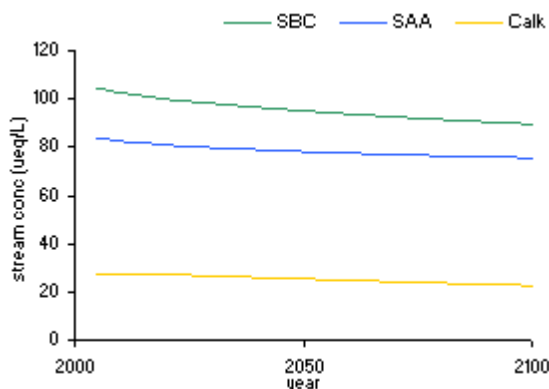
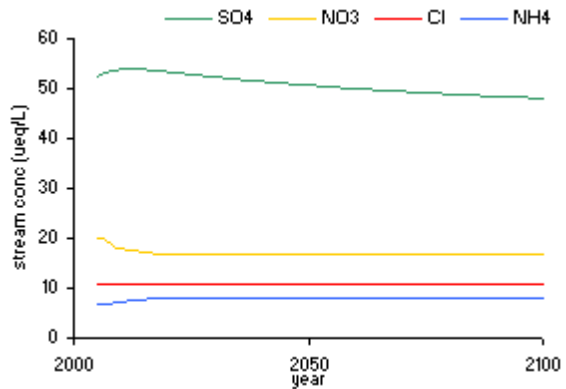
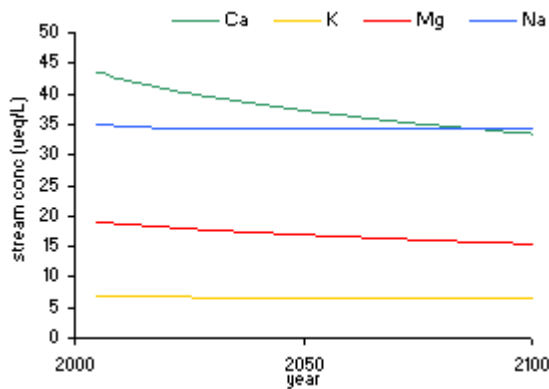


**Stream ID 70 - Peach Orchard Creek**

**Hindcast**

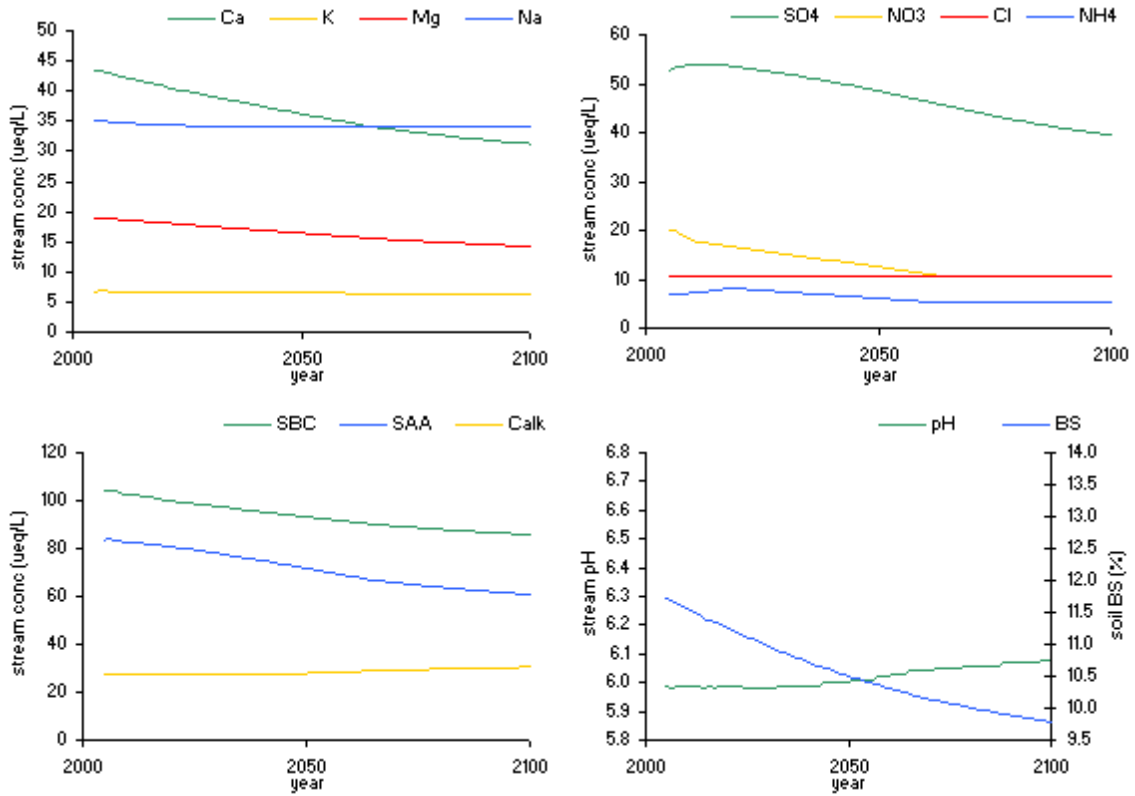


**Base**

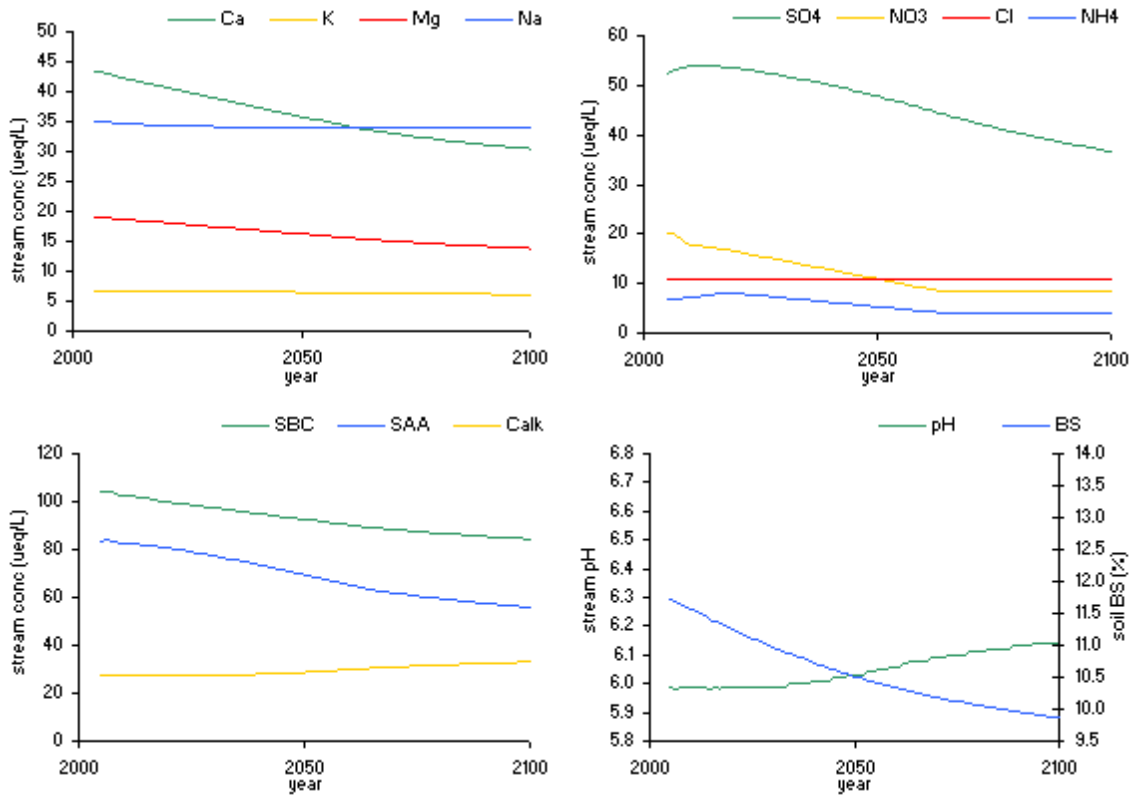


*Stream ID 70 - Peach Orchard Creek*

**Moderate**

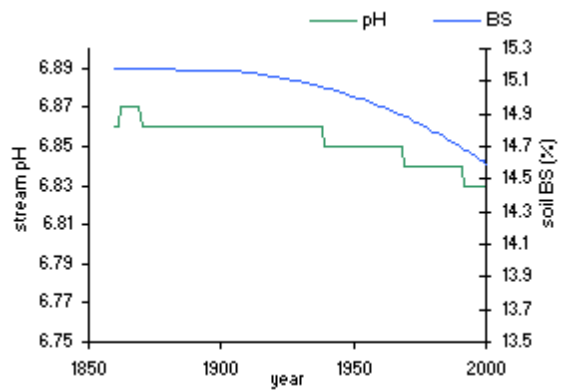
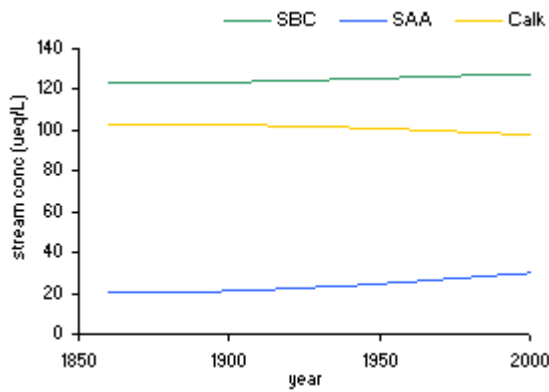
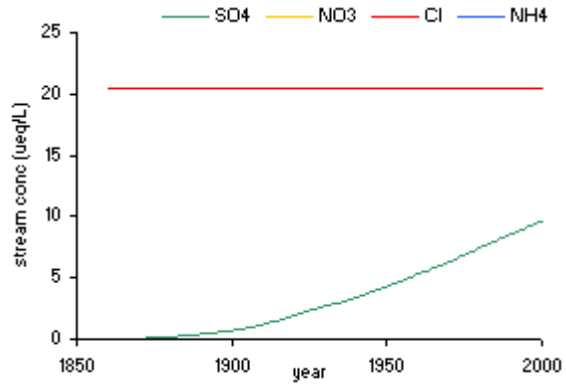
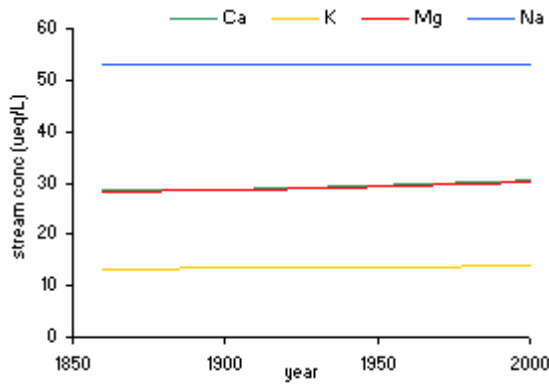


**Aggressive**

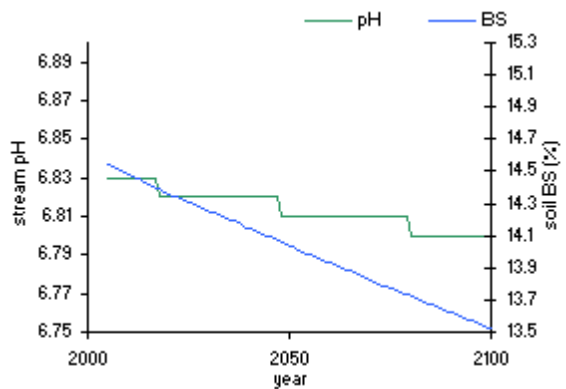
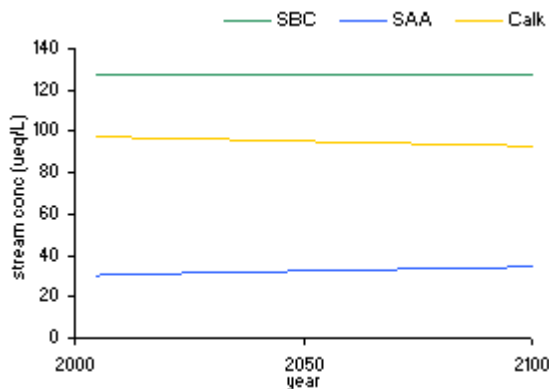
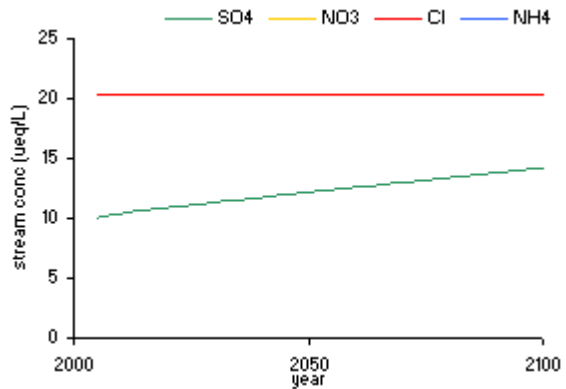
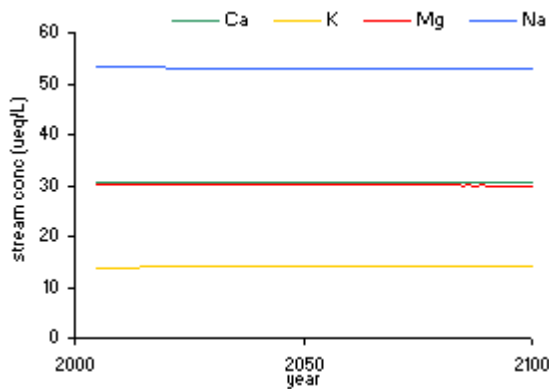


**Stream ID 191 - Pigpen Branch**

**Hindcast**

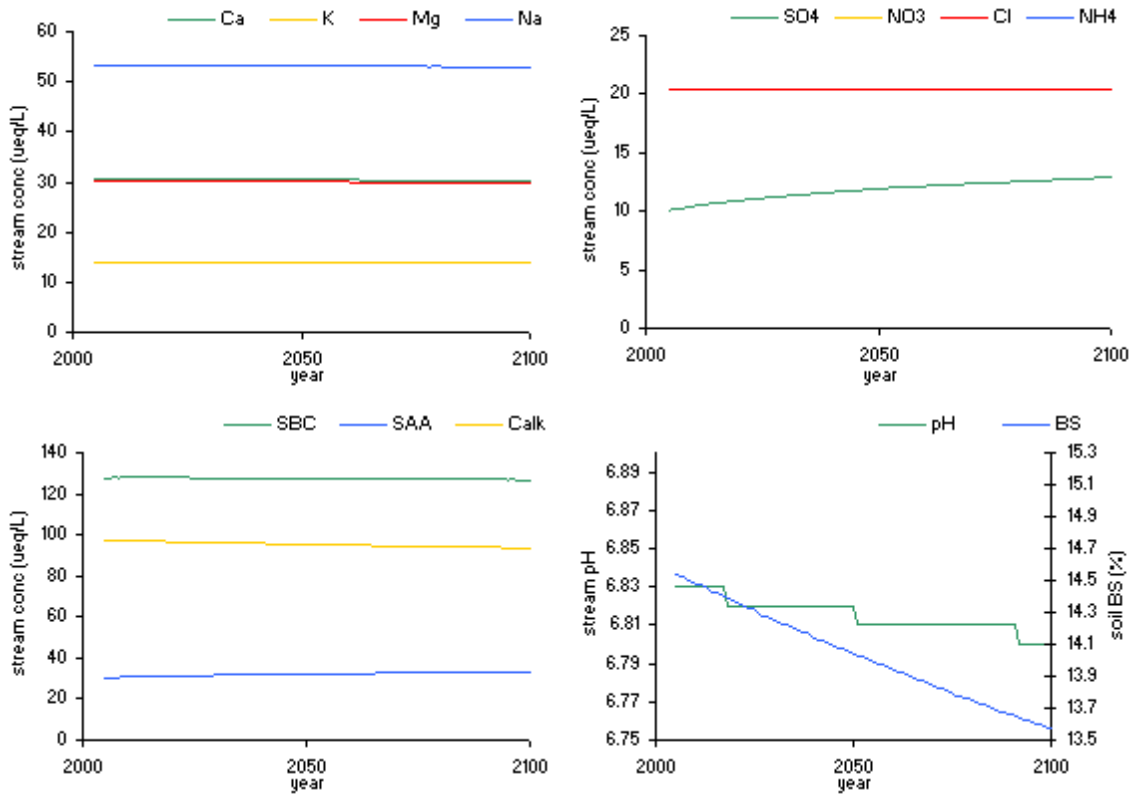


**Base**

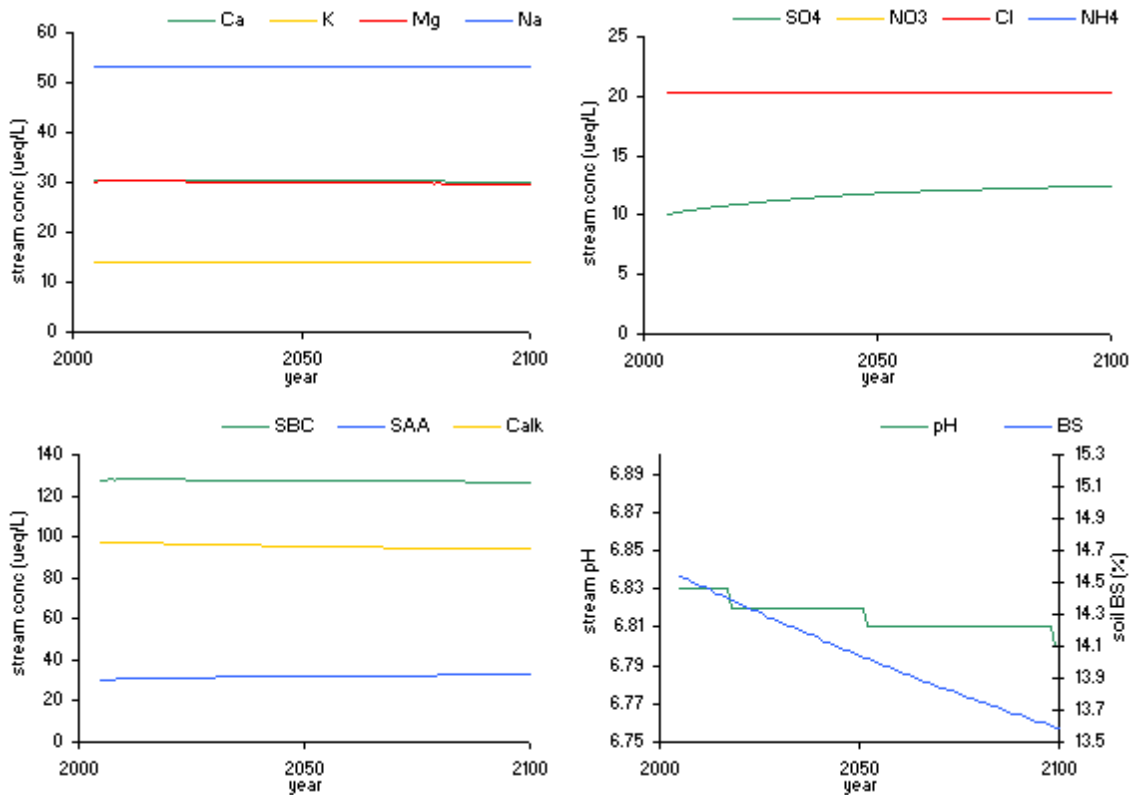


**Stream ID 191 - Pigpen Branch**

**Moderate**

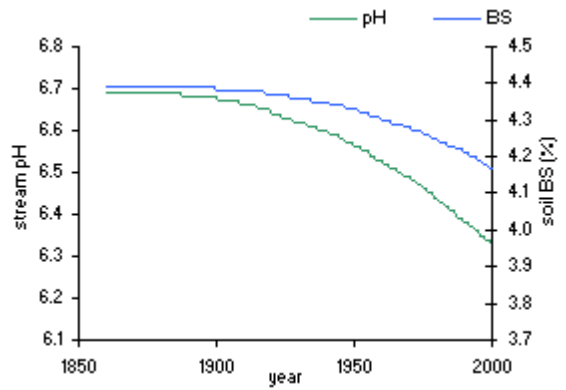
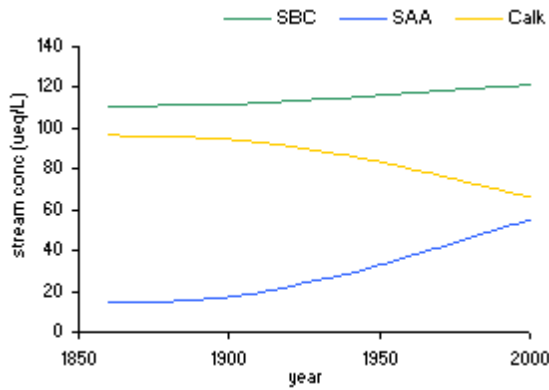
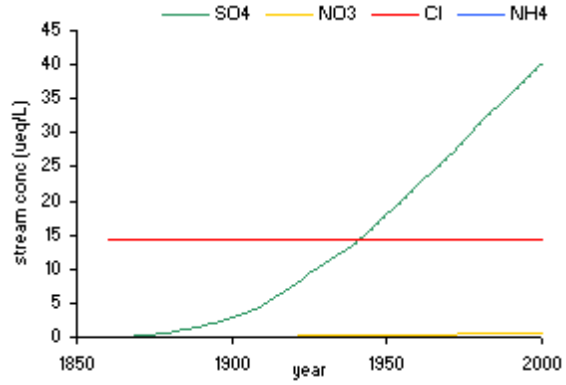
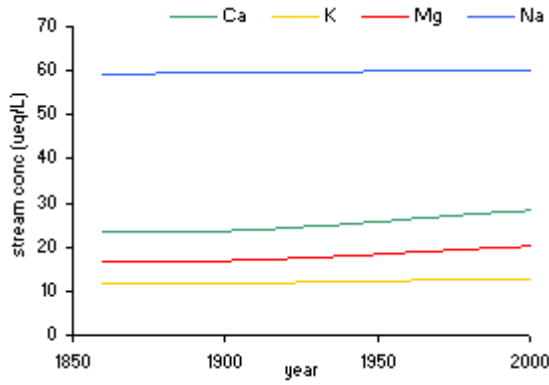


**Aggressive**

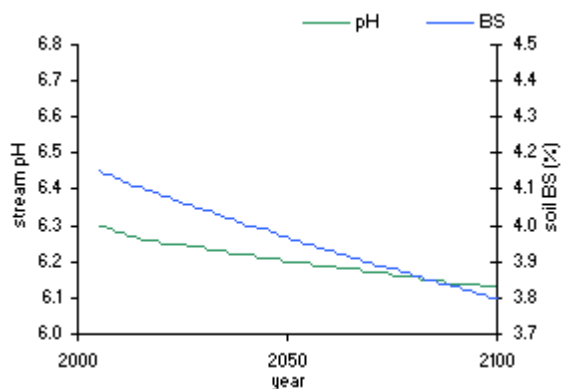
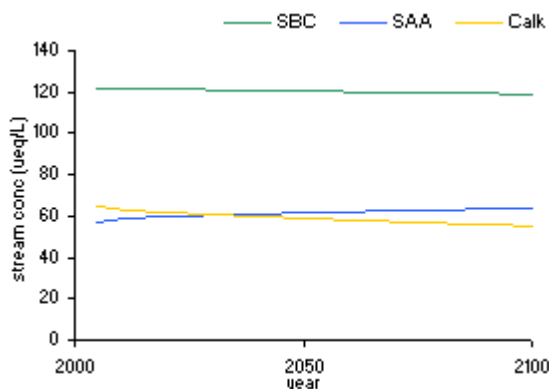
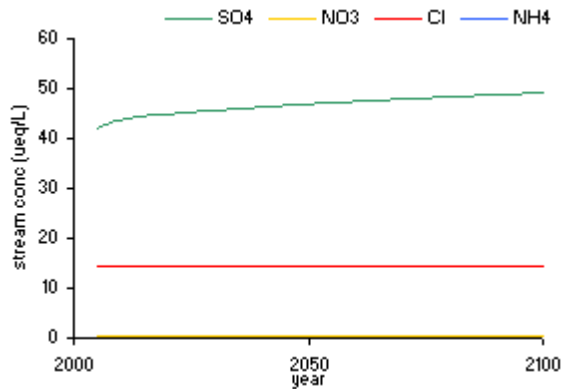
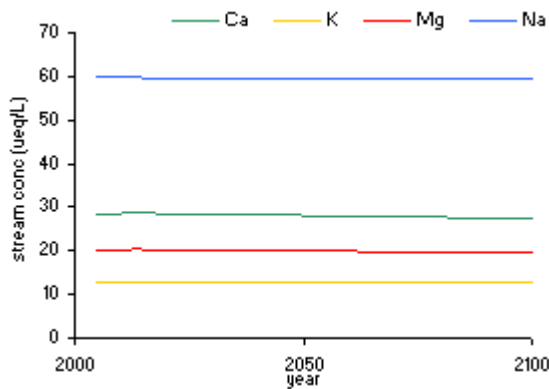


**Stream ID 143 - Rattlesnake Branch**

**Hindcast**

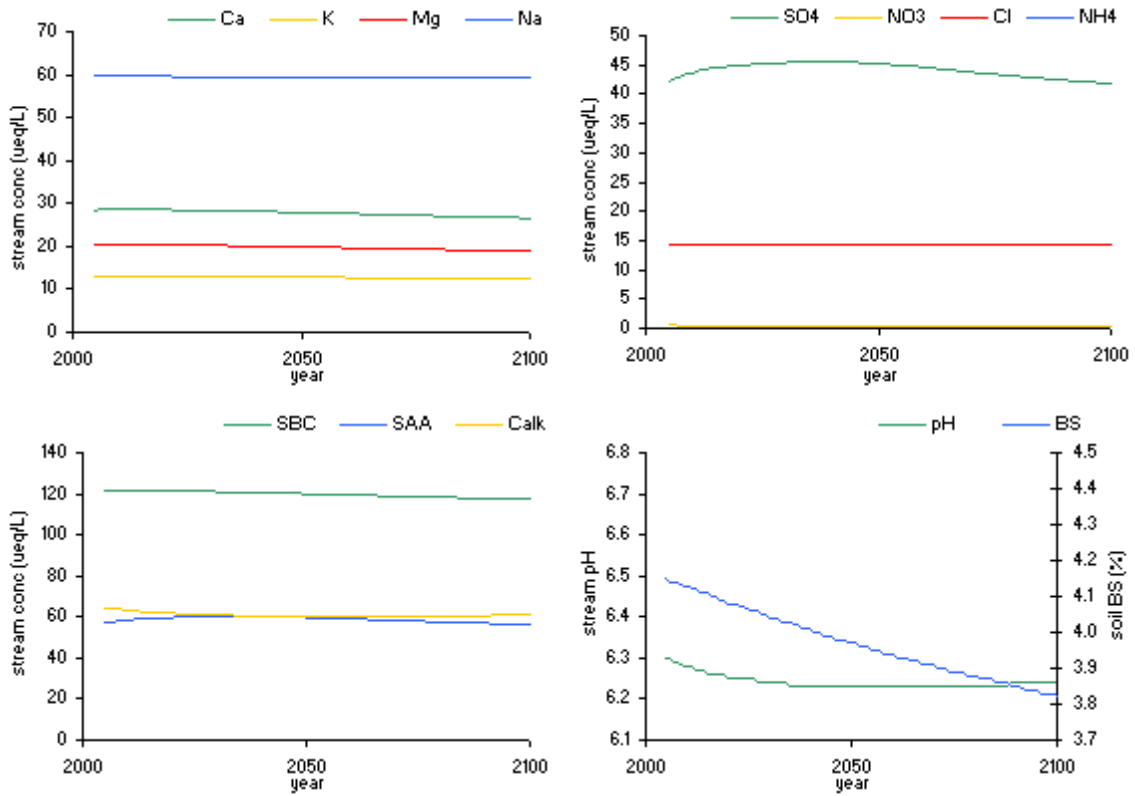


**Base**

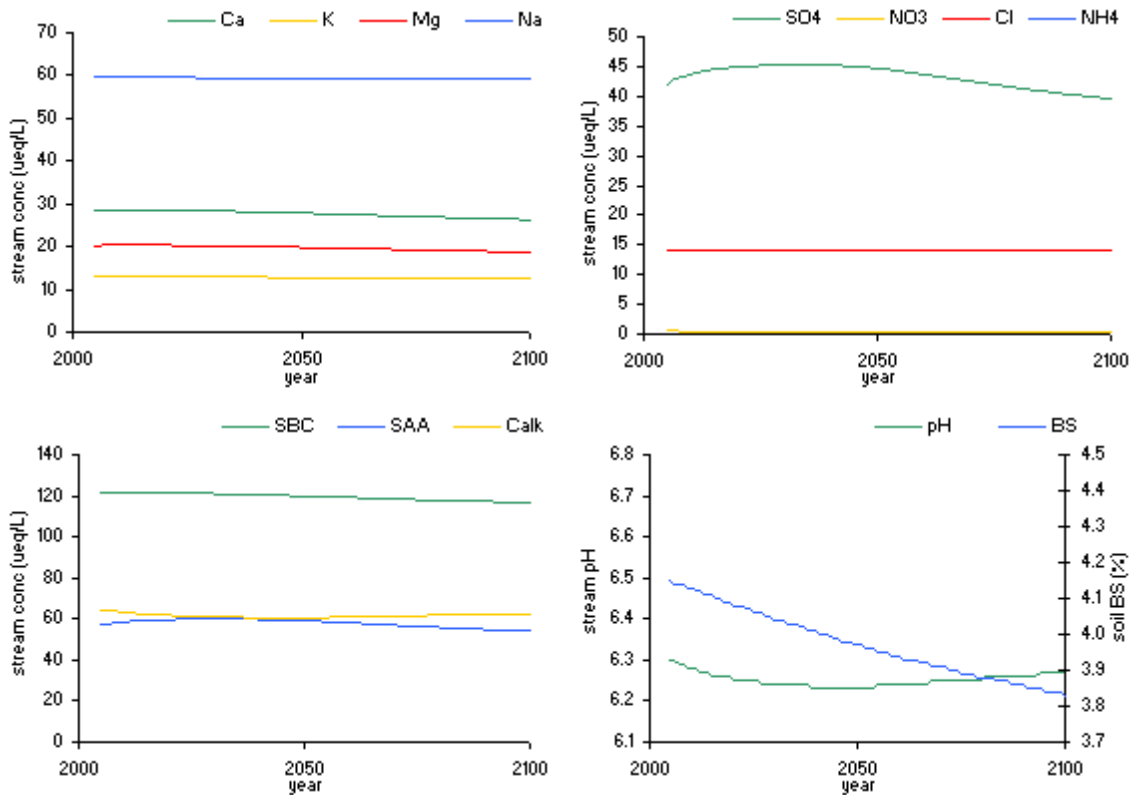


**Stream ID 143 - Rattlesnake Branch**

**Moderate**

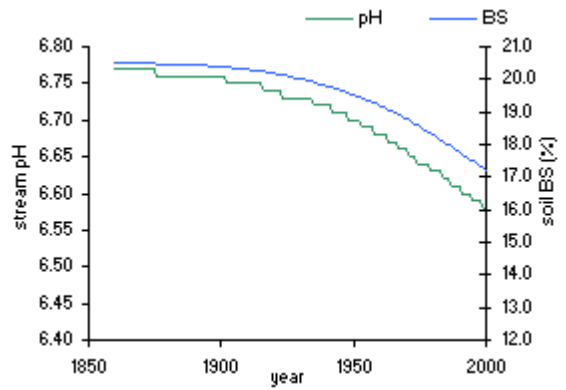
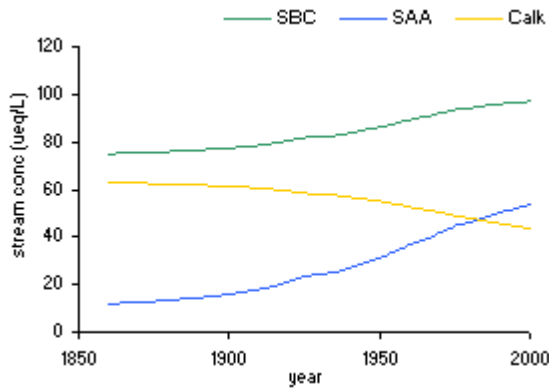
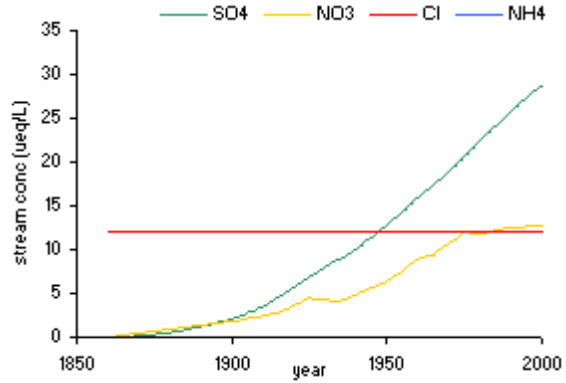
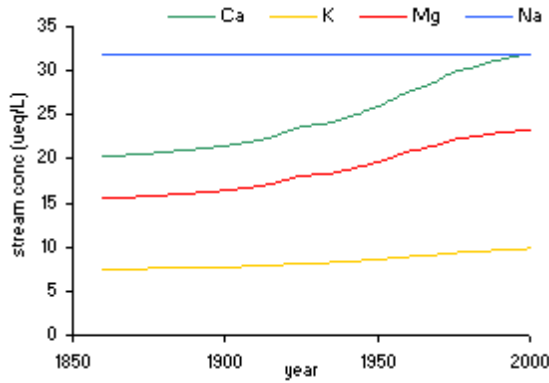


**Aggressive**

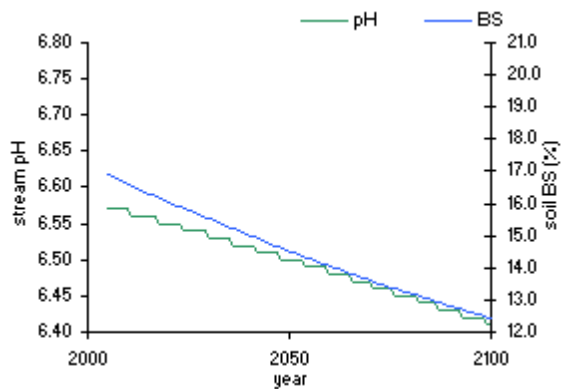
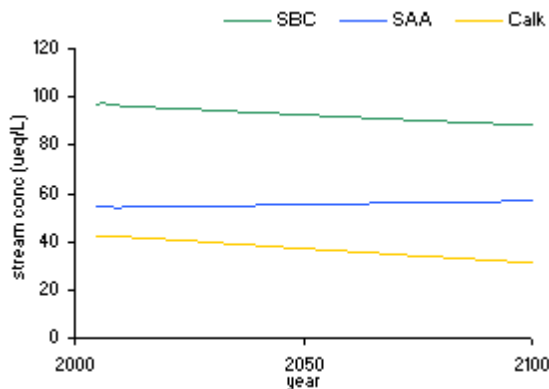
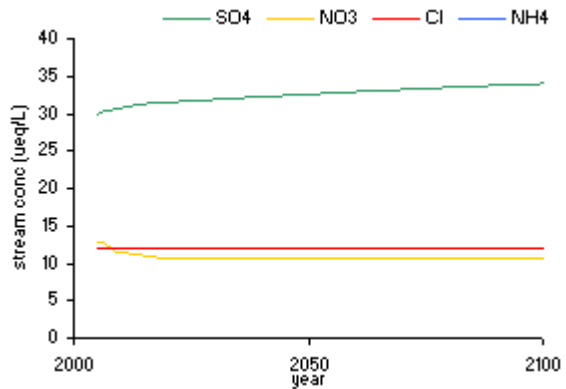
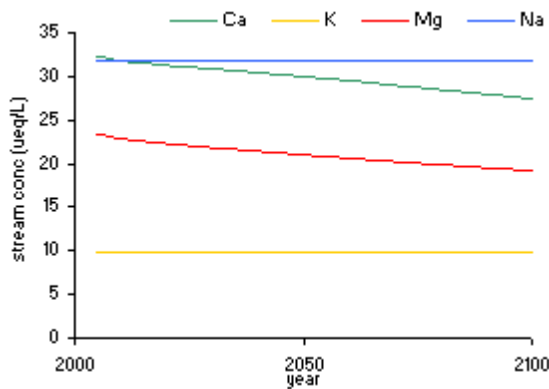


**Stream ID 147 - Right Hand Prong**

**Hindcast**

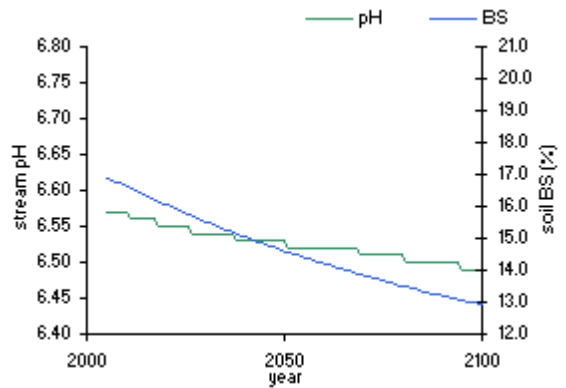
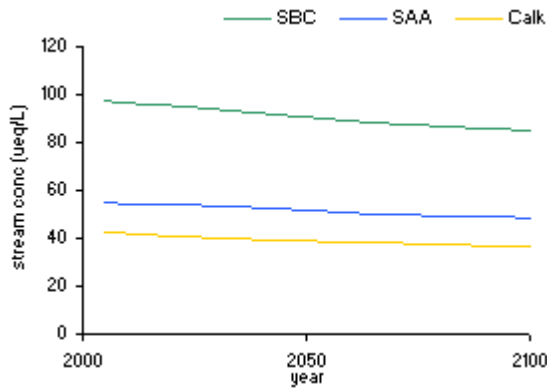
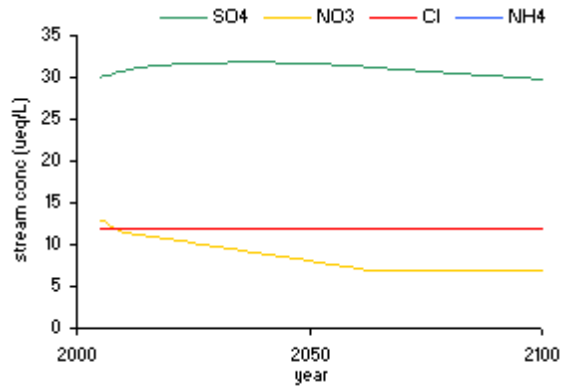
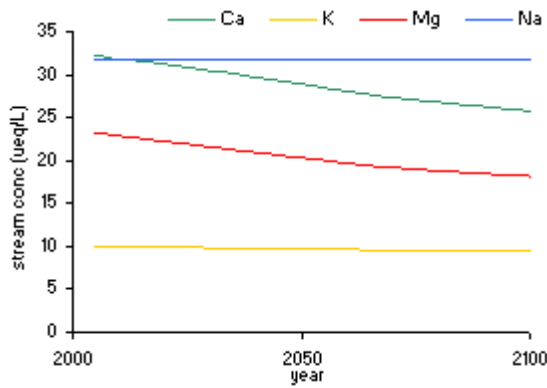


**Base**

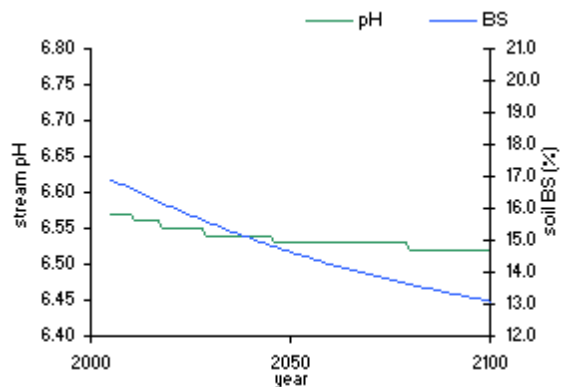
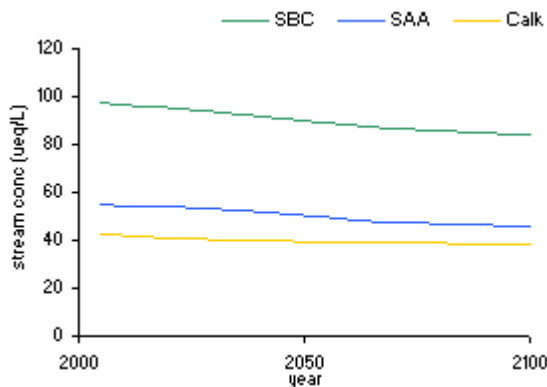
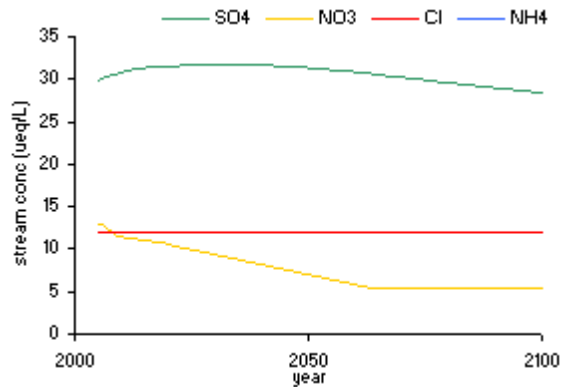
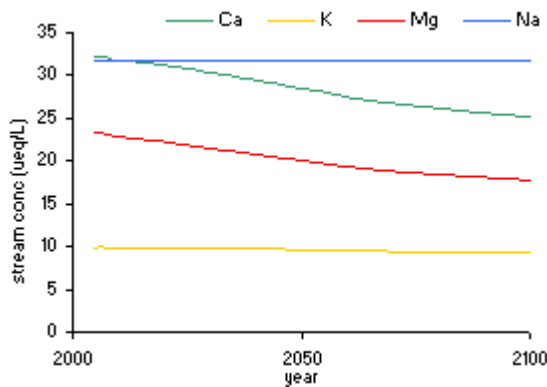


**Stream ID 147 - Right Hand Prong**

**Moderate**



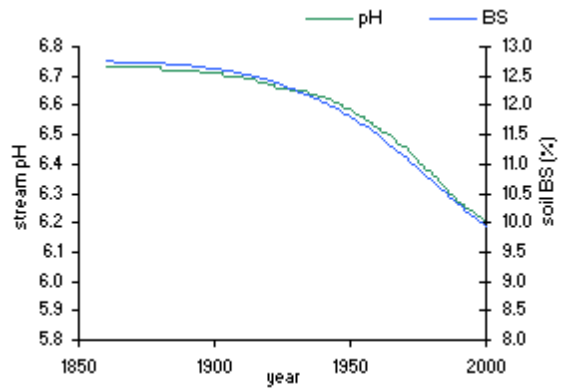
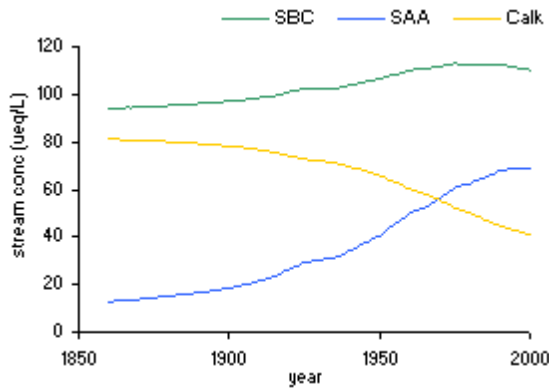
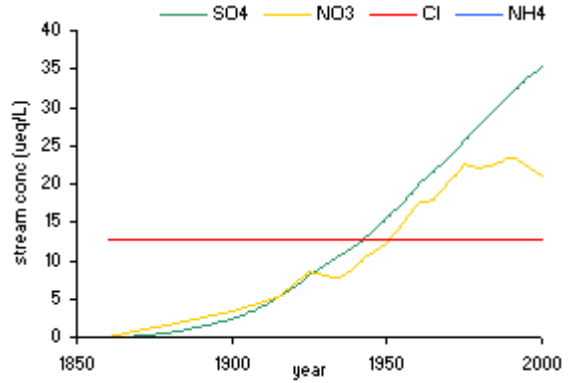
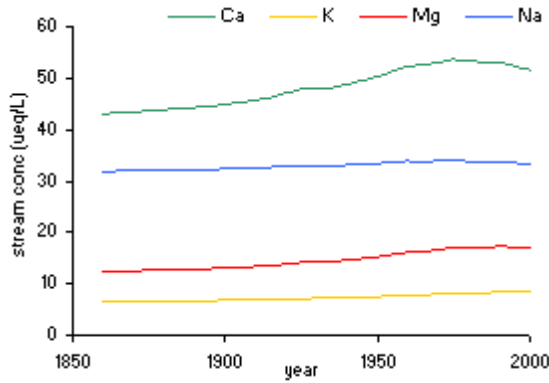
**Aggressive**



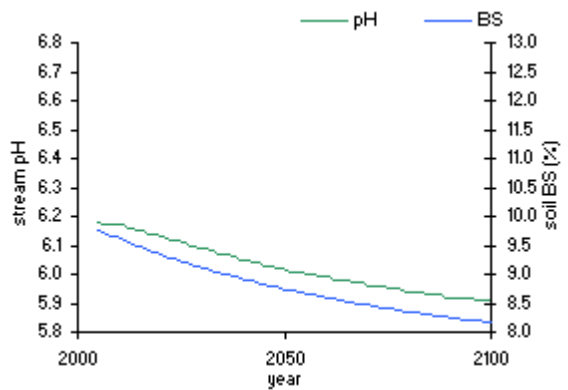
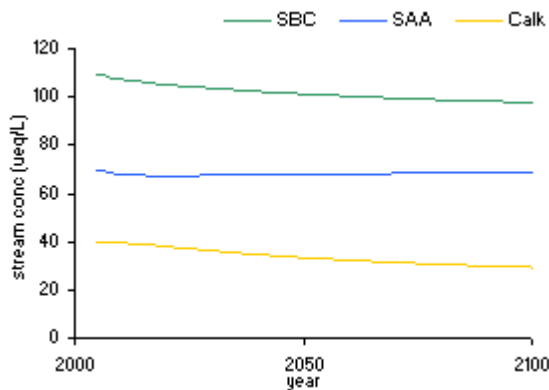
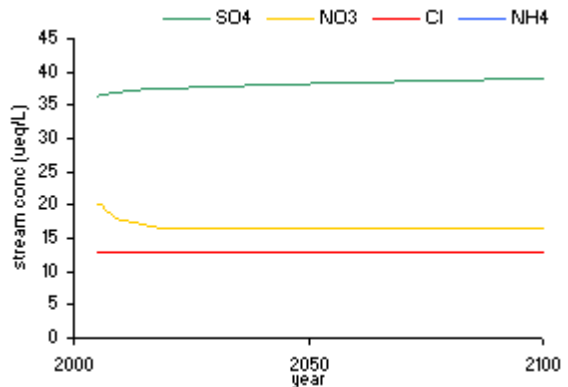
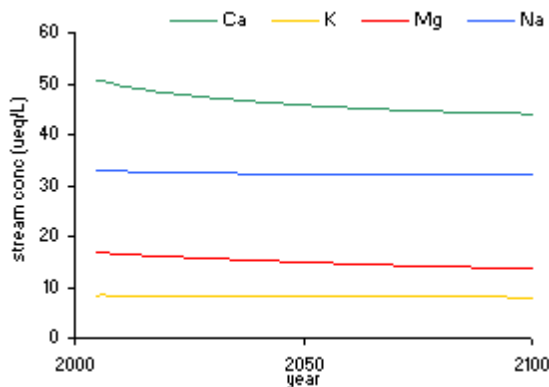


**Stream ID 251 - Roaring Branch**

**Hindcast**

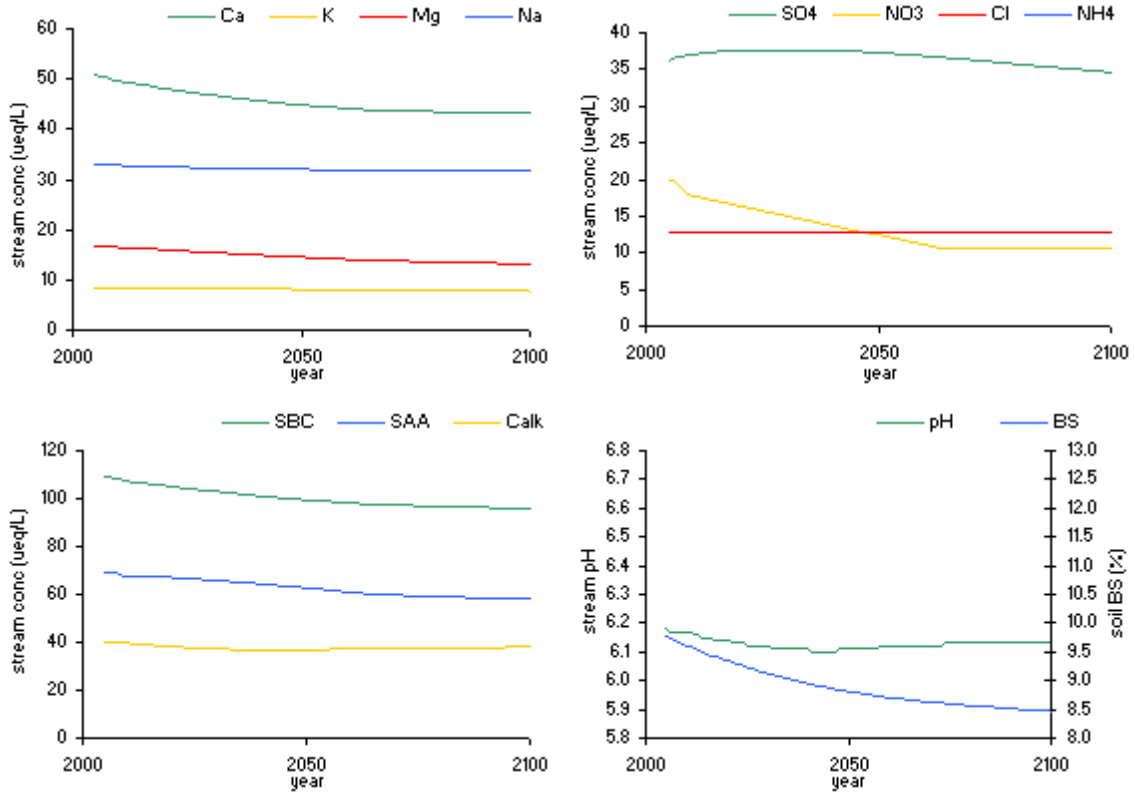


**Base**

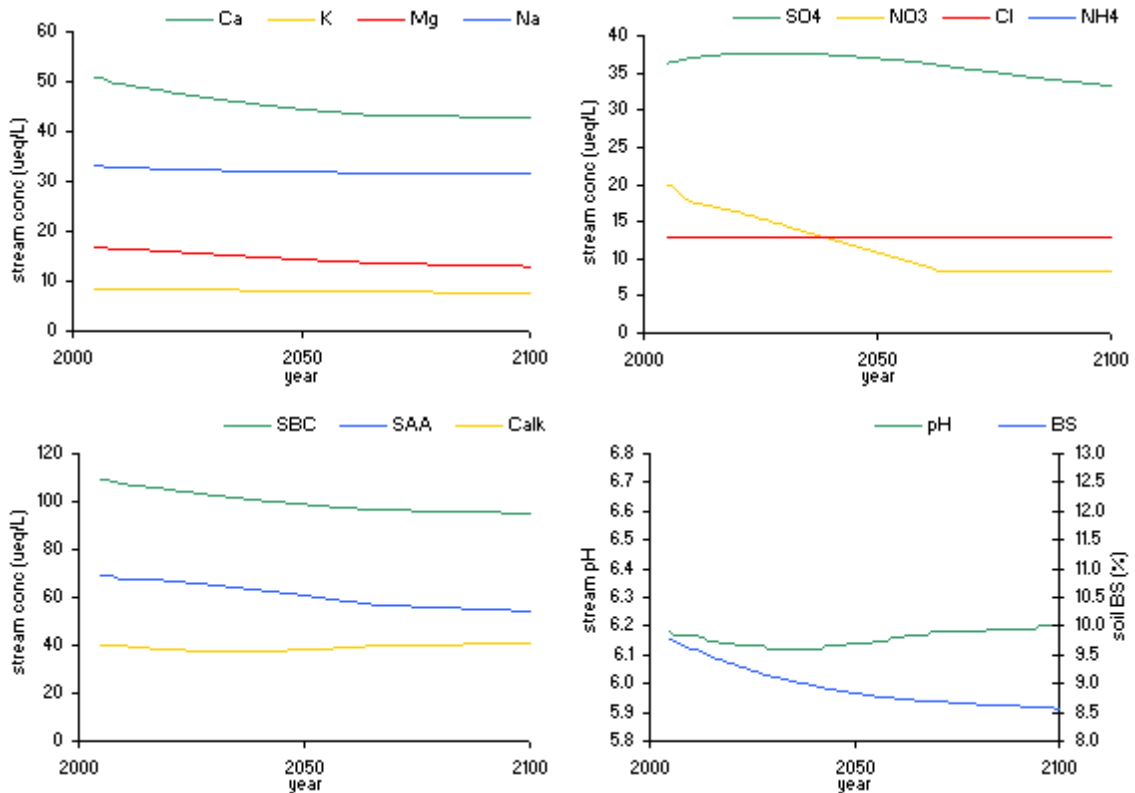


**Stream ID 251 - Roaring Branch**

**Moderate**

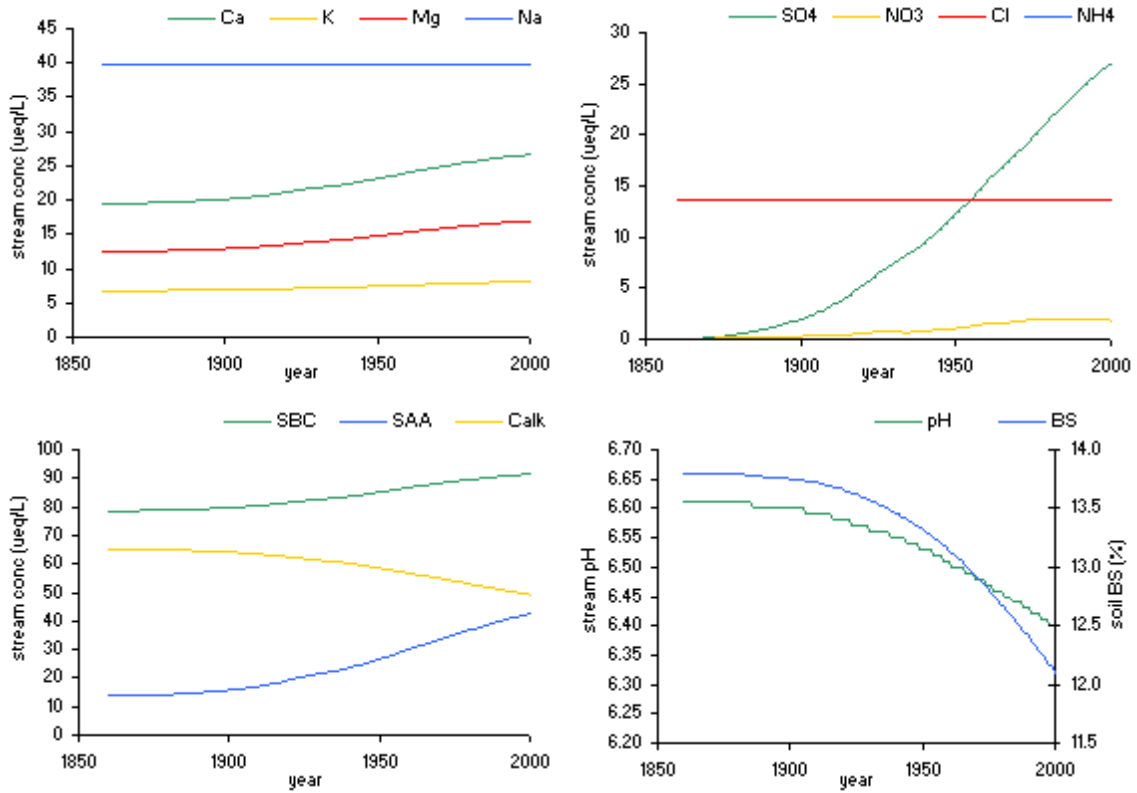


**Aggressive**

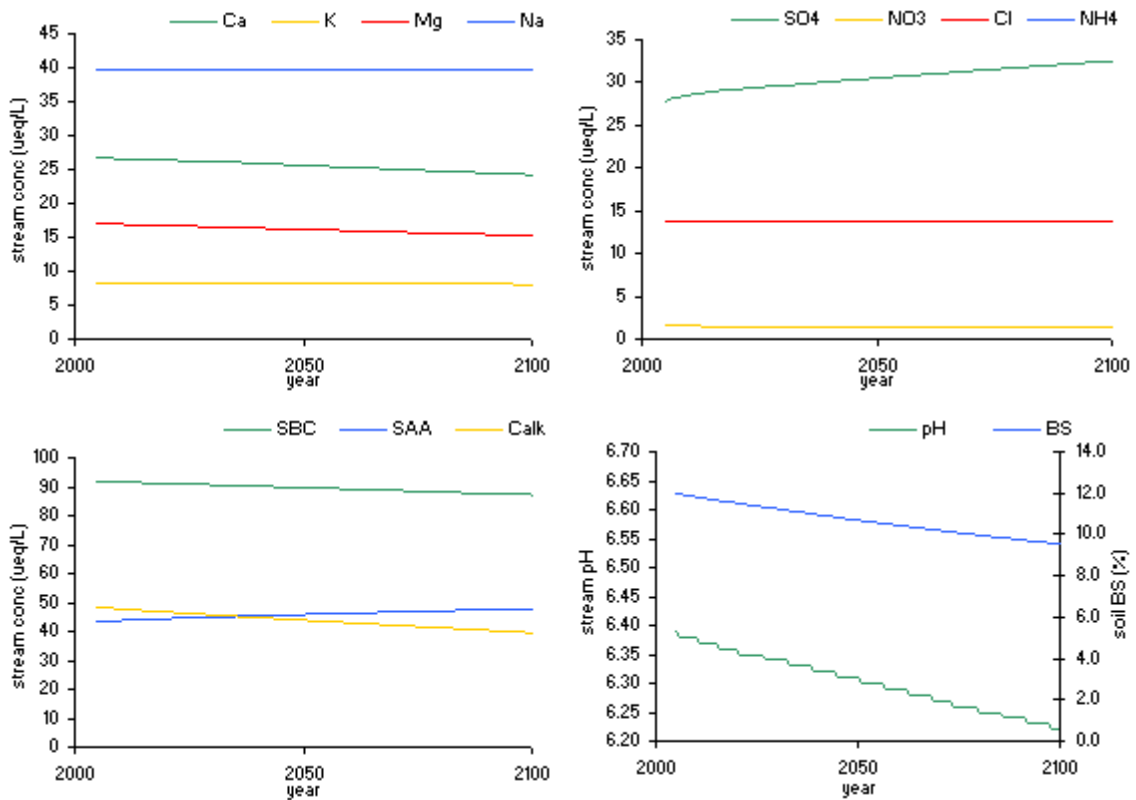


**Stream ID 257 - Rough Ridge Creek**

**Hindcast**

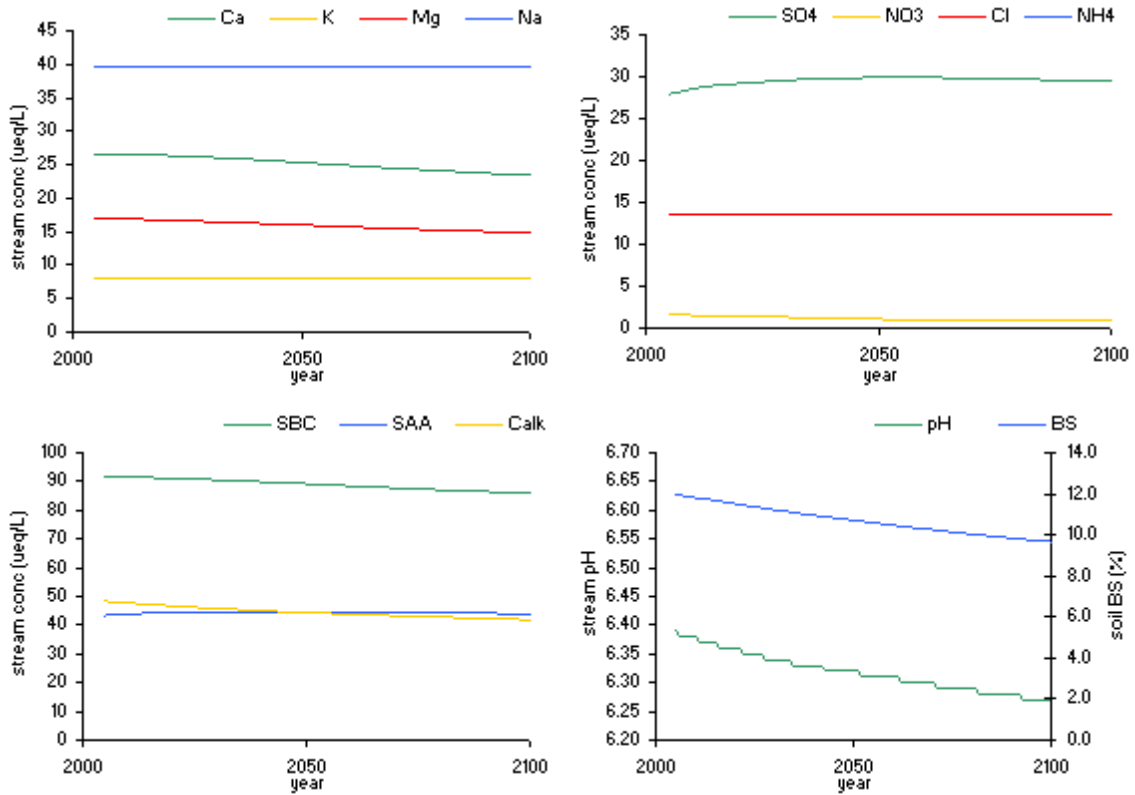


**Base**

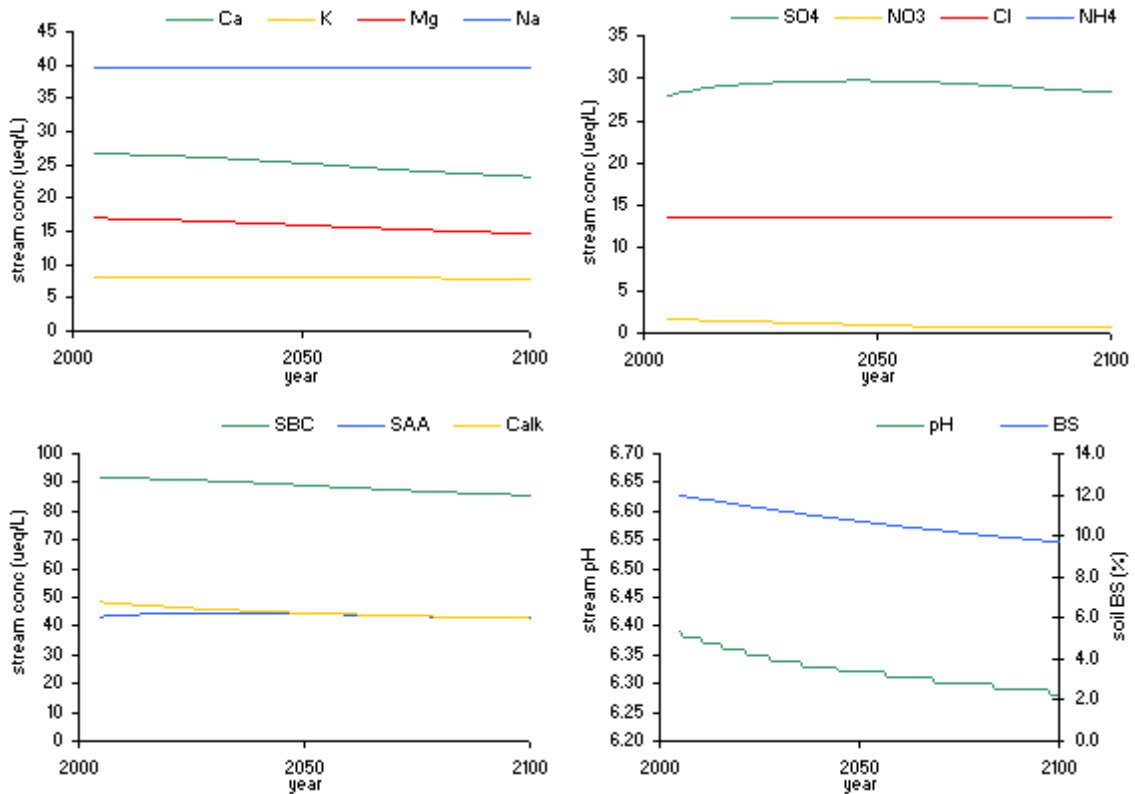


Stream ID 257 - Rough Ridge Creek

Moderate

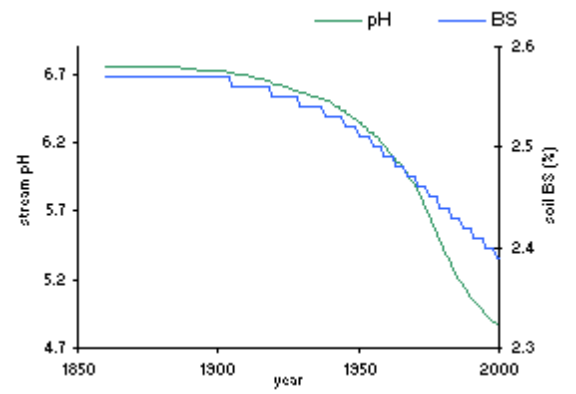
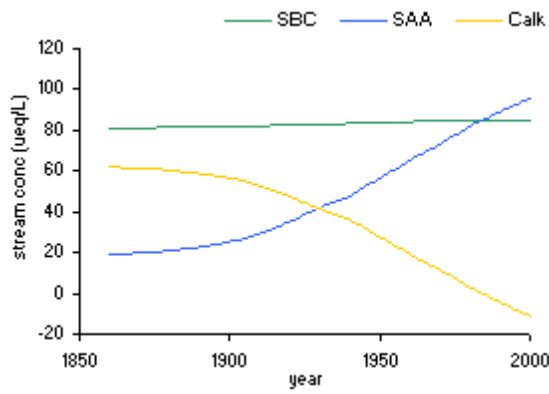
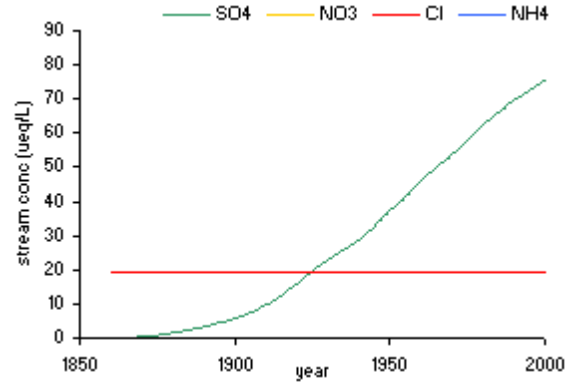
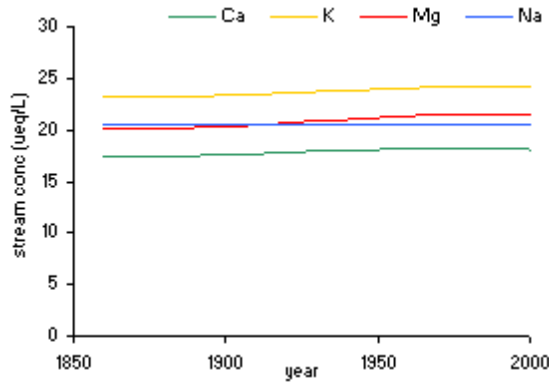


Aggressive

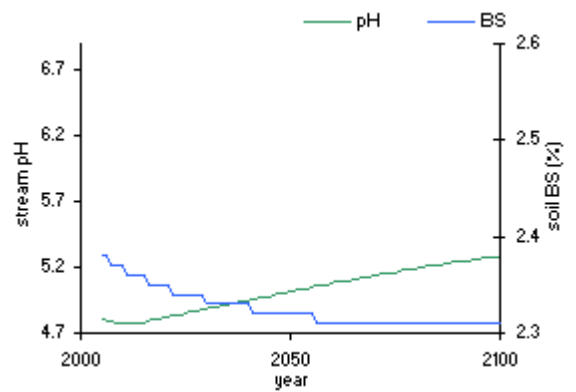
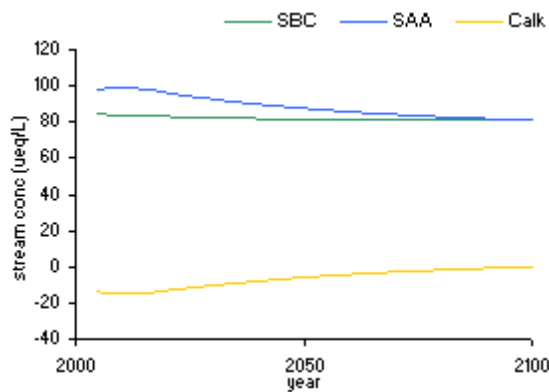
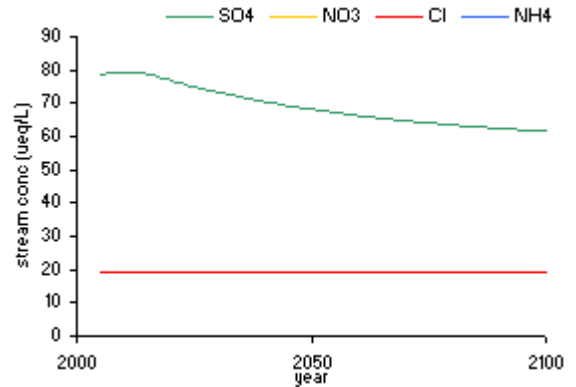
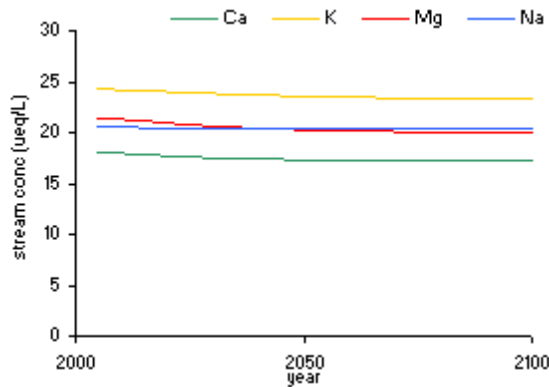


Stream ID 15 - Russell Creek

Hindcast

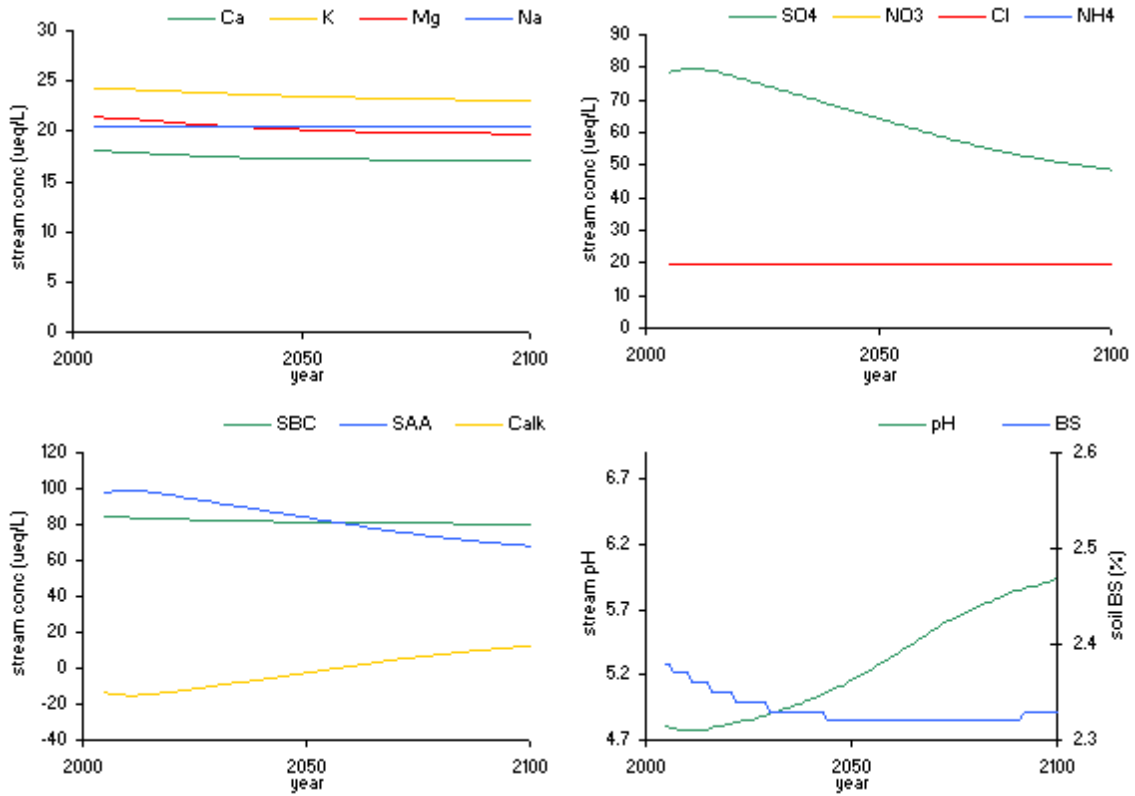


Base

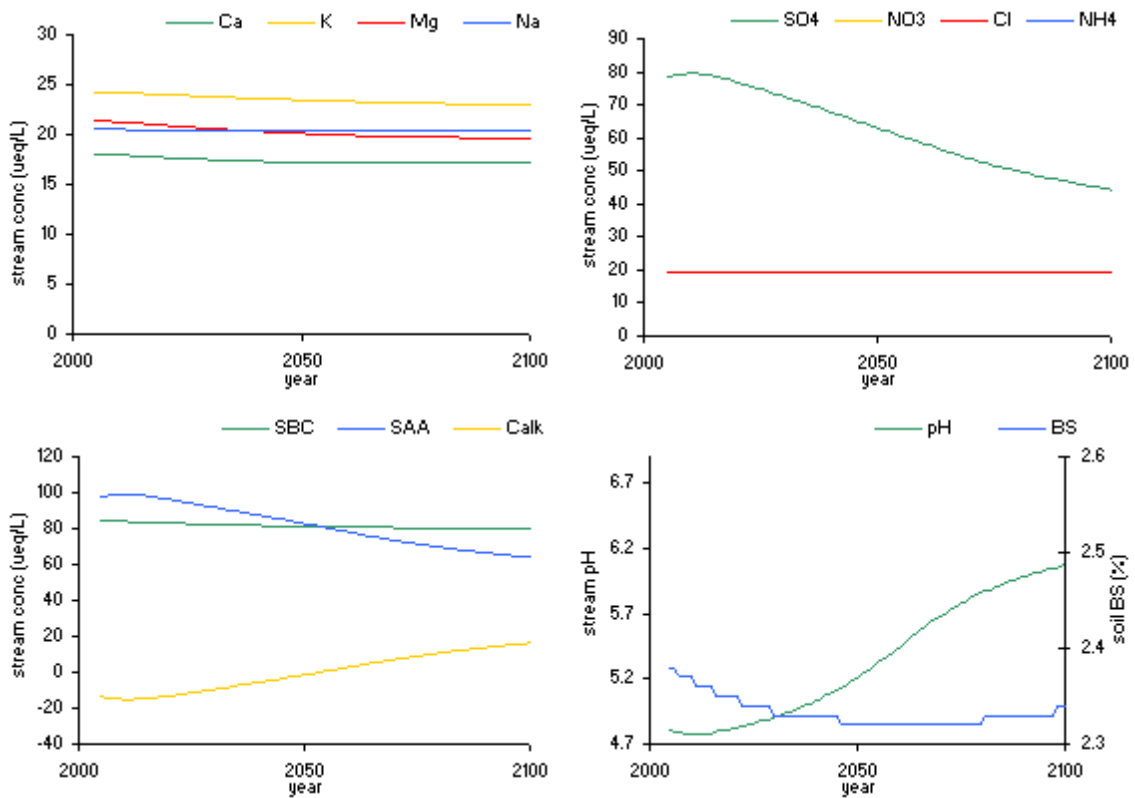


**Stream ID 15 - Russell Creek**

**Moderate**

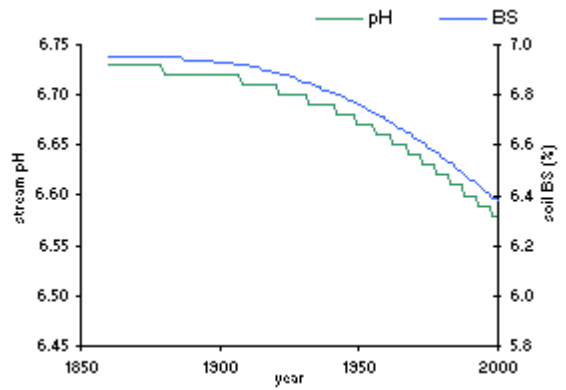
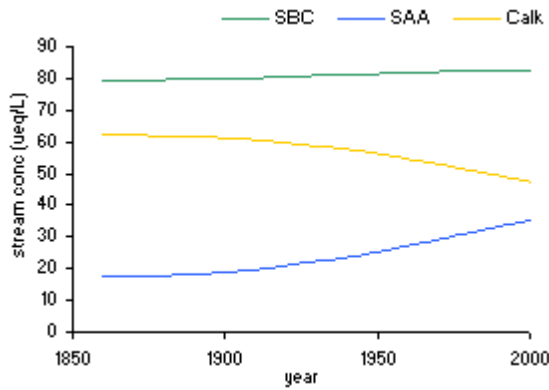
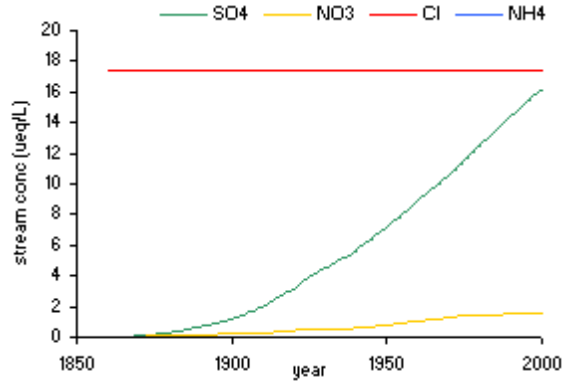
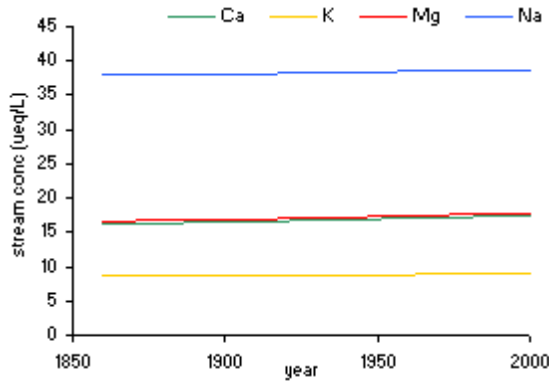


**Aggressive**

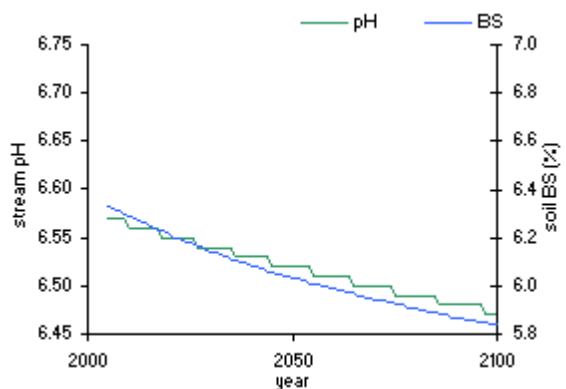
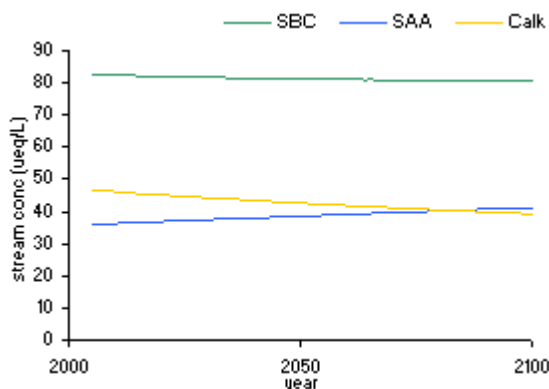
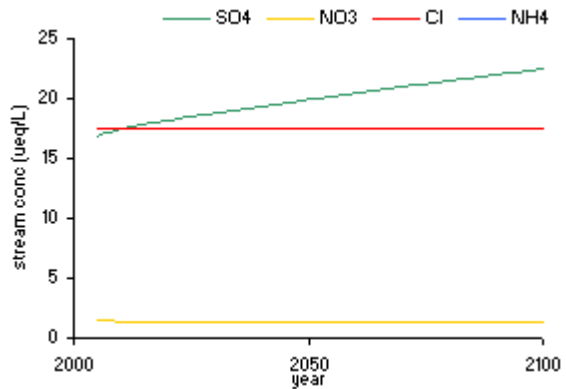
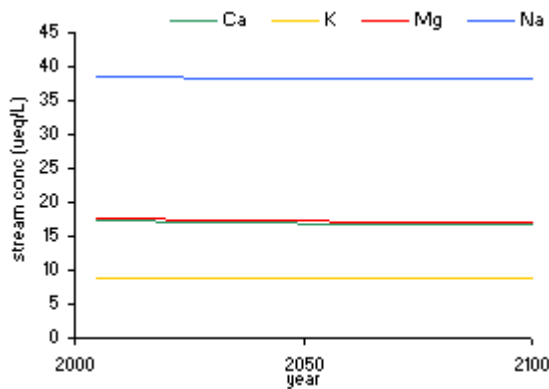


**Stream ID 193 - Scotsman Creek**

**Hindcast**

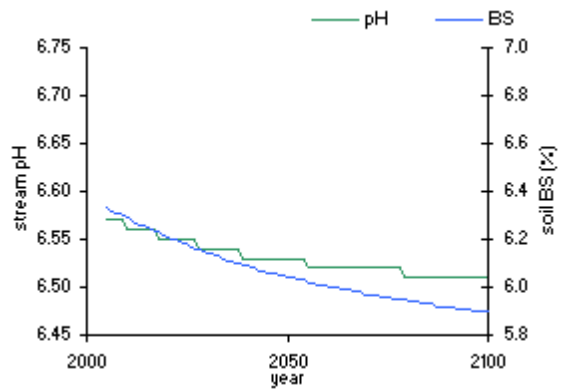
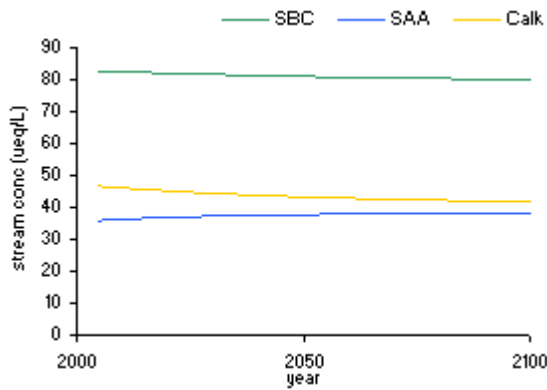
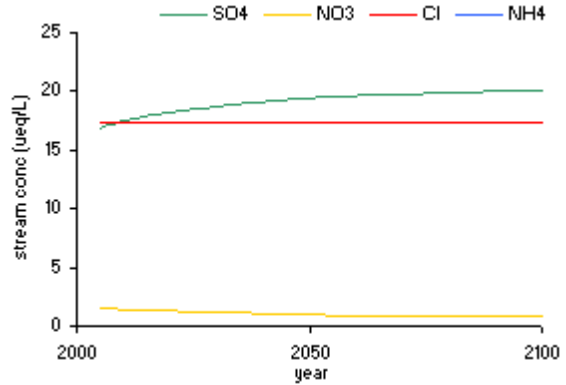
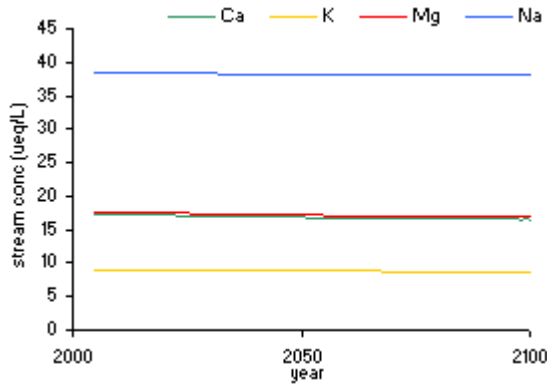


**Base**

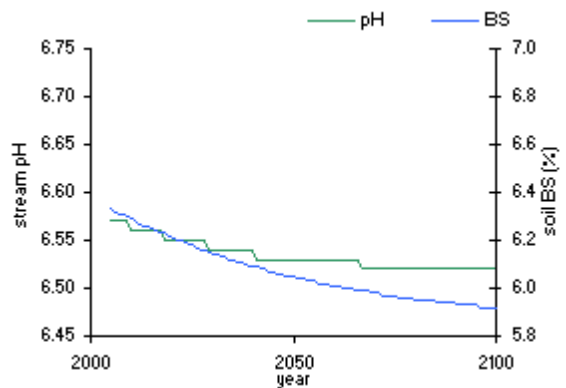
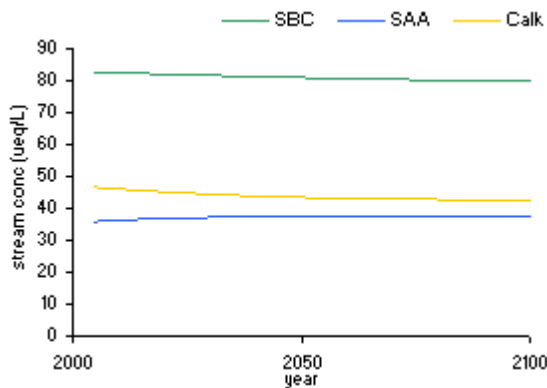
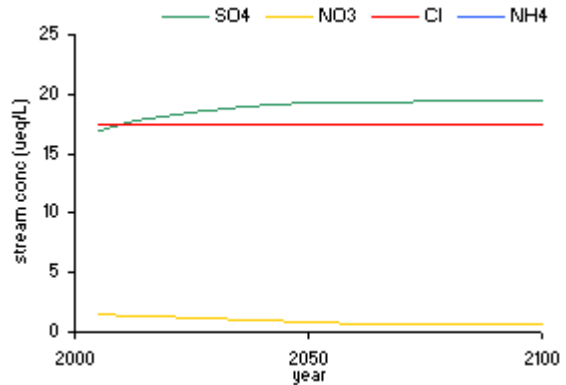
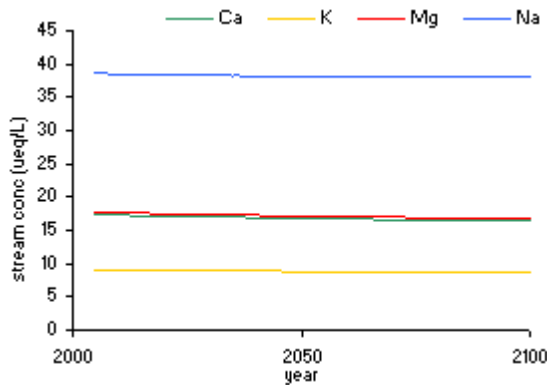


Stream ID 193 - Scotsman Creek

Moderate



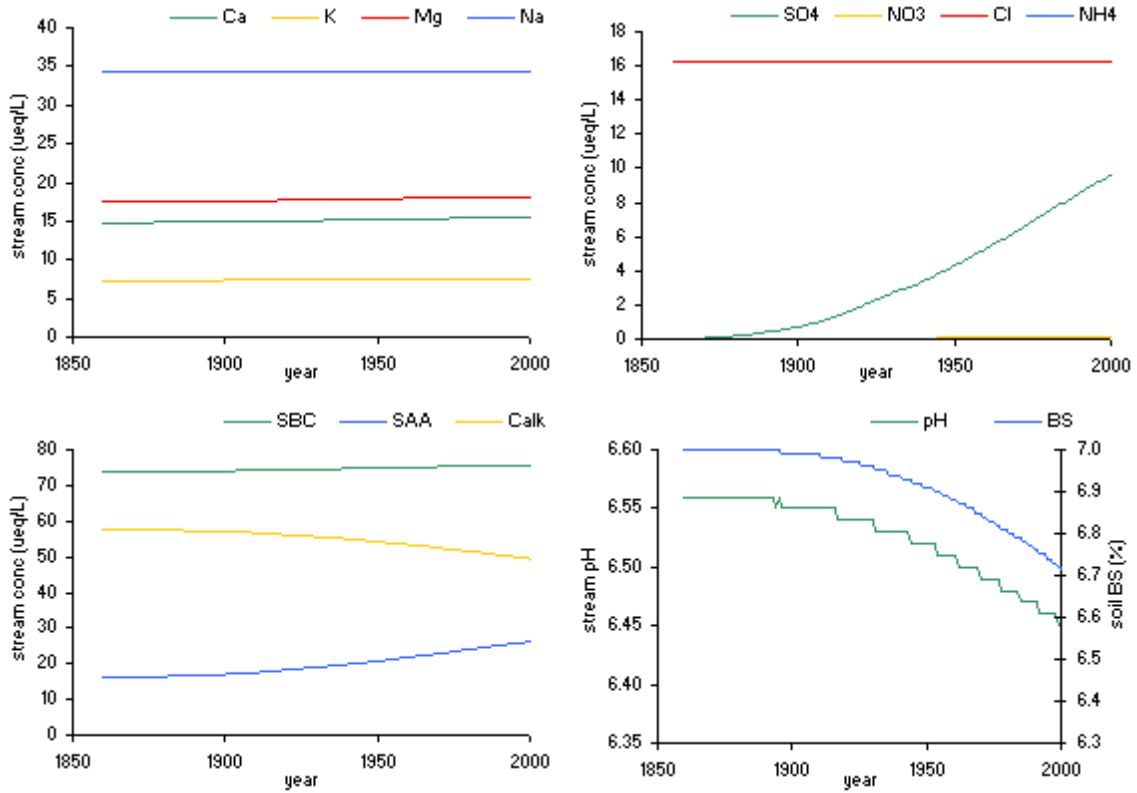
Aggressive



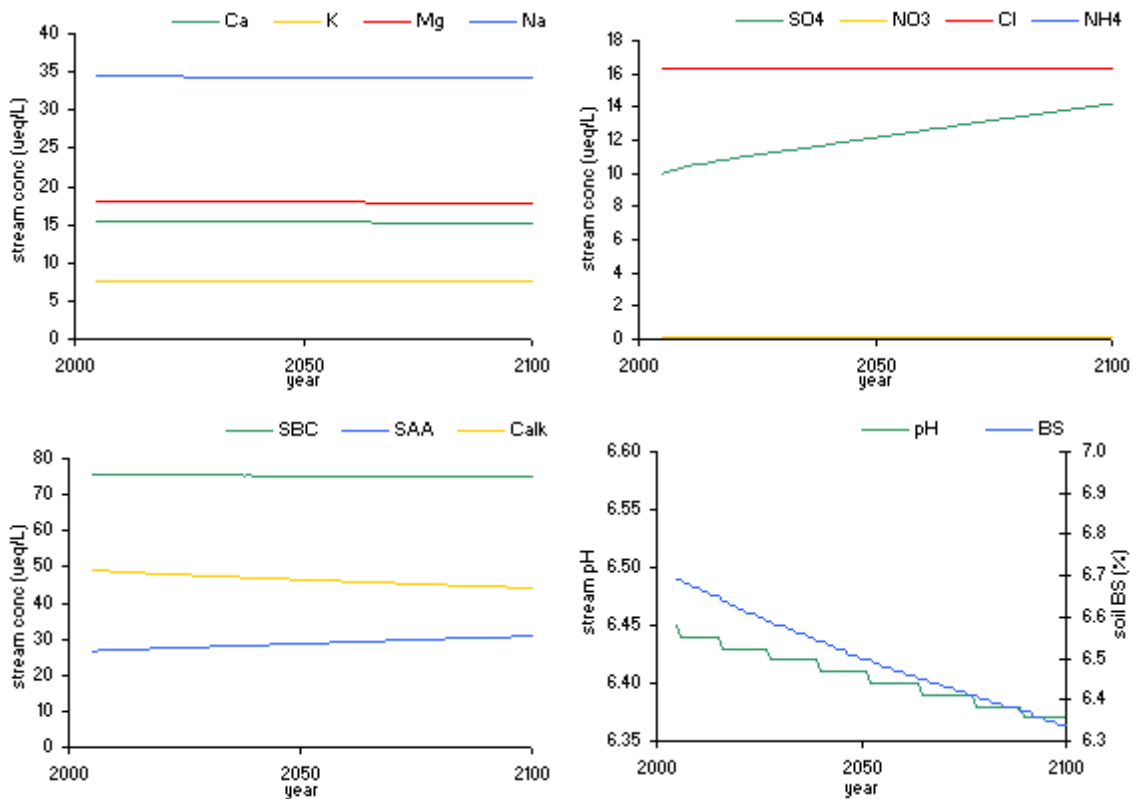


**Stream ID 188 - South Fork Fowler Creek**

**Hindcast**

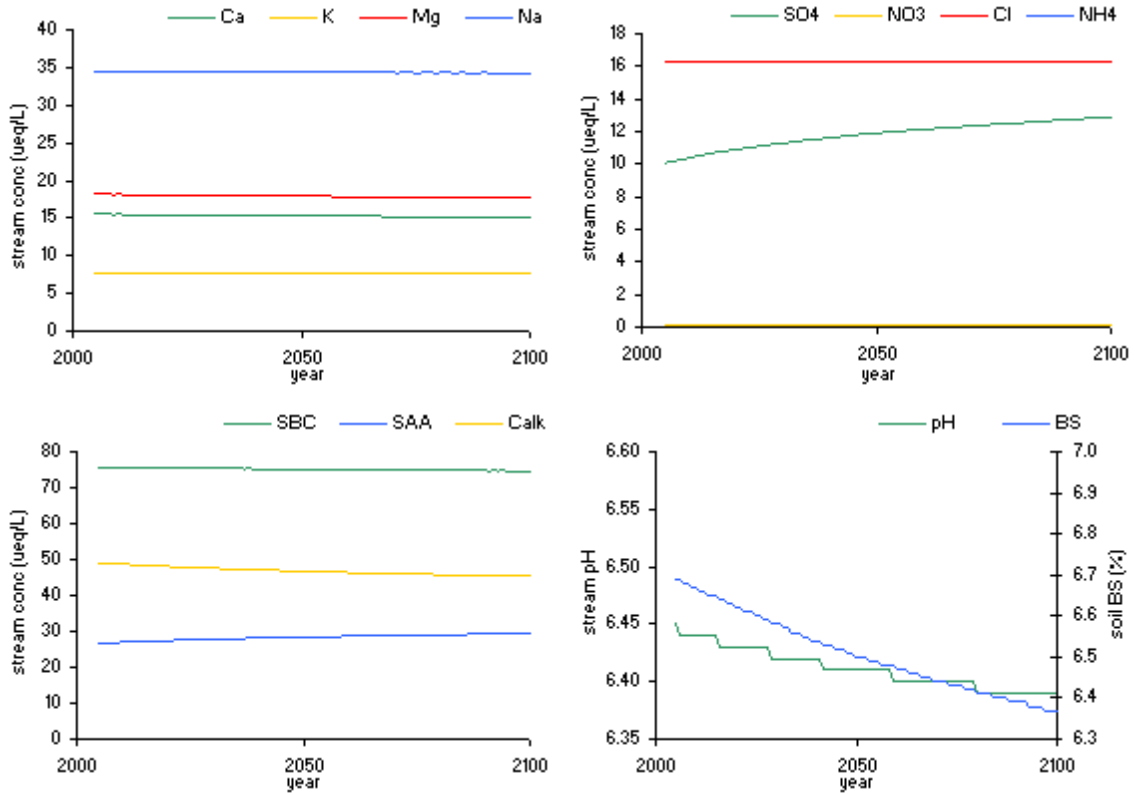


**Base**

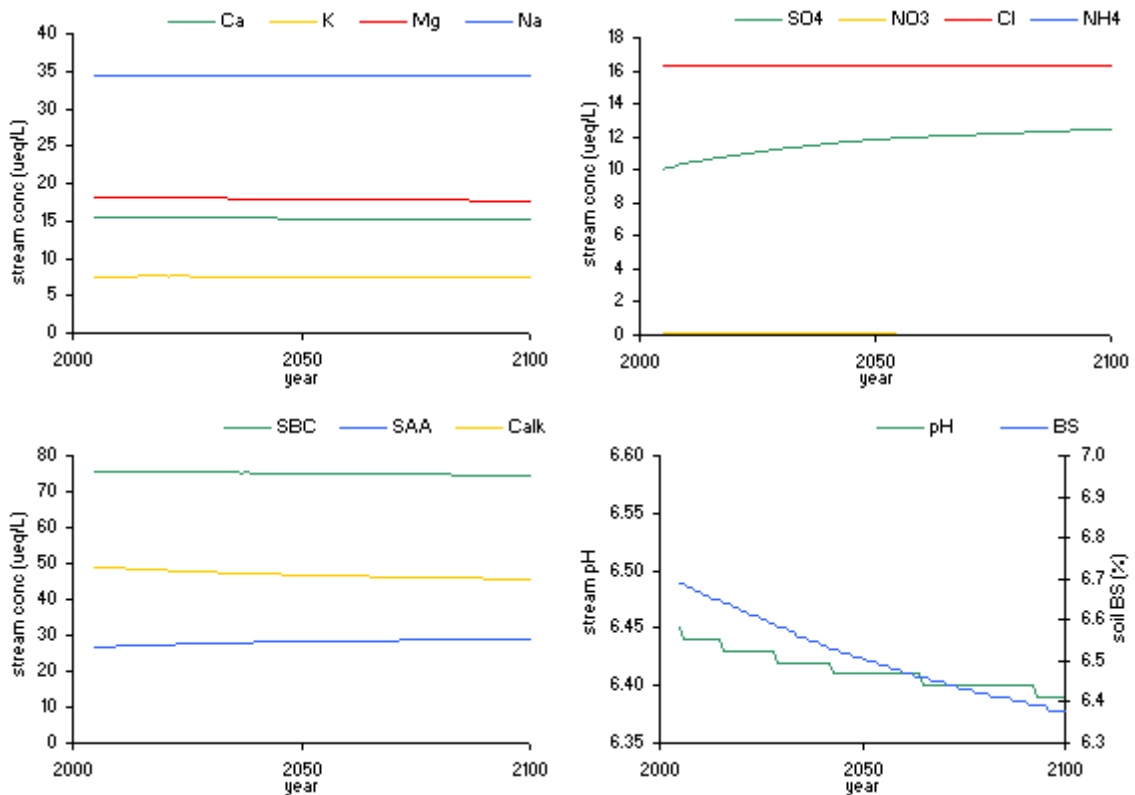


Stream ID 188 - South Fork Fowler Creek

Moderate

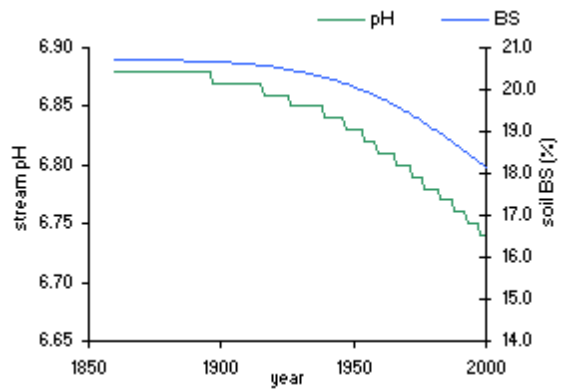
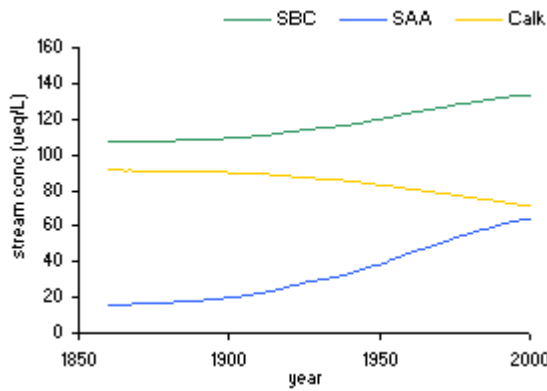
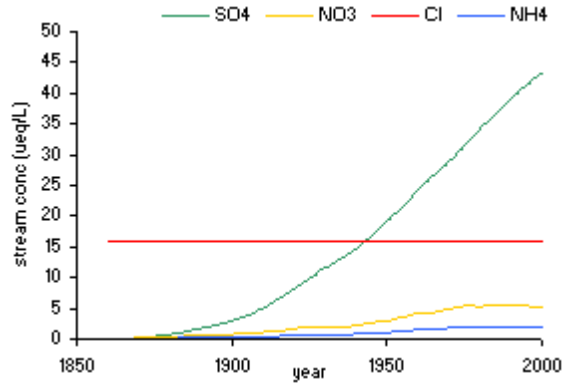
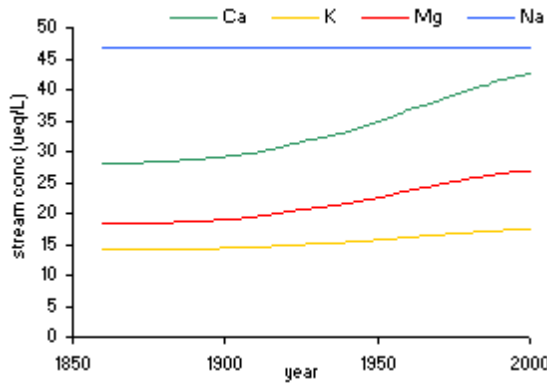


Aggressive

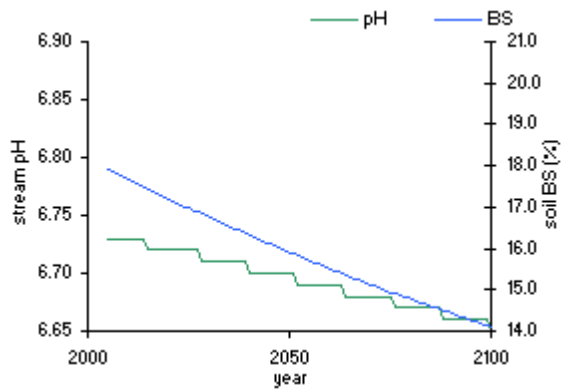
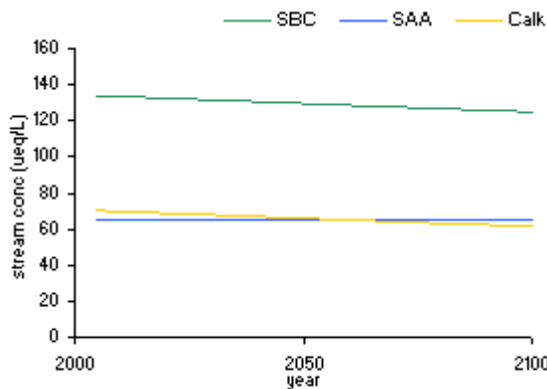
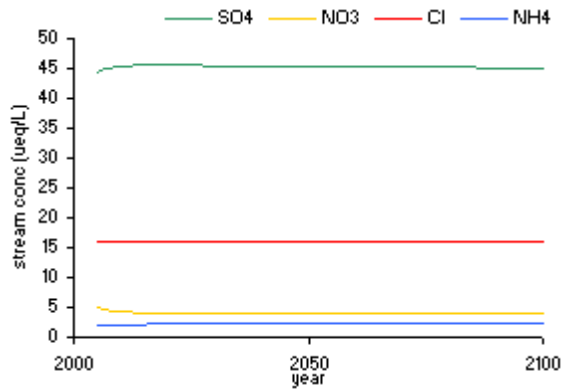
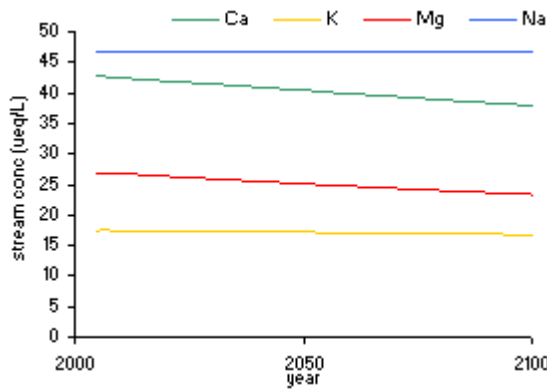


Stream ID 266 - Spivey Creek

Hindcast

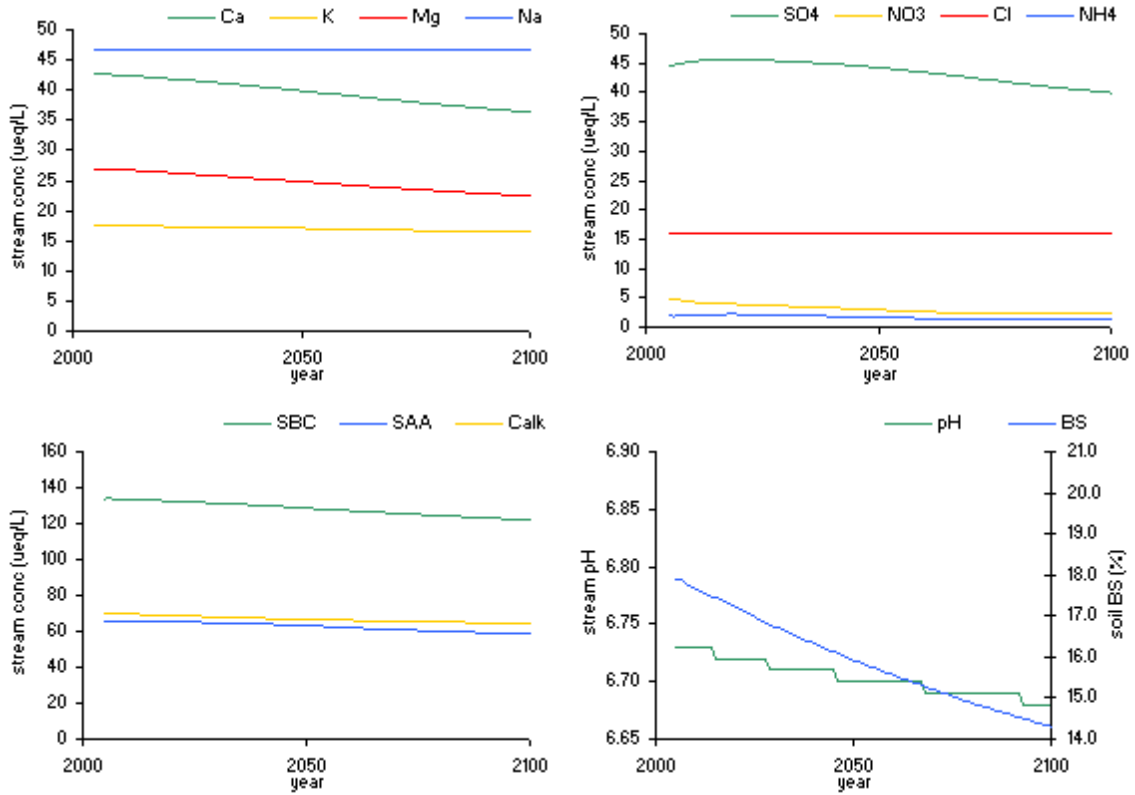


Base

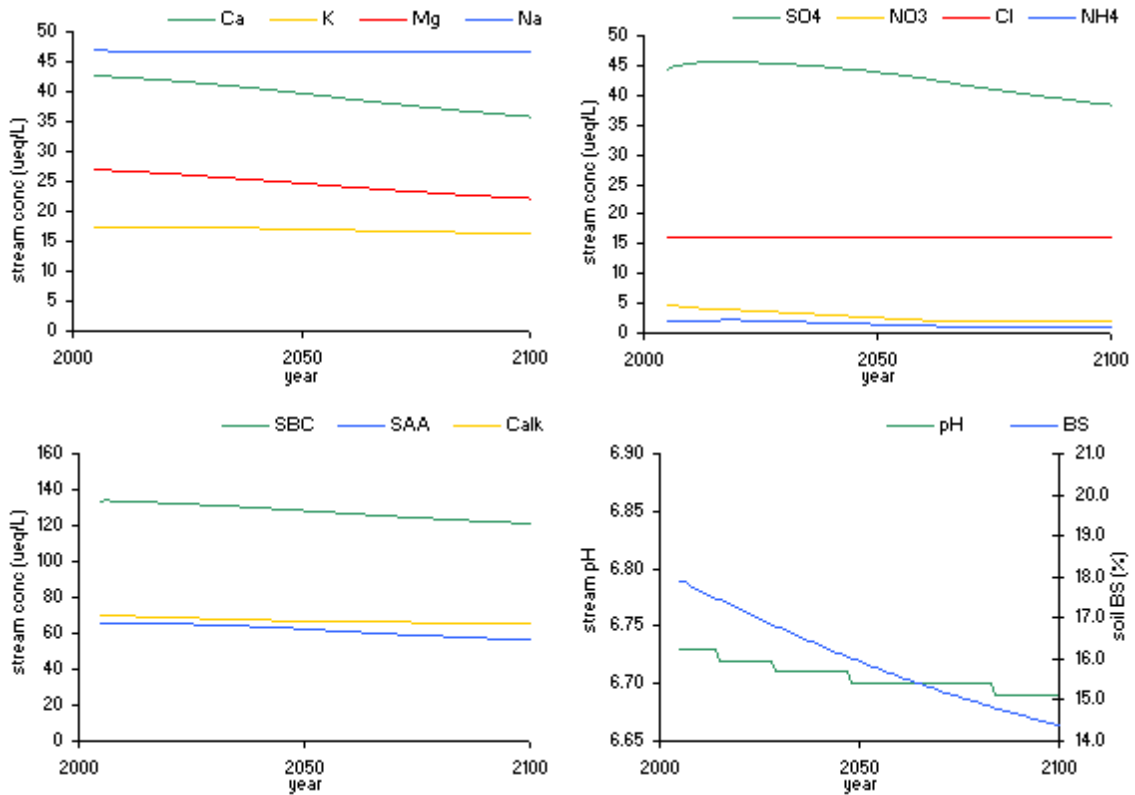


Stream ID 266 - Spivey Creek

Moderate

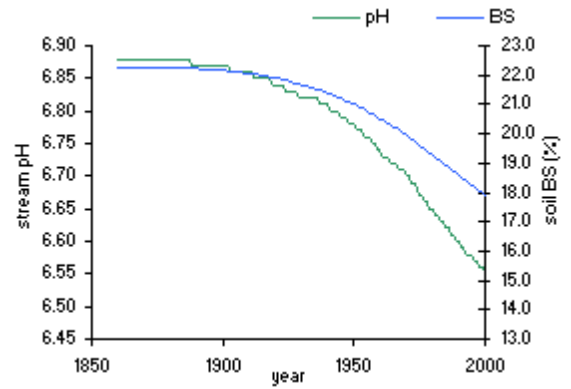
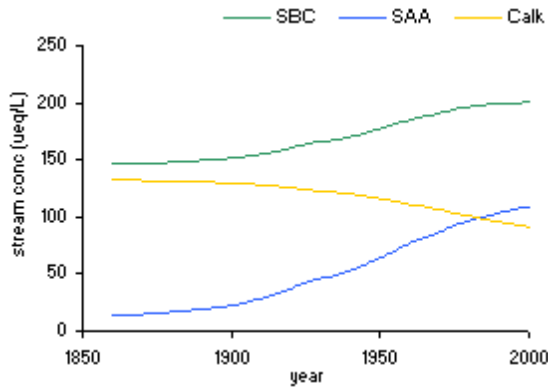
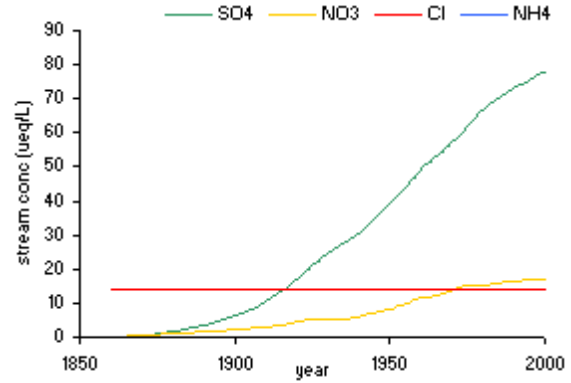
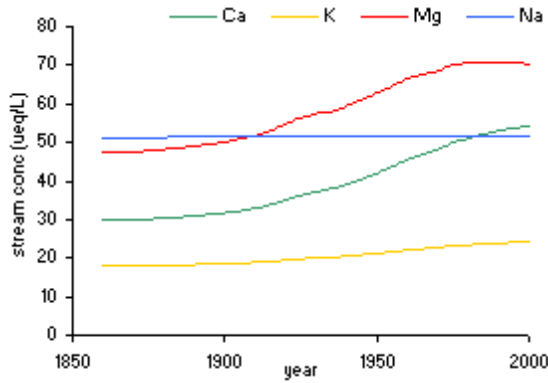


Aggressive

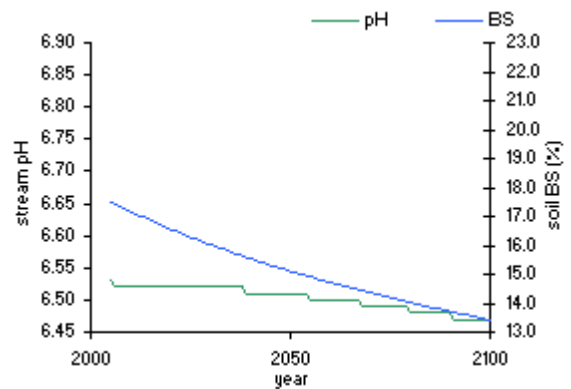
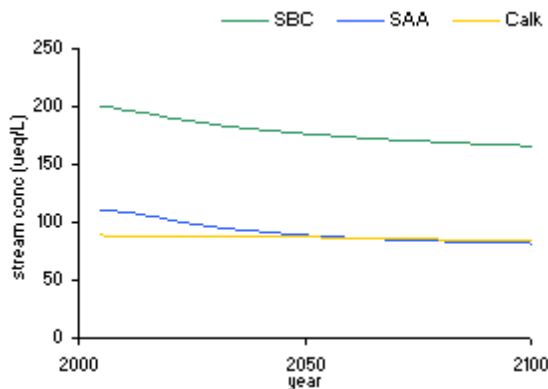
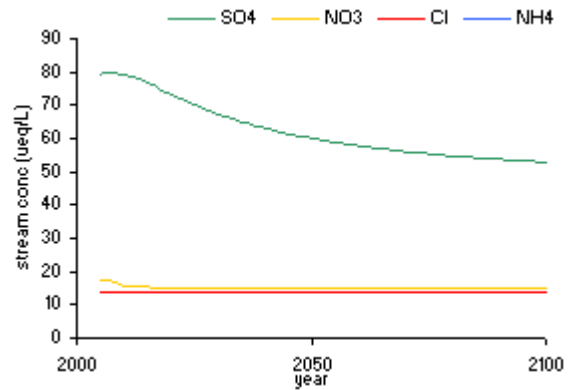
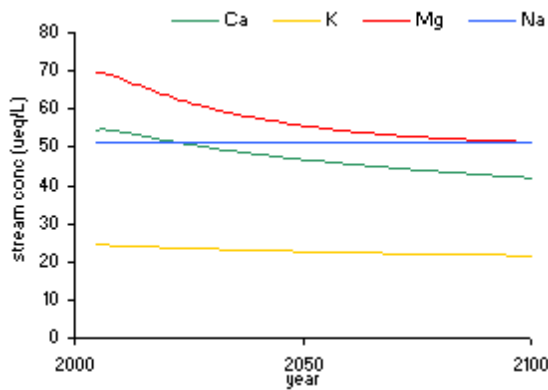


**Stream ID 88 - Squibb Creek**

**Hindcast**

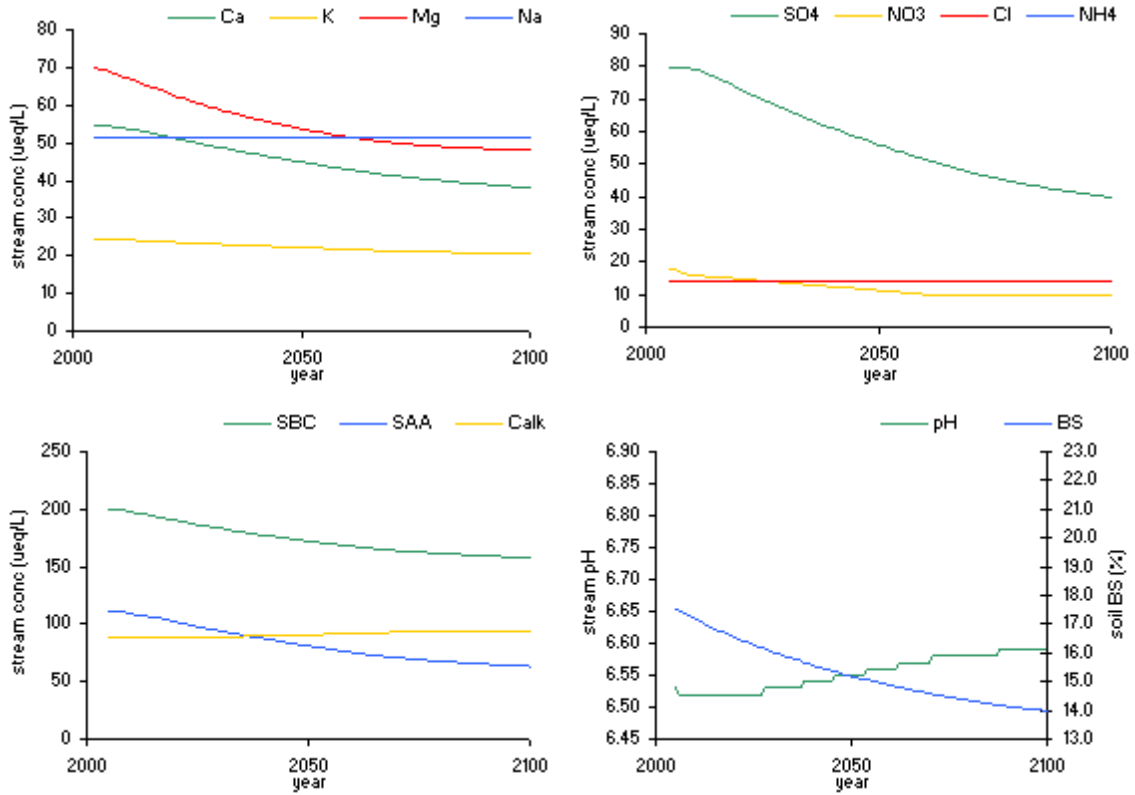


**Base**

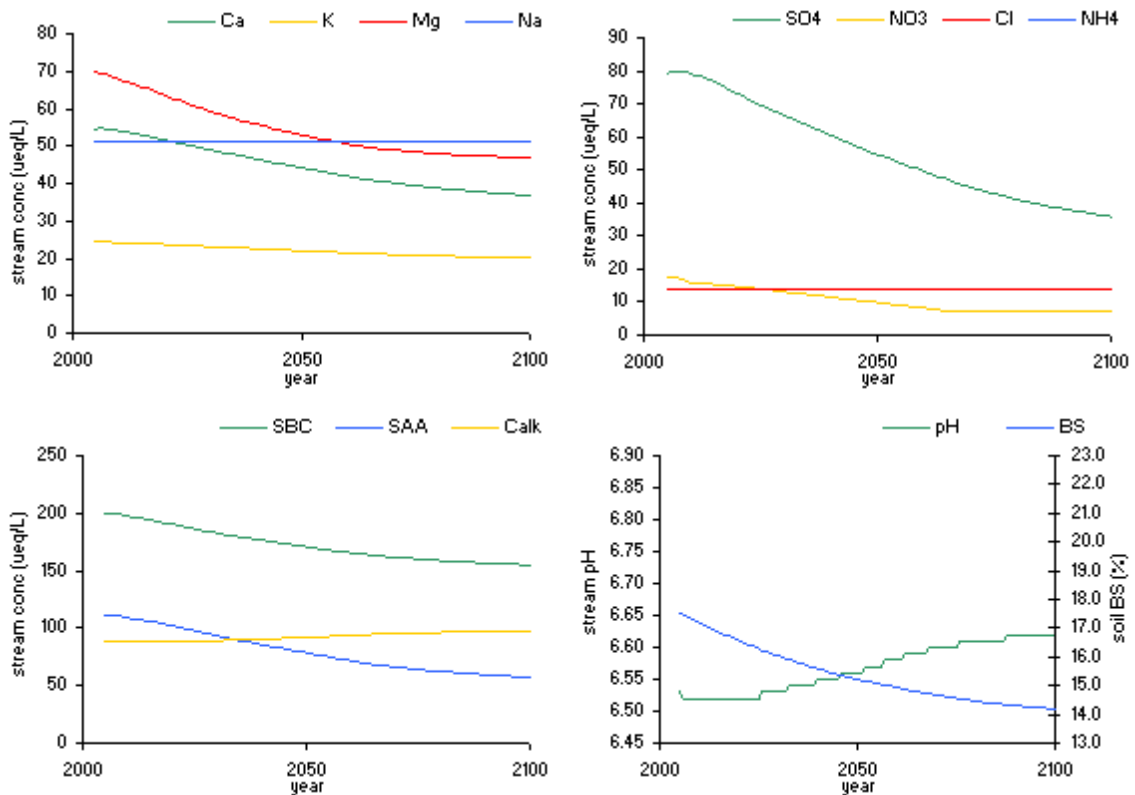


**Stream ID 88 - Squibb Creek**

**Moderate**

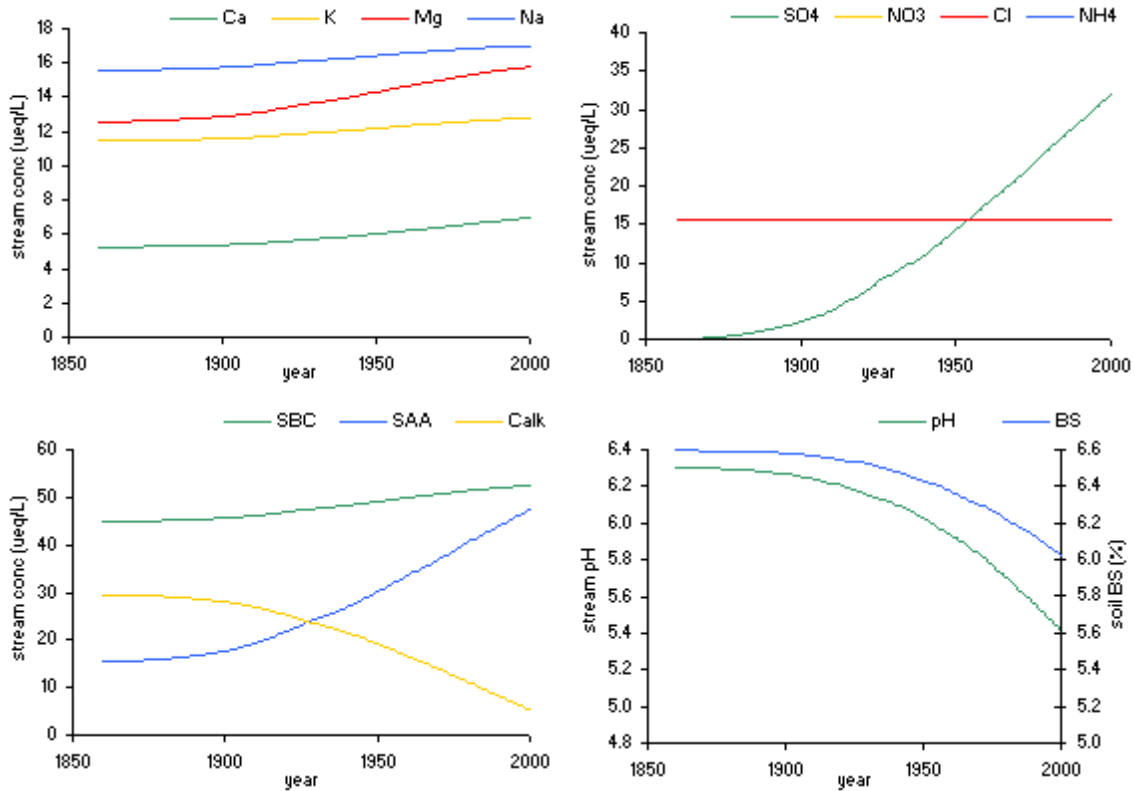


**Aggressive**

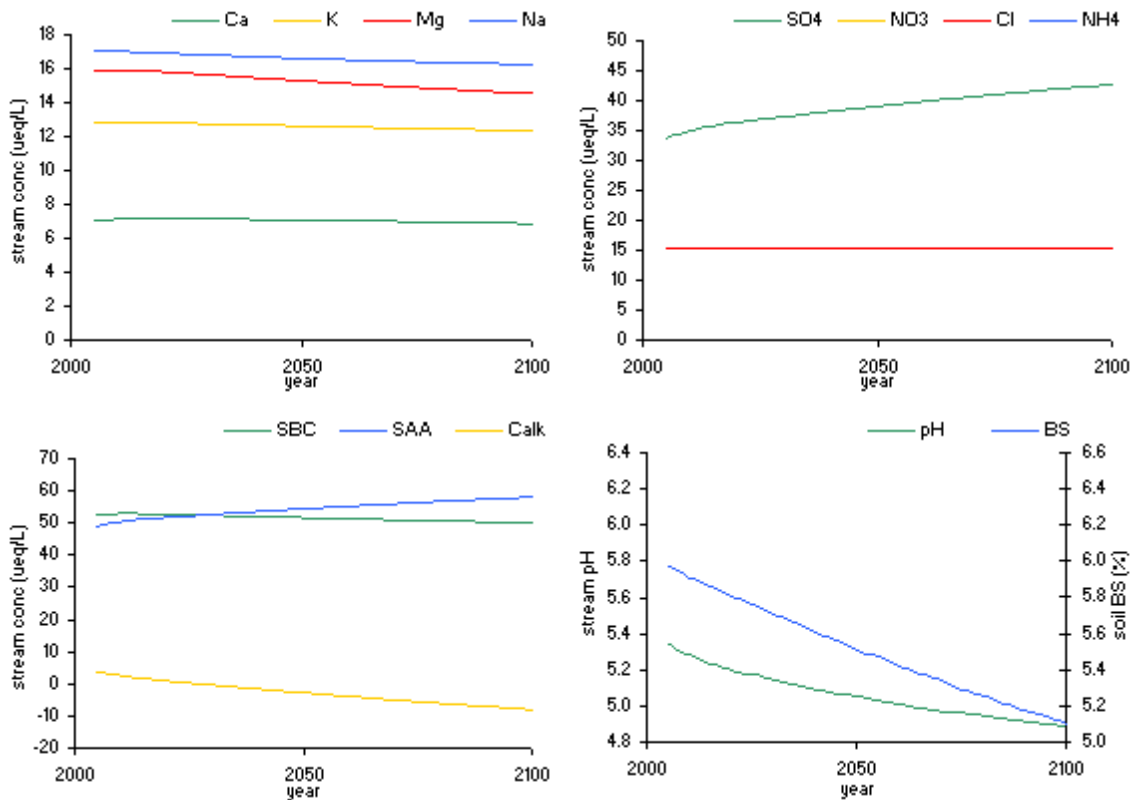


**Stream ID 28 - Stillhouse Branch**

**Hindcast**

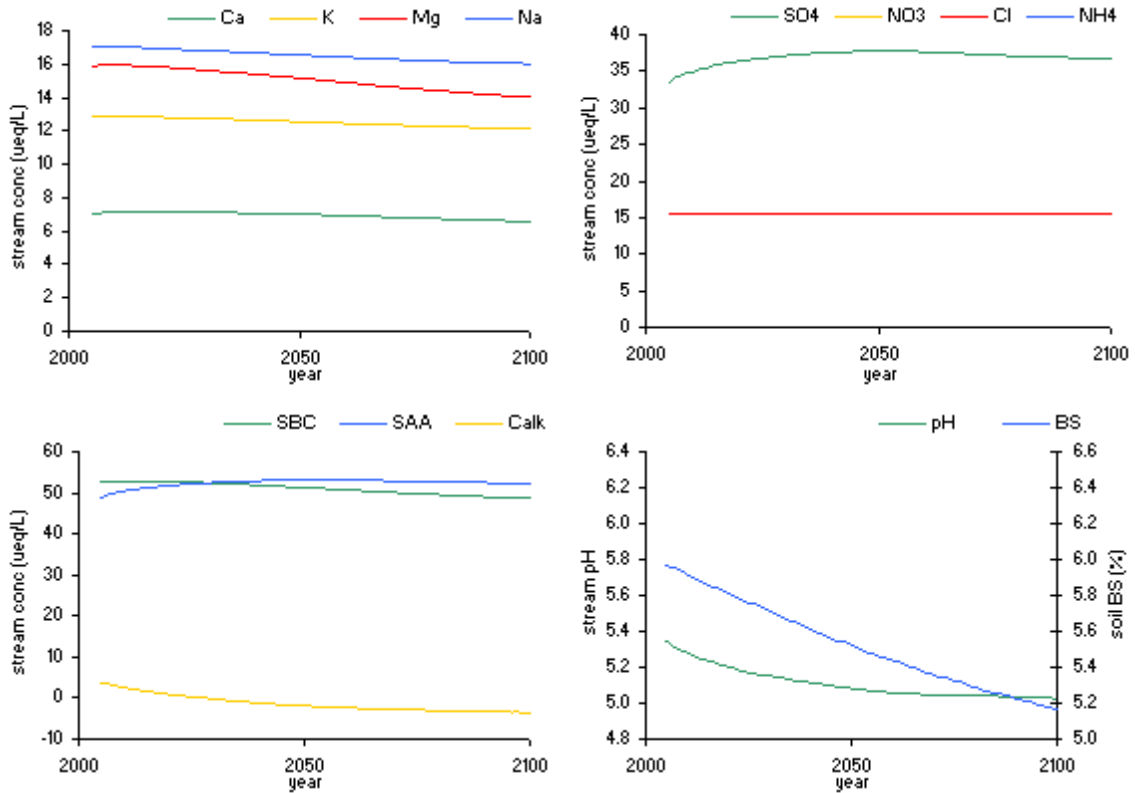


**Base**

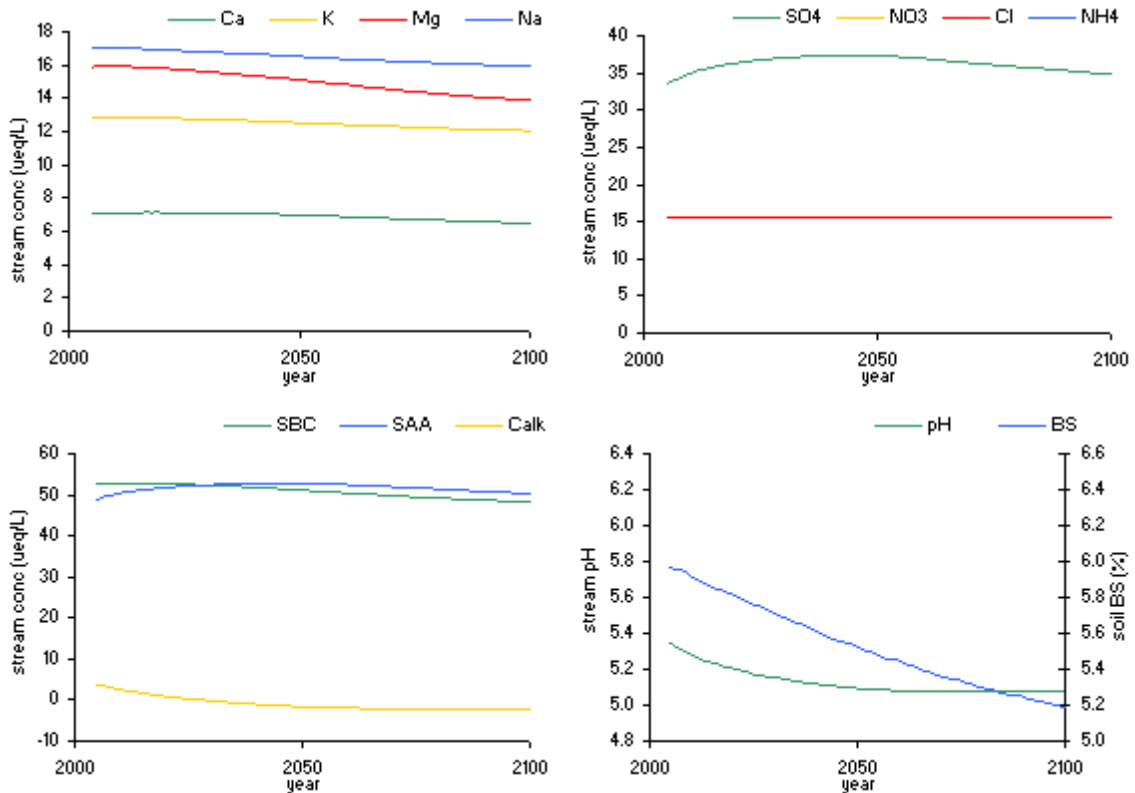


**Stream ID 28 - Stillhouse Branch**

**Moderate**



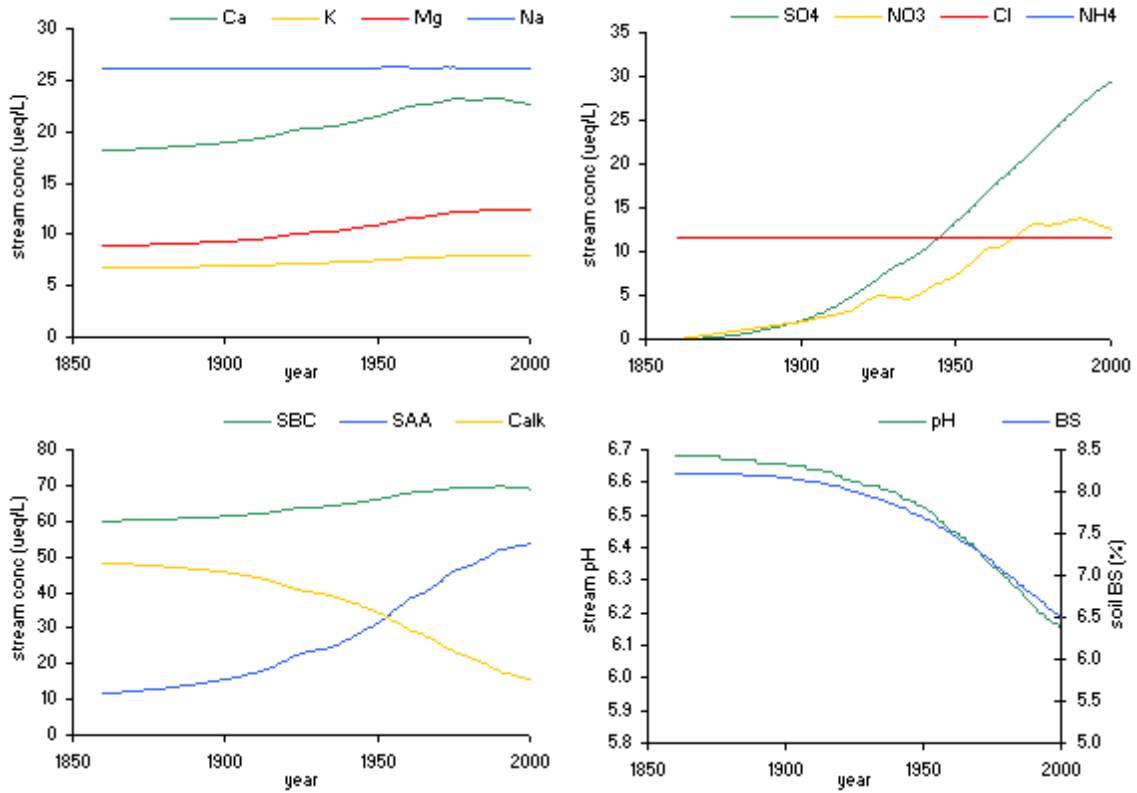
**Aggressive**



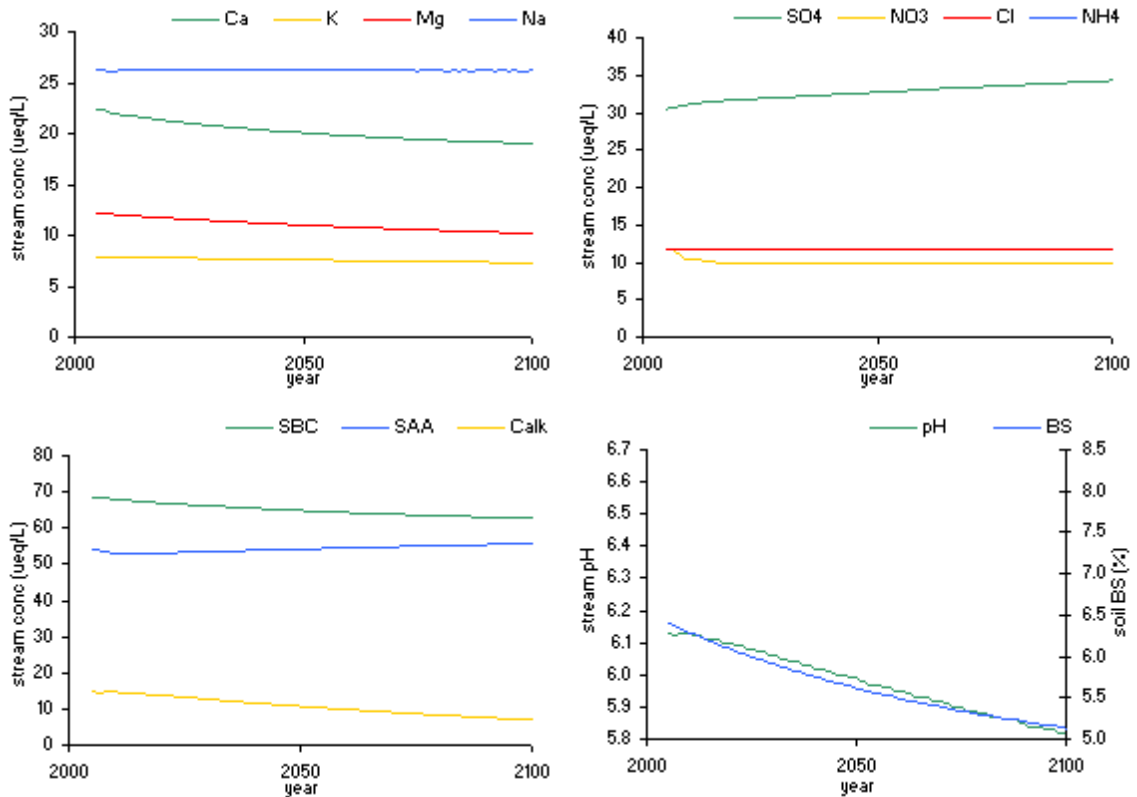


*Stream ID 245 - Unnamed creek A*

**Hindcast**

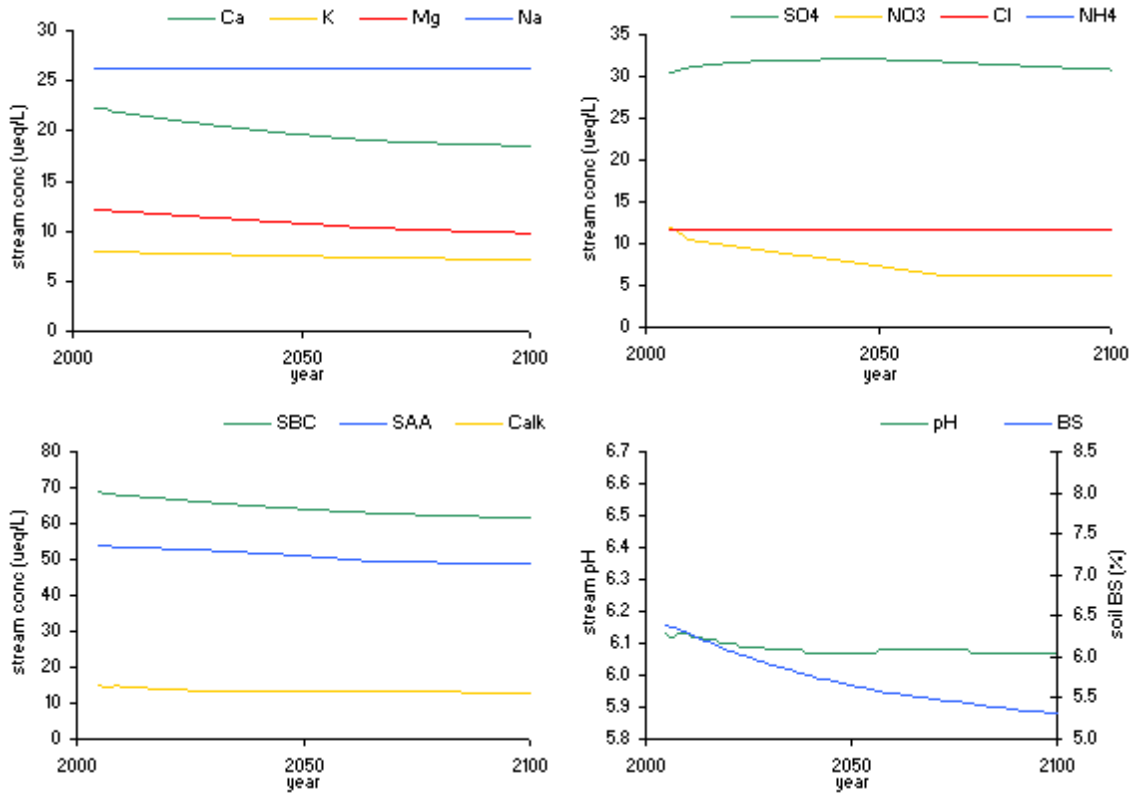


**Base**

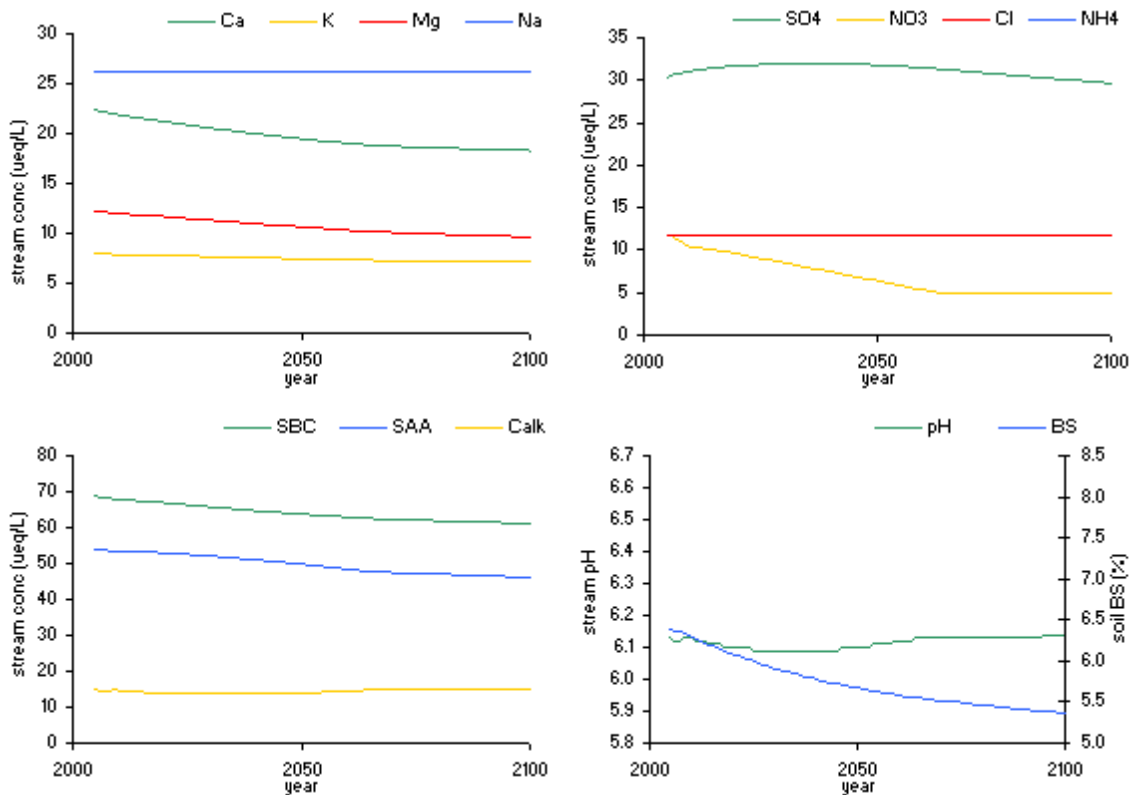


Stream ID 245 - Unnamed creek A

Moderate

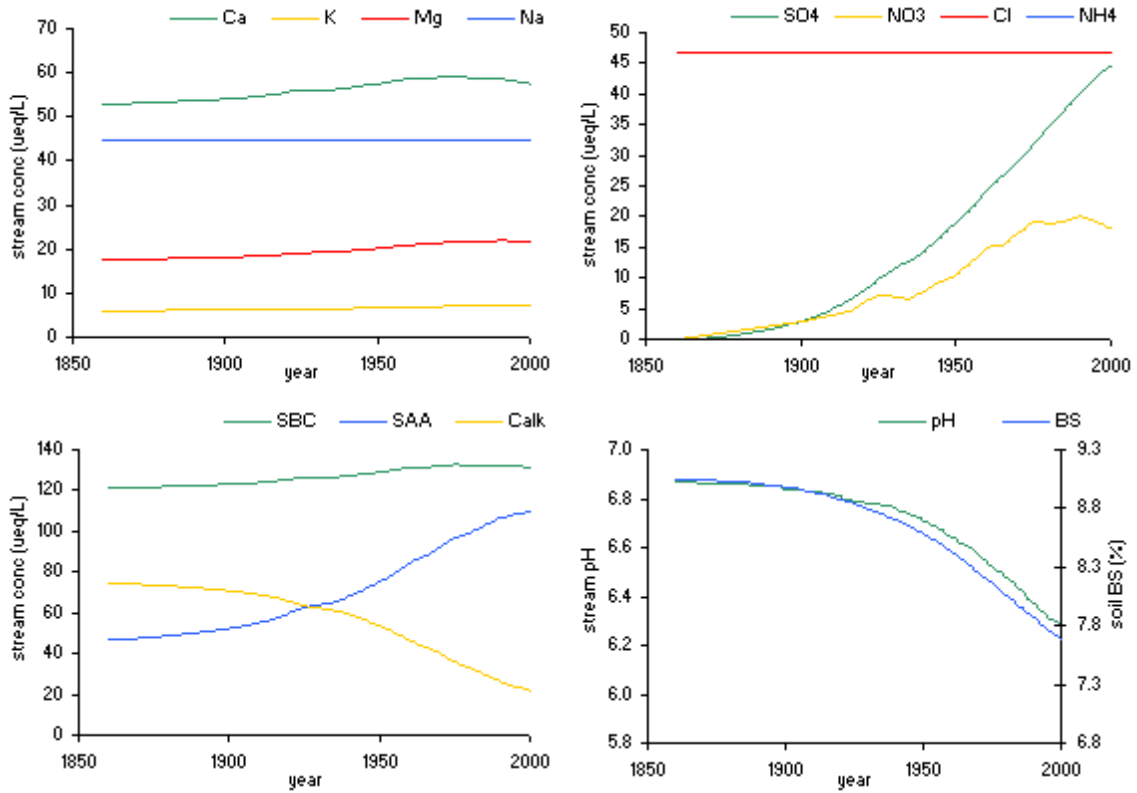


Aggressive

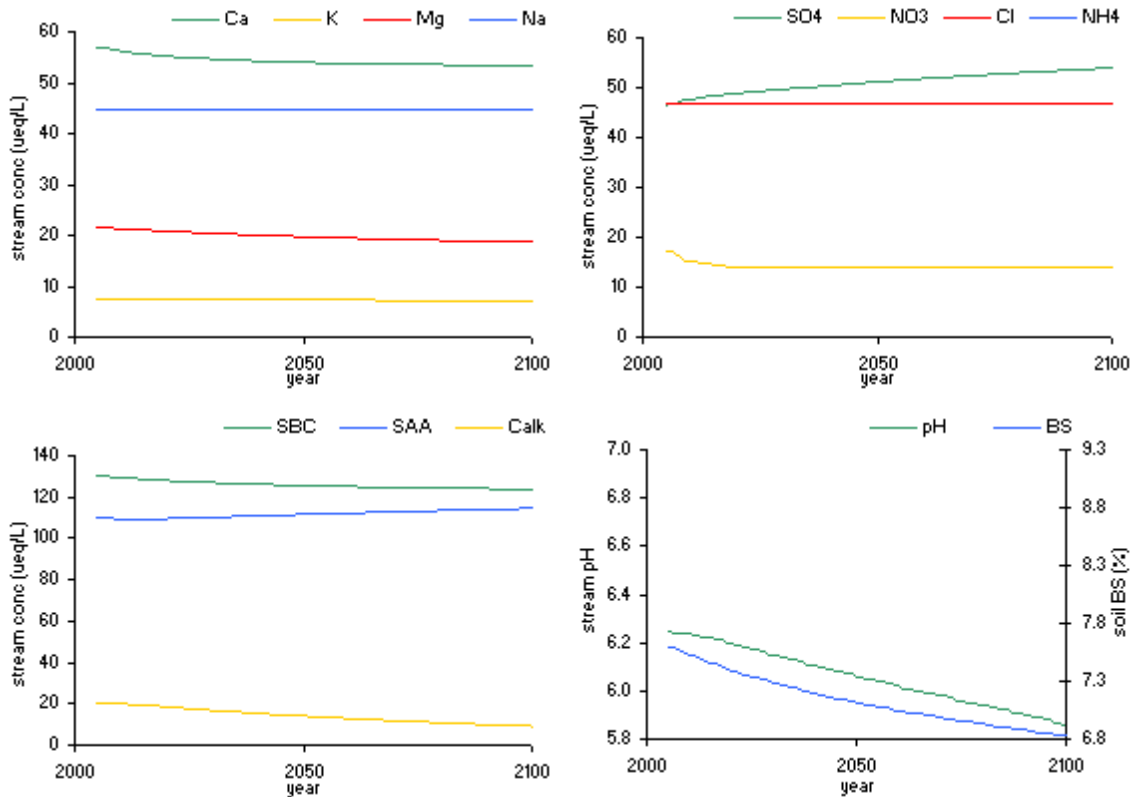


**Stream ID 246 - Unnamed creek B**

**Hindcast**

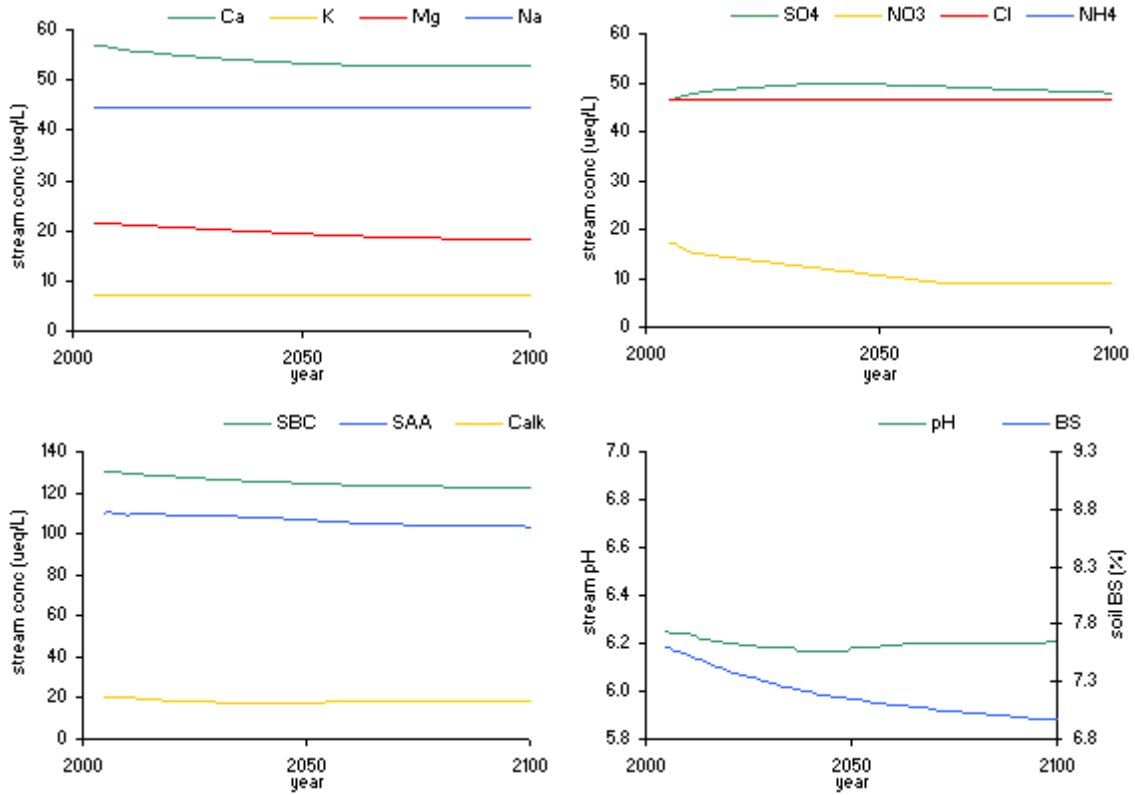


**Base**

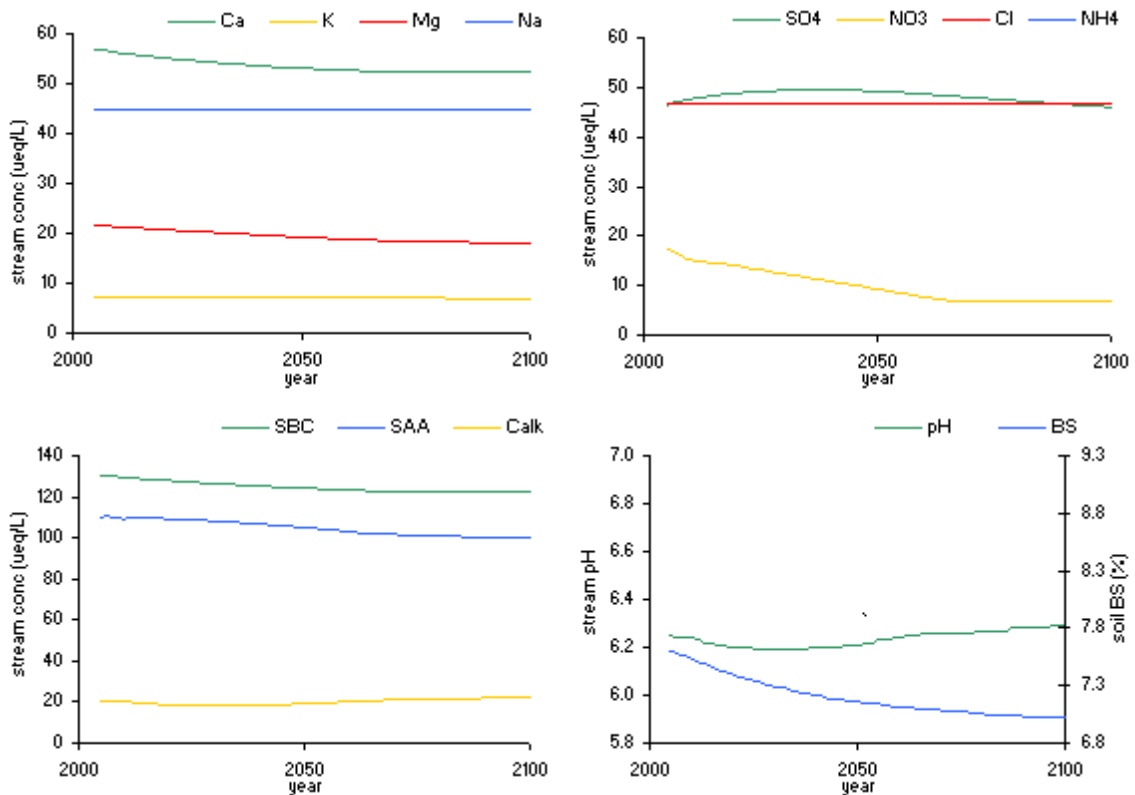


**Stream ID 246 - Unnamed creek B**

**Moderate**

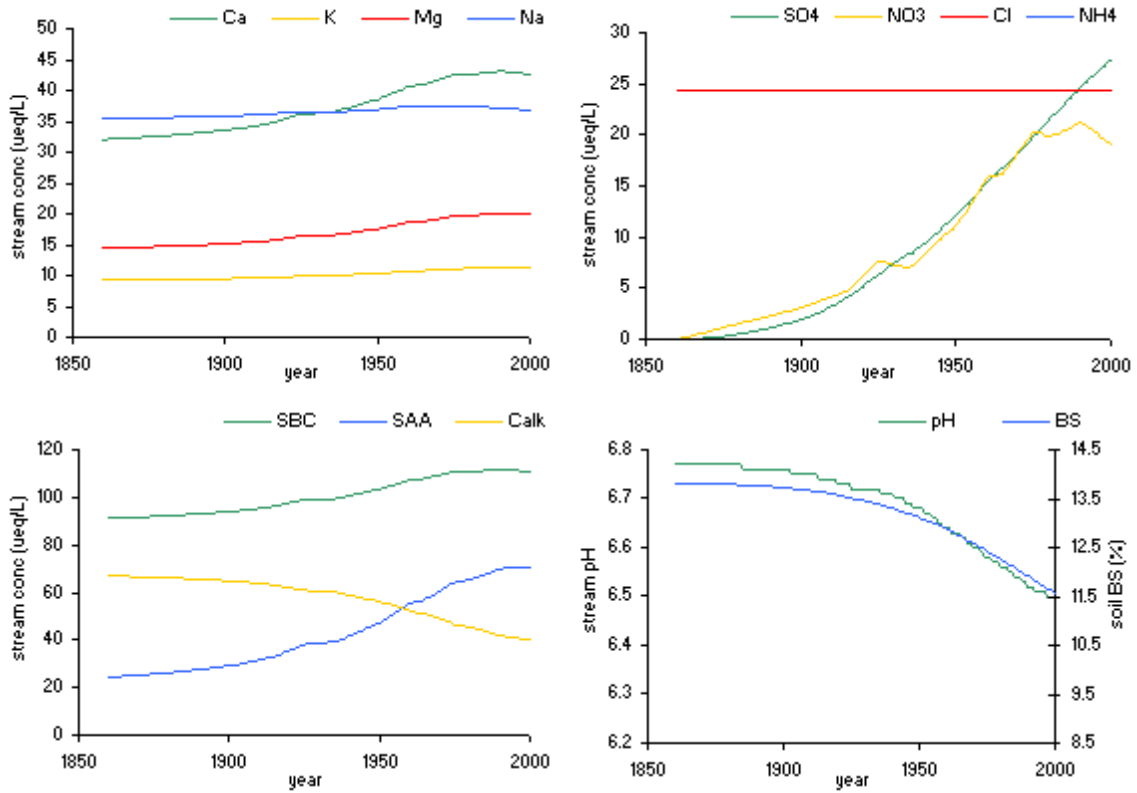


**Aggressive**

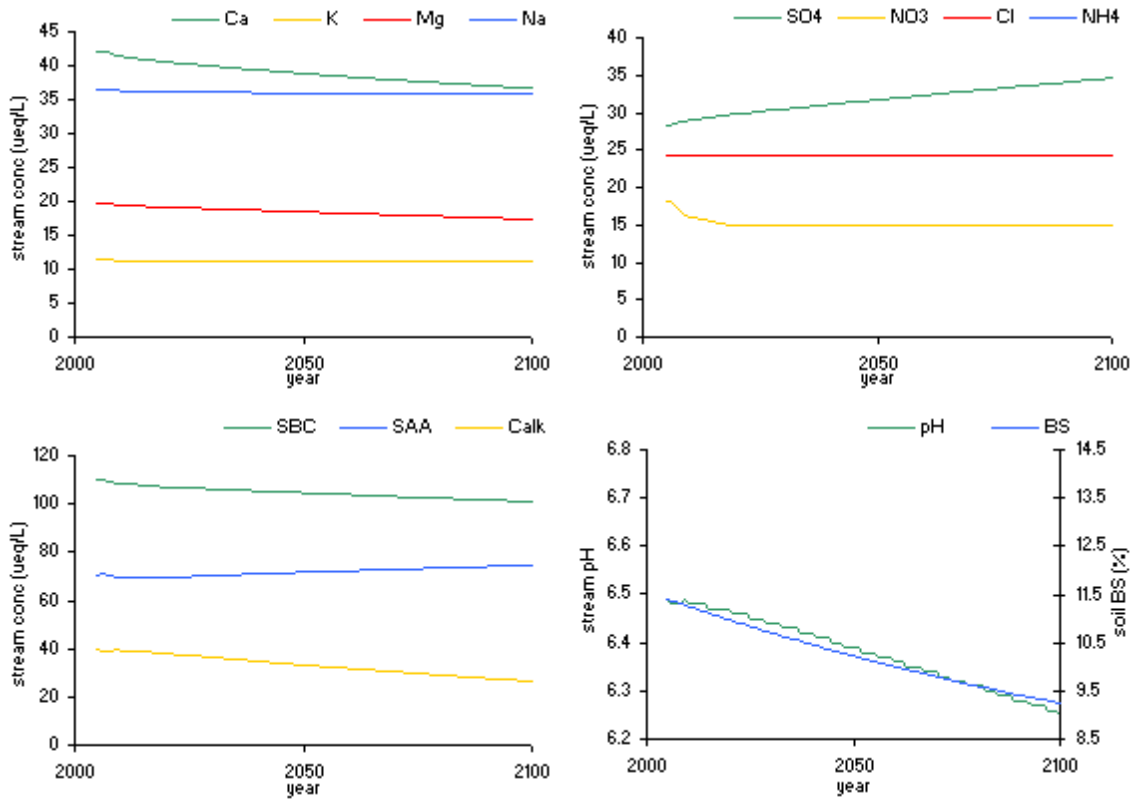


Stream ID 249 - Unnamed creek C

Hindcast

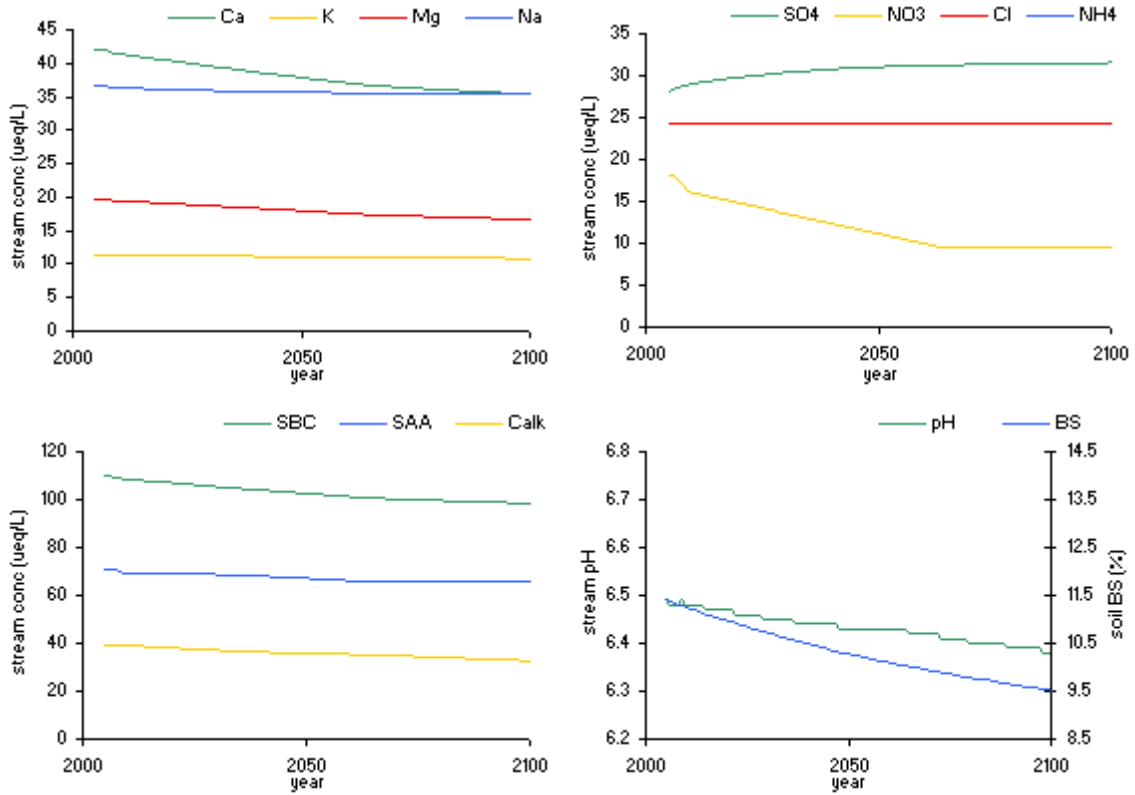


Base

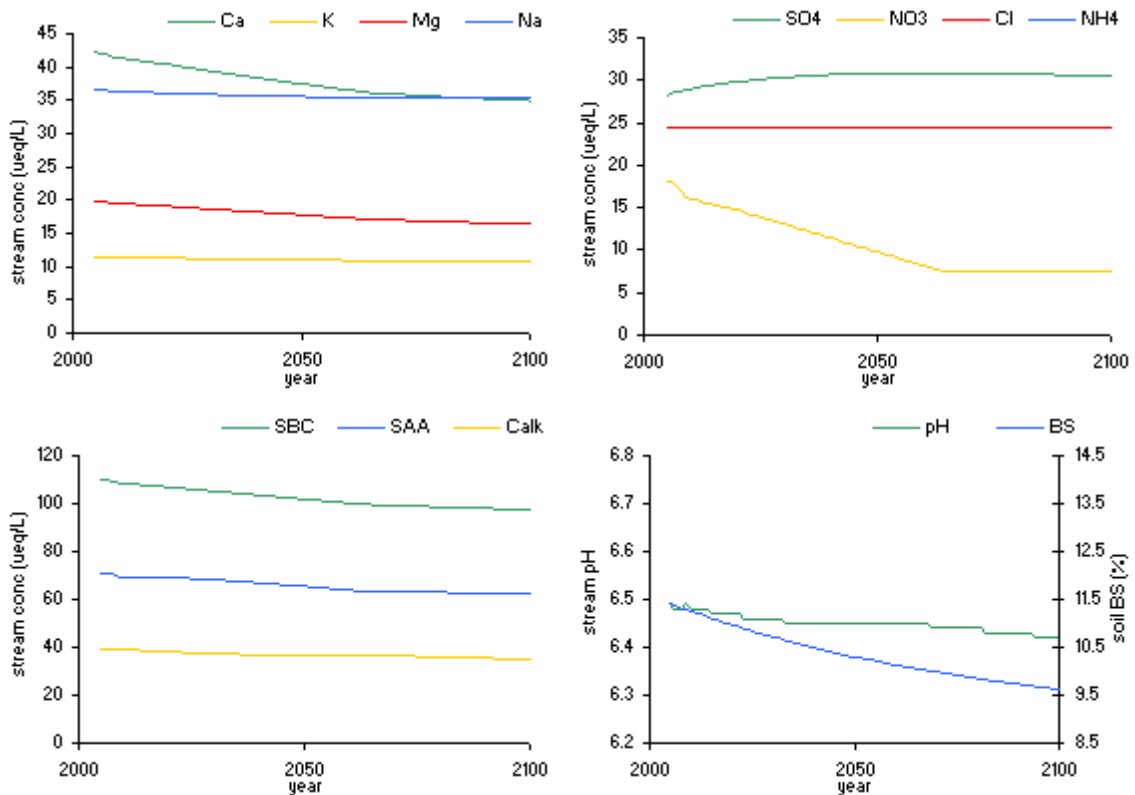


Stream ID 249 - Unnamed creek C

Moderate

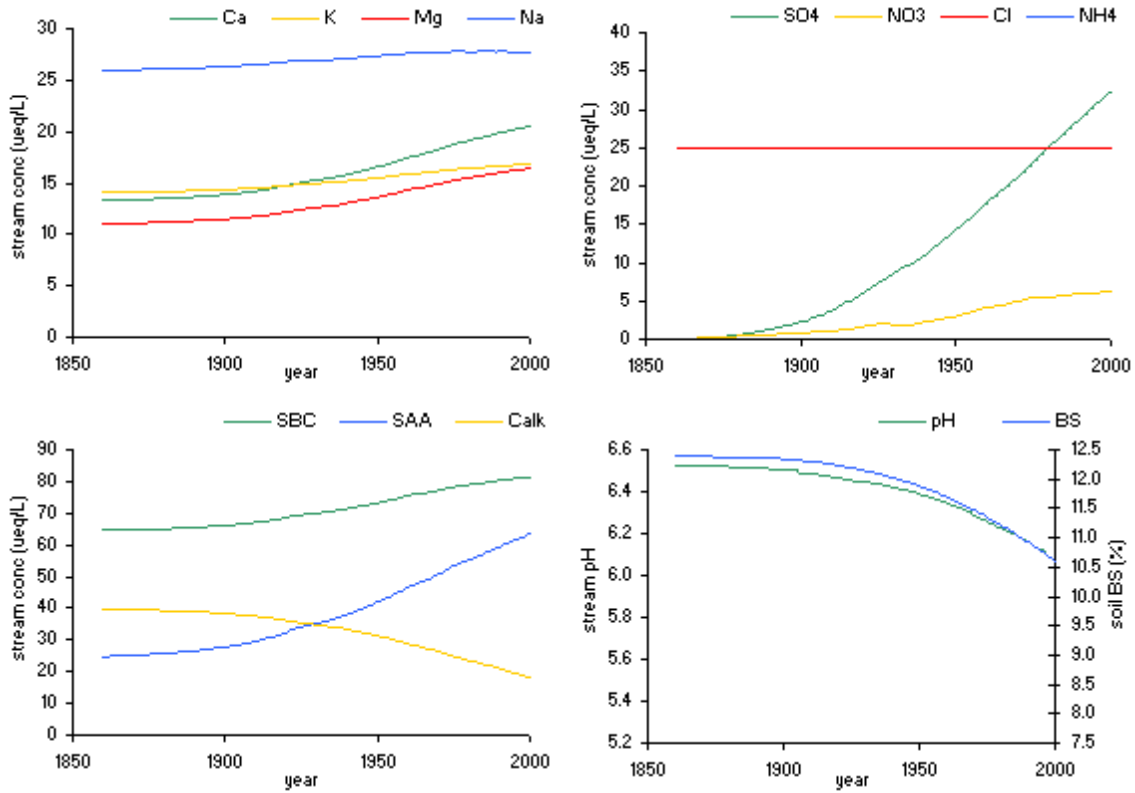


Aggressive

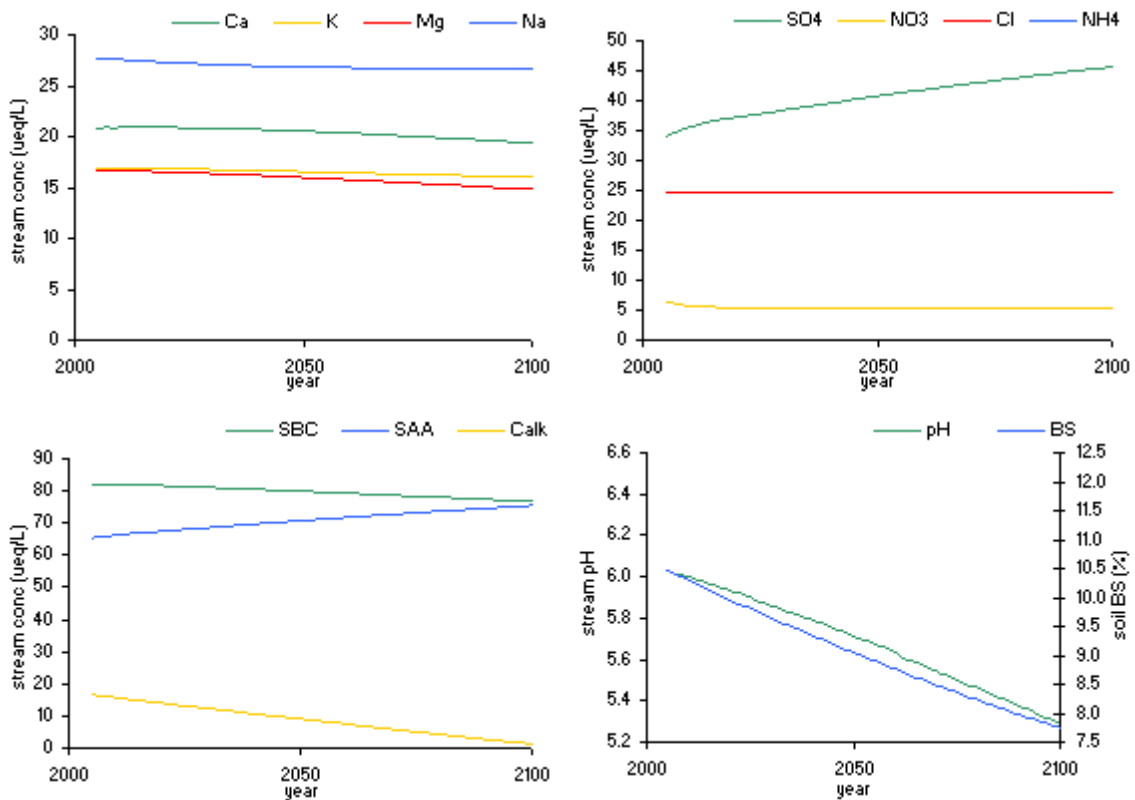


*Stream ID 60 - Upper Creek*

**Hindcast**

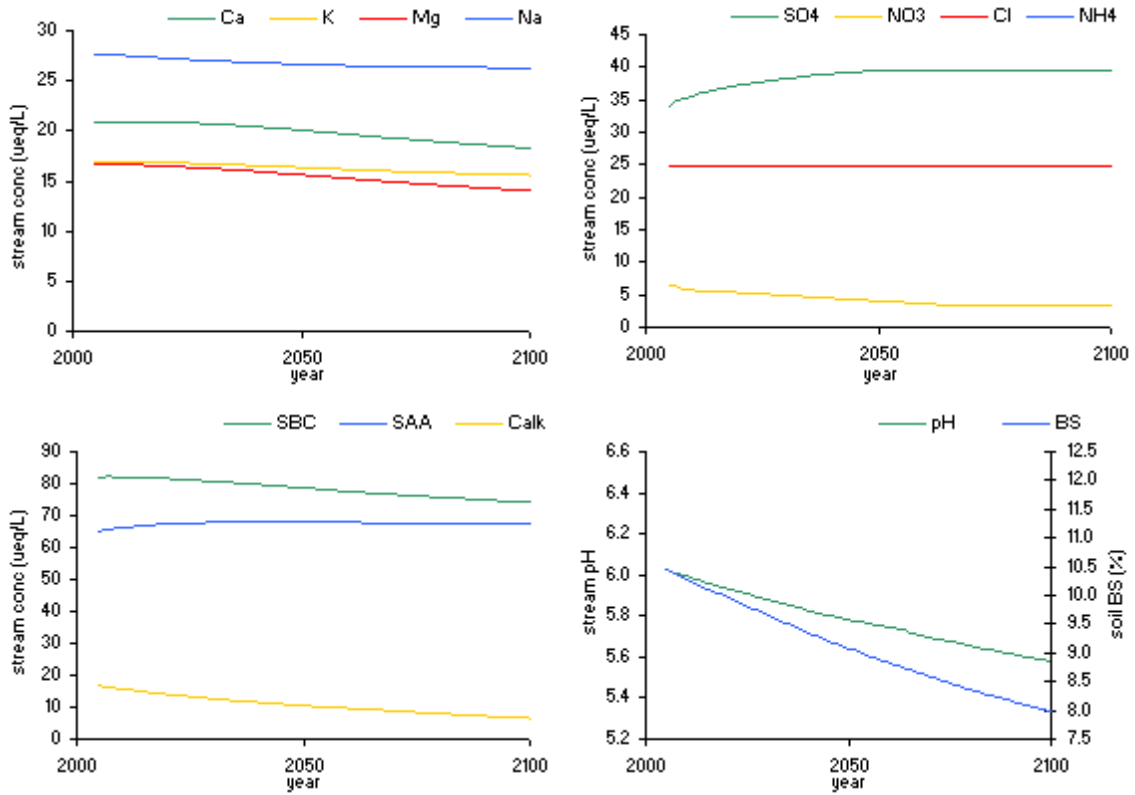


**Base**

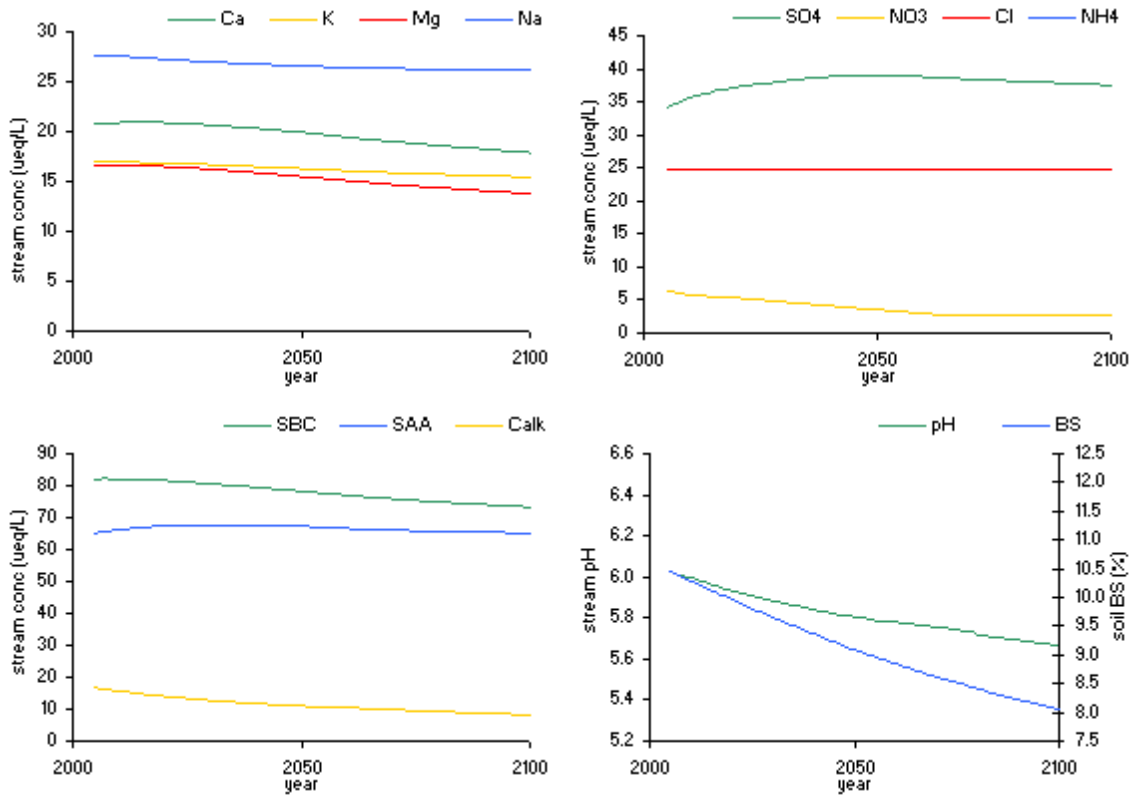


*Stream ID 60 - Upper Creek*

**Moderate**



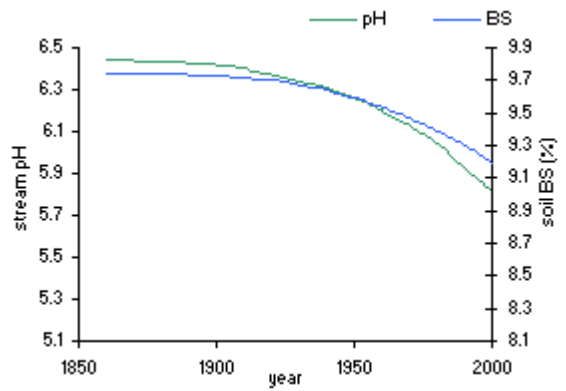
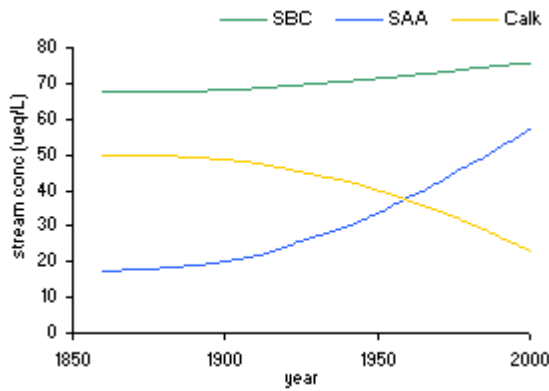
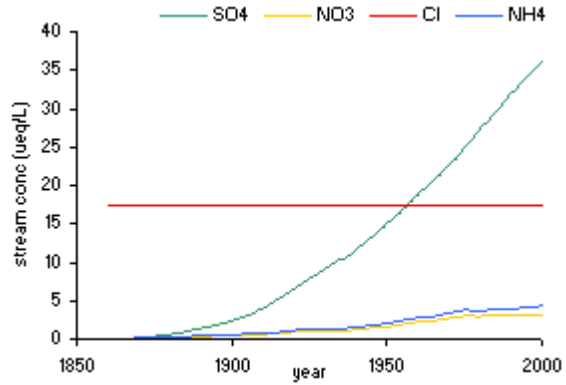
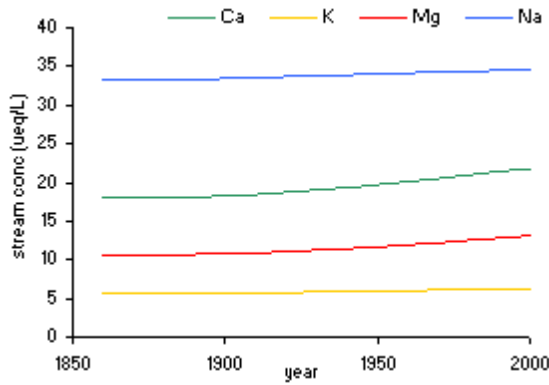
**Aggressive**



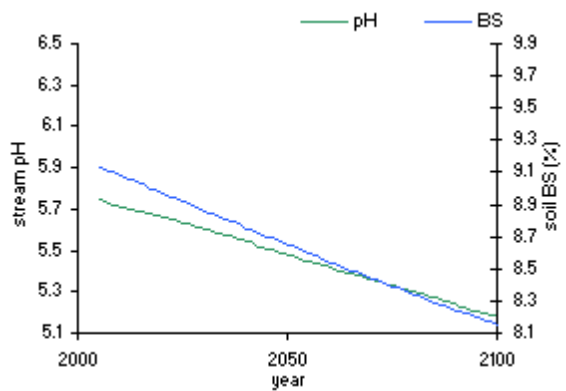
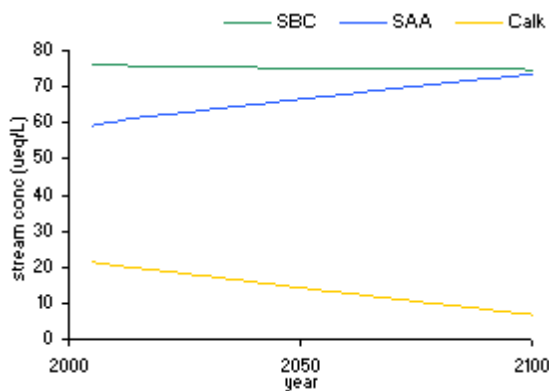
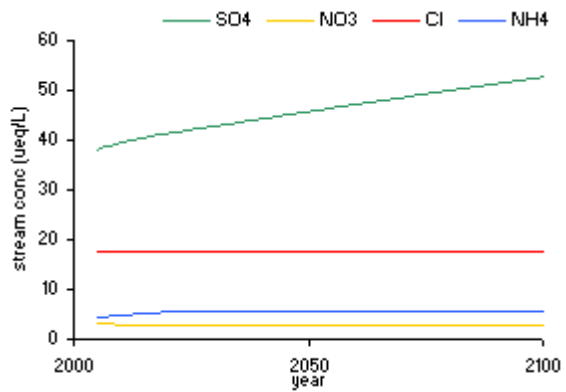
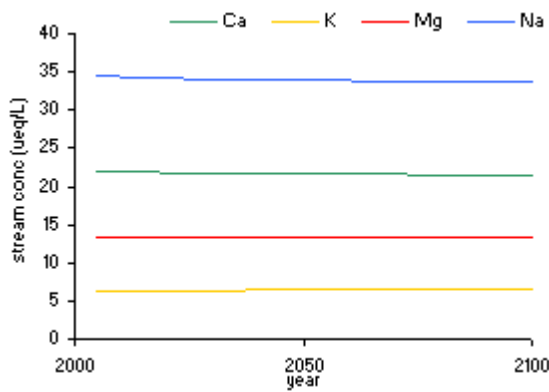


*Stream ID 120 - UT Flat Laurel Creek*

**Hindcast**

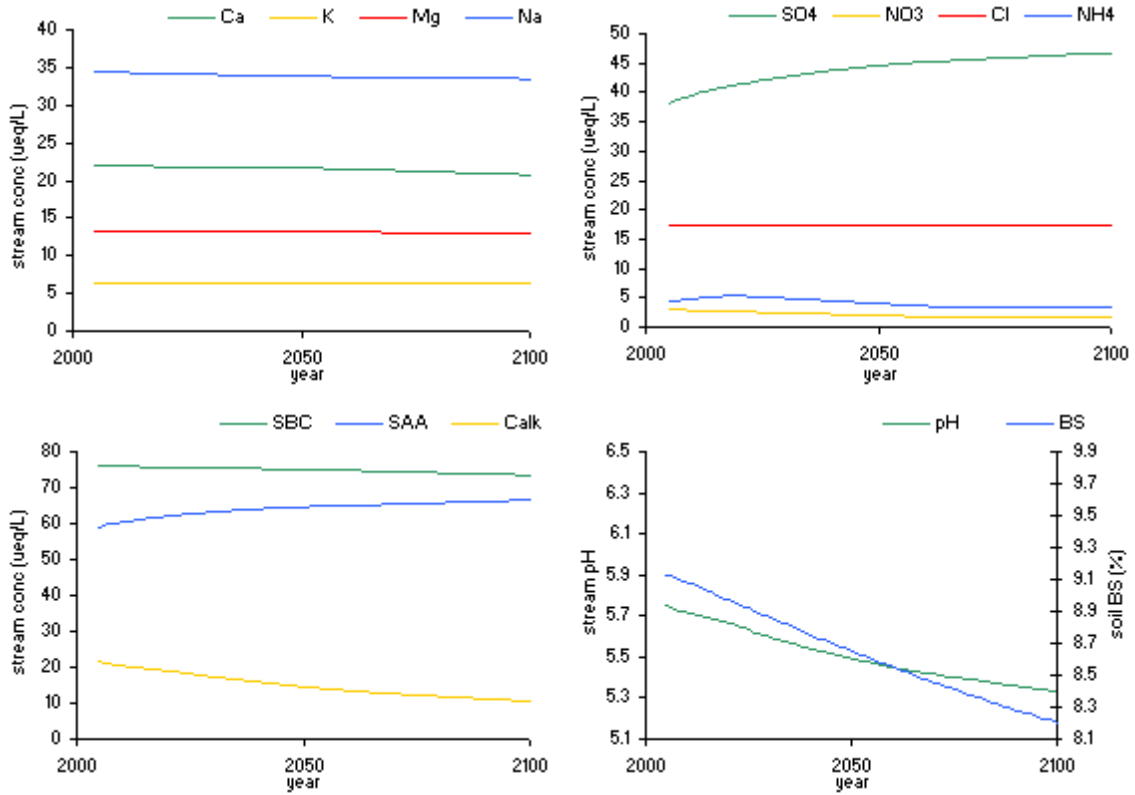


**Base**

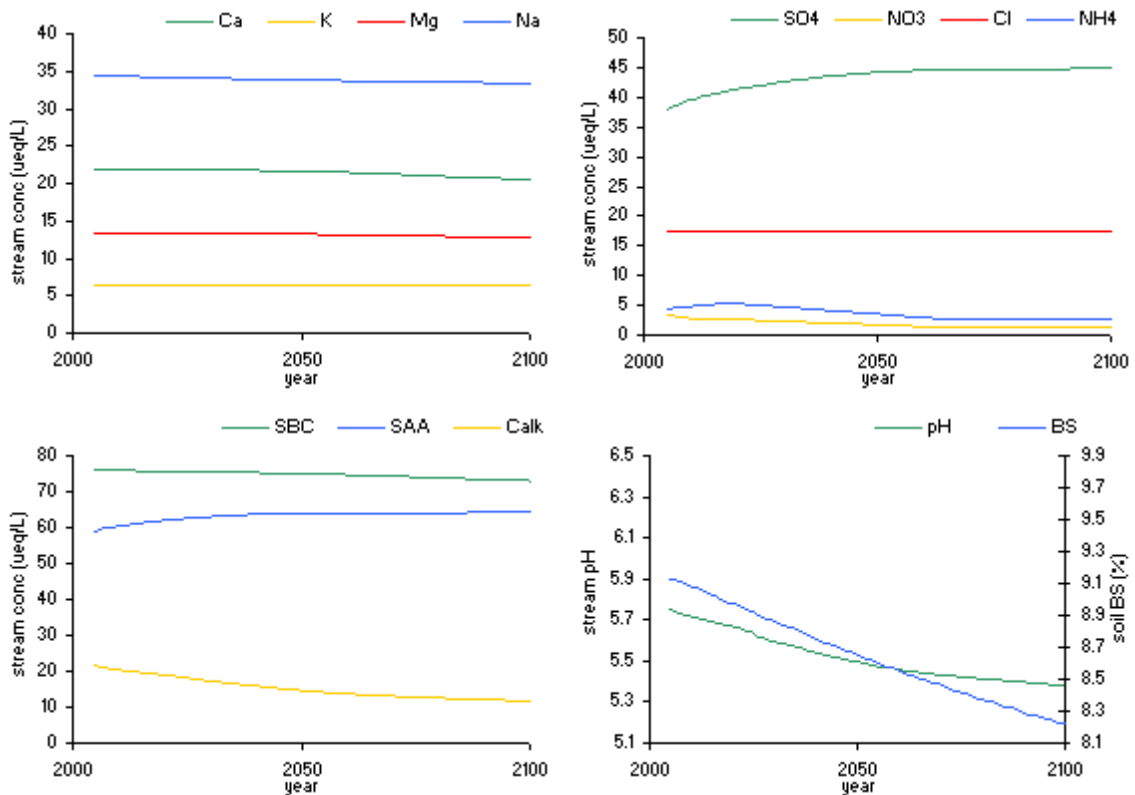


Stream ID 120 - UT Flat Laurel Creek

Moderate

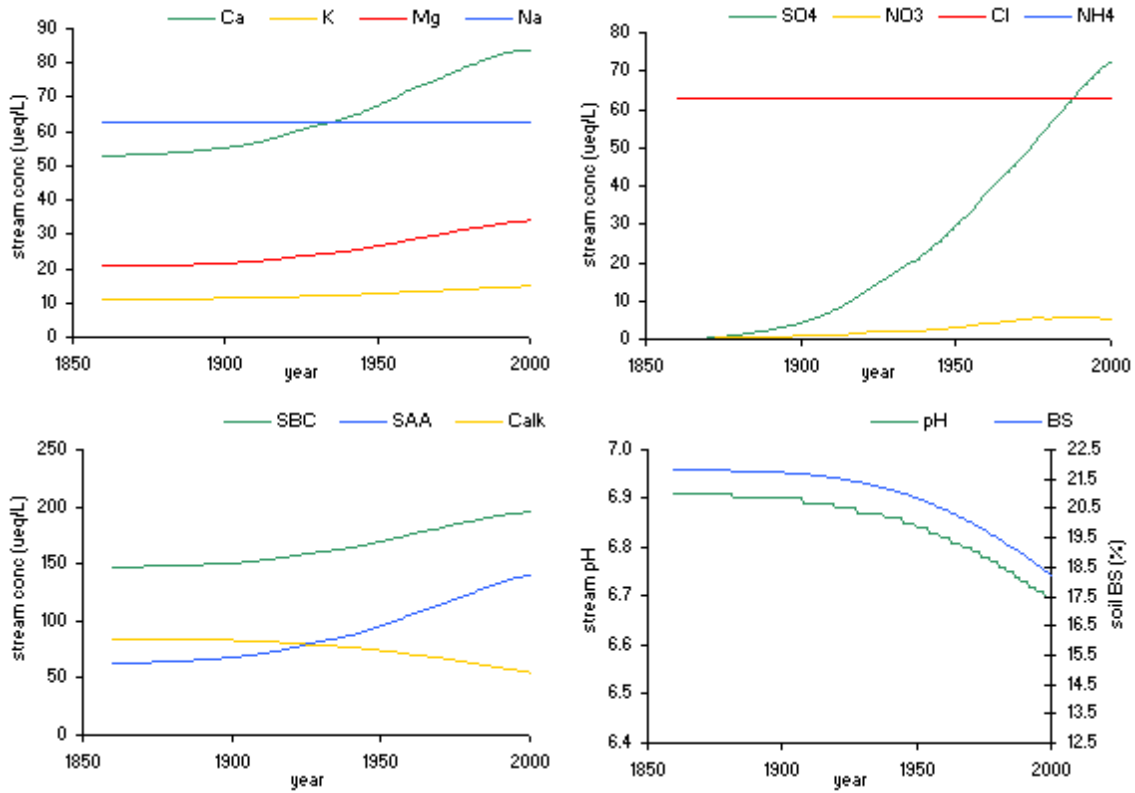


Aggressive

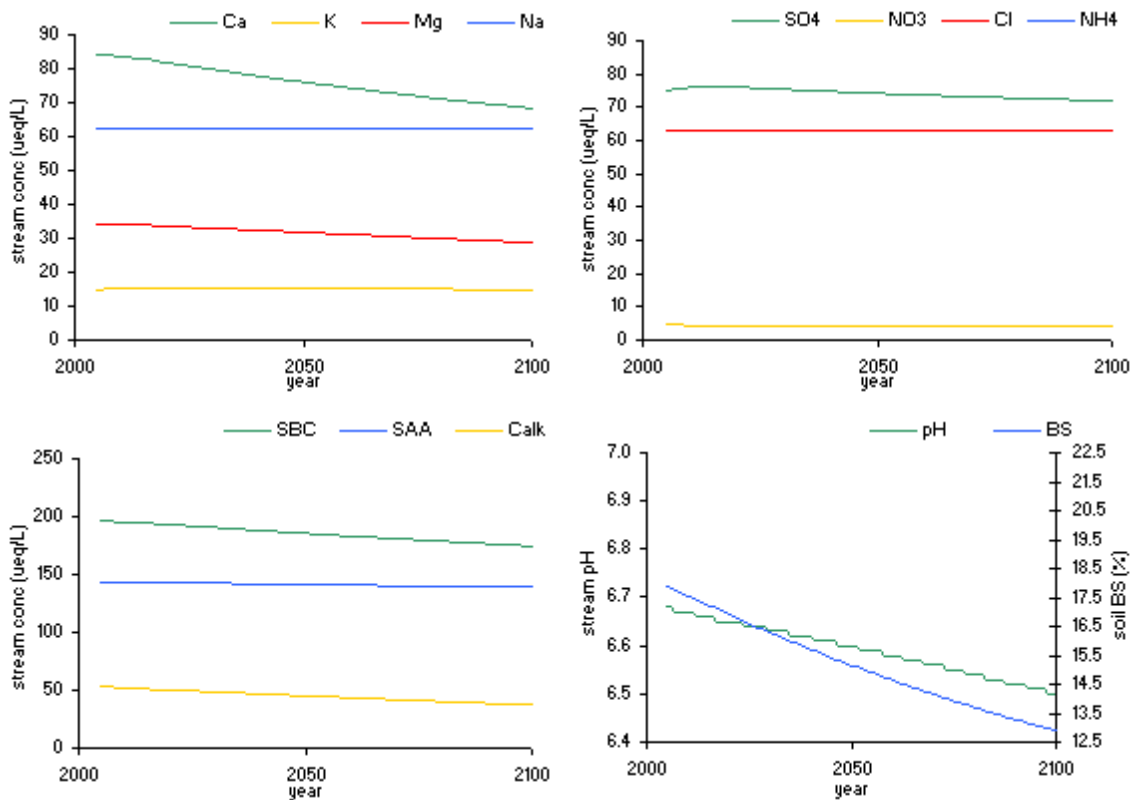


*Stream ID 265 - UT Laurel Branch*

**Hindcast**

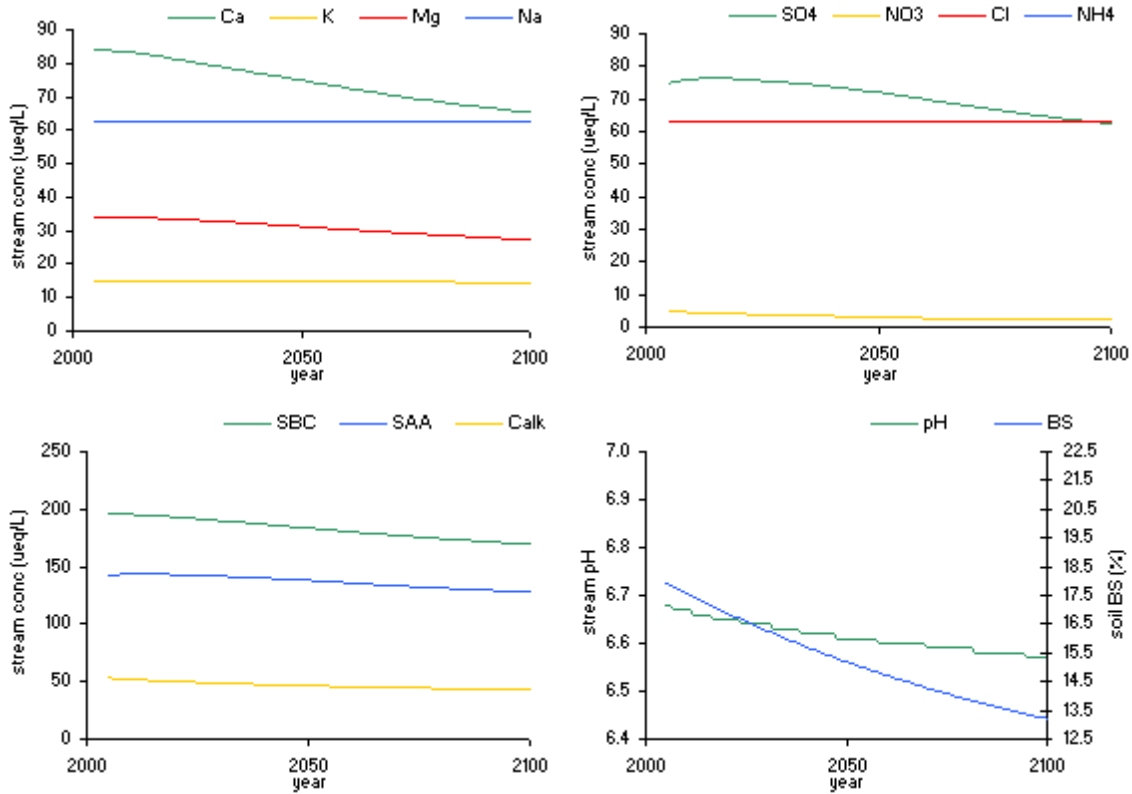


**Base**

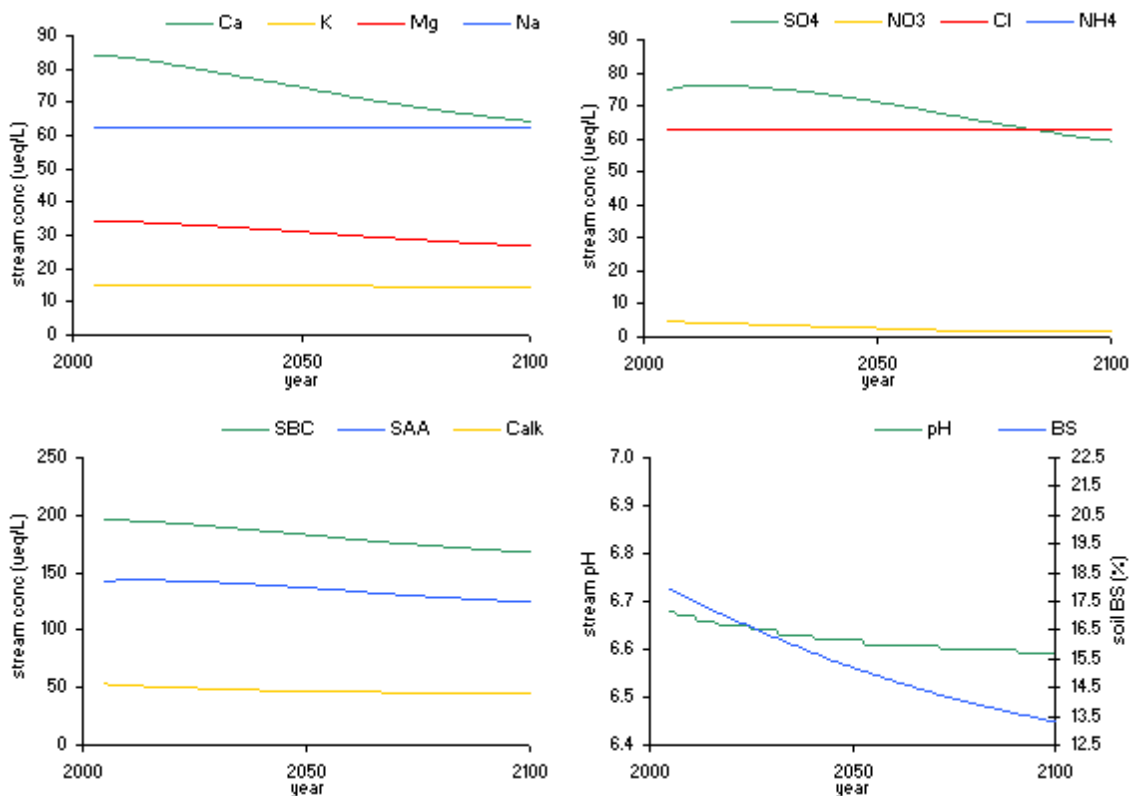


**Stream ID 265 - UT Laurel Branch**

**Moderate**

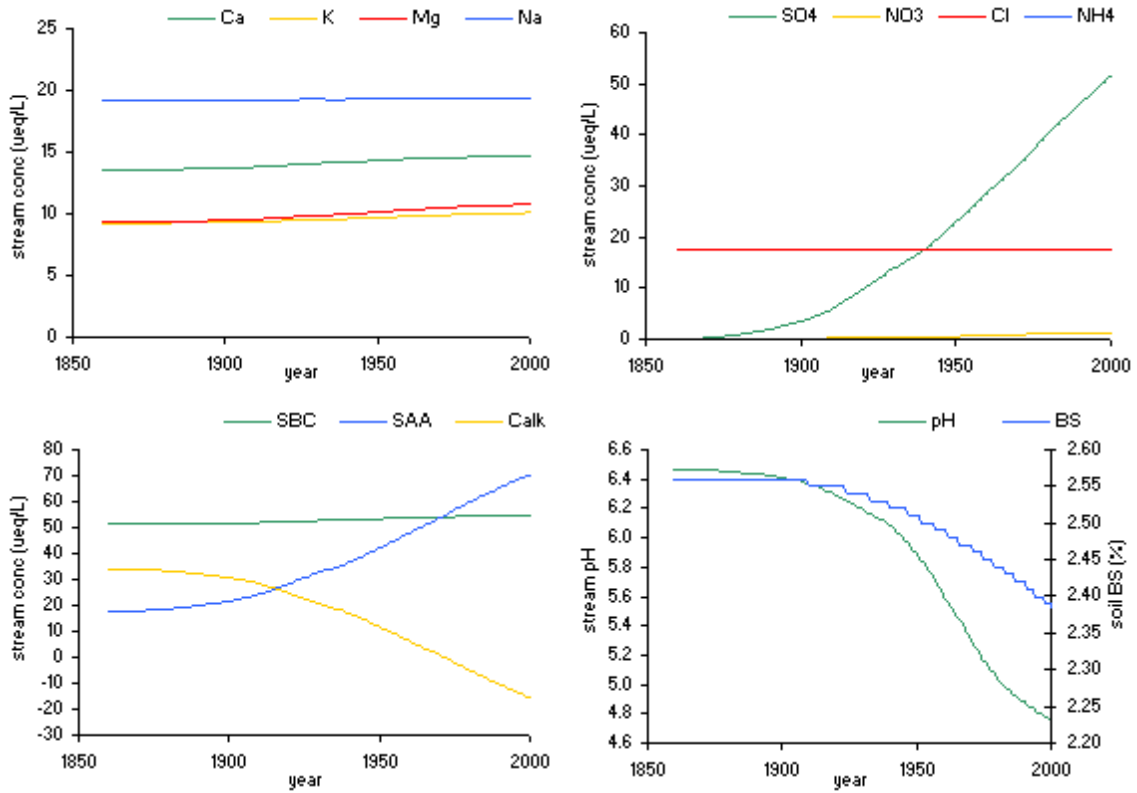


**Aggressive**

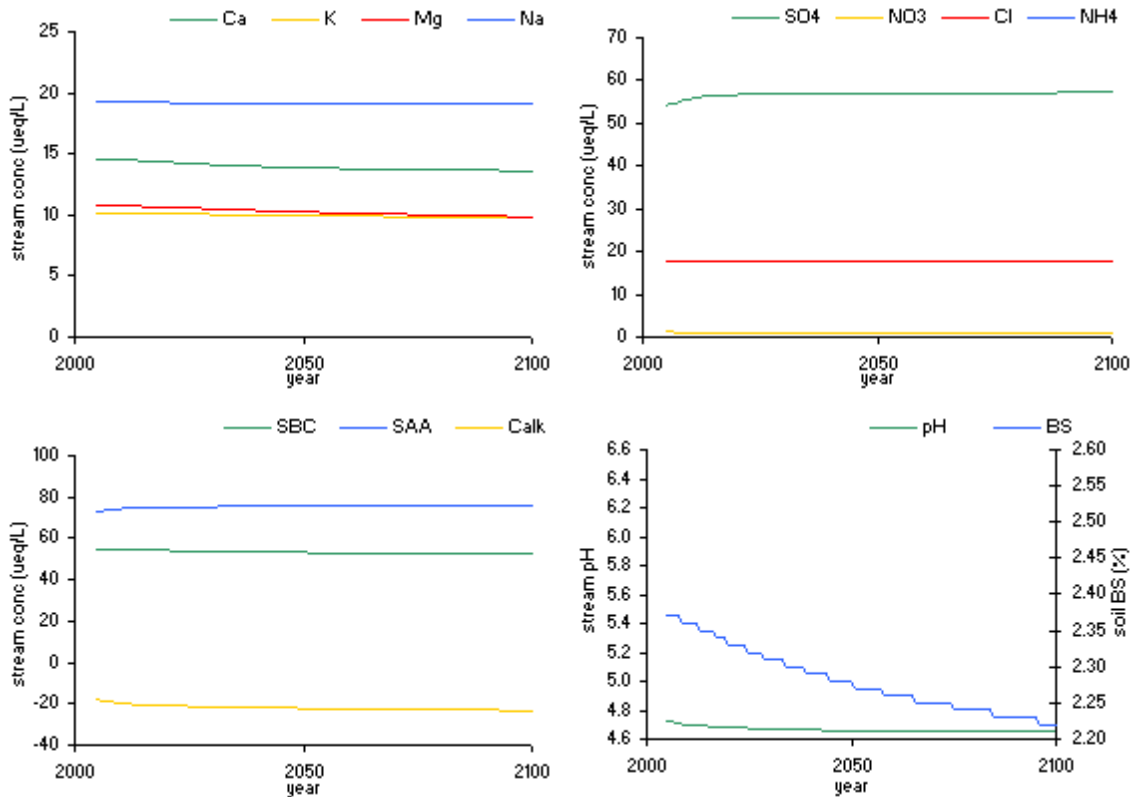


*Stream ID 21 - UT Linville River (NuCM site)*

**Hindcast**

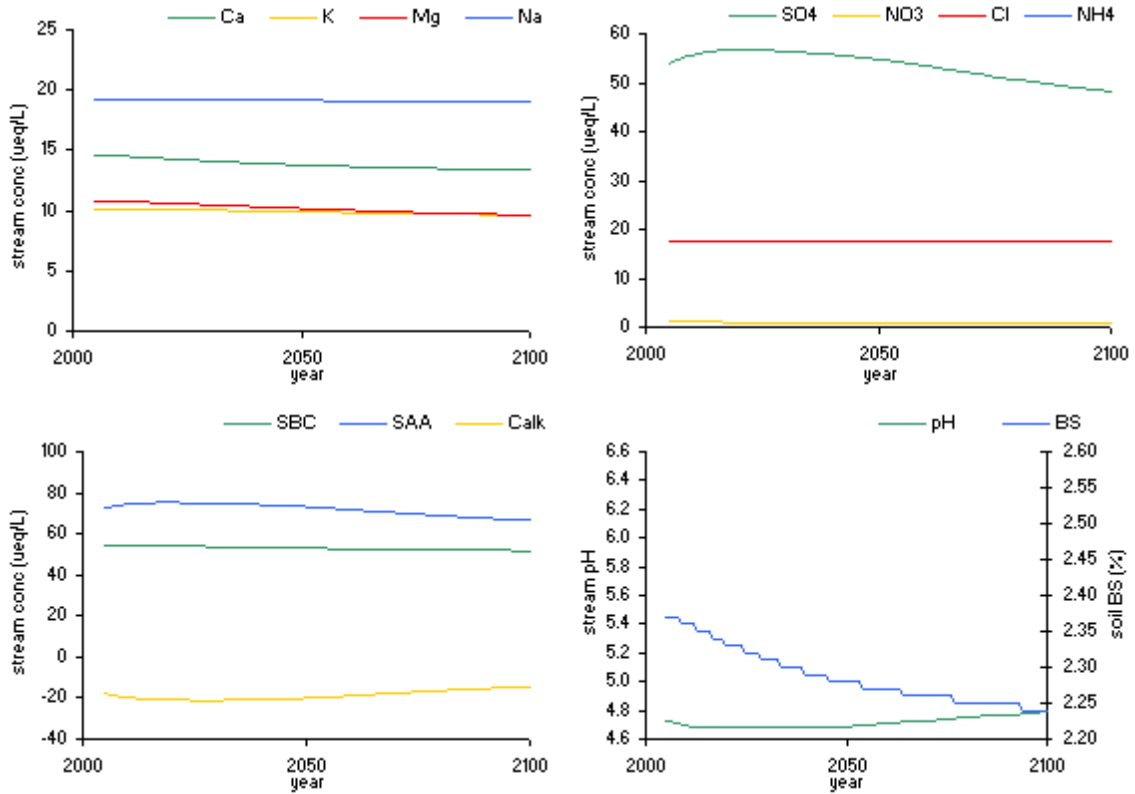


**Base**

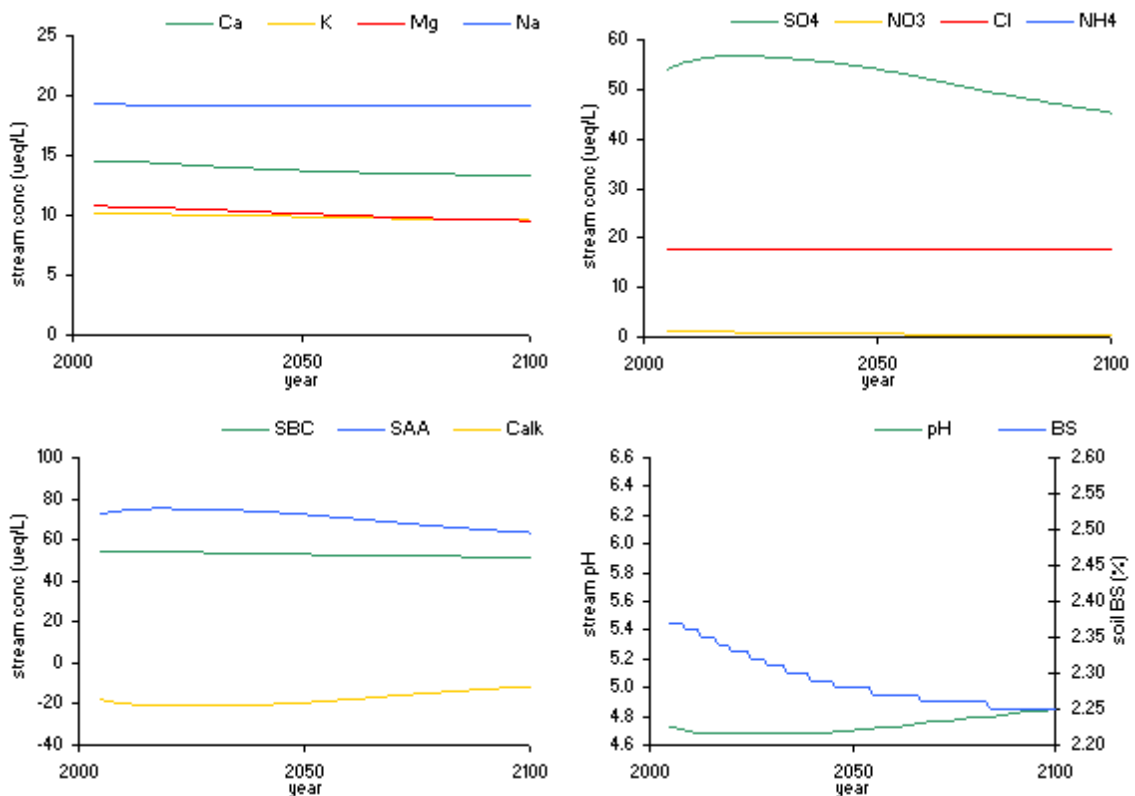


*Stream ID 21 - UT Linville River (NuCM site)*

**Moderate**

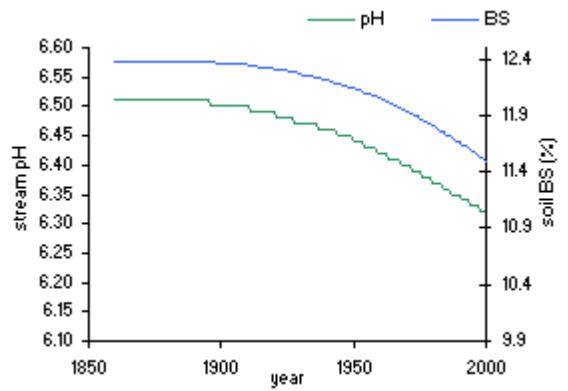
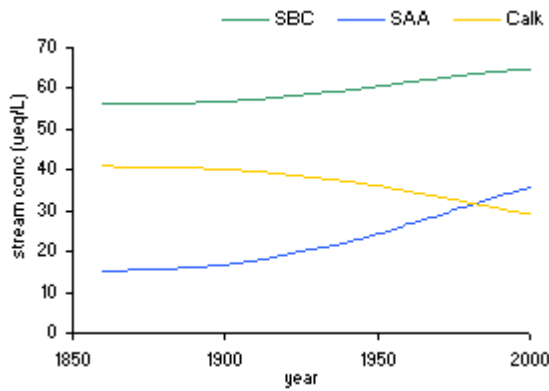
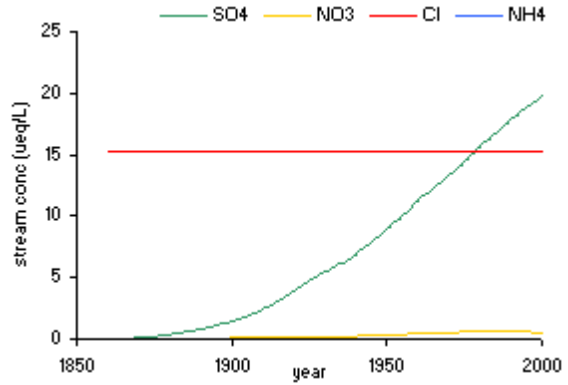
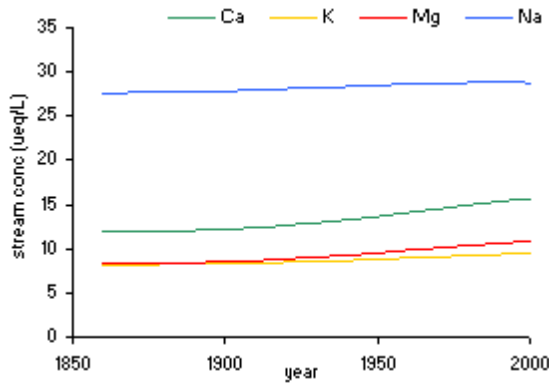


**Aggressive**

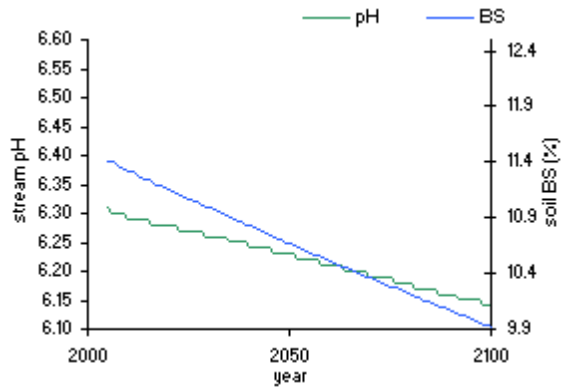
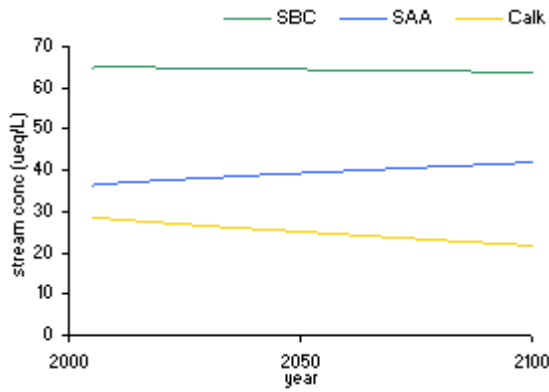
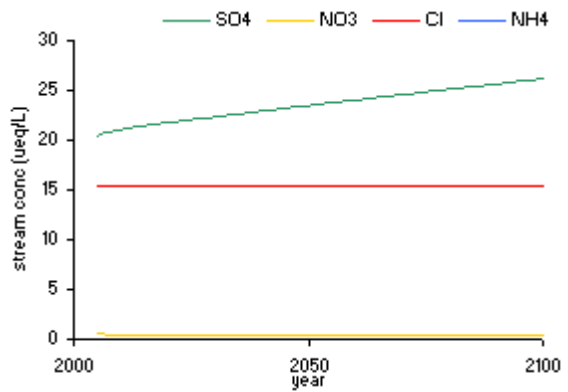
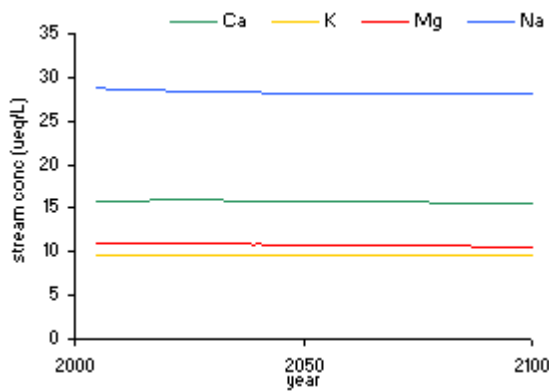


Stream ID 262 - UT McNabb Creek

Hindcast

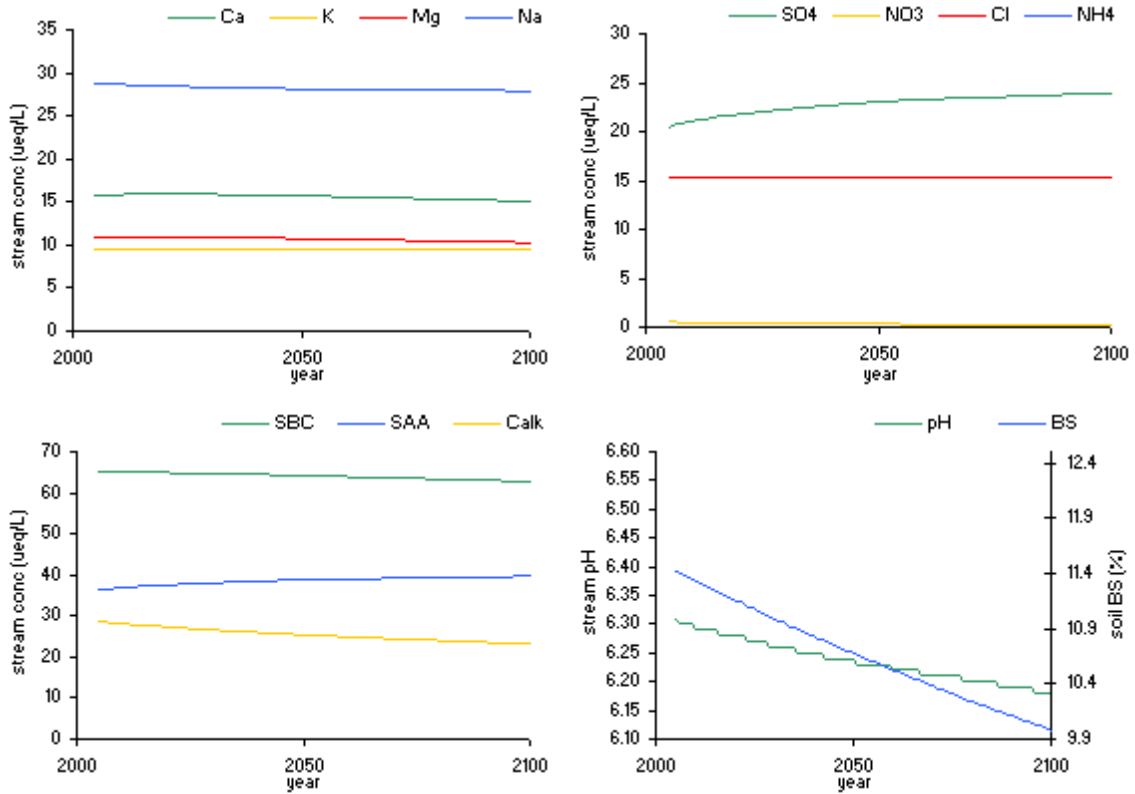


Base

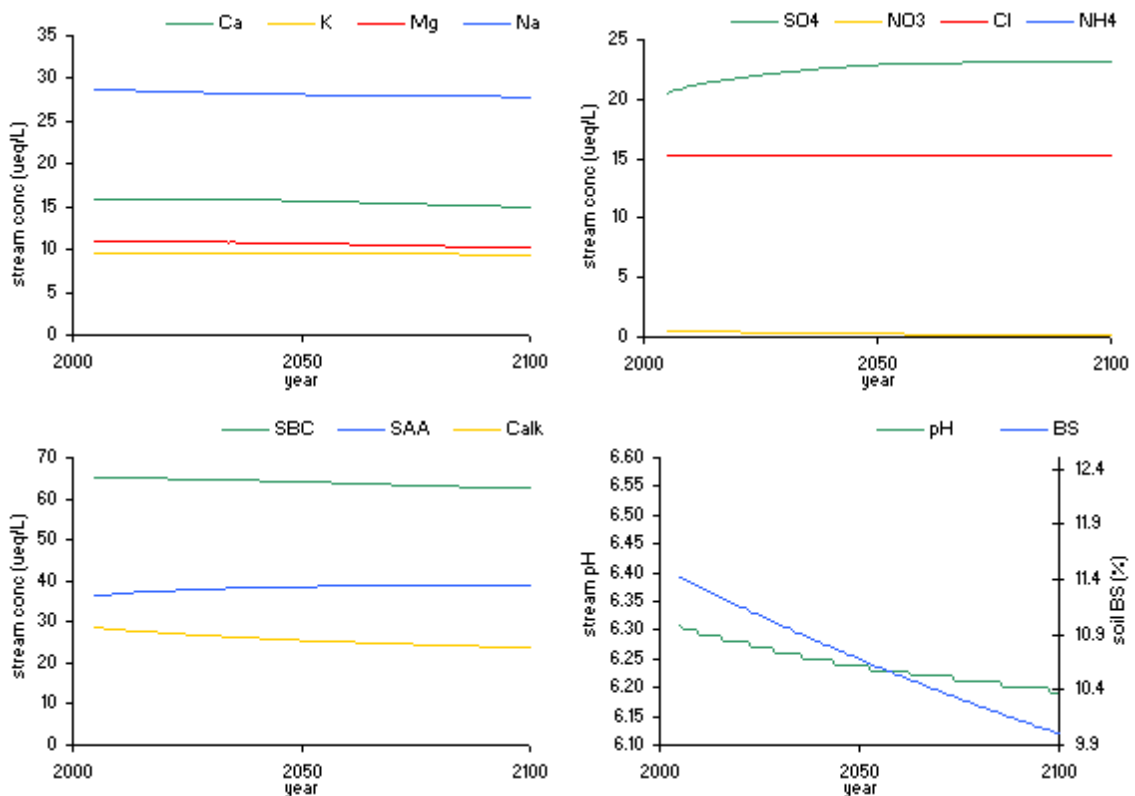


Stream ID 262 - UT McNabb Creek

Moderate



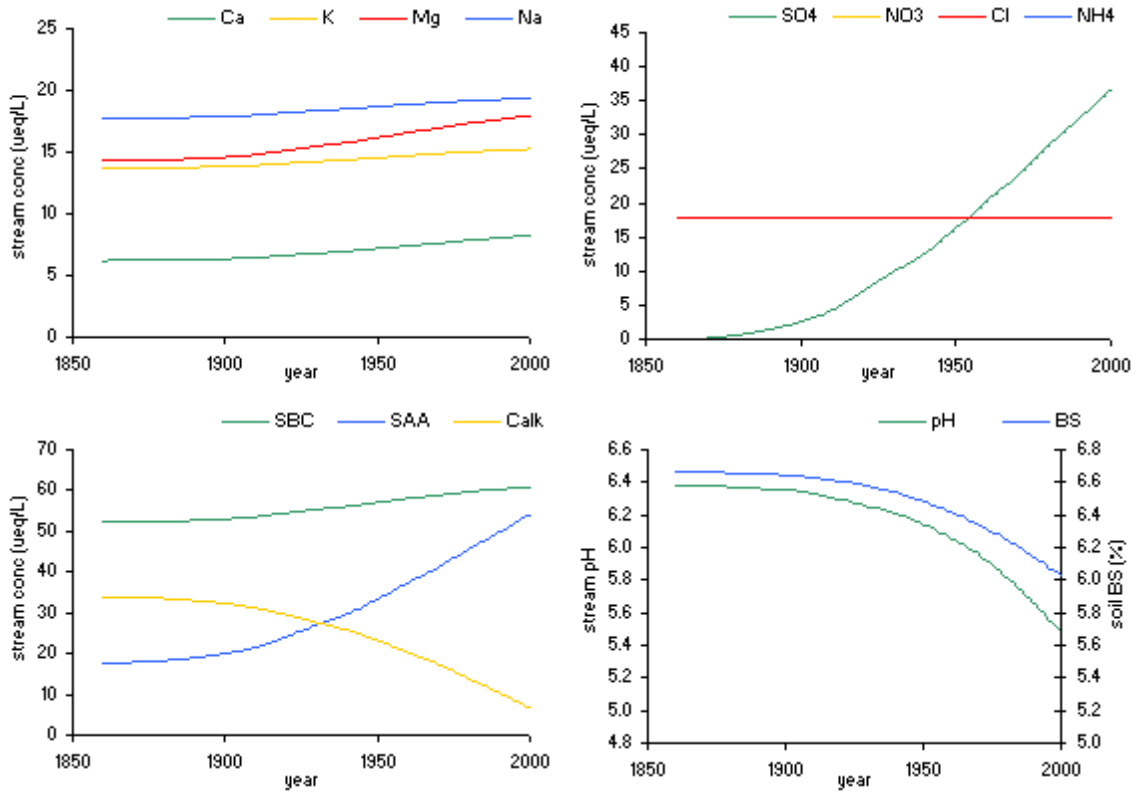
Aggressive



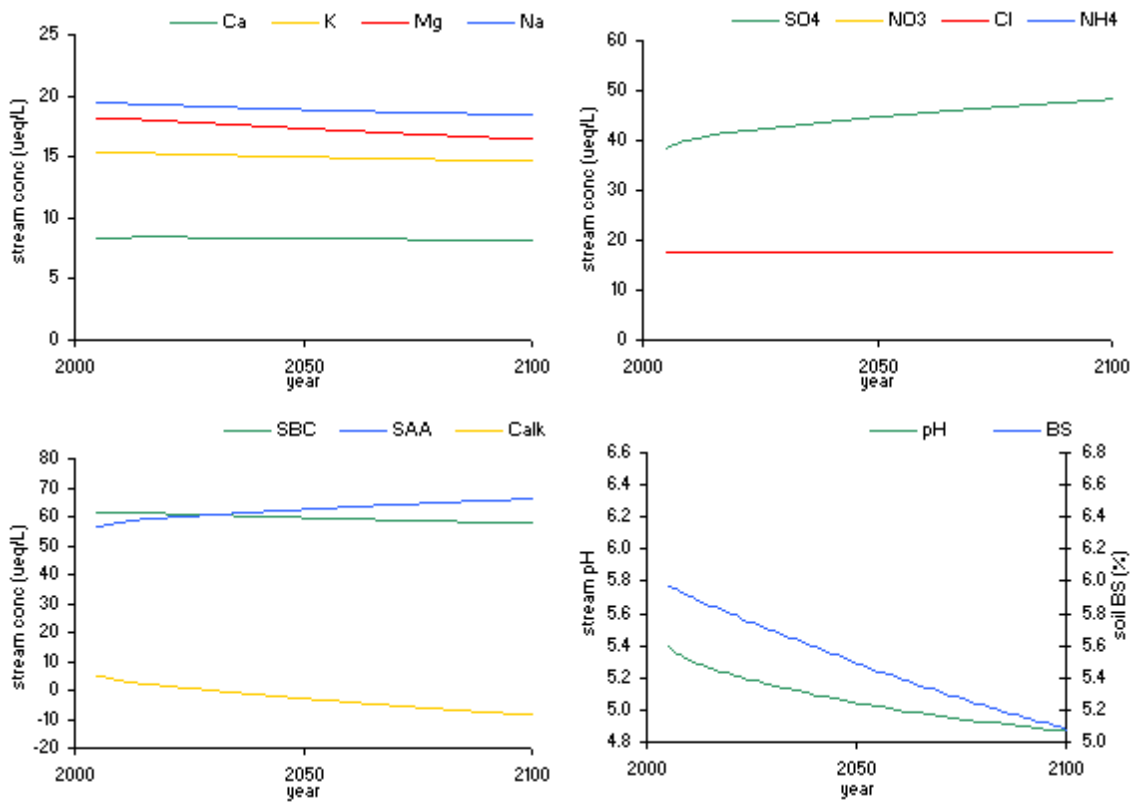


*Stream ID 33 - UT North Fork Catawba*

**Hindcast**

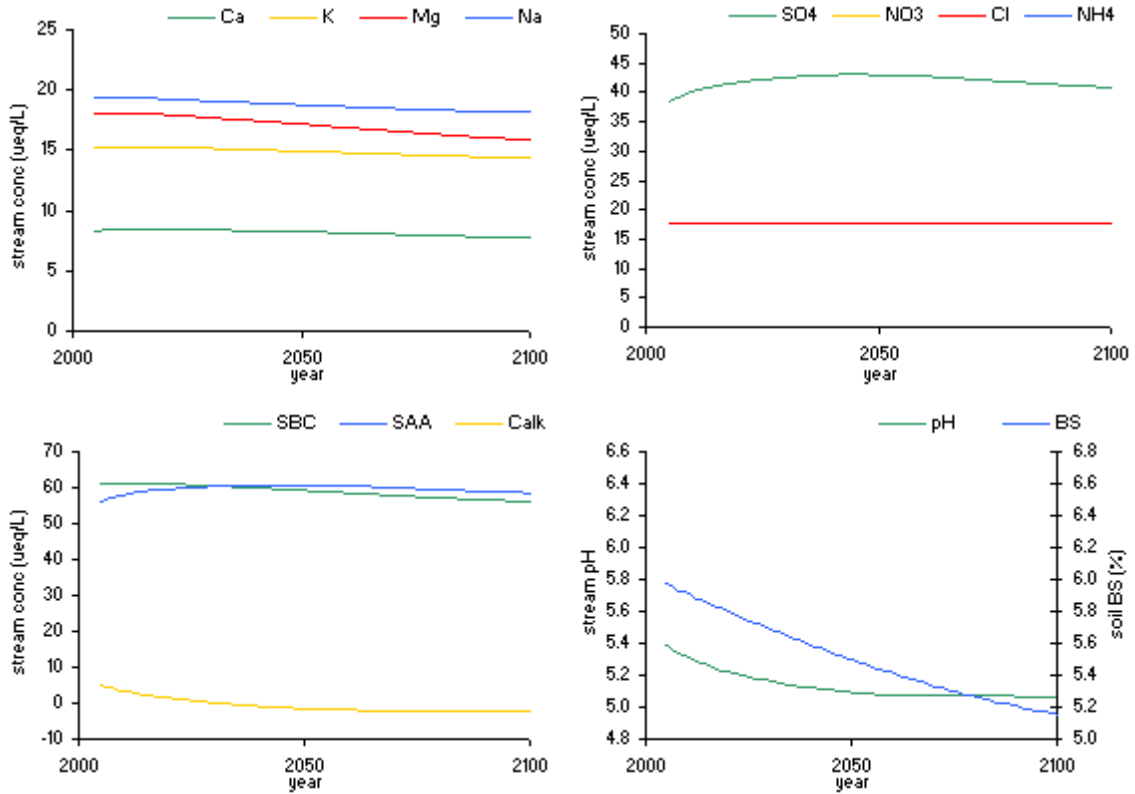


**Base**

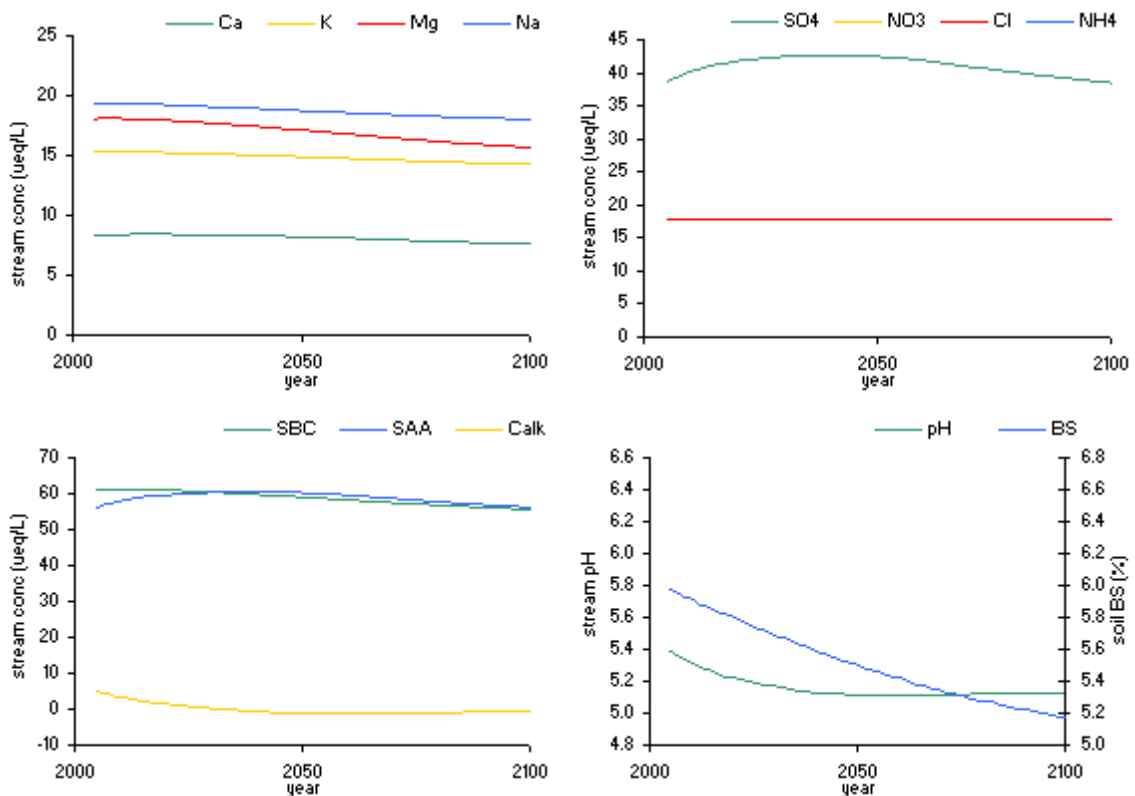


*Stream ID 33 - UT North Fork Catawba*

**Moderate**

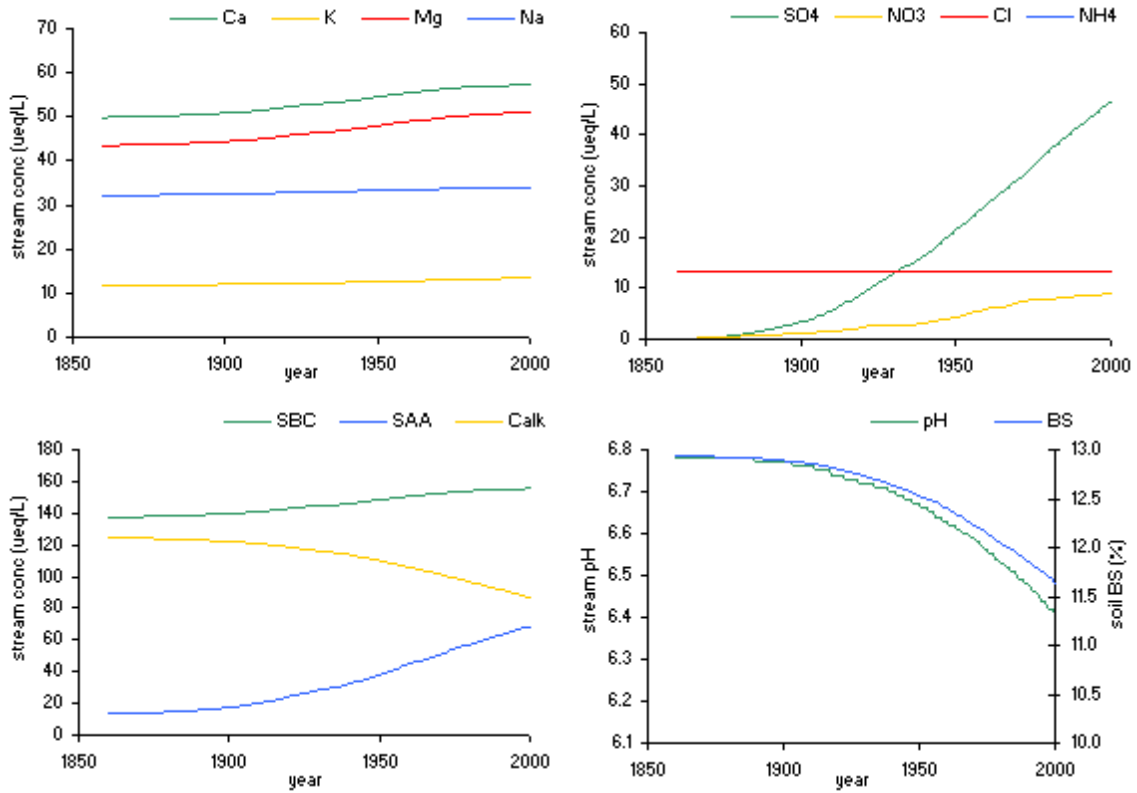


**Aggressive**

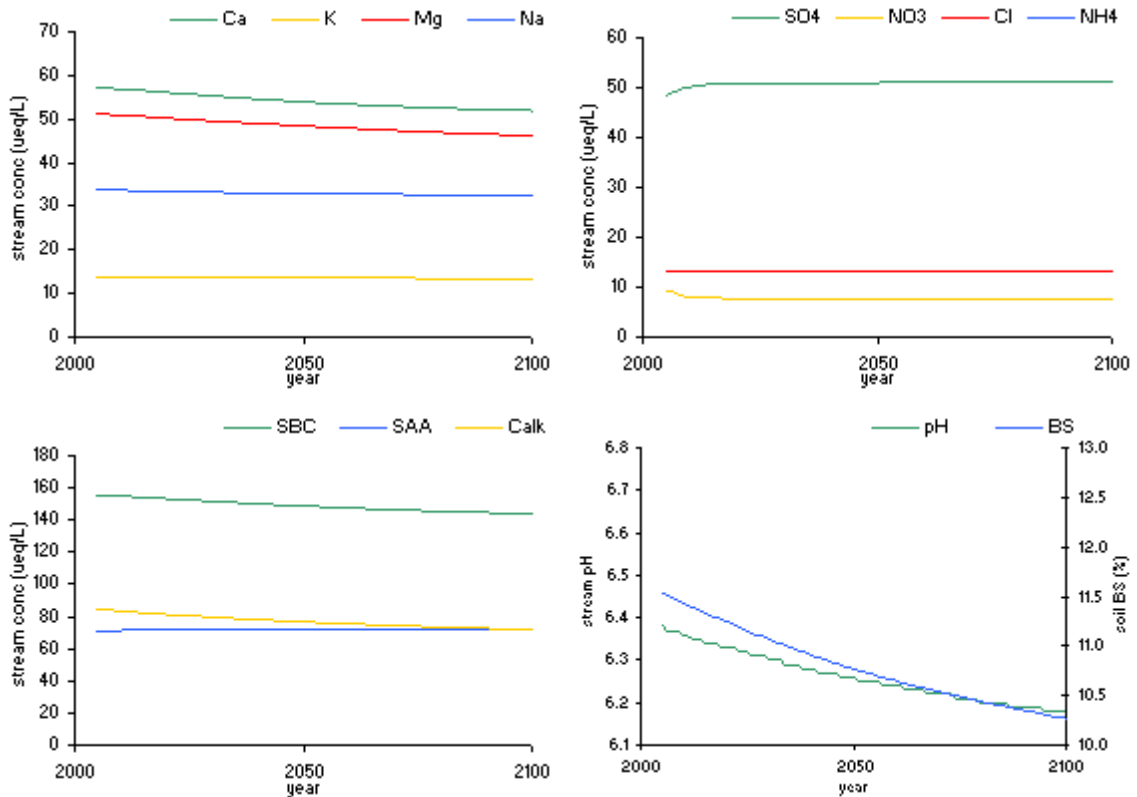


**Stream ID 94 - UT Paint Creek**

**Hindcast**

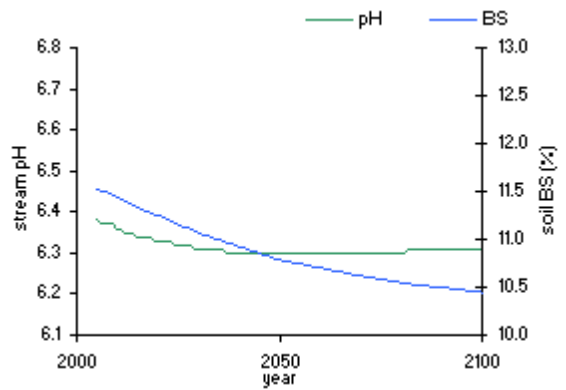
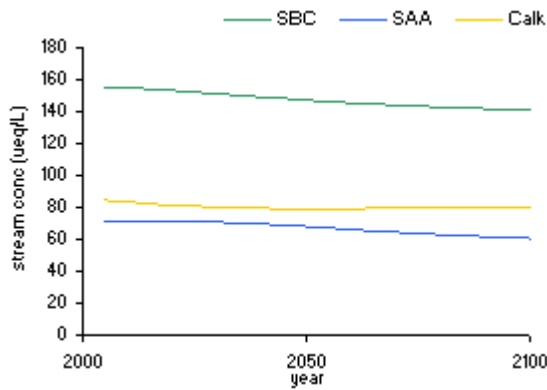
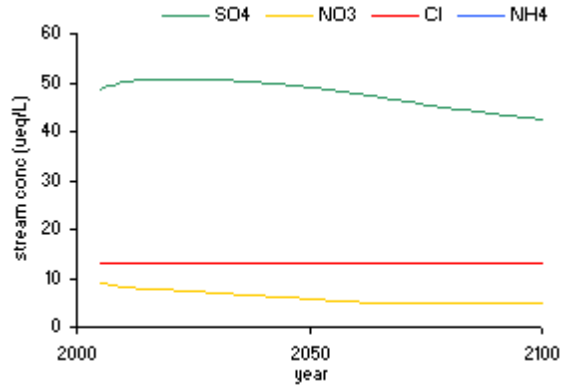
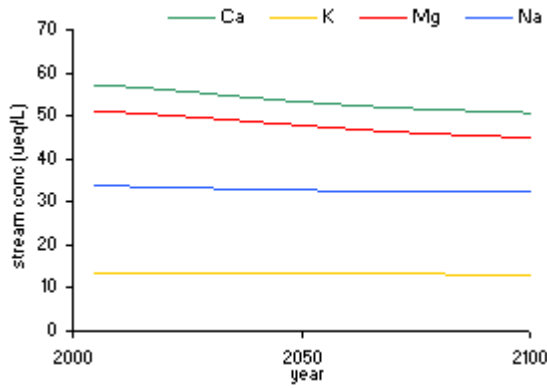


**Base**

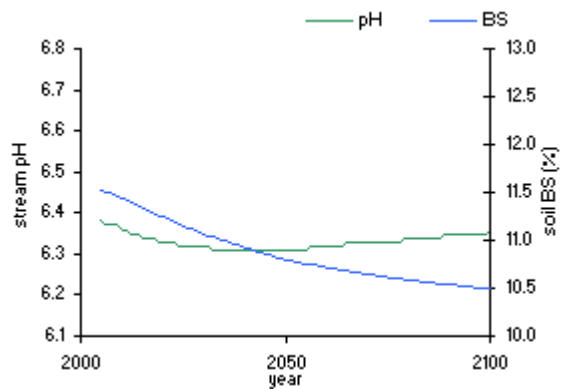
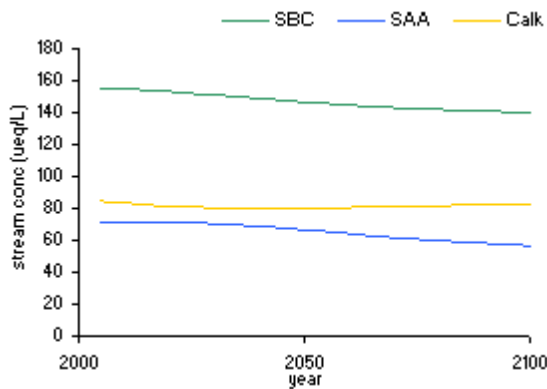
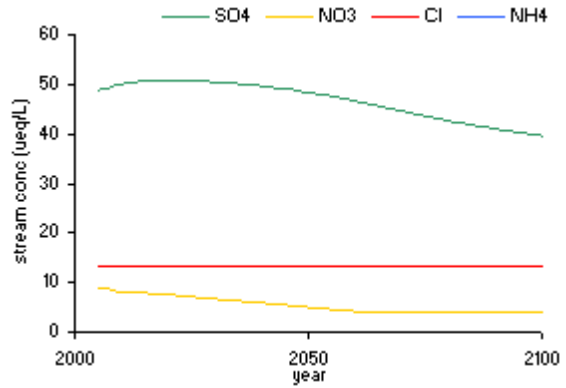
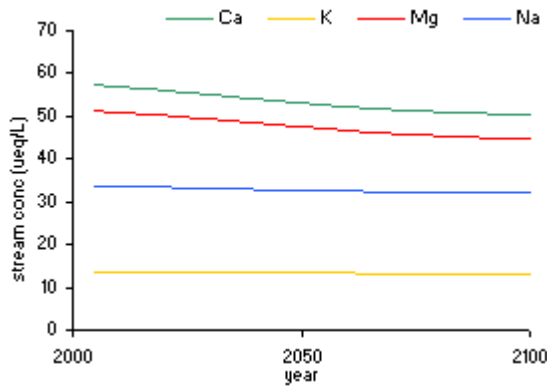


**Stream ID 94 - UT Paint Creek**

**Moderate**

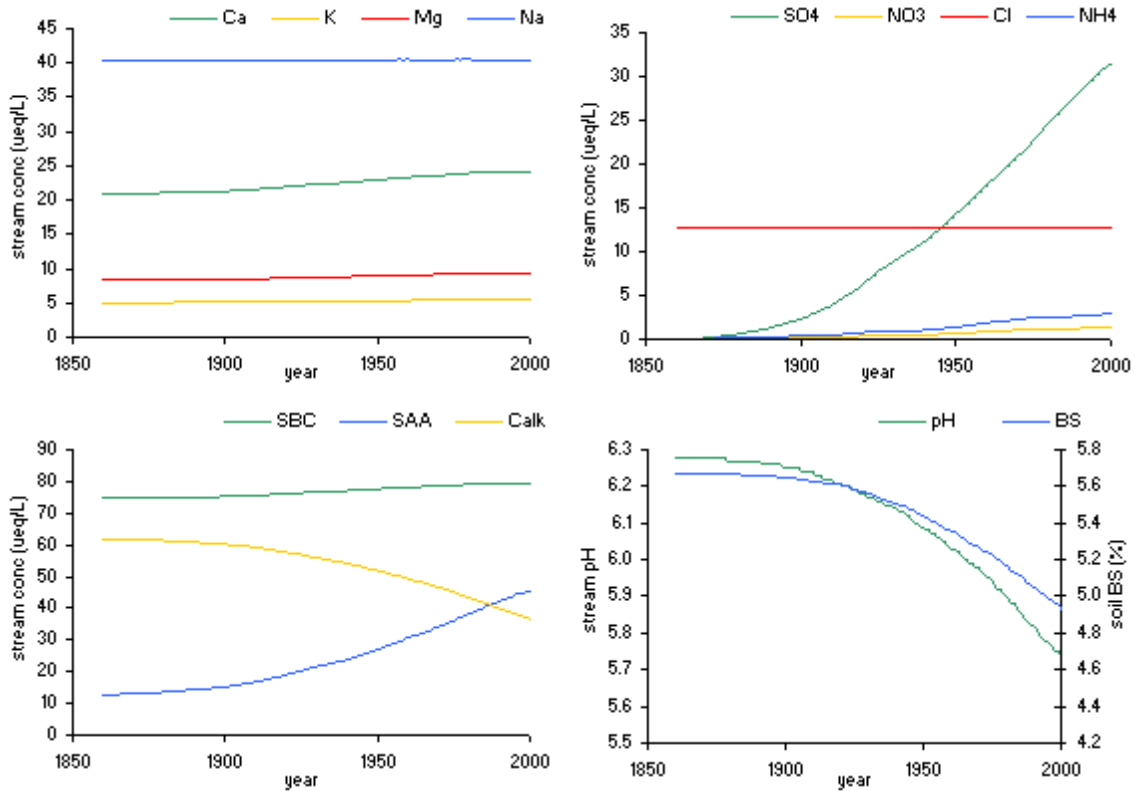


**Aggressive**

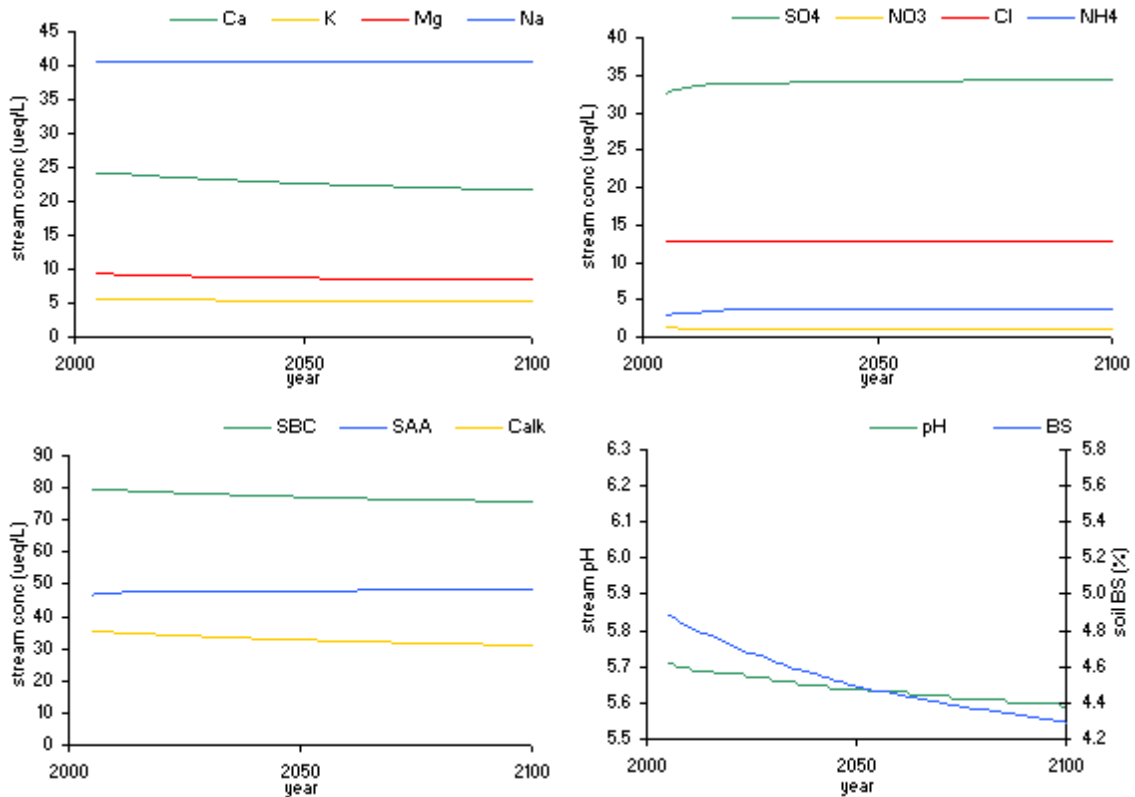


**Stream ID 163 - UT Panthertown Creek (Boggy Creek)**

**Hindcast**

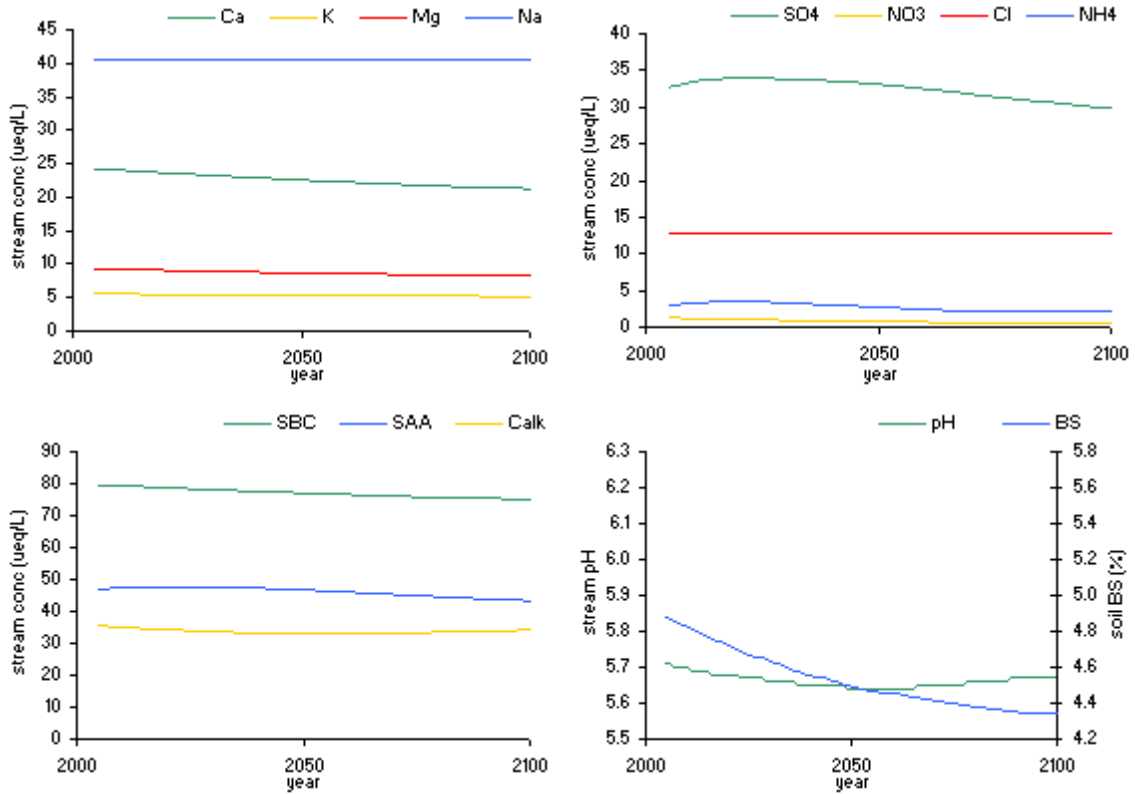


**Base**

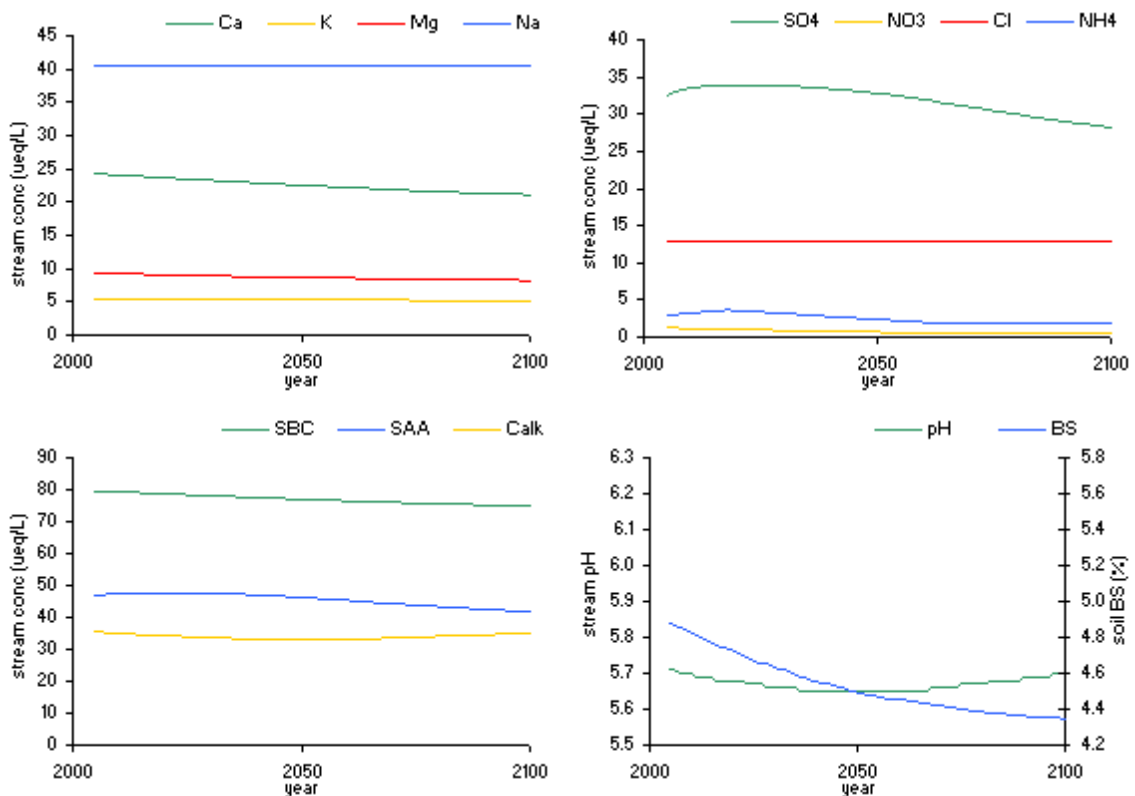


**Stream ID 163 - UT Panthertown Creek (Boggy Creek)**

**Moderate**

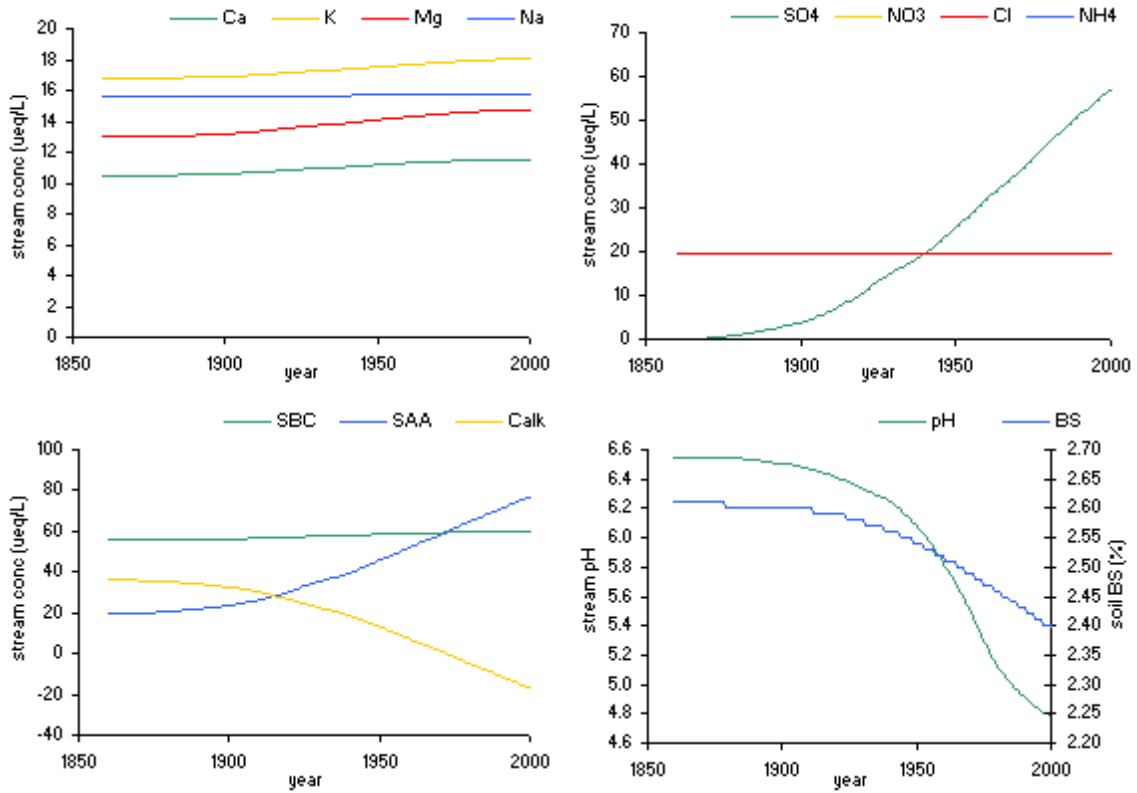


**Aggressive**

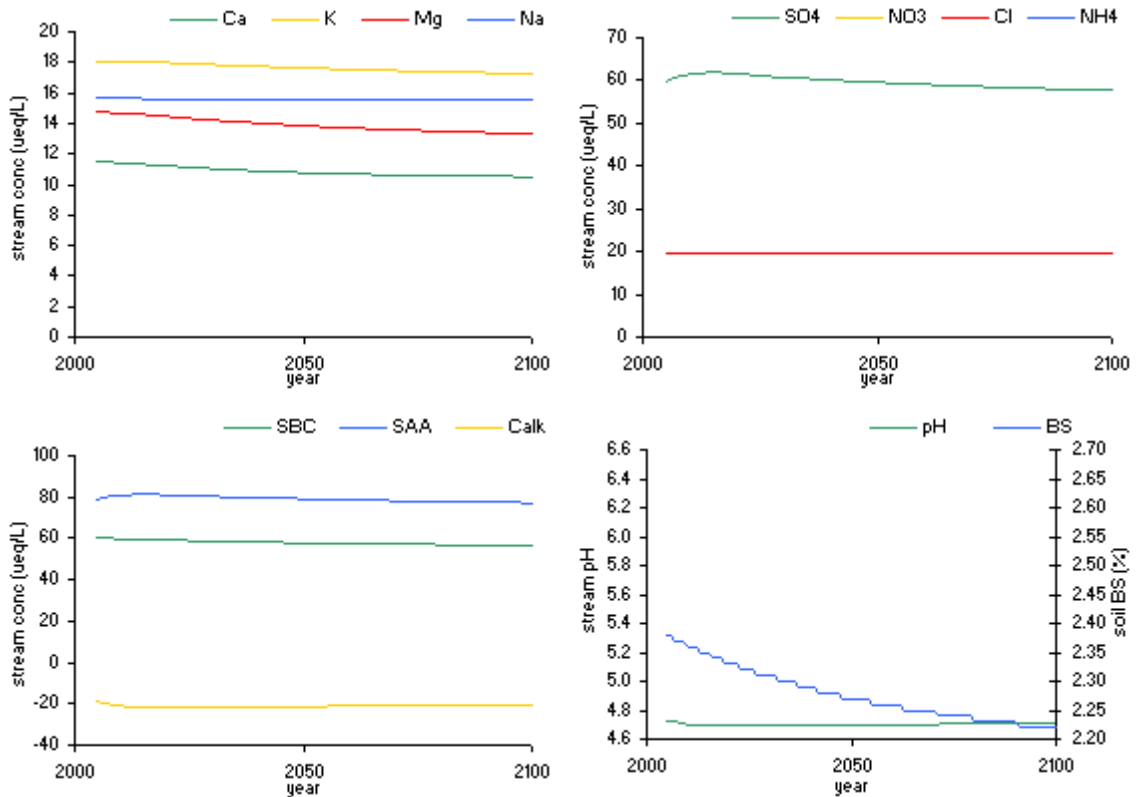


Stream ID 14 - UT Russell Creek

Hindcast

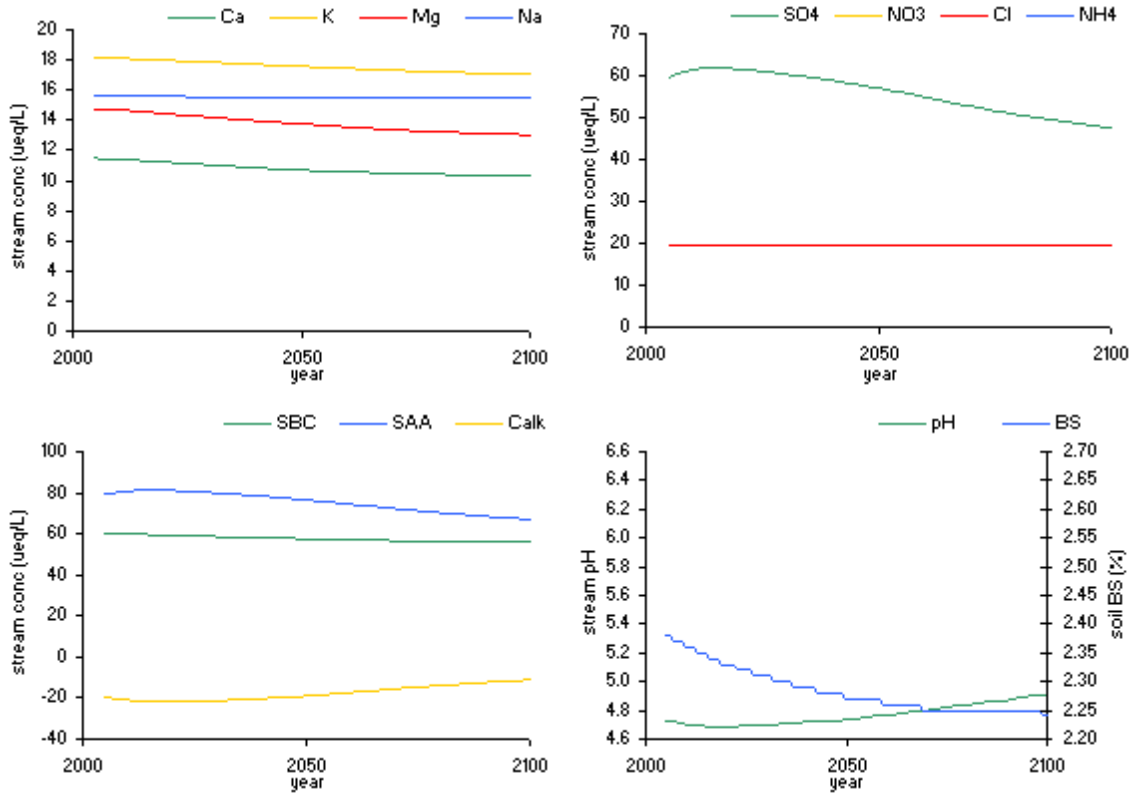


Base

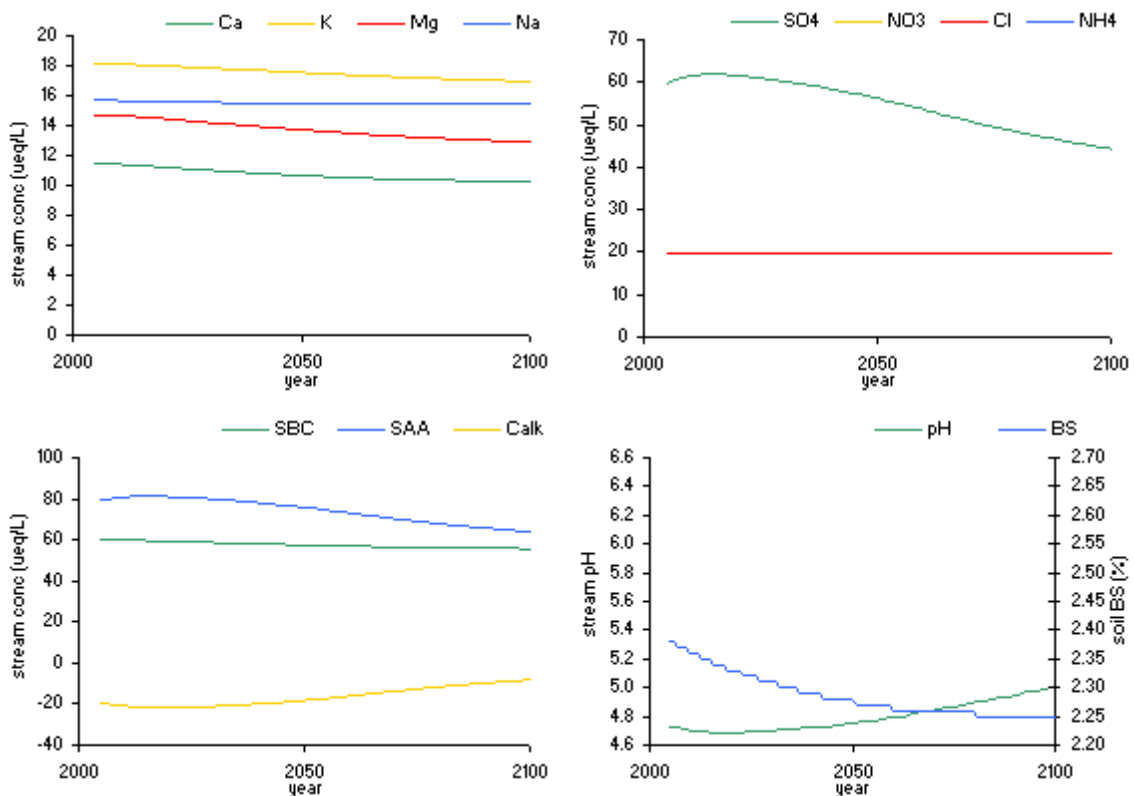


*Stream ID 14 - UT Russell Creek*

**Moderate**



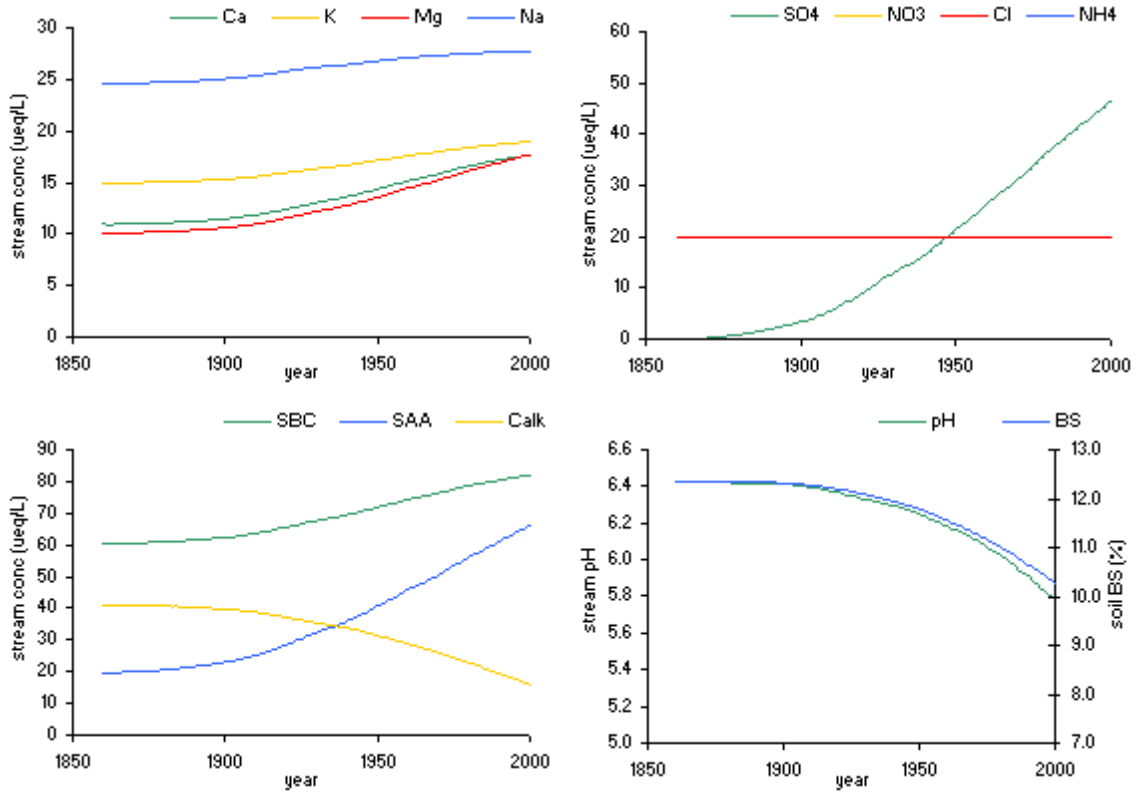
**Aggressive**



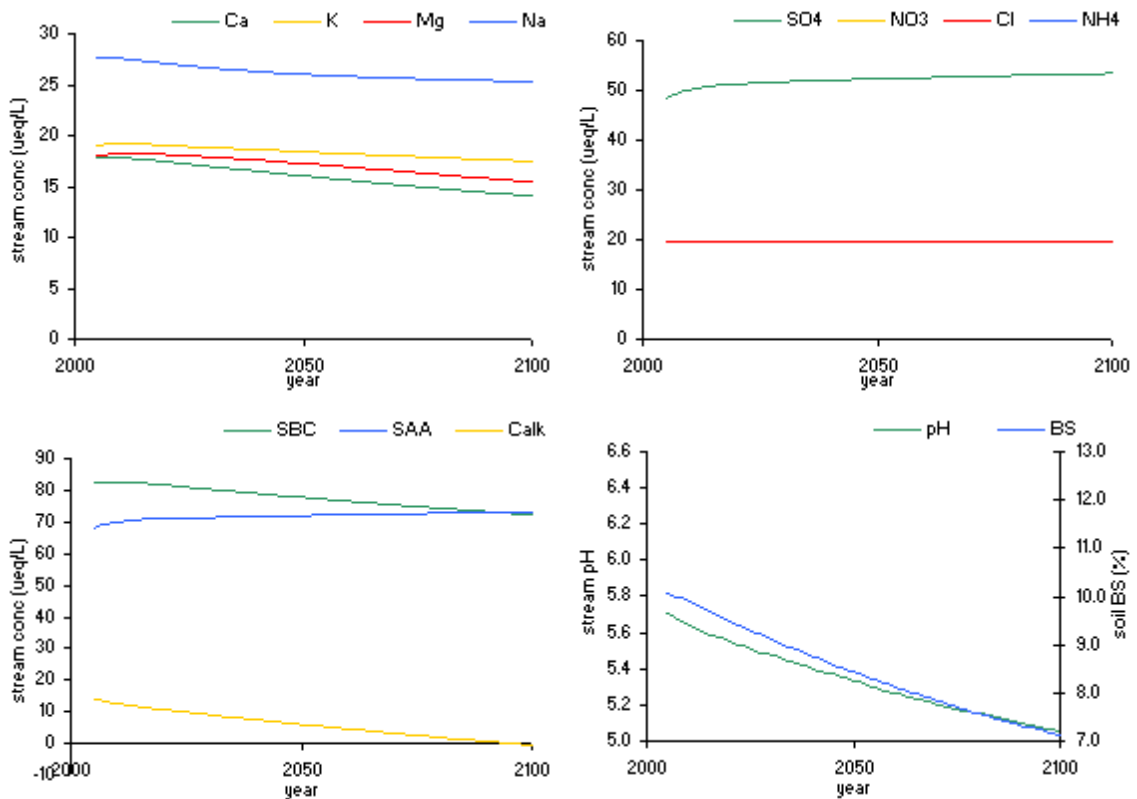


Stream ID 16 - White Creek

Hindcast

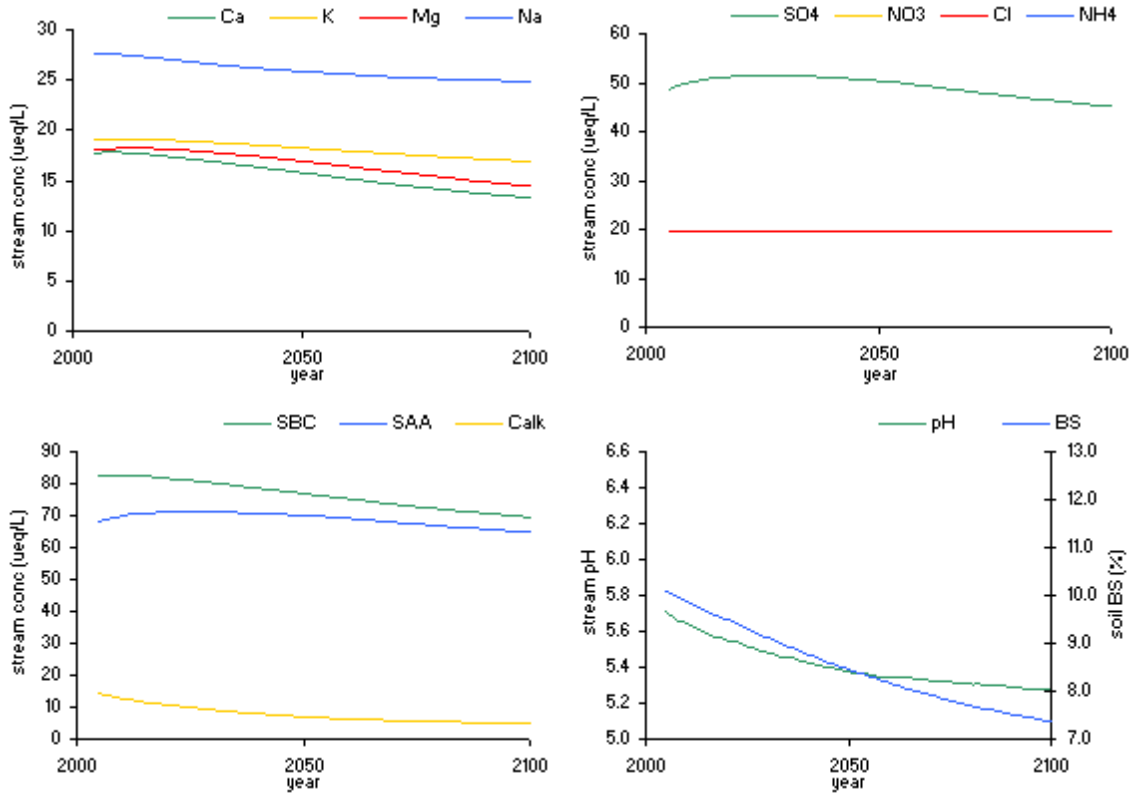


Base

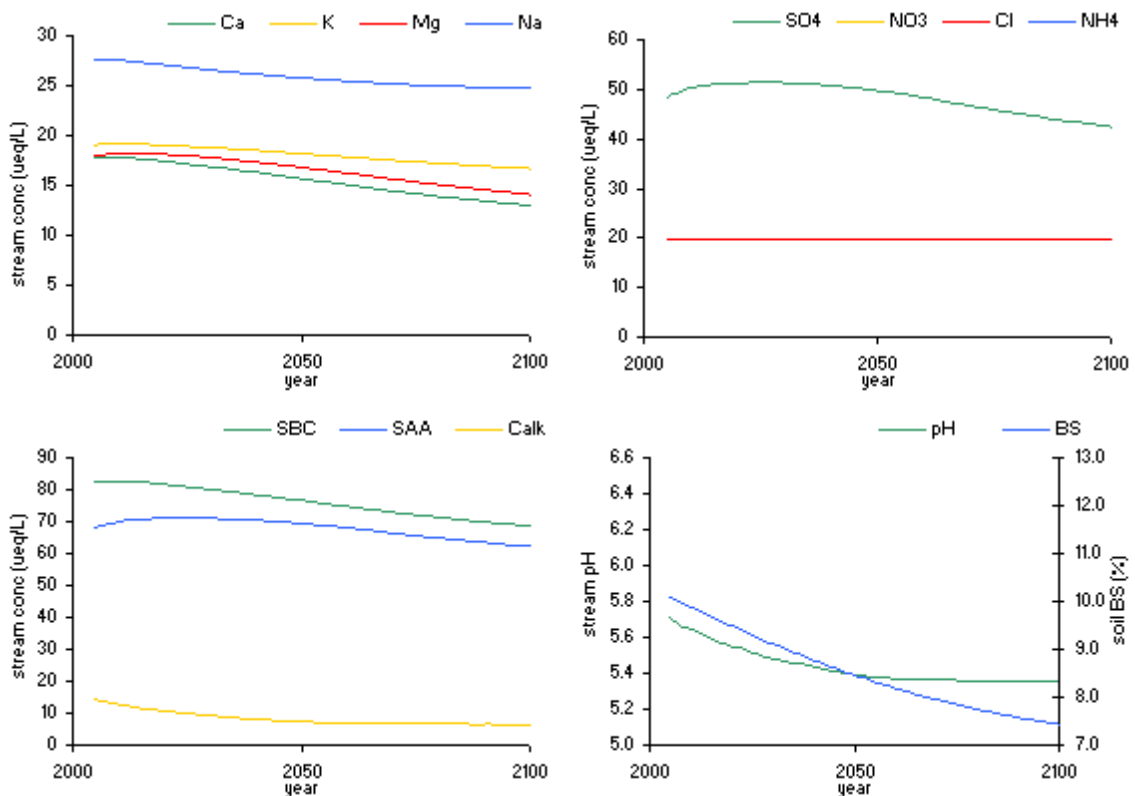


Stream ID 16 - White Creek

Moderate

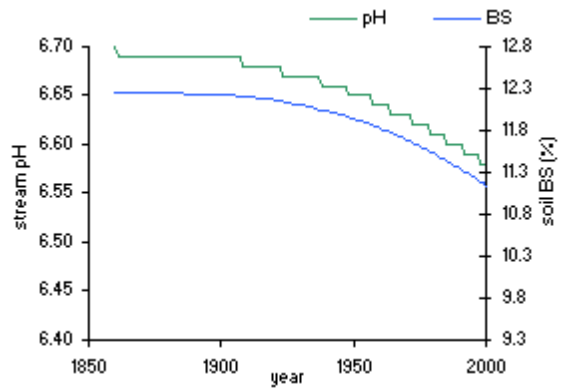
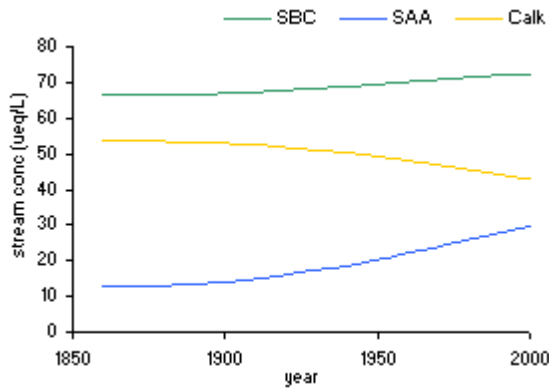
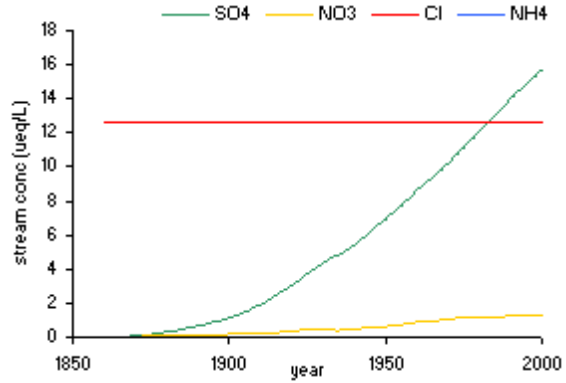
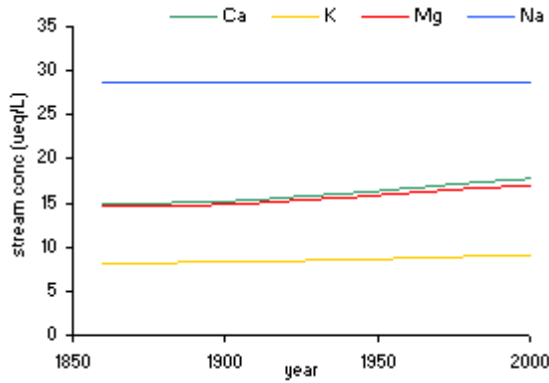


Aggressive

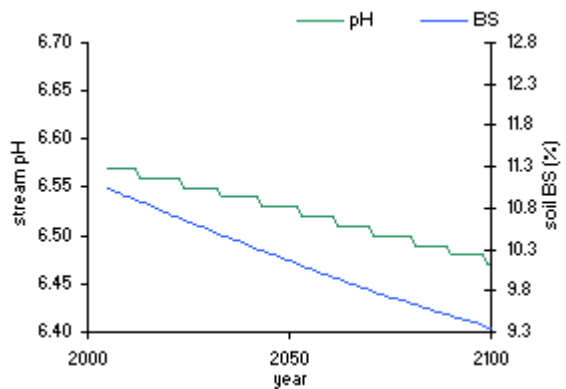
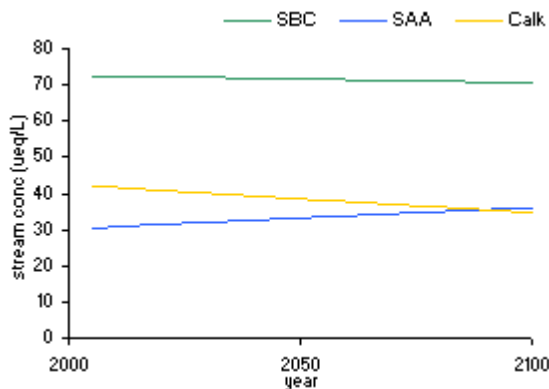
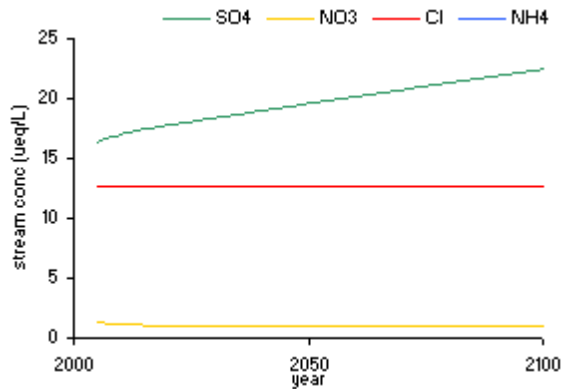
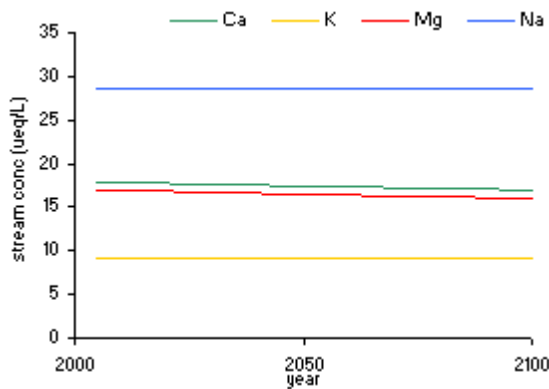


**Stream ID 232 - Wildcat Branch**

**Hindcast**

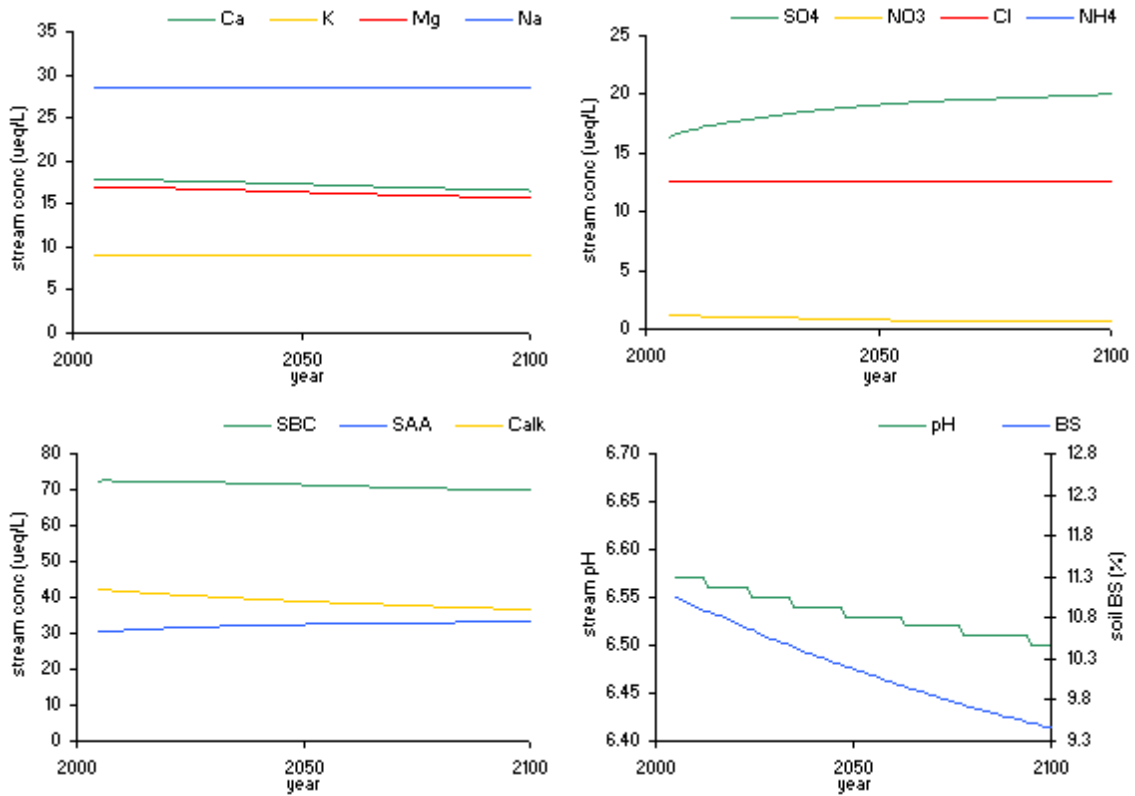


**Base**

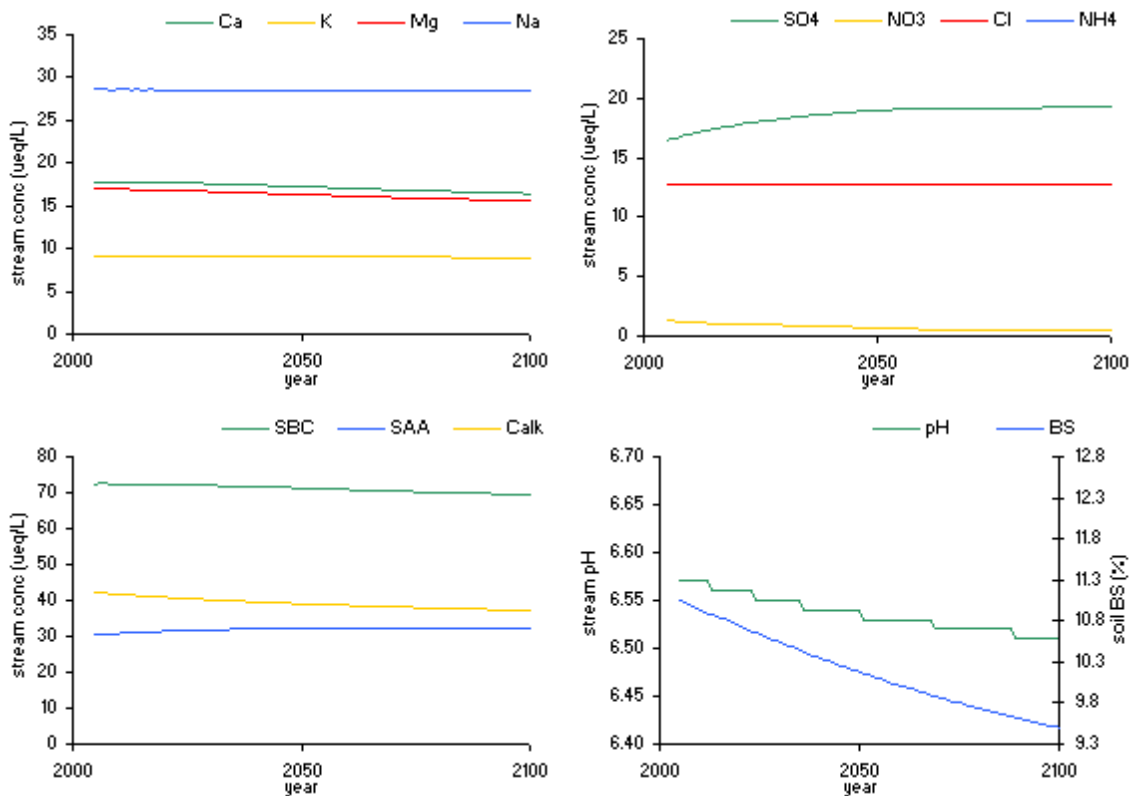


**Stream ID 232 - Wildcat Branch**

**Moderate**

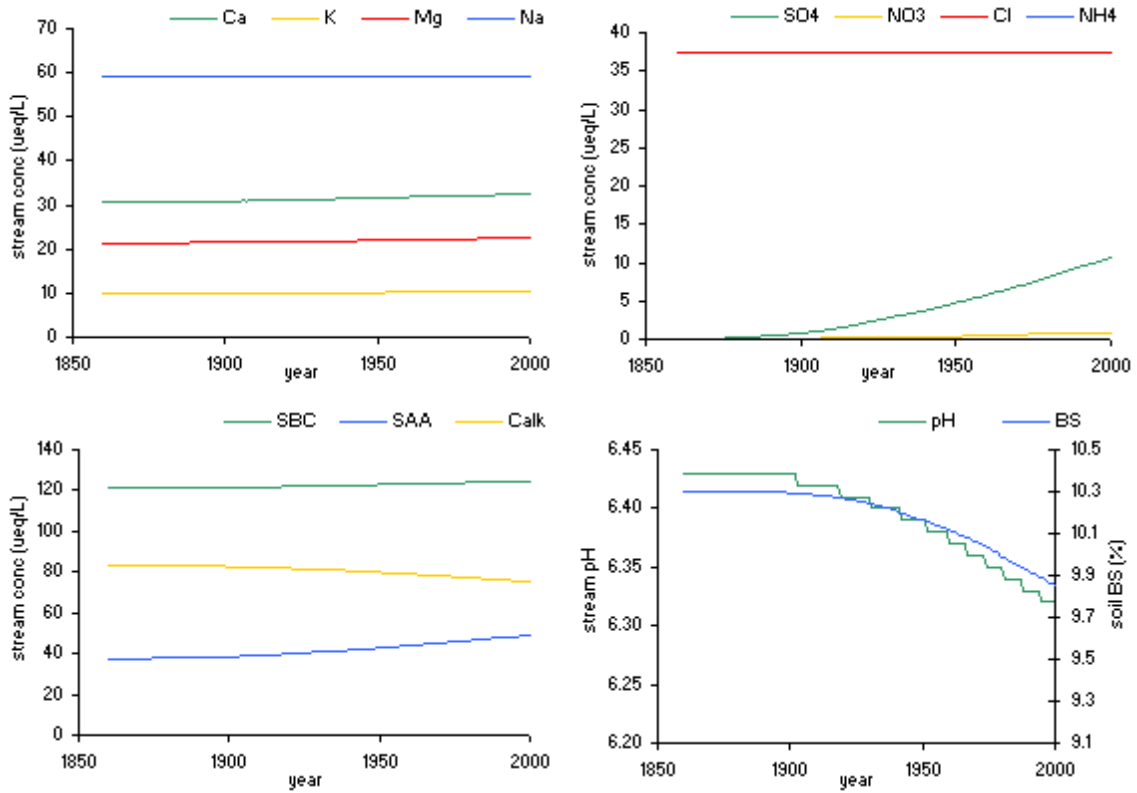


**Aggressive**

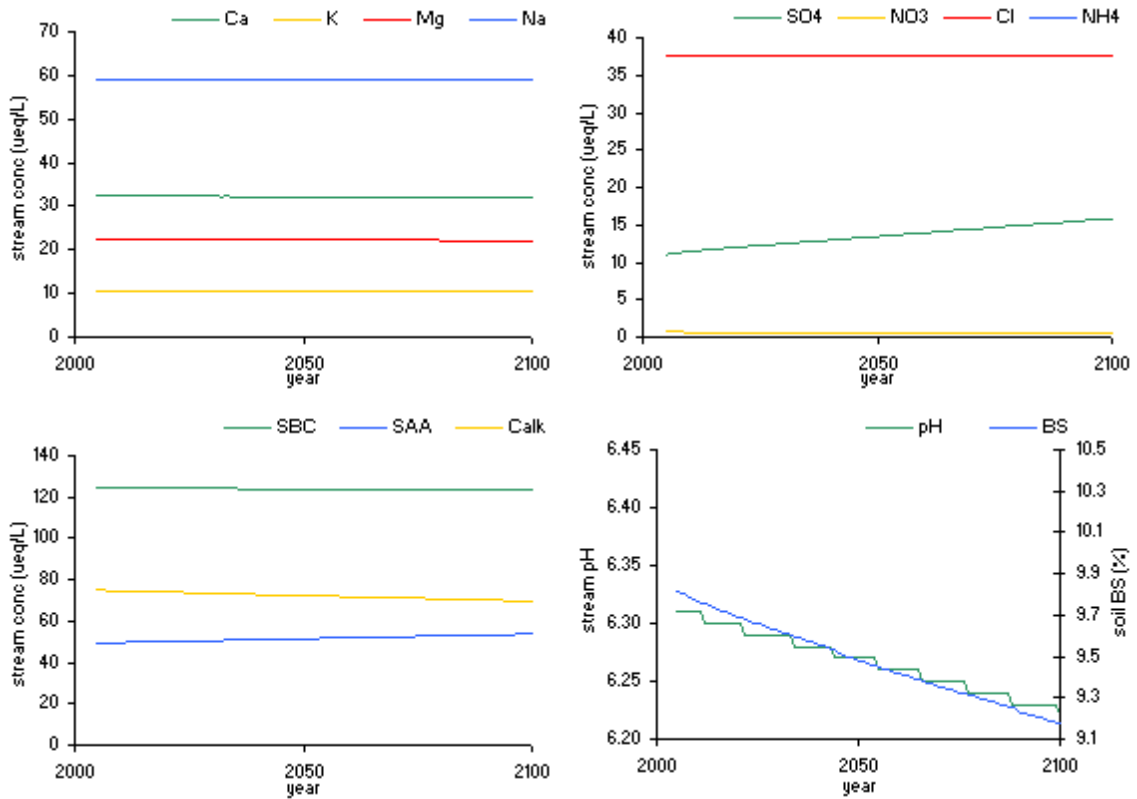


*Stream ID 169 - Wilson Creek*

**Hindcast**

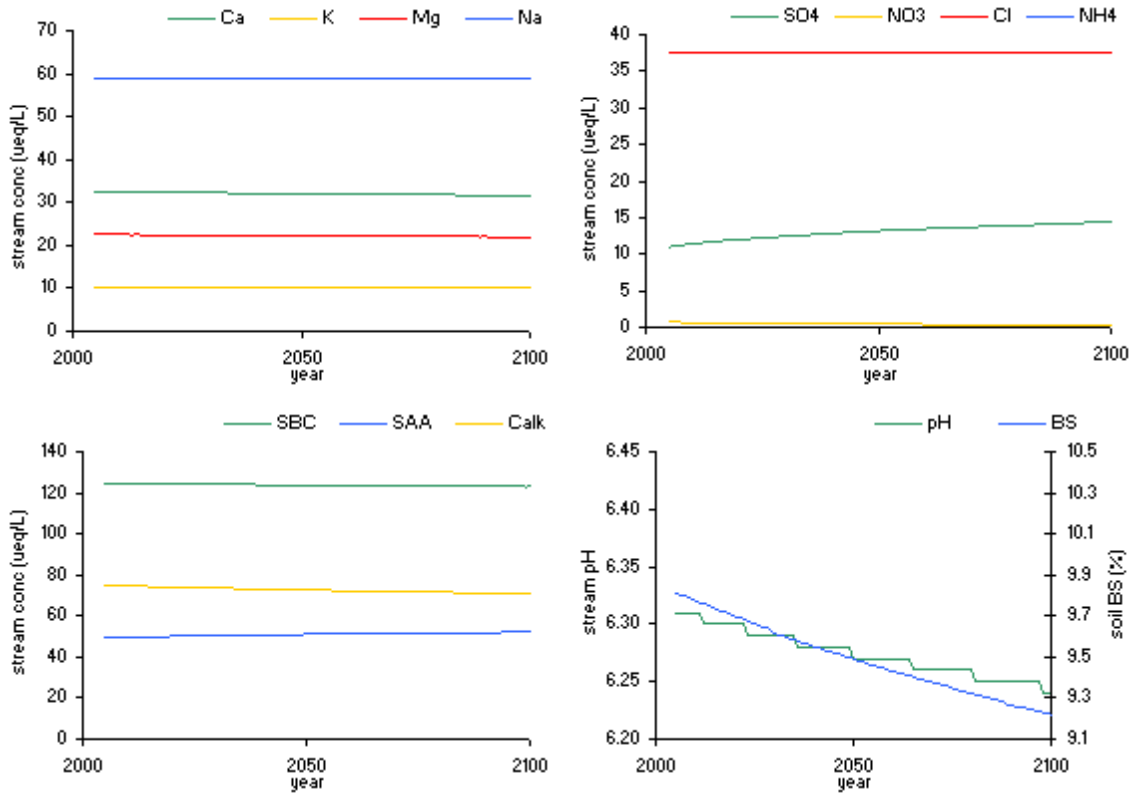


**Base**

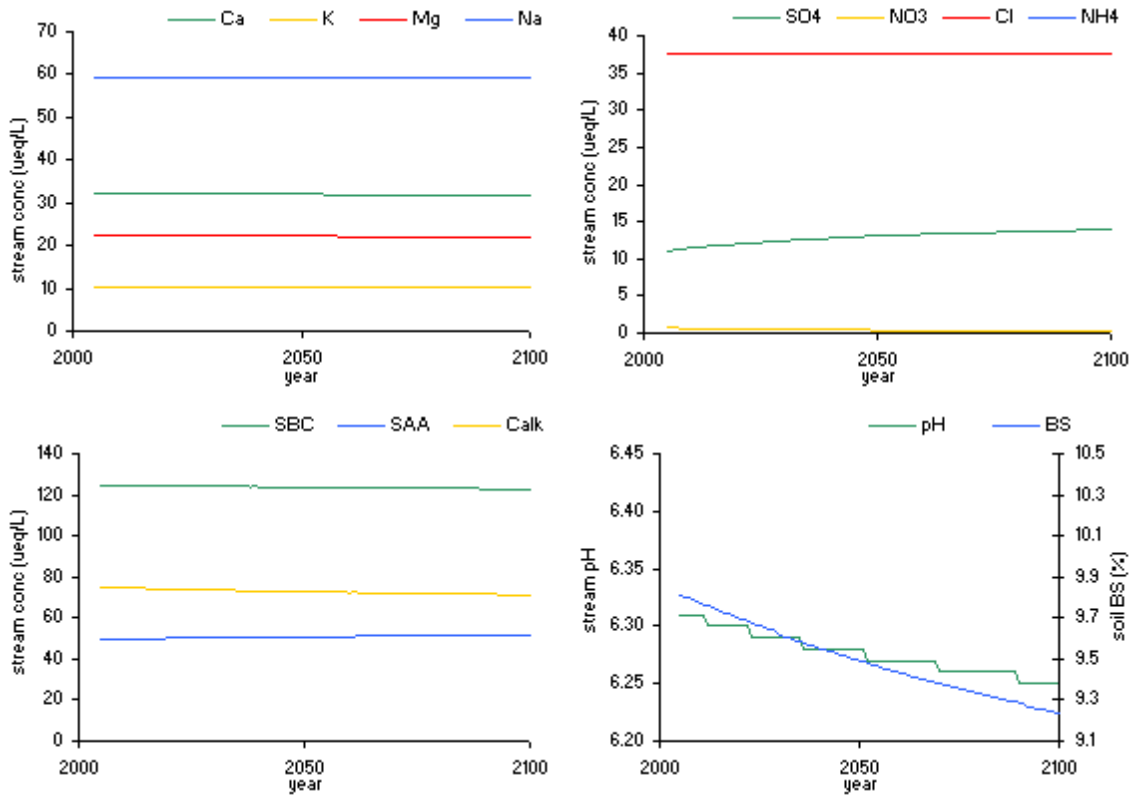


Stream ID 169 - Wilson Creek

Moderate

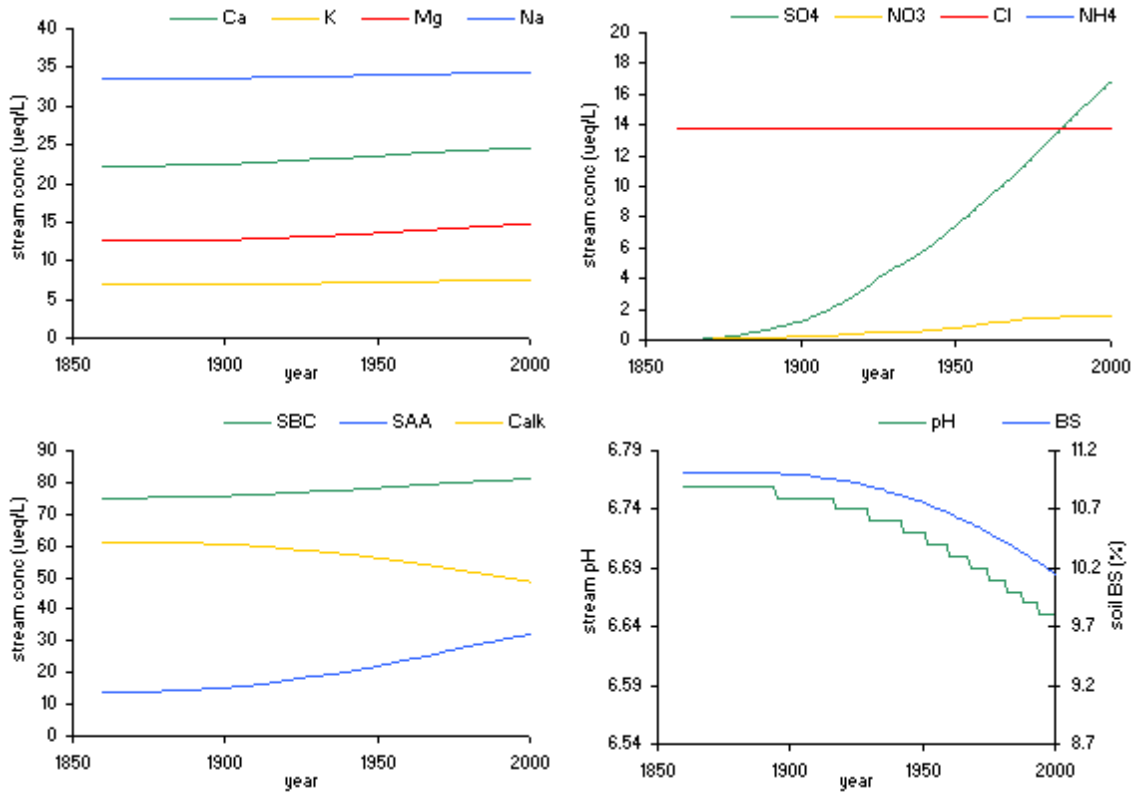


Aggressive

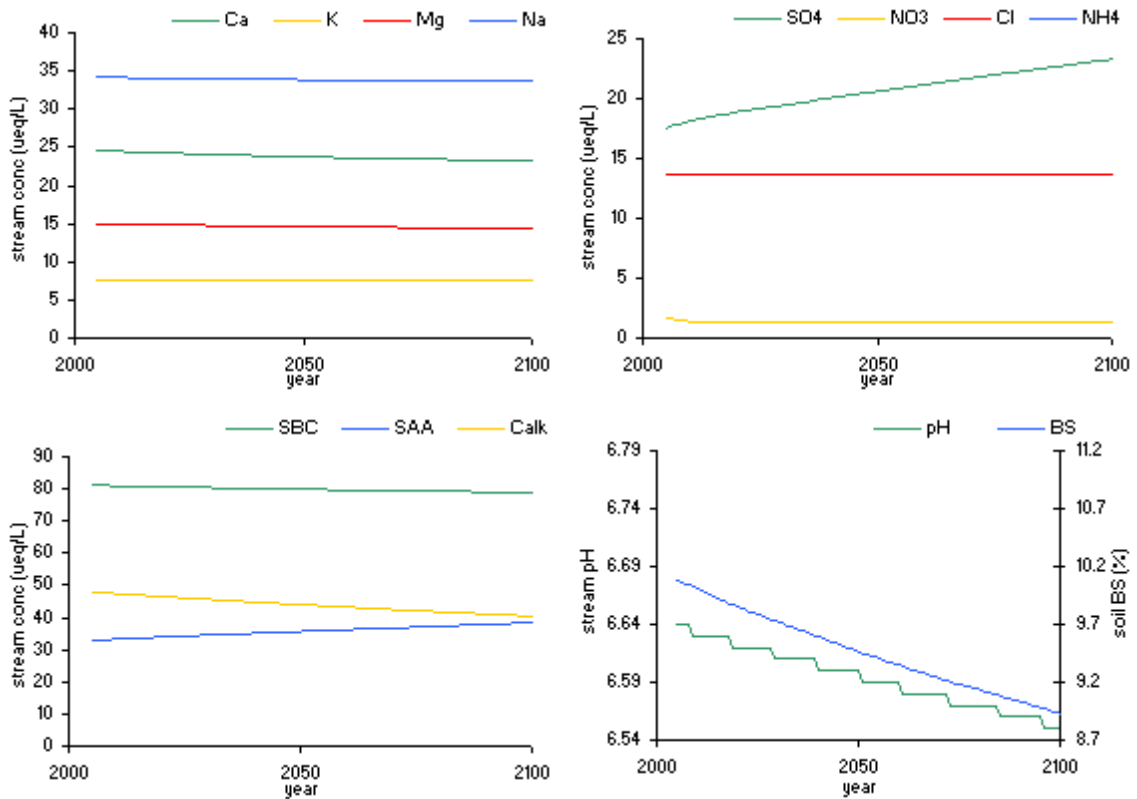


*Stream ID 150 - Wolf Creek*

**Hindcast**

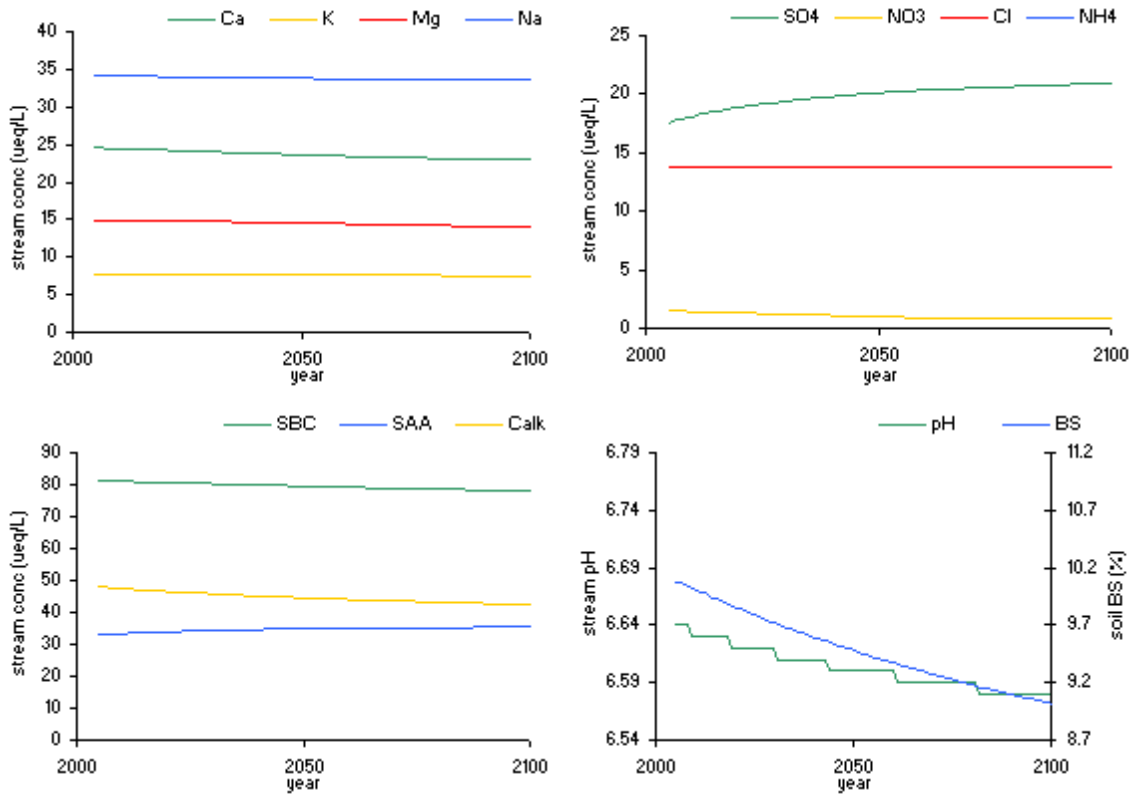


**Base**

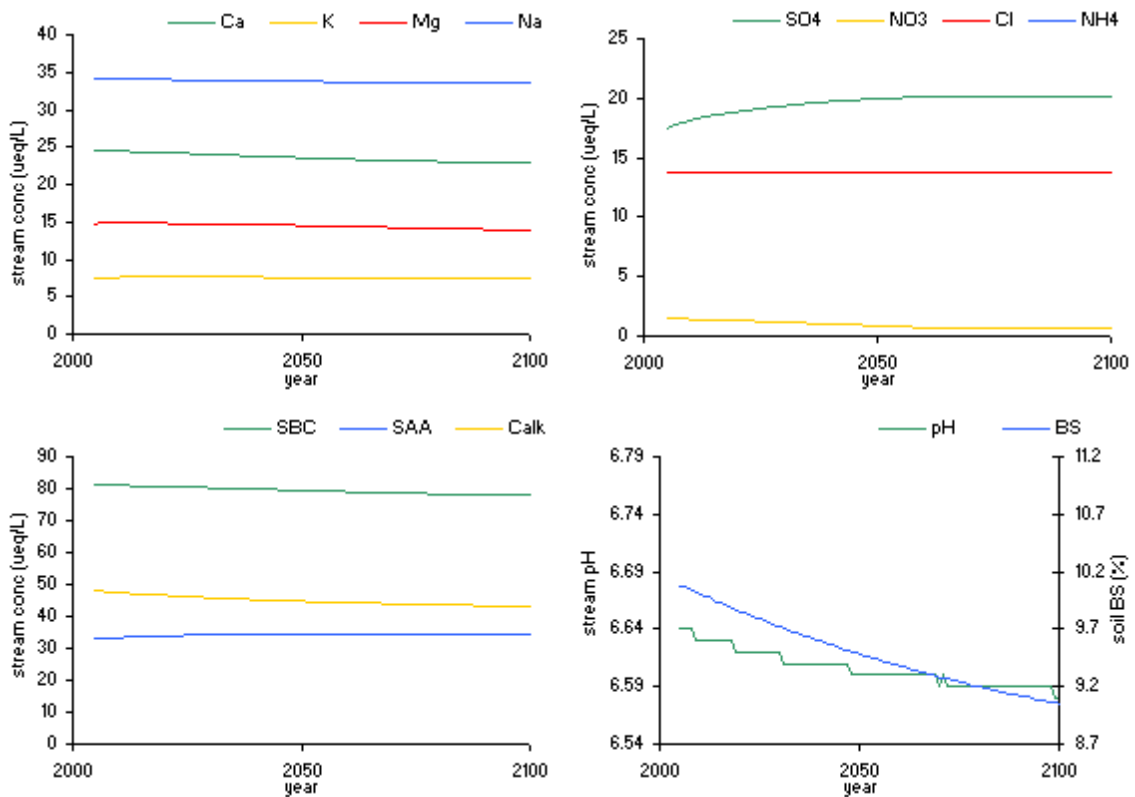


Stream ID 150 - Wolf Creek

Moderate



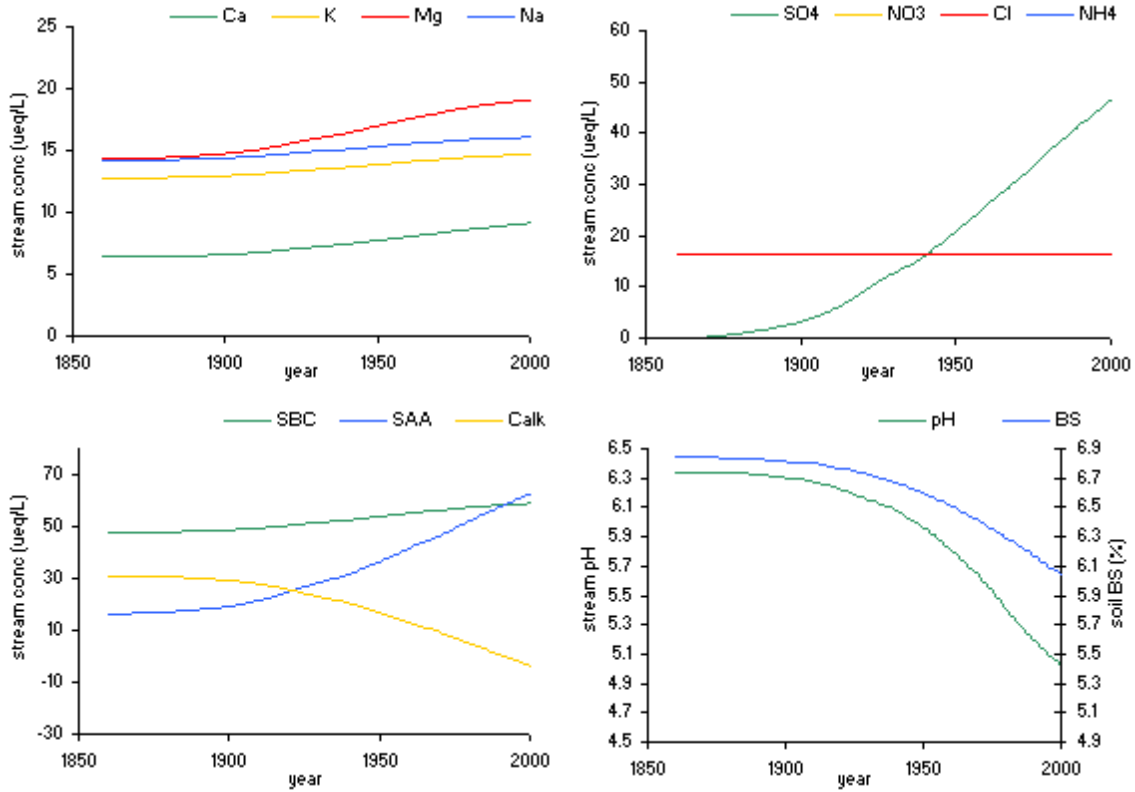
Aggressive



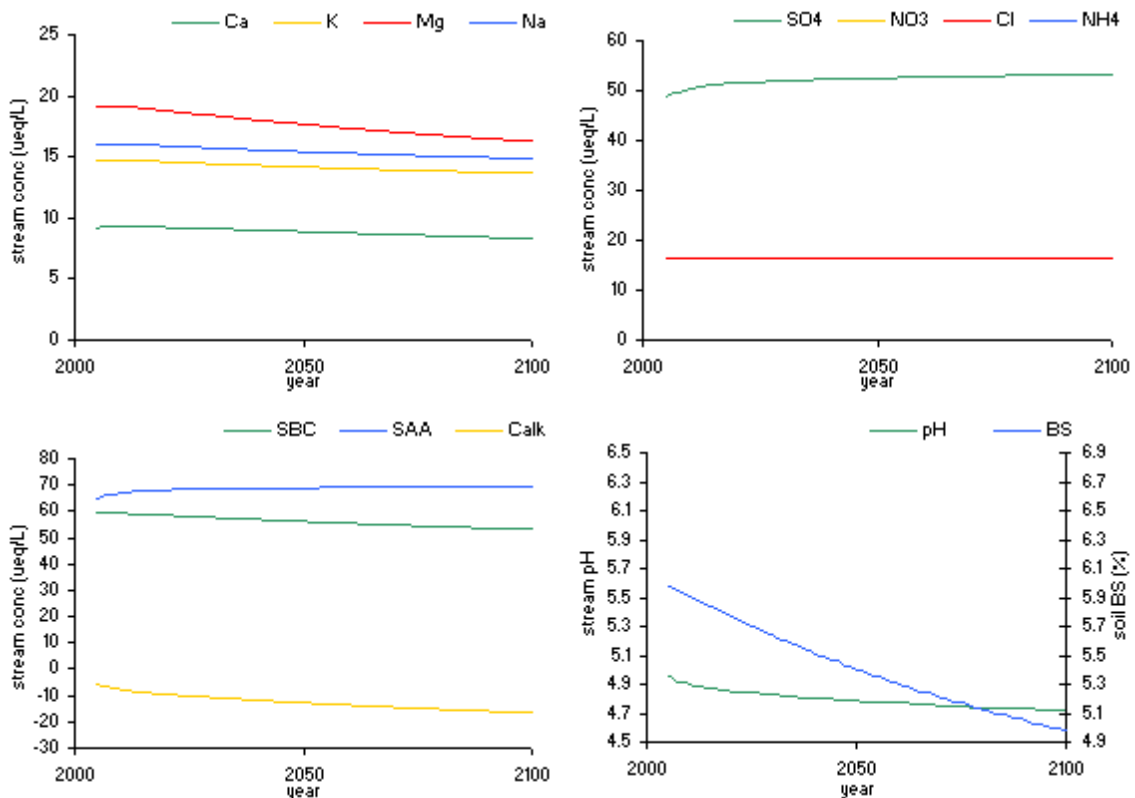


**Stream ID 27 - Yellow Fork**

**Hindcast**

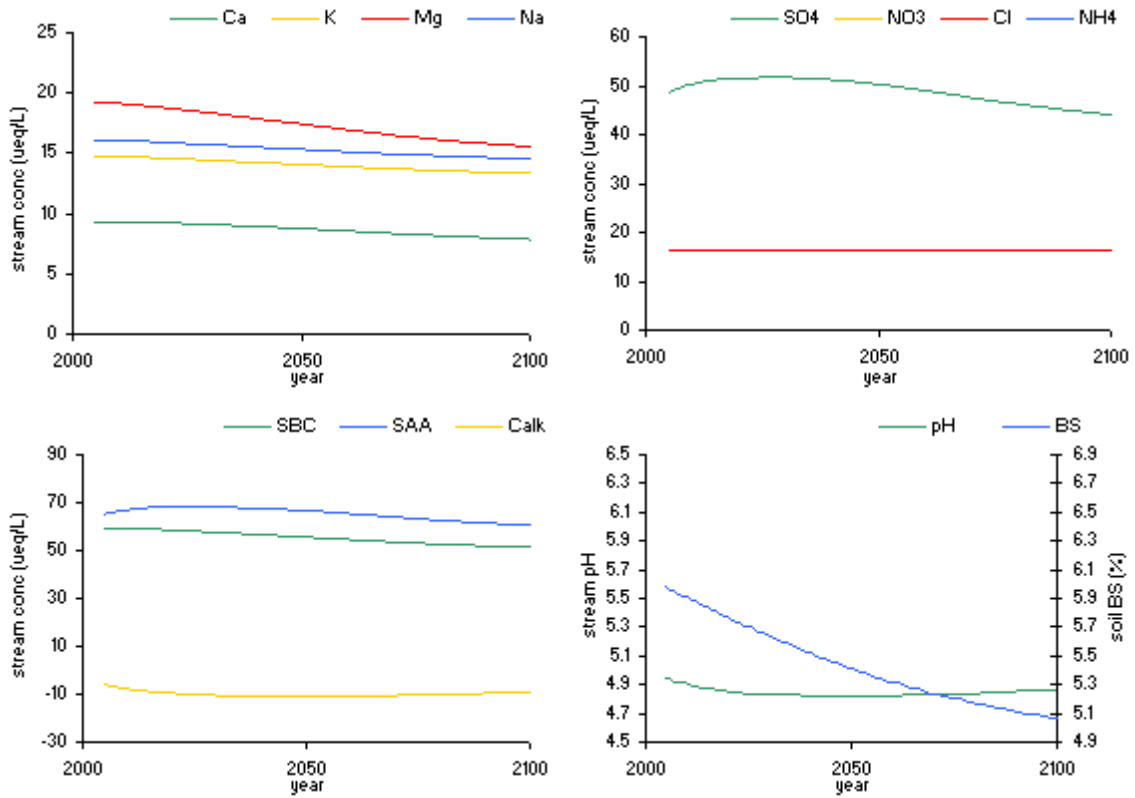


**Base**

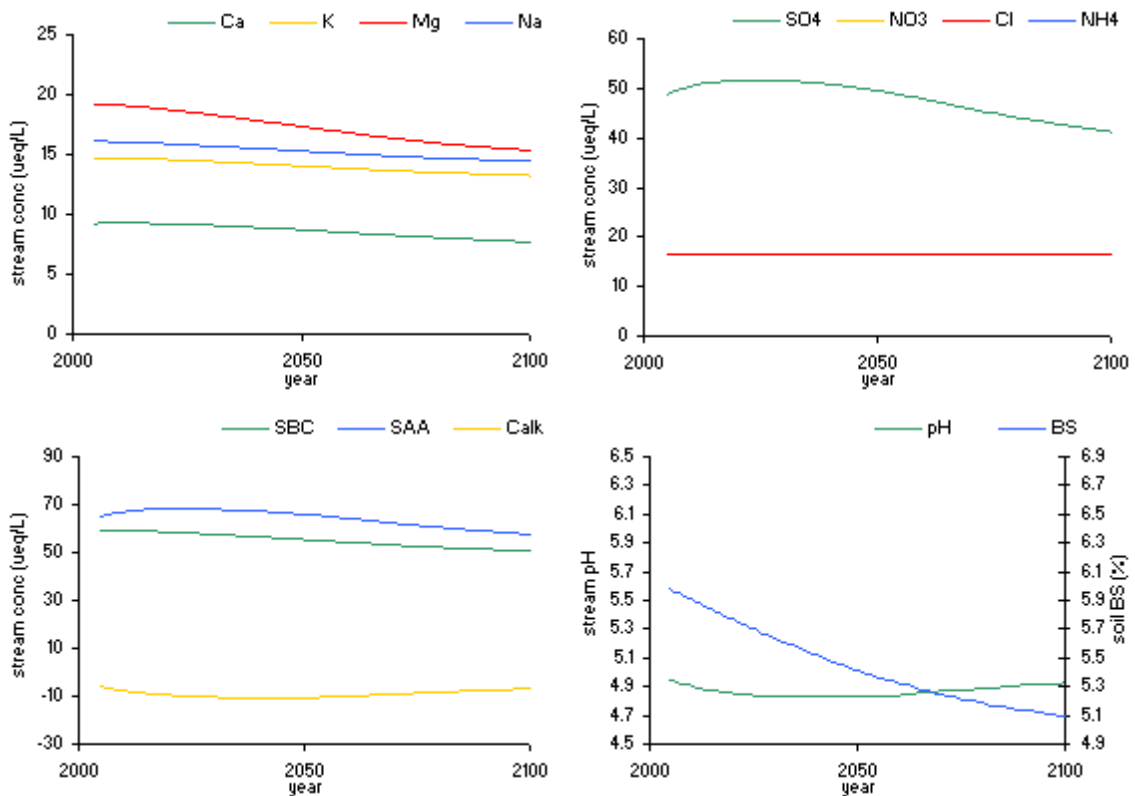


**Stream ID 27 - Yellow Fork**

**Moderate**



**Aggressive**



## APPENDIX D

### Deposition Unit Conversion Factors



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**Table D1. Conversion factors for units of atmospheric deposition.**

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| <b>To Convert From</b>                                | <b>To</b>  | <b>Multiply By</b> |
|---|------------|--------------------|
| meq SO <sub>4</sub> <sup>2-</sup> /m <sup>2</sup> /yr | kg S/ha/yr | 0.16               |
| meq NO <sub>3</sub> <sup>-</sup> /m <sup>2</sup> /yr  | kg N/ha/yr | 0.14               |
| meq NH <sub>4</sub> <sup>+</sup> /m <sup>2</sup> /yr  | kg N/ha/yr | 0.14               |

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## APPENDIX E

Map showing location of upper and lower node stream sampling locations from the National Stream Survey within the study area





# National Stream Survey Sampling Sites (Upper and Lower Nodes)

