

Appendix 4E. Dominance of most abundant taxa in benthic macroinvertebrate samples collected on transects at the study sites in Surry County, North Carolina, 2004-2007. [SR, secondary road; %, percent]

| Transect | Dominance of most abundant taxon (%) | Most abundant taxon | Dominance of second most abundant taxon (%) | Second most abundant taxon | Dominance of third most abundant taxon (%) | Third most abundant taxon | Dominance of fourth most abundant taxon (%) | Fourth most abundant taxon | Dominance of fifth most abundant taxon (%) | Fifth most abundant taxon |
|---|--------------------------------------|------------------------|---|----------------------------|--|--------------------------------|---|--------------------------------|--|---------------------------------|
| Hogan Creek at SR 2038 near Siloam, North Carolina (control site) | | | | | | | | | | |
| Sample collection date March 24, 2004 | | | | | | | | | | |
| A | 27.0 | <i>Cricotopus sp.</i> | 15.2 | <i>Ephemera sp.</i> | 13.7 | <i>Orthocladus sp.</i> | 12.7 | <i>Polypedium aviceps</i> | 3.4 | <i>Cheumatopsyche sp.</i> |
| B | 26.3 | <i>Ephemera sp.</i> | 21.9 | <i>Cheumatopsyche sp.</i> | 12.2 | <i>Polypedium aviceps</i> | 4.0 | <i>Isoperla namata</i> | 3.6 | <i>Hydropsyche betteni</i> |
| C | 30.8 | <i>Ephemera sp.</i> | 19.4 | <i>Polypedium aviceps</i> | 10.0 | <i>Isoperla namata</i> | 9.7 | <i>Cheumatopsyche sp.</i> | 4.7 | <i>Orthocladus sp.</i> |
| D | 37.6 | <i>Ephemera sp.</i> | 13.9 | <i>Polypedium aviceps</i> | 9.5 | <i>Cheumatopsyche sp.</i> | 4.7 | <i>Isoperla namata</i> | 3.3 | <i>Oulimnius latiusculus</i> |
| E | 28.3 | <i>Ephemera sp.</i> | 16.7 | <i>Cheumatopsyche sp.</i> | 10.6 | <i>Polypedium aviceps</i> | 5.5 | <i>Isoperla namata</i> | 4.1 | <i>Cricotopus sp.</i> |
| Sample collection date February 16, 2005 | | | | | | | | | | |
| A | 66.9 | <i>Ephemera sp.</i> | 10.8 | <i>Isoperla namata</i> | 4.2 | <i>Orthocladus sp.</i> | 3.6 | <i>Cheumatopsyche sp.</i> | 3.0 | <i>Simulium sp.</i> |
| B | 57.5 | <i>Ephemera sp.</i> | 7.0 | <i>Isoperla namata</i> | 5.8 | <i>Cheumatopsyche sp.</i> | 3.8 | <i>Oulimnius latiusculus</i> | 3.2 | <i>Optioservus ovalis</i> |
| C | 49.1 | <i>Ephemera sp.</i> | 12.9 | <i>Isoperla namata</i> | 6.7 | <i>Orthocladus sp.</i> | 5.2 | <i>Eukiefferiella claripen</i> | 3.7 | <i>Cheumatopsyche sp.</i> |
| D | 52.9 | <i>Ephemera sp.</i> | 9.4 | <i>Orthocladus sp.</i> | 8.5 | <i>Isoperla namata</i> | 4.8 | <i>Eukiefferiella claripen</i> | 3.9 | <i>Cheumatopsyche sp.</i> |
| E | 55.8 | <i>Ephemera sp.</i> | 8.4 | <i>Orthocladus sp.</i> | 5.6 | <i>Isoperla namata</i> | 4.7 | <i>Eukiefferiella claripen</i> | 4.4 | <i>Cheumatopsyche sp.</i> |
| Sample collection date March 8, 2006 | | | | | | | | | | |
| A | 42.9 | <i>Ephemera sp.</i> | 14.3 | <i>Orthocladus sp.</i> | 8.9 | <i>Isoperla namata</i> | 6.3 | <i>Cheumatopsyche sp.</i> | 6.0 | <i>Diamesa sp.</i> |
| B | 33.8 | <i>Ephemera sp.</i> | 23.2 | <i>Cheumatopsyche sp.</i> | 8.3 | <i>Orthocladus sp.</i> | 8.0 | <i>Maccaffertium modest</i> | 4.5 | <i>Oulimnius latiusculus</i> |
| C | 30.6 | <i>Ephemera sp.</i> | 26.5 | <i>Orthocladus sp.</i> | 11.4 | <i>Eukiefferiella brevicar</i> | 8.8 | <i>Diamesa sp.</i> | 5.4 | <i>Cheumatopsyche sp.</i> |
| D | 28.4 | <i>Orthocladus sp.</i> | 25.6 | <i>Ephemera sp.</i> | 15.0 | <i>Diamesa sp.</i> | 7.0 | <i>Eukiefferiella brevicar</i> | 3.5 | <i>Cheumatopsyche sp.</i> |
| E | 51.3 | <i>Ephemera sp.</i> | 14.3 | <i>Cheumatopsyche sp.</i> | 4.2 | <i>Maccaffertium modestum</i> | 3.9 | <i>Oulimnius latiusculus</i> | 3.4 | <i>Orthocladus sp.</i> |
| Sample collection date March 20, 2007 | | | | | | | | | | |
| A | 45.9 | <i>Ephemera sp.</i> | 11.1 | <i>Diamesa sp.</i> | 5.7 | <i>Cheumatopsyche sp.</i> | 4.1 | Chloroperlidae | 3.2 | <i>Orthocladus sp.</i> |
| B | 48.9 | <i>Ephemera sp.</i> | 13.2 | <i>Diamesa sp.</i> | 8.4 | <i>Neostempellina sp.</i> | 5.4 | <i>Orthocladus sp.</i> | 3.9 | <i>Eukiefferiella brevicar</i> |
| C | 45.7 | <i>Ephemera sp.</i> | 10.5 | <i>Diamesa sp.</i> | 9.1 | <i>Neophylax sp.</i> | 5.9 | <i>Eukiefferiella brevicar</i> | 3.7 | <i>Cheumatopsyche sp.</i> |
| D | 55.0 | <i>Ephemera sp.</i> | 5.9 | <i>Cheumatopsyche sp.</i> | 5.9 | Chloroperlidae | 5.1 | <i>Isoperla namata</i> | 4.0 | <i>Maccaffertium terminatum</i> |
| E | 49.9 | <i>Ephemera sp.</i> | 26.5 | <i>Cheumatopsyche sp.</i> | 3.2 | <i>Oulimnius latiusculus</i> | 2.4 | <i>Isoperla namata</i> | 2.1 | Chloroperlidae |

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| Transect | Dominance of most abundant taxon (%) | Most abundant taxon | Dominance of second most abundant taxon (%) | Second most abundant taxon | Dominance of third most abundant taxon (%) | Third most abundant taxon | Dominance of fourth most abundant taxon (%) | Fourth most abundant taxon | Dominance of fifth most abundant taxon (%) | Fifth most abundant taxon |
|--|--------------------------------------|---------------------------------|---|-----------------------------------|--|-----------------------------------|---|--------------------------------|--|-----------------------------------|
| Bull Creek at Ash Hill, North Carolina (BMP site) | | | | | | | | | | |
| Sample collection date March 24, 2004 | | | | | | | | | | |
| A | 20.8 | <i>Cricotopus sp.</i> | 19.0 | <i>Cheumatopsyche sp.</i> | 10.2 | <i>Maccaffertium modestum</i> | 7.7 | <i>Ephemera sp.</i> | 6.9 | <i>Polypedium aviceps</i> |
| B | 30.7 | <i>Orthocladus sp.</i> | 30.0 | <i>Cricotopus sp.</i> | 5.7 | <i>Maccaffertium modestum</i> | 5.3 | <i>Rheotanytarsus sp.</i> | 5.3 | <i>Polypedium aviceps</i> |
| C | 23.1 | <i>Polypedium aviceps</i> | 16.9 | <i>Orthocladus sp.</i> | 8.8 | <i>Cheumatopsyche sp.</i> | 6.5 | <i>Cardiocladius obscuri</i> | 5.8 | <i>Rheotanytarsus sp.</i> |
| D | 21.3 | <i>Cheumatopsyche sp.</i> | 19.1 | <i>Cricotopus sp.</i> | 16.7 | <i>Orthocladus sp.</i> | 8.5 | <i>Antocha sp.</i> | 5.3 | <i>Hydropsyche betteni</i> |
| E | 19.5 | <i>Polypedium aviceps</i> | 16.0 | <i>Cheumatopsyche sp.</i> | 9.7 | <i>Cricotopus sp.</i> | 9.3 | <i>Maccaffertium modest</i> | 8.2 | <i>Ephemera sp.</i> |
| Sample collection date February 16, 2005 | | | | | | | | | | |
| A | 17.7 | <i>Ephemera sp.</i> | 10.3 | <i>Nais sp.</i> | 9.8 | <i>Rheotanytarsus sp.</i> | 8.5 | <i>Eukiefferiella claripen</i> | 7.1 | <i>Orthocladus sp.</i> |
| B | 21.8 | <i>Nais sp.</i> | 13.4 | <i>Ephemera sp.</i> | 12.2 | <i>Eukiefferiella claripennis</i> | 8.1 | <i>Rheotanytarsus sp.</i> | 7.0 | <i>Orthocladus sp.</i> |
| C | 15.8 | <i>Ephemera sp.</i> | 14.1 | <i>Eukiefferiella claripenni:</i> | 10.0 | <i>Rheotanytarsus sp.</i> | 9.1 | <i>Cheumatopsyche sp.</i> | 6.7 | <i>Antocha sp.</i> |
| D | 13.0 | <i>Nais sp.</i> | 12.0 | <i>Ephemera sp.</i> | 9.6 | <i>Rheotanytarsus sp.</i> | 9.1 | <i>Cheumatopsyche sp.</i> | 8.3 | <i>Eukiefferiella claripennis</i> |
| E | 14.9 | <i>Ephemera sp.</i> | 13.6 | <i>Eukiefferiella claripenni:</i> | 9.8 | <i>Nais sp.</i> | 8.5 | <i>Rheotanytarsus sp.</i> | 8.5 | <i>Orthocladus sp.</i> |
| Sample collection date March 8, 2006 | | | | | | | | | | |
| A | 26.9 | <i>Ephemera sp.</i> | 12.9 | <i>Orthocladus sp.</i> | 6.6 | <i>Maccaffertium modestum</i> | 6.0 | <i>Oulimnius latiusculus</i> | 5.7 | Acari |
| B | 23.2 | <i>Orthocladus sp.</i> | 13.3 | <i>Ephemera sp.</i> | 8.8 | <i>Oulimnius latiusculus</i> | 7.6 | <i>Rheotanytarsus sp.</i> | 6.8 | <i>Cheumatopsyche sp.</i> |
| C | 19.9 | <i>Ephemera sp.</i> | 18.7 | <i>Orthocladus sp.</i> | 14.0 | <i>Cheumatopsyche sp.</i> | 10.5 | <i>Oulimnius latiusculus</i> | 10.2 | Acari |
| D | 27.9 | <i>Orthocladus sp.</i> | 19.2 | <i>Ephemera sp.</i> | 9.3 | <i>Oulimnius latiusculus</i> | 9.0 | <i>Antocha sp.</i> | 7.1 | Acari |
| E | 21.8 | <i>Orthocladus sp.</i> | 21.2 | <i>Ephemera sp.</i> | 9.5 | <i>Oulimnius latiusculus</i> | 5.2 | <i>Eukiefferiella brevical</i> | 5.2 | <i>Cheumatopsyche sp.</i> |
| Sample collection date March 21, 2007 | | | | | | | | | | |
| A | 16.8 | <i>Cheumatopsyche sp.</i> | 16.3 | <i>Ephemera sp.</i> | 13.9 | <i>Eukiefferiella brevicalcar</i> | 10.0 | <i>Rheotanytarsus sp.</i> | 7.1 | <i>Orthocladus sp.</i> |
| B | 14.9 | <i>Eukiefferiella brevicalc</i> | 12.5 | <i>Orthocladus sp.</i> | 10.9 | <i>Rheotanytarsus sp.</i> | 10.9 | <i>Cheumatopsyche sp.</i> | 8.8 | <i>Ephemera sp.</i> |
| C | 24.5 | <i>Eukiefferiella brevicalc</i> | 12.8 | <i>Orthocladus sp.</i> | 10.7 | <i>Rheotanytarsus sp.</i> | 8.4 | <i>Serratella deficiens</i> | 6.3 | <i>Maccaffertium terminatum</i> |
| D | 23.1 | <i>Orthocladus sp.</i> | 17.4 | <i>Eukiefferiella brevicalca</i> | 10.6 | <i>Rheotanytarsus sp.</i> | 9.7 | <i>Cheumatopsyche sp.</i> | 6.3 | <i>Antocha sp.</i> |
| E | 28.4 | <i>Eukiefferiella brevicalc</i> | 12.1 | <i>Orthocladus sp.</i> | 9.0 | <i>Cheumatopsyche sp.</i> | 8.7 | <i>Ephemera sp.</i> | 5.6 | <i>Rheotanytarsus sp.</i> |

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| Transect | Dominance of most abundant taxon (%) | Most abundant taxon | Dominance of second most abundant taxon (%) | Second most abundant taxon | Dominance of third most abundant taxon (%) | Third most abundant taxon | Dominance of fourth most abundant taxon (%) | Fourth most abundant taxon | Dominance of fifth most abundant taxon (%) | Fifth most abundant taxon |
|--|--------------------------------------|-------------------------|---|---------------------------------|--|---------------------------------|---|----------------------------|--|------------------------------|
| Pauls Creek above SR 1625 near Pine Ridge, North Carolina (in-stream restoration and BMP site) | | | | | | | | | | |
| Sample collection date March 23, 2004 | | | | | | | | | | |
| A | 25.8 | <i>Orthocladius sp.</i> | 21.8 | <i>Ephemerella sp.</i> | 11.3 | <i>Simulium/Stegopterna sp.</i> | 6.5 | <i>Acentrella sp.</i> | 2.9 | Empididae |
| B | 34.9 | <i>Ephemerella sp.</i> | 17.0 | <i>Simulium/Stegopterna sp.</i> | 14.4 | <i>Orthocladius sp.</i> | 7.0 | <i>Acentrella sp.</i> | 4.8 | <i>Antocha sp.</i> |
| C | 31.1 | <i>Ephemerella sp.</i> | 24.6 | <i>Orthocladius sp.</i> | 8.9 | <i>Acentrella sp.</i> | 5.4 | <i>Rhithrogena uhari</i> | 4.3 | <i>Antocha sp.</i> |
| D | 32.9 | <i>Ephemerella sp.</i> | 28.4 | <i>Simulium/Stegopterna sp.</i> | 6.9 | <i>Isoperla namata</i> | 5.2 | <i>Rhithrogena uhari</i> | 4.5 | <i>Baetis tricaudatus</i> |
| E | 40.3 | <i>Ephemerella sp.</i> | 12.7 | <i>Orthocladius sp.</i> | 12.0 | <i>Simulium/Stegopterna sp.</i> | 9.5 | <i>Rhithrogena uhari</i> | 3.2 | <i>Acentrella sp.</i> |
| Sample collection date February 17, 2005 | | | | | | | | | | |
| A | 52.1 | <i>Ephemerella sp.</i> | 23.9 | <i>Rhithrogena uhari</i> | 5.9 | <i>Isoperla namata</i> | 4.3 | <i>Orthocladius sp.</i> | 2.1 | <i>Drunella sp.</i> |
| B | 59.0 | <i>Ephemerella sp.</i> | 17.7 | <i>Rhithrogena uhari</i> | 5.2 | <i>Isoperla namata</i> | 4.3 | <i>Orthocladius sp.</i> | 2.1 | <i>Drunella sp.</i> |
| C | 48.9 | <i>Ephemerella sp.</i> | 17.4 | <i>Rhithrogena uhari</i> | 9.2 | <i>Isoperla namata</i> | 6.0 | <i>Orthocladius sp.</i> | 1.8 | <i>Acentrella sp.</i> |
| D | 58.4 | <i>Ephemerella sp.</i> | 13.4 | <i>Rhithrogena uhari</i> | 7.5 | <i>Orthocladius sp.</i> | 4.7 | <i>Isoperla namata</i> | 2.2 | <i>Diamesa sp.</i> |
| E | 54.8 | <i>Ephemerella sp.</i> | 10.3 | <i>Rhithrogena uhari</i> | 7.4 | <i>Orthocladius sp.</i> | 2.9 | <i>Isoperla namata</i> | 1.6 | <i>Acentrella sp.</i> |
| Sample collection date March 9, 2006 | | | | | | | | | | |
| A | 45.9 | <i>Ephemerella sp.</i> | 13.2 | <i>Rhithrogena uhari</i> | 9.4 | <i>Orthocladius sp.</i> | 8.5 | <i>Isoperla namata</i> | 2.9 | <i>Cheumatopsyche sp.</i> |
| B | 40.7 | <i>Ephemerella sp.</i> | 14.6 | <i>Isoperla namata</i> | 14.3 | <i>Orthocladius sp.</i> | 13.4 | <i>Rhithrogena uhari</i> | 2.1 | Empididae |
| C | 49.8 | <i>Ephemerella sp.</i> | 15.2 | <i>Orthocladius sp.</i> | 11.6 | <i>Rhithrogena uhari</i> | 10.3 | <i>Isoperla namata</i> | 1.5 | <i>Tvetenia discoloripes</i> |
| D | 49.8 | <i>Ephemerella sp.</i> | 15.0 | <i>Orthocladius sp.</i> | 6.9 | <i>Isoperla namata</i> | 6.9 | <i>Rhithrogena uhari</i> | 2.5 | <i>Ceratopsyche sparna</i> |
| E | 58.1 | <i>Ephemerella sp.</i> | 12.9 | <i>Orthocladius sp.</i> | 6.3 | <i>Isoperla namata</i> | 4.0 | <i>Ceratopsyche sparna</i> | 2.6 | <i>Cheumatopsyche sp.</i> |
| Sample Collection Date March 21, 2007 | | | | | | | | | | |
| A | 43.4 | <i>Ephemerella sp.</i> | 15.2 | <i>Hydropsyche betteni</i> | 10.1 | Acari | 7.1 | <i>Rhithrogena uhari</i> | 5.1 | <i>Isoperla namata</i> |
| B | 41.5 | <i>Ephemerella sp.</i> | 12.3 | Acari | 9.2 | <i>Rhithrogena uhari</i> | 4.1 | <i>Cheumatopsyche sp.</i> | 4.1 | <i>Drunella sp.</i> |
| C | 38.3 | <i>Ephemerella sp.</i> | 13.8 | <i>Rhithrogena uhari</i> | 7.2 | Acari | 5.4 | <i>Drunella sp.</i> | 4.8 | <i>Acentrella sp.</i> |
| D | 57.9 | <i>Ephemerella sp.</i> | 7.8 | <i>Rhithrogena uhari</i> | 3.9 | <i>Cheumatopsyche sp.</i> | 3.6 | <i>Hydropsyche bronta</i> | 3.6 | <i>Isoperla namata</i> |
| E | 61.1 | <i>Ephemerella sp.</i> | 5.6 | <i>Isoperla namata</i> | 3.5 | <i>Maccaffertium terminatum</i> | 3.5 | <i>Drunella sp.</i> | 2.8 | <i>Simulium sp.</i> |