|  |  |  |  |
| --- | --- | --- | --- |
| Carbon and WaterCycles  | A level Geography | Group Name: **Emergency data** | C:\Users\robinc\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\Black PDNP Logo.png |

|  |  |  |  |
| --- | --- | --- | --- |
| Site Name: | Burbage Brook | Distance from source (km) | 1.5 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Surface Velocity *(Bonios over 10m section)* | No.1 | 60s | No.2 | 23s | No.3 | 64s | No.4 | 21s | No.5 | 67s |
| Average Velocity  | *Calculate velocity in metres/sec (= 10/ Average time )* | 0.22 m/s |

|  |  |
| --- | --- |
| Channel Width *(metres,* ***not centimetres****)* | 2.1 m |

**Measure the depth at 5 places**: at each bank, in the middle and at ¼ and 3/4 the way across

|  |  |  |
| --- | --- | --- |
| Channel Depth *(metres)* | Distance across (m) | Depth (m) |
|  **1****5****4****2****3****1** | 0 | 0.14 |
| **2** | 0.53 | 0.17 |
| **3** | 1.05 | 0.22 |
| *Cross section looking downstream* **4** | 1.525 | 0.17 |
| **5** | 2.1 | 0.15 |
| Average depth |  | 0.17 m |
| Cross sectional area (Average depth \* Channel width) |  | 0.357 m2 |

|  |  |
| --- | --- |
| Discharge (Cross sectional area \*average velocity ) | 0.16m3/s |

**1000L = 1 m3**

|  |  |
| --- | --- |
| **Carbon content (DOC) from testing** | **4.7 g/m3** |

|  |  |
| --- | --- |
| Carbon discharge per second = Discharge x carbon content | 0.76 g/s |
| Carbon discharge per hour (x 60) | 45 g/h |
| Carbon discharge per day (x60x24) | 1087 g/d |
| Carbon discharge per year (x60x24x365) | 396856 g/y |