|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table S4**. Generalized additive models (GAM) testing treatment (burned vs. unburned) and factor-smooth interaction effects on dissolved organic carbon (DOC) and total dissolved nitrogen (TDN) at five time points and total phosphorous (TP) at one time point. Separate smoothers were fit for burned and unburned data, and anova tables were generated by *anova.gam*(). | | | | | |
| **Dissolved organic carbon (DOC mg/L)** | |  |  |  |  |
|  | *Effect* | *df /edf* | *Ref.df* | *F* | *p-value* |
| Day-0 | s(plant material) | 1.040 | 1.080 | 1.341 | 0.240 |
|  |  |  |  |  |  |
| Day-10 | Treatment | 1 | – | 9.571 | **0.005** |
|  | s(plant material) : burned | 3.623 | 4.412 | 119.7 | **<0.001** |
|  | s(plant material) : unburned | 3.151 | 3.853 | 149.1 | **<0.001** |
|  |  |  |  |  |  |
| Day-31 | Treatment | 1 | – | 0.035 | 0.853 |
|  | s(plant material) : burned | 6.482 | 7.532 | 34.39 | **<0.001** |
|  | s(plant material) : unburned | 1.568 | 1.929 | 59.34 | **<0.001** |
|  |  |  |  |  |  |
| Day-59 | Treatment | 1 | – | 12.32 | **0.002** |
|  | s(plant material) : burned | 2.051 | 2.532 | 94.00 | **<0.001** |
|  | s(plant material) : unburned | 2.202 | 2.714 | 56.55 | **<0.001** |
|  |  |  |  |  |  |
| Day-89 | s(plant material) | 1.928 | 2.385 | 29.80 | **<0.001** |
|  |  |  |  |  |  |
| **Total dissolved nitrogen (TDN mg/L)** | |  |  |  |  |
| Day-0 | Treatment | 1 | – | 0.879 | 0.357 |
|  | s(plant material) : burned | 1.000 | 1.000 | 0.009 | 0.927 |
|  | s(plant material) : unburned | 1.000 | 1.000 | 6.303 | **0.019** |
|  |  |  |  |  |  |
| Day-10 | s(plant material) | 2.848 | 3.492 | 5.720 | **0.003** |
|  |  |  |  |  |  |
| Day-31 | Treatment | 1 | – | 4.122 | 0.053 |
|  | s(plant material) | 3.207 | 3.921 | 4.870 | **0.004** |
|  |  |  |  |  |  |
| Day-59 | Treatment | 1 | – | 3.500 | 0.075 |
|  | s(plant material) : burned | 4.359 | 5.269 | 23.03 | **<0.001** |
|  | s(plant material) : unburned | 2.457 | 3.022 | 10.52 | **<0.001** |
|  |  |  |  |  |  |
| Day-89 | Treatment | 1 | – | 6.231 | **0.020** |
|  | s(plant material) : burned | 2.417 | 2.973 | 3.613 | **0.032** |
|  | s(plant material) : unburned | 1.000 | 1.000 | 0.531 | 0.473 |
|  |  |  |  |  |  |
| **Total phosphorus (TP μmol/L)** | |  |  |  |  |
| Day-31 | Treatment | 1 | – | 1.329 | 0.267 |
|  | s(plant material) : burned | 2.924 | 3.525 | 154.7 | **<0.001** |
|  | s(plant material) : unburned | 2.930 | 3.371 | 124.6 | **<0.001** |
| *Treatment* indicates the parametric term in GAM, *s(plant material)* is the smooth term for either burned or unburned treatments. *df / edf* column indicates either *df* (degrees of freedom) for parametric terms or *edf* (effective degrees of freedom) for smoother terms; *Ref.df* = reference degree of freedom, where dashes indicate NA for parametric terms. Significant effects (p<0.05) are in bold. | | | | | |