|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | |
|  | Summer | Winter | Summer | Winter | Summer | Winter | Summer | Winter |
| Temperature | **0.94** | **0.89** | 0.22 | 0.02 | 0.17 | -0.08 | 0.12 | -0.22 |
| pH | **-0.96** | **-0.89** | -0.06 | 0.44 | -0.27 | 0.02 | 0.01 | -0.06 |
| EC | 0.04 | 0.19 | **0.99** | **0.94** | -0.06 | 0.09 | 0.03 | 0.01 |
| TSS | **0.74** | 0.53 | 0.31 | -0.1 | 0.46 | 0.13 | 0.02 | **0.6** |
| Turbidity | **0.62** | **0.76** | 0.39 | 0.31 | 0.41 | -0.03 | -0.3 | -0.38 |
| Salinity | 0.11 | -0.2 | **0.86** | **0.76** | 0.18 | 0.04 | 0.17 | 0.13 |
| TDS | 0.28 | 0.43 | 0.26 | -0.09 | **0.6** | 0.04 | 0.32 | **0.77** |
| DO | **-0.99** | **-0.85** | -0.13 | -0.13 | -0.08 | 0.08 | 0.11 | -0.13 |
| COD | **0.84** | **0.92** | 0.2 | 0.01 | 0.29 | 0.12 | -0.26 | 0.38 |
| NH4. | **0.88** | **0.92** | 0.25 | 0.11 | 0.26 | -0.06 | -0.2 | 0.28 |
| NO3 | **0.71** | **0.87** | -0.14 | 0.07 | 0.1 | -0.25 | 0.28 | 0.26 |
| Phosphate | 0.4 | 0.15 | **0.77** | **0.87** | 0.09 | 0.28 | -0.31 | 0.24 |
| Sulfates | 0.2 | 0.05 | 0.07 | 0.7 | -0.03 | 0.39 | **-0.66** | **0.46** |
| K | **-0.49** | -0.25 | 0.38 | 0.37 | -0.22 | **0.8** | 0.11 | -0.32 |
| Ca | -0.38 | -0.02 | **0.54** | 0.46 | 0.14 | **0.84** | 0.47 | -0.16 |
| Mg | **-0.68** | 0.06 | 0.31 | 0.41 | 0.18 | **0.84** | 0.33 | -0.06 |
| Cl | 0.42 | 0.17 | **0.8** | **0.77** | -0.17 | 0.53 | -0.31 | -0.08 |
| Br | -0.09 | -0.12 | **-0.84** | -0.14 | -0.37 | -0.001 | 0.15 | **-0.86** |
| Cd | 0.38 | 0.41 | -0.54 | **-0.69** | **0.55** | 0.07 | -0.02 | 0.26 |
| Cr | 0.58 | **0.82** | -0.11 | -0.44 | **0.78** | 0.001 | -0.14 | 0.32 |
| Ni | -0.49 | 0.43 | **0.52** | **-0.49** | 0.48 | 0.41 | 0.36 | 0.45 |
| Cu | 0.02 | -0.01 | 0.04 | 0.02 | 0.01 | **0.95** | **0.94** | 0.13 |
| Zn | 0.05 | -0.12 | -0.08 | -0.15 | 0.19 | **0.77** | **0.83** | 0.11 |
| Mn | 0.03 | **0.53** | -0.18 | -0.44 | **0.97** | 0.47 | 0.19 | 0.46 |
| Hg | 0.52 | **0.86** | 0.19 | 0.07 | **0.63** | 0.24 | -0.42 | 0.33 |
| As | 0.07 | -0.06 | 0.2 | -0.22 | **0.57** | 0.24 | 0.2 | **-0.78** |
| Pb | 0.3 | **0.9** | 0.15 | -0.19 | **0.95** | -0.08 | -0.02 | 0.21 |
| Initial eigen value | 8.12 | 8.9 | 5.43 | 5.4 | 5.05 | 4.7 | 3.39 | 4.00 |
| Percent variance of initial value | 30.1 | 33 | 20.1 | 20 | 18.71 | 17.4 | 12.56 | 14.82 |
| Cumulative percent of initial eigenvalue | 30 | 33 | 50.2 | 53 | 68.91 | 70.4 | 81.47 | 85.22 |