

1 **Supplementary Material:**

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3 **The variation of microbiological characteristics in surface waters during**

4 **persistent precipitation**

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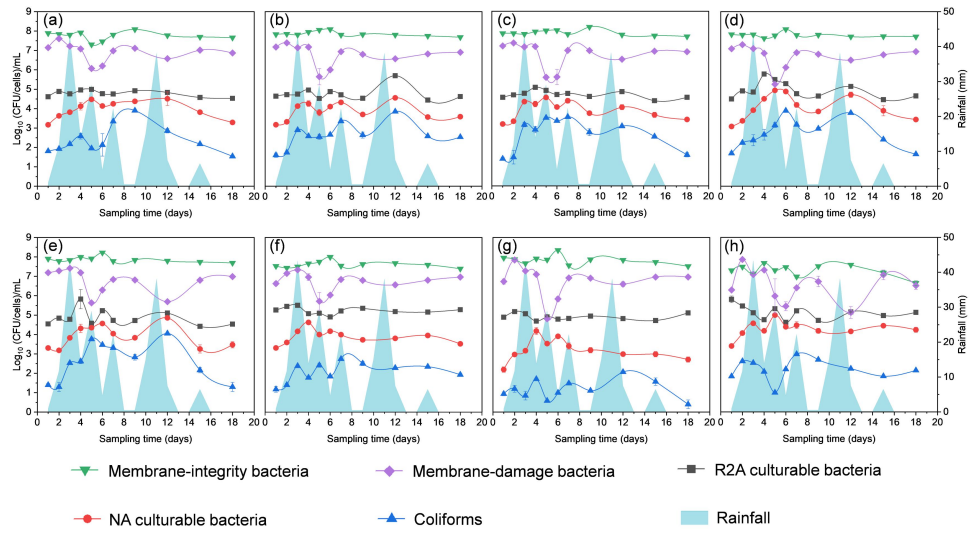
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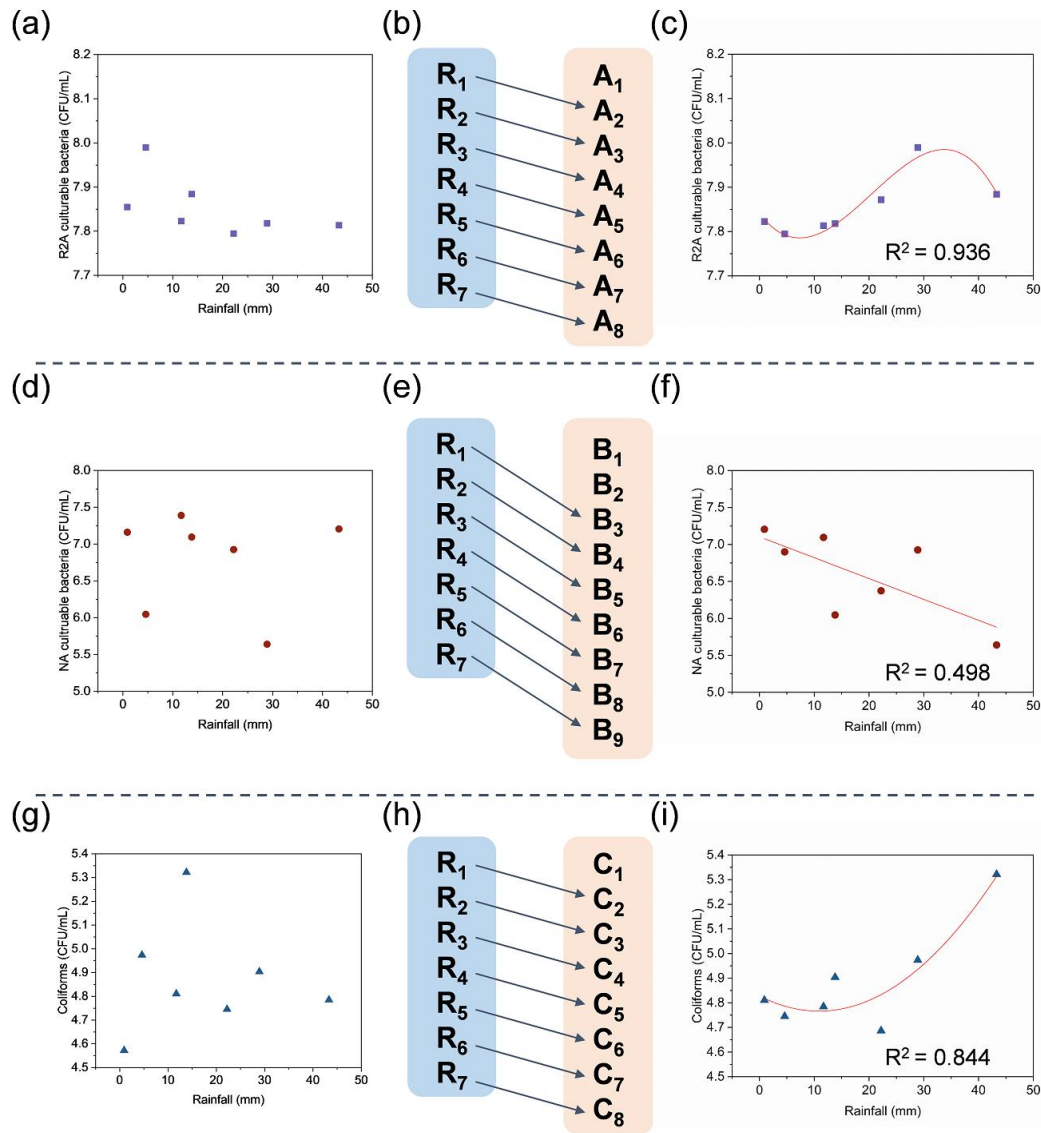
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13 **Fig. S1** The alteration of microbial concentrations in all sampling points during the

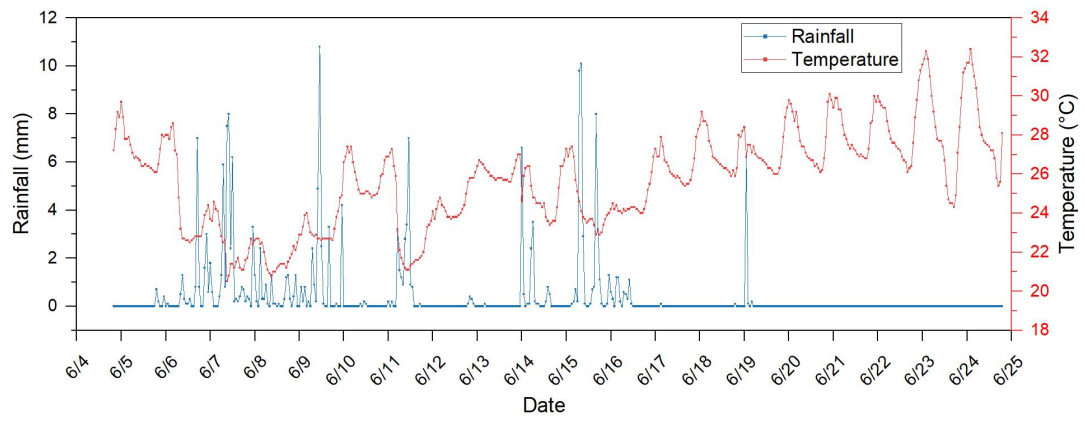
14 persistent precipitation. (1) - (h) was sampling points P1 to P8, respectively.



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16 **Fig. S2** The lag impact of the persistent precipitation on culturable bacteria in Furong
 17 Lake. The culturable bacteria analyzed included R2A culturable bacteria (a-c), NA
 18 culturable bacteria (d-f), and coliforms (g-i). The data collected during the first seven
 19 days of the persistent precipitation were utilized for analysis, Daily rainfalls were
 20 represented by R1-7, whereas the concentrations of R2A culturable bacteria (A₁₋₈),
 21 NA culturable bacteria (B₁₋₉), and coliforms (C₁₋₈) were measured during the initial
 22 eight, nine, and eight sampling times, respectively. When the rainfall on the sampling
 23 day corresponded to the three microbial indicators, scatter plots were observed (a), (d),
 24 and (g). After performing lag analysis (b), (e), and (h), quantitative relationship fitting

25 charts were derived (c), (f), and (i), displaying the correlation between rainfall and
26 bacterial concentrations.



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28 **Fig. S3** The hourly variation of rainfall and temperature during the persistent
29 precipitation event.