The manuscript presents a valuable high-frequency field dataset documenting lacustrine groundwater discharge (LGD) and associated nitrogen and phosphorus fluxes in a closed oxbow lake. The dataset is potentially useful for advancing understanding of groundwater–lake interactions and nutrient transport in similar systems, and the manuscript is generally well written. However, substantial revisions are required before publication.

Major comments

1. Clarification of knowledge gap and novelty
The introduction would benefit from a clearer articulation of the specific knowledge gap addressed by this study. High-frequency observations appear to be the primary advance, yet prior observational frequencies and their limitations are not explicitly discussed. Clearly contrasting the temporal resolution of previous studies with the present work would help establish novelty.

2. Interpretation and mechanistic understanding
Many sections in the Results and Discussion read as descriptive summaries of observations rather than analyses of underlying mechanisms. Stronger interpretation is needed to explain why observed patterns occur, rather than simply documenting that they occur. This is particularly important for linking meteorological forcing, hydraulic gradients, LGD rates, and nutrient dynamics.

3. Generalization of findings
Several statements extend the conclusions to a global context of closed lakes. Given the strong dependence of LGD on local hydrogeology, climate, and landscape setting, the manuscript should more carefully justify the scope of generalization or clearly acknowledge its limitations.

4. Discussion of implications
The implications section should be strengthened by explicitly connecting the high-frequency observations to new conceptual or management insights. Emphasis should be placed on what is newly learned about closed-lake systems that could not be resolved with lower-frequency sampling.

Specific comments

• Line 17: Please clarify between which seasons the reported increase and subsequent decline in LGD were observed.

• Lines 22 and 40: The manuscript generalizes findings to a global perspective. Please clarify how such generalization is justified given variability in climate, hydrogeology, and lake morphology among closed lakes.

• Line 41: Since observational frequency is a key advance, please explicitly state the sampling frequencies used in prior studies and how they limit interpretation.

• Lines 48–55: The transition from water balance to nutrient transport would be improved by first emphasizing the importance of LGD as a nutrient pathway, then introducing prior nutrient-flux studies and their temporal limitations.

• Lines 58–61: The relevance of these statements is unclear. Please clarify how they motivate the present study.

• Line 63: The abbreviation “HWL” is not intuitive. Consider using “HW Lake” or spelling out the full name more frequently.

• Line 86: Please clarify the hydrological or geomorphological implication of a slope less than 0.0001.

• Line 91: Consider explicitly stating that the water-level fluctuation is large, with the 8 m variation provided as quantitative evidence.

• Line 95: If the 50–80 m aquifer thickness is not shown in Figure 1, please clarify this in the figure or its caption.

• Line 100: Since “Yangtze River (YR)” is used relatively infrequently, consider using the full name throughout for clarity.

• Figure 1: Figures should be self-contained. Please define HWL and LGD in the caption and clarify whether the lake is always connected to the river via groundwater or whether surface-water exchange occurs seasonally.

• Line 119: Please clarify whether “spring water” and “pore water” refer to the same samples. If so, use consistent terminology throughout.

• Table 1: Please clarify the meaning of “pore/spring water” in the caption. Additionally, indicate whether replicate samples were collected and discuss potential uncertainties if only single samples were obtained.

• Line 139: Consider reordering this section to first describe $^{222}$Rn measurements, followed by TN, TP, and chlorophyll-a, with other physicochemical parameters presented as supporting data.

• Line 148: Please consider adding a supplementary figure showing temporal changes in $^{222}$Rn and the fitting of Equation (1), along with an explanation of how uncertainty was quantified.

• Line 162: A simplified conceptual diagram illustrating water and isotope fluxes among the lake, groundwater, sediments, and atmosphere would greatly aid reader understanding.

• Line 168: Briefly summarize how $^{222}$Rn data were used to estimate Fg, Fd, and Fa in the main text before referring readers to the Supplement.

• Lines 181–230: Many results sections would benefit from beginning with a brief statement of the key observation or takeaway before presenting detailed data.

• Figure 2: Please clarify what the symbols, lines, and bars represent in panels (c) and (d), as these plots are difficult to interpret.

• Table 2: Consider presenting key results graphically (e.g., bar plots) in the main text or Supplement to improve readability.

• Lines 254 and 273: The quadratic fitting is based on only five data points and may be statistically fragile unless supported by a physical justification. Please clarify the rationale or temper the interpretation.

• Line 335: The contrasting behavior of TN and TP warrants mechanistic discussion (e.g., redox sensitivity, sorption, or biogeochemical controls), rather than only reporting observed differences.

• Line 363: Since the role of TN/TP ratios in controlling chlorophyll‑a is well established, please clarify whether this represents a new finding or how the present results extend prior knowledge.

• Line 378: Given that high‑frequency sampling is the main advance, the discussion should focus more on what new insights this temporal resolution provides relative to prior sparse observations in closed lakes.

• Line 399: The manuscript suggests TN/TP ratio is more influential than absolute concentrations. Please discuss the implications of this finding.

• Line 399 and elsewhere: Please use consistent terminology for “chlorophyll‑a” or “Chl a” throughout.

• Line 414: The conclusions should be revised to more clearly highlight new insights enabled by high‑frequency observations and their implications for understanding and managing closed‑lake systems.