1. The conventional practice of broad academic citation introduces a compounding ambiguity into scientific literature. To ensure transparency regarding the exact data or concepts being referenced, it would be significantly more precise if citations included the specific page or line numbers of the source manuscript. In the absence of such granular attribution, the current peer-review and citation framework risk perpetuating vague references—a systemic issue that has persisted for decades without adequate correction.

   While substantial research is dedicated to refining methodologies and analytical frameworks to advance the understanding of hydrological systems, minimal critical attention has been directed toward rectifying this unstandardized citation practice. For instance, in the current draft of the manuscript, the authors cite both **Leonard et al. (2014) and Zscheischler and Seneviratne (2017)** to substantiate the assertion made in lines 30–32. The necessity of a dual citation for this single statement remains unclear. It is impossible to discern whether the referenced concepts are split across the two papers, or if both independently corroborate the identical claim. If both sources refer to the exact same finding, the inclusion of multiple manuscripts raises significant questions regarding the purpose of the citation, suggesting a superfluous expansion of the references rather than purposeful academic attribution. A specific line-level attribution from the authors is necessary to resolve this ambiguity and ensure clarity.

   Ultimately, this lack of clarity makes it difficult to evaluate the precise foundation of the authors' argument. Resolving how these citations are handled is left to the discretion of the editor to determine the appropriate standard.

2. In Section 3.2, regarding the sampling of annual maxima at individual gauges, the authors adopt the methodology implemented by **Papalexiou and Koutsoyiannis (2013).** According to this methodology, two criteria are established to determine the Annual Maximum Flow (AMQ) (see Lines 138–145). The second criterion states that a AMQ is rejected if the fraction of missing values within that year is greater than or equal to 1/3.

   However, this data-filtering methodology can be fundamentally flawed when evaluating annual aggregates or statistical representatives, as a simple illustrative example demonstrates.

   Instead of a full 365-day year, let us consider a simplified case with a true dataset of six sequential values: **[100, 100, 100, 100, 10, 10]**. The true sum of this dataset is 420.

   Case 1 (Rejection of a highly representative year): Assume the last two entries are missing, leaving the observed data as **[100, 100, 100, 100, missing, missing]**. Because exactly 1/3 (=2/6) of the data is missing, the adopted rule rejects this entire year’s AMQ. Yet, the available data captures the vast majority of the true underlying signal (contributing 400 out of the true 420 total).

   Case 2 (Acceptance of an unrepresentative year): Assume instead that the second entry is missing, yielding **[100, missing, 100, 100, 10, 10]**. Because only 1/6 of the data is missing, it falls well below the 1/3 threshold, and the methodology

accepts this year. However, the observed sum drops significantly to 320 (farther from the true value of 420 than Case 1).

This demonstrates that a rigid fraction-of-missing-data rule fails to account for the magnitude and distribution of the missing values. A year with fewer missing values can yield a much less accurate statistical representation than a year rejected for exceeding the 1/3 threshold. Therefore, the adopted screening methodology is unreliable for this type of hydrological analysis.

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PROFESSIONAL SUMMARY

Computational Hydrologist, Systems Architect, and Environmental Modeler with a proven track record of engineering high-velocity software and mathematical solutions to complex catchment anomalies. Expert in continental-scale hydrological datasets, Physics-Informed Machine Learning, and high-resolution gridded watershed frameworks. Core contributions include solo-engineering the foundational spatial integration of the multi-million-element USGS NHDPlus dataset into the United States national grid using Soil and Water Assessment Tool (SWAT), and serving as the principal technical architect behind the 3D mathematical physics modeling for Singapore's sovereign urban stormwater initiatives.

CORE TECHNICAL COMPETENCIES

Hydroinformatics Frameworks: Expert in orchestrating multi-scale water frameworks and hydroinformatics pipelines using engines like SWAT.
Geospatial Engineering: Full-stack development across ESRI enterprise ecosystems and advanced open-source spatial stacks.
Intelligent Modeling: Design and deployment of Physics-Informed Machine Learning models.
Advanced Analytics: Production-grade integration of spatio-temporal statistical pipelines, custom APIs, and advanced clustering matrices.

CONCISE CAREER TRAJECTORY & IMPACT

- **One Tool Any Country (OTAC) Global Framework (Ongoing):** Conceptualized and independently developing a multi-year global Python framework fusing surface/groundwater, water quality, and climate science with GCMs, satellite imagery, and advanced ML pipelines.
- **Continental-Scale Big Data Integration:** Executed the integration of the multi-million-element **USGS NHDPlus** watershed dataset into the United States national grid using the **SWAT.**
- **Enterprise Software Engineering Support:** Engineered custom codebase workarounds for enterprise clients directly at **ESRI Headquarters (Redlands, CA).**
- **Sovereign Infrastructure Modeling:** Modeled 3D rain garden physics at the **National University of Singapore (NUS)**, directly defining Singapore's National Bioretention Guidelines.
- **Academic Instruction:** Delivered advanced undergraduate engineering curriculum covering core disciplines in hydrology, hydraulics, and fluid mechanics.

SCIENTIFIC SERVICE & GOVERNANCE

- **Interactive Scientific Peer Review:** Contribute analytical commentaries within the interactive open-access review platforms of **Hydrology and Earth System Sciences (HESS / European Geosciences Union)**, driving technical accountability in climate and hydrological literature (e.g., *hess-2023-275*).
- **Selected Peer-Reviewed Publication:** Mylevaganam, S., Srinivasan, R., & Singh, V. (2015). Ecohydrologically Driven Catchment Evaluation and Prioritization. *Open Journal of Applied Sciences*, 5, 325-334.

EDUCATION & CREDENTIALS

M.S. in Spatial Science (Hydrology) | Texas A&M University, USA

- MS GPA: 4.0/4.0 | Doctoral Coursework GPA: 3.78/4.0

M.Eng. in Water Engineering and Management | Asian Institute of Technology, Thailand

- Coursework GPA: 3.83/4.0 | Research GPA: 4.0/4.0

B.Sc. Eng. in Civil Engineering | University of Moratuwa, Sri Lanka
- GPA: 3.86/4.0 | First Class Honors