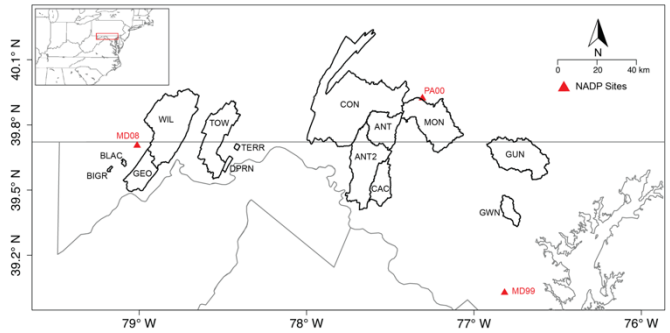
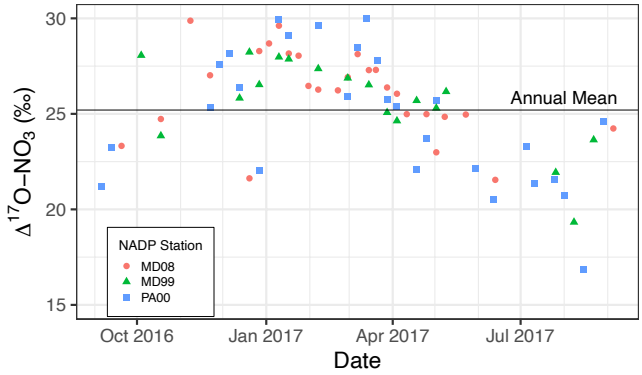
By estimating the concentration of stream nitrate (NO_3^-), isotopic compositions of NO_3^- ($\delta^{15}N$, $\delta^{18}O$, and $\Delta^{17}O$), and water flux during base flow and storm events, this manuscript investigated the exportation of $NO_3^-_{terr}$ and $NO_3^-_{atm}$ in two different watersheds, where two watersheds have different land-use. Compared to the mixed agricultural/forested watershed, the developed urban watershed exported more $NO_3^-_{atm}$ during storm events, which was explained by impervious surfaces that hydrologically connect runoff to channels to facilitate the export of $NO_3^-_{atm}$ during storm events. In addition, the disproportionality factor was proposed to quantify the disproportionate effect of $NO_3^-_{terr}$ and $NO_3^-_{atm}$ compared to the runoff during storm events.

While the paper is nicely written, I have one major concern about the $\Delta^{17}O$ of atmospheric NO_3^- in rainfall. In the author's past study, they reported the mean value of $\Delta^{17}O$ of atmospheric NO_3^- in three nearly stations was +25.1 ‰ (Bostic et al., 2021; figures of following), which the value was in accordance with other past studies (e.g., +26.3 ± 3 ‰; Tsunogai et al., 2016, +26.1 ± 3.5 ‰; Hale et al., 2014, and +20 ~ +30 ‰; Michalski et al., 2003) in the similar latitudes. On the other hand, the mean value of $\Delta^{17}O$ of atmospheric NO_3^- in this study was +20.2 ± 2.8‰ (Table S1), which the value was seems significantly smaller than the past studies. The concern should be resolved before publication.





Specific comments:

Line 140-147: The calculated $NO_3^-_{atm}$Deposition should compare with similar past studies to verify the accuracy of the data.

Line 240: Is DF=1 here?

L370-373: The interpretation of low $\delta^{15}N_{Terr}$ and $\delta^{18}O_{Terr}$ during storm events was reasonable; the same phenomenon has also been reported by a recent study (Ding et al., 2022). However, there is another possibility, the shorter residence time of stream NO_3^- during storm events could cause smaller biologically-mediated fractionation (having not enough time for bioreactions of fractionation) than normal time; thus, the exported NO_3^- showed low values of $\delta^{15}N_{Terr}$ and $\delta^{18}O_{Terr}$, rather than the addition of new NO_3^-. In addition, the reason why the $\delta^{15}N_{Terr}$ in GUN watershed didn't show low values (and the weaker significance of $\delta^{18}O_{Terr}$) also should be discussed in the manuscript. Because GUN watershed showed higher land-use of forest and agriculture (Table 1), the flushing effect should be stronger in GUN watershed.

Figure 4: While other figures had 8 points, there were only 7 points in Figure 4, Figure S4 also.

Figure 5: The calculation of the fraction of rainfall NO_3^- exported (y-axis) should be expressed in section 2 of the manuscript.
How about using the intensity of rainfall (unit: cm/h) as the x-axis?

Figure S2: It seems many stream water samples were sampled during baseflow and storm periods. Did the authors analyze the isotopic compositions ($\delta^{15}N$, $\delta^{18}O$, and $\Delta^{17}O$ of NO_3^-) of all these samples? If the authors did, they can list these data in supplementary and the number of analyzed in the manuscript, not only the mean value (Figure 3; Table S3).

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