We think the editor for their helpful comments on our revised manuscript. As recommended by the editor, we have included a statement about the lack of evidence for the importance of biomass burning NH_x contributions to our study site in Providence, RI, and expanded on our discussion of the EPA National Emission Inventory residential wood combustion emission estimates. We also supported that biomass burning was not a main source of NH_3/pNH_4^+ from correlation plots between the measured NH_3 and pNH_4^+ with potassium ion data from a nearby Chemical Speciation Network. This analysis indicated that K^+ was weakly correlated with NH_3 and pNH_4^+ and was included as an additional figure in the Supplement (Figure S3). Lastly, we mentioned that excluding biomass burning emissions as well as other miscellaneous sources of urban NH_x does not impact the goal of our mixing model results, which is to identify the temporal contributions of the main identified sources at our study site location.

These changes and additions were made on Pages 12-13; Lines 369-380 in the revised manuscript, "Biomass burning, while a significant global source of NH_3 (Behera et al., 2013), was not considered in the mixing model since there was insufficient evidence from the local wind direction and long-range transport analysis that it was a major contributing source to our study location. Further, the NEI-14 predicted residential wood combustion represented less than 5% of the annual emission of NH_3 in Providence County, with seasonal variation, including higher relative emissions during the colder months (Figure 4). Still, potassium (K^+), a common biomass burning tracer, from $PM_{2.5}$ samples collected from the nearby CSN site in East Providence, RI, was not significantly correlated with NH_3 ($r=0.019$; $p= 0.857$) and weakly correlated with pNH_4^+ ($r = 0.233$; $p = 0.022$) excluding an outlier on July 4th (Figure S3). We acknowledge that there are additional miscellaneous NH_3 sources in an urban environment, including pets, household products, and humans (Ampollini et al., 2019; Sutton et al., 2000; Li et al., 2020); however, we assumed that these sources were negligible compared to the main identified emission sources. Excluding biomass burning and other miscellaneous sources of NH_3 was not expected to impact the goal of the mixing model calculations, which was to estimate the relative amounts of the main identified NH_3 emission sources and their temporal variation at the Providence, RI study site."