

Second set of comments from Dr. Jerry Melillo, received May 11, 2009

General comment: Finally, I was a bit surprised that nothing was said about how climate change might affect Nr.

Comments on EPA doc. – specific suggestions

P13 – why not show delta of 5 Tg N/yr in veg., soil and groundwater, as well as denitrification estimate of 16 Tg N/yr in the figure to complete the mass balance?

P14, L10-11 – by adding “fiber and fuel crops” the “issue” expands to “national energy security and a sustainable supply of fiber

P15, L5 – hyphen needed, “service-based”
L22 – hyphen needed, “land-use”

P16, L16 – check punctuation sequence
L17 – hyphen needed, “risk-reduction”

P17, L31 – change “must” to “will likely” – generally be careful about using the word “must”

P23, L14 – change “between” to “among”
L24 – change “all” to “most”

P24, L1-2 – punctuation “...molecule can, in sequence, contribute....”
L27 – punctuation “...and water, as exhibited in the n cascade, underscore....”

P25, figure –make it larger
L4 – eliminate “popular”
L11 – eliminate “important”

P31, L32 – would it be possible to add a column to indicate primary sources of this information?

P42, L7-11 – at what spatial scale? Country or watershed suggested, but no actual area suggested, e.g., km²
L12 – make it clear that NFUE discussion starts a new section – add section label “2.2.3.2”

P47, L16 – a more complete discussion of the Crutzen et al. discussion would be useful here. Also, see the results from Scanlon et al. 2003, where diode laser and eddy flux were used

P51 – biofuels discussion should note that if biofuels feedstocks are going to be grown on marginal lands, additional N inputs and irrigation may be needed.

P64, L6 – why no finding for this topic? a big deal at the local level.

P83, L21-23 – awkwardly stated – revise to read “EPA should work with USDAS, DOE and universities to ensure that”

P87, L31-33 – recommendation is vague – make clearer

P94, L28 onward – section repeated

P97, table – a better table can be taken from the Millennium Ecosystem Assessment

P125, L13 – confusing sentence, clarify

P131, figure – not very informative, clarify

P154, L26 – sentence does not make sense, rewrite