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Comments

The GHG Emissions due to land use change are not additive to the existing emissions of current land use. For example - current sequestration in the area, GHG from any ag/grazing or etc.

The "Net increase in emissions" needs to include this consideration of current land use and the emissions from current land use projected forward. The emissions from sites would replace the current emissions and are not additive, suggest analyzing the No Action alternative and presenting "Net increase" as the difference between the NAA and the alternatives analysed.
Reccomend adding equation numbers and reference to make it easier on reader.

regarding second paragraph - identify what these potential mitigation options are. Are they discussed previously in the report? if so provide a reference to relevant sections. I think it is a stretch to say the GHG emissions is necessarily a conservative estimate given it is quite high level, and does not currently examine the current land use.

For example - If the current land use is a carbon sink (unlikely), than this document is actually a significant under estimate of GHG increase.

Related to language in last paragraph on 21A-12 regarding "...indicate a rapid surge of emissions immediately following flooding, after which emissions stabilize" is this surge accounted for in values presented for "Land converted to flooded lands" if not, this is not necessarily a conservative estimate.

Minor comment - Is it better to have the "Land Converted to Flooded Land" section so the analysis follows the timeline? I.e. land is first flooded - than flooded lands remaining flooded.

Is the current flow designed in order to separate presentation of CH4 and CO2 calculations?

For definition of variables suggest making order of definition follow order of appearance for ease of reference.

For example, definitions in following order:
F_{CH4tot}, F_{CH4res}, F_}ch4downstream}, \alpha, EF_{CH4...}, A_{tot}, R_d

Definition of \alpha mentions "in reservoir i" unsure what i is? Was this language copied from the EPA chapter? Is "i" in index for \alpha_i in that document? if so remove reference to index in this document.

Add explanation of how monthly maximum reservoir surface area was determined

As this assumes some rate of fill for the reservoir post construction may need to mention how this was determined.

Maybe this is just a reference to a section in the report where those are discussed.
Are the annual emissions after 20 years the important variable here, or the Net emissions for those 20 years from the inundation. the key metric for GHG impact of sites would be the cumulative impact I believe.

definition of variables doesn't match order of use in equation for EF_{CO2} (\phiappears second, defined 3rd)
Unclear what importance of the column "95% CL As a Percentage of the Mean" is this just saying the 95th percentile is the bottom 5%? is that necessary to say?

Standard error of 1.2 is 5% of mean (24), so lower and upper 95% column CL of mean is mean +- 10%. Unclear how the equation in the preceding paragraph fits in?

+- 1.96 standard error/mean*100 = +- 9.8 using 1.2 and 24 .

Potentially missing something on my end... would suggest clarifying, perhaps pulling out the in text calculation to a numbered equation.

order of variable definitions should match use in equations.

Reccomend adding NAA land use emissions as baseline. The net increase is in reference to existing and projected future emissions of current land use.

Reccomend calculating net emissions after 20/40 years as opposed to Annual emissions at 20 years and 40 years.

Reviewer

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