



RESPONSE TO PUBLIC COMMENTS

February 2019

A methodology for *Avoided Conversion of Grasslands and Shrublands to Cropland v 2.0* was developed by the American Carbon Registry (ACR), a nonprofit enterprise of Winrock International together with The Nature Conservancy and Ducks Unlimited.

All new methodologies and methodology modifications, whether developed internally or brought to ACR by external parties, undergo a process of public consultation and scientific peer review prior to approval.

The methodology was posted for public comment from October 14 – November 18, 2018. Responses to public comments were finalized by the authors in February 2019. All comments received, and responses are documented here. If applicable, additional public comments received after the formal close of the public comment period are also documented herein and were considered in the final version of the methodology.

This document is organized by sections of the methodology. Section numbers as referenced by the public in the following table refer to the document version as posted for public comment.

Section	Comment	Commenter	Response
General	<p>I enjoyed reading through the new version of the ACoG Methodology. NRCS really appreciates the clear recognition of the CIG funding in the acknowledgement section. Thanks for the great effort!</p> <p>My only other observation is that it sure would be helpful if you were able to develop a quick calculator for prospective project developers. I recognize that this would require some effort, but people seem to</p>	<p>Adam Chambers USDA - NRCS</p>	<p>ACR supports the convenience of tools to simplify project development and MRV. The update of this methodology was funded by a USDA CIG grant, of which tool development was not part of the awarded SOW. However, as part of this update, a rigorous analysis was conducted to develop a simplified lookup table for determining eligibility and additionality at the county level, thereby removing the need for an appraisal, and we feel capturing many more dimensions of the conversion decision other than just economic. GHG quantification can be performed using the DAYCENT model or empirical models or emission factors as available and approved. Further, under separate funding, ACR is creating a companion guidance/manual document and project planning tool for project developers. These will be available following peer review.</p>

	appreciate the other such tools that are available.		
2.3, 3.1	<p>We request that ACR reconsider the requirement to update the baseline crop management scenario every five years. Although we acknowledge the desire to keep quantification up-to-date with crop management, reassessing the baseline creates a substantial amount of uncertainty for the project developer. The added risk of a shifting baseline will reduce developer's willingness to make investments in projects that are otherwise expected to provide long-term returns for long-term conservation. Ideally, the baseline calculations should be applicable for the lifetime of the project. Otherwise we request the baseline calculations remain applicable for at least 10 years</p>	Edenfort (Shaira Esmail & Lauren Mechak)	ACR appreciates the uncertainty associated with baseline updates. To ensure that the credits are real i.e. they are the result of a true change in conditions, the representation of the baseline must accurately reflect current cropping conditions, as it is a hypothetical counterfactual and cannot be physically verified. Adoption rates for certain agricultural practices can be rapid so a 5-year update is warranted in our opinion. The majority of generated ERTs in the first 10 years will be due to the avoided soil carbon losses which are determined largely by the soil type present, land use history and climate conditions, while the rate of loss may be influenced by the assumed tillage practices, were they to change significantly at the 5-year update.
3.1.2	<p>On page 24 there is a minor typo (screen shot below). There are a few other minor formatting issues.</p> <p>The following baseline data should be defined:</p> <ul style="list-style-type: none"> <li>● Field preparation techniques</li> <li>● Tillage practices and intensity</li> </ul>	Adam Chambers USDA - NRCS	Revised
3.2.2	I especially like the Practice-Based Performance Standard using the risk of	Marissa Ahlering The Nature Conservancy	Noted. No response required.

	conversion criteria as a replacement for the appraisal		
5.0	We request that further guidance or minimum qualifications for the use of empirical models based on time series measurements and proxy sites be provided. The criteria provided for process-based biogeochemical models make it clear what would be accepted by the Registry, however, similar guidelines are not provided for the second approach.	Edenfort (Shaira Esmail & Lauren Mechak)	The general criteria for use of an empirical model are the same as those listed for biogeochemical models on page 30 (Chapter 5), with the added criteria that the experiments be a time series including cropped and uncropped sites. This has been made clear in the first section of Chapter 5 (p 29 and 30).
5.0	In the use of models' section, it says DAYCENT is approved but it states that other models have to use the validation bullet points below. Does this mean that DAYCENT does not need to be validated for the project's region? Seems like the validation criteria should apply to DAYCENT as well as any other model. (pg. 29)	Marissa Ahlering The Nature Conservancy	DAYCENT is approved for use with this methodology and has been extensively tested and shown to produce accurate results for these systems in the conterminous U.S. Harmann et al 2008 states, "The CENTURY and DAYCENT models have been thoroughly tested using data on observed plant production, soil organic matter, nutrient cycling, and trace gas (N <sub>2</sub> O and CH <sub>4</sub> ) fluxes from agricultural, grassland, and forest systems (Parton et al. 1993, 2005, Parton and Rasmussen 1994, Kelly et al. 1997, Del Grosso et al. 2008a). These tests indicate that CENTURY and DAYCENT can correctly simulate the impact of different cultivation practices, cropping systems, and organic and inorganic fertilizer use on observed changes in soil C and N levels, soil N-mineralization rates, trace gas fluxes, and crop yields." However, the model does need to be calibrated for yield which is done using USDA data at the county level. Yield outputs and DAYCENT input files describing the typical cropping practices and historical land use are reviewed for accuracy by a verifier.
6.1.4	An example of what you mean by indirect N <sub>2</sub> O emissions from nitrogen fertilizer applications would be useful as I am not sure what the difference is between	Marissa Ahlering The Nature Conservancy	Definition has been added in the definitions section.

	nitrogen fertilizer application and the indirect emissions. What are the indirect N <sub>2</sub> O emissions? (pg. 42)		
7.2	Monitoring: What is meant by general herd numbers and grazing practices? I realize there may be good reasons to keep this a little vague, but maybe the specifics here should be similar to the parameters around grazing that are specified near the beginning of the methodology (e.g., no overgrazing, etc.). General herd numbers mean nothing without area and dates. I would also argue that the grazing intensity more important than the grazing practices themselves. (pg. 64)”	Marissa Ahlering The Nature Conservancy	Text has been changed to the following, “Livestock presence, average annual AUMs of grazing and average annual forage availability in AUMs within the Project Area and the dates of grazing activity” and footnotes added to reference consistency with a Grazing Management Plan and the conservation values set forth in the easement. The former may be available, and the latter will ALWAYS be included in the conservation agreement. Section 1.2 contains eligibility criteria that preclude the overgrazing, overstocking or any activity leading to progressive loss of vegetative cover or preventing carbon pools from remaining at a steady state.