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## Soil Enrichment Version 2.0

Workgroup Meeting 2  
March 29, 2024

# Housekeeping

- Please keep yourselves muted unless / until you would like to speak
- Please use the raise your hand function when answering a question
- All other attendees/observers are in listen-only mode
- Observers are free to submit questions in the question box
  - **We've updated the settings to allow all attendees to see questions submitted to the Q&A section, as well as comment on questions / up-vote questions**
- **For workgroup members submitting comments and questions via chat: Please change your message settings to send comments to all attendees**
- The slides and a recording of the presentation will be posted online



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# AGENDA

- Survey results & discussion (30 mins)
- Item #1: Project definition (1 hr)
- Item #2: Quantification (Fossil Fuels & Grazing) (1 hr)
- Follow-up items (15 mins)
- Next steps/topics for discussion (15 mins)



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# SURVEY RESULTS

# Overall Survey Comments

- Thank you to all workgroup members for completing the survey
- Survey results suggested the SEP 2.0 Update is motivated by:
  - Lessons learned from project implementation
  - Need for improvement to quantification to both address potential gaps in the methodology as well as implementing emerging technologies
  - Addressing areas of the protocol that have been difficult to follow for verification purposes

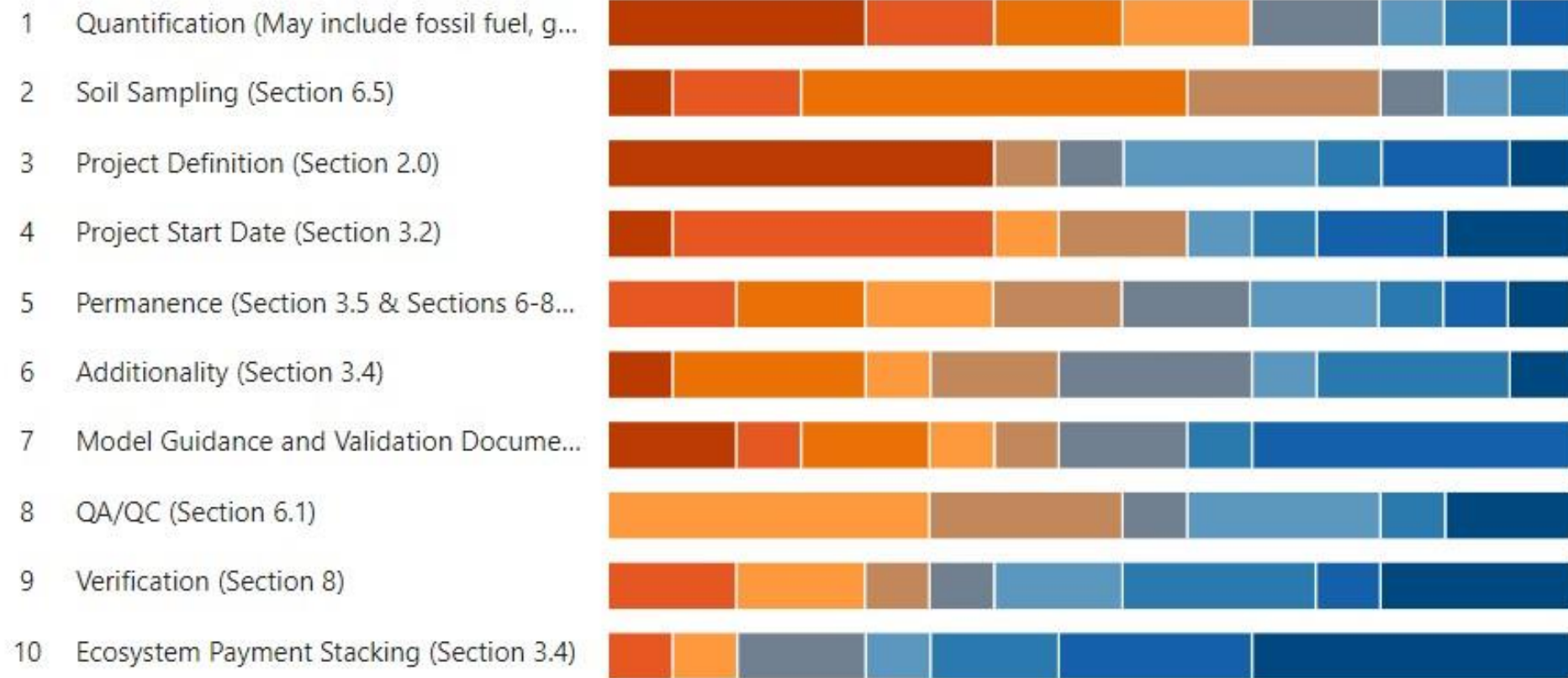
# Topic Importance

- **Top Topics as ranked by workgroup members:**
  - Soil Sampling
  - Model Guidance and Validation Documentation
  - Quantification – Defining baseline, removals & reductions, Methane & Nitrous oxide emissions, cumulative accounting, etc
  - QA/QC (Section 6.1)
  - Permanence (Section 3.5 & Sections 6-8 MRV)

# Order of Topics

## Rank Options

First choice ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ Last choice





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# PROJECT DEFINITION (SECTION 2.0)



# Survey Feedback – Project definition

- Workgroup members expressed desire to update language in project definition to more clearly define project parameters
- Inclusion of SOC on every field within a project vs. flexibility of project fields to not be required to measure SOC
- Need to discuss allowed project activities
- Clarity on how “native ecosystem” is defined
- Expand allowable tree canopy

# Project Definition – Section 2.0

- Definition: **and/or** Soil Organic Carbon
  - Defined as the adoption of agricultural management practices that are intended to increase soil organic carbon (SOC) storage **and/or** decrease net emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from agricultural operations
- Should it be **and** instead of **and/or**?
- If so, what % or number of fields need to have SOC for SEP?
- Timelines for SOC implementation?
- Other priorities? Nitrogen? Rice?
- Pros/Cons of fields in different projects by protocol type?

# Project Definition – Section 2.0

- 2.2.1 Defining Project Activities
  - Are there any new activities that should be considered?
- 2.2.2 Defining the Project Area
  - i.e. Update language differentiating project start date vs. field start date
  - Native ecosystem definition
  - Allowable tree canopy
- 2.2.3 Project Aggregation (field submittal requirements)
  - Change language around requirements of field enrollment form
- 2.2.3.2 Transferring Fields Between Projects
  - Ability to have individual fields ‘come and go’ from the project

# Project Start Date – Section 3.2

- Project Start Date vs. Field Start Date requirements
- Project Start Date is set by the first field in the project in the registry, and reporting periods and verification periods are set in alignment with this date and protocol requirements
- Fields can continuously be added to a project – currently uploading the field on a field list to the registry can timestamp the field start date
- Challenges with this approach - timing, administration and guidance
- **Can we use field contracts as the start date? Concerns? Confidence?**
- **Should 12-month field submittal deadlines be aligned with growing seasons rather than calendar? Could allow fields to be registered up until the harvest event of an initial cycle?**
- **Need an updated form for field list submittals and tracking by project**



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# QUANTIFICATION – SECTION 5.0

# Survey Feedback – Quantification

- Address uncertainty in greater detail (soil sampling and model discussion?)
- Cumulative accounting potential (next meeting?)
- Guidance on sub-field management & sampling (soil sampling discussion)
- **Flexibility in grazing quantification (discussion started today)**
- Improved methane & nitrous oxide accounting (project definition & model?)

# Quantification – Section 5

## Fossil Fuel Quantification – Equation 5.29

– By practice vs. consumption of fuel

**Equation 5.29b** Carbon Dioxide emissions from fossil fuels based on agronomic practice

$\overline{CO2\_NR}_{s,t} = \sum_e (\overline{FFC}_{e,s,t} \times EF_{CO_2})$		
Where,		
$\overline{CO2\_NR}_{s,t}$	= Average carbon dioxide emissions from diesel fuel use per unit area in stratum <i>s</i> in cultivation cycle <i>t</i>	Units tCO <sub>2e</sub> /acre
$\overline{FFC}_{e,s,t}$	= Average consumption of diesel fuel use per unit area stratum <i>s</i> in an agronomic practice <i>e</i> in cultivation cycle <i>t</i>	gal/acre
$EF_{CO_2}$	= Emission factor for diesel fuel	tCO <sub>2e</sub> /gal

– Deminimis – 5% compared to delta vs. baseline

$$\frac{|\text{emissions reductions of fossil fuels}|}{\text{total emissions reductions}} < 5\%$$

# Quantification – Section 5

## Grazing Quantification – Section 5

- Potential for limited use of conservative emission factors
- Applicability and limitations of empirical approaches (% , timelines, model)
- Allowing Animal Unit Equivalents (AUEs) and Animal Unit Months (AUMs) to serve an alternative metric of grazing activity to Animal Grazing Days (AGDs)





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# OPEN DISCUSSION – FEEDBACK AND SUGGESTIONS



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# NEXT STEPS

# Next Steps

- Email us with any feedback on topics discussed today
- Reach out any time to discuss protocol topics or process
- *Reserve Staff to identify priorities for discussion at next WG meeting*
- ***Next Workgroup Meeting TBD – April 2024 (Doodle Poll)***

# Key contacts

## Protocol development lead:

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**THANK YOU!**