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## **Nitrogen Management Project Protocol Summary of Changes from Version 1.0 to Version 2.0**

August 1<sup>st</sup>, 2018

The Nitrogen Management Project Protocol Version 2.0 incorporates the following significant changes from Version 1.0.

- Section 2.2 Project Definition
  - o Significant updates made to consolidate and simplify guidance
  - o Split into eligibility elements and expanded to include new crops, regions & practices
  - o Expanded to allow for in-project aggregation: multiple farmers/fields/regions in a single project
- Section 2.3 Defining the Cultivation Year
  - o Updated to streamline terminology with ARB Rice COP
- Section 2.4 Professional guidance on N reductions and best management practices
  - o Expanded guidance regarding complimentary practices – included guidance on where to seek professional advice
- Section 2.5 Project Ownership Structure and Terminology
  - o Significant updates made to accommodate new cooperative structure and potential for inclusion of multiple farmers/fields into single project
  - o Introduced safeguards to mitigate risks of entities not directly party to project having negative impact on project integrity
  - o Introduced methods to facilitate movement of fields in/out/between projects/cooperatives
- Section 3.2 Start Date
  - o Updated so that project must be submitted within 12 months of eligible activities being undertaken on an eligible field, and so that all other fields must be submitted within 24 months of the field start date
- Section 3.3 Reporting Period
  - o Significant updates made to treatment of ineligible cultivation and cultivation for which CRTs are not being sought.
  - o Activities that will not count as a reporting period include:
    - Fields that are left fallow;
    - Anytime an eligible crop is grown on a project field, but the field either does not meet project requirements (such as the performance standard, verification requirements, regulatory compliance requirements, etc.), or the field is voluntarily withdrawn for that cultivation year;
    - Anytime an ineligible crop are cultivated during a given season.
- Section 3.4 Crediting Period
  - o Minor updates made to better align with ARB Compliance Offset Protocol
  - o duration expanded to ten reporting periods

- clarified that each field may have a maximum of ten reporting periods, and each project also has a maximum of 10 reporting periods
- Section 3.5.1 Performance Standard Test
  - Significant updates made to provide common practice assessment of new crops, regions and practices
  - Section 3.5.1.1 – Updated NUE metric based on Partial Factor Productivity (PFP)
    - Created multi-year county- and crop-specific average N rates and PFP values
  - Section 3.5.1.1 - Included new guidance for cultivation of crops for which CRTs are not being sought
- Section 3.5.2 Legal Requirement Test
  - Following the updated performance standard analysis, the application of the LRT to Clean Water Act programs was made more flexible, such that only quantitative limits on N rate applications will make a project ineligible, except for reductions in excess of such requirements
- Table 4.1
  - SSR3 Updated to direct that CO<sub>2</sub> emissions from additional use of cultivation equipment will be excluded if no changes in number of fertilizer applications or introduction of new cover crop rotations, as likely to be insignificant change relative to baseline.
  - SSR 4 for irrigation added
- Section 5
  - Significant updates made to equations for calculation of primary emission reductions, including changes to leakage assessment, changes to organic N calculations, and rearrange remaining equations and updated guidance.
  - Section 5.3.1.1 Hierarchical Options for Determining Baseline N Rates – introduced new hierarchical flexible approaches to developing baselines, to allow for multiple scenarios and levels of data availability
  - Section 5.3.1.2 – introduced new flexible approach to determining baseline yield
  - Section 5.5.2 GHG Emissions from Shifting Crop Production Outside Project Boundaries (Leakage) – significant change made whereby now leakage is accounted for via a proportionate increase in the projects synthetic N rate, rather than a proportionate increase in overall N<sub>2</sub>O emissions (as the QM now calculates synthetic N rate emissions separately)
- Section 6 Project Monitoring
  - Significant updates made throughout Section 6 and subsections to streamline monitoring, introduce new cooperative monitoring requirements, remove CSNT requirements, and remove guidance for aggregate monitoring.
  - New Table 6.2 added to summarize requisite field management data and inputs into new NMQuanTool
- Section 6.1 Individual Project Monitoring Plan
  - Significant updates made to streamline monitoring and introduce new cooperative monitoring requirements.
  - Consolidated multiple sections from previous version into single abbreviated section.
- Section 6.2 Monitoring Project Cooperatives
  - Added new guidance for monitoring requirements for the new cooperative management structure.

- Section 6.3 Field & Project Data Monitoring Requirements
  - o Consolidated multiple sections into a single summary of monitoring requirements for all project fields/data – as requisite requirement for all cultivation years, regardless of whether CRTs are being sought (see Section 7.2 below, where also introduced flexibility re missing requisite reports).
  - o Created new Table 6.2 summarizing all monitoring requirements.
- Section 7.2.1 Project Monitoring Report
  - o Significant updates made to streamline guidance, introduce guidance for new cooperative structure, and remove guidance for aggregate reporting.
- Section 8 Verification Guidance
  - o Significant updates made throughout Section 8 and subsections to streamline verification guidance, introduce new cooperative verification requirements, and remove guidance for aggregate verifications.
  - o Minor updated made to streamline required professional agronomists on verification team, in line with Rice COP.
- Appendices:
  - o Significant updates throughout