



Delaware CO₂ Budget Trading Program

Offset Project Monitoring and Verification Report Instructions

U.S. Forest Projects – Improved Forest Management

March 2019



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 2 of 8**

1. Overview

To demonstrate the achievement of CO₂-equivalent sequestration from an improved forest management offset project that has received a consistency determination from the Delaware Department of Natural Resources and Environmental Control (Department), a Project Sponsor must submit to the Department in accordance with these instructions a fully completed *Offset Project Monitoring and Verification Report – U.S. Forest Projects – Improved Forest Management* (“*M&V Report*”), consisting of the coversheet and all forms and related attachments. Following these instructions will ensure that the *M&V Report* contains all necessary information and is submitted properly.

The Project Sponsor should review the CO₂ Budget Trading Program regulations at 7 DE Reg. 1147 addressing offset projects and the award of CO₂ allowances. All offset application materials and other documents are available at: <https://dnrec.alpha.delaware.gov/air/greenhouse-gas/offsets/>

2. Submission Instruction

Submit one (1) complete hardcopy original *Consistency Application* as well as an electronic copy in the form of a CD disk to the Department at the location specified below. Submit hardcopies of forms requiring signatures as originally-signed copies and scan such signed forms for electronic submission. Facsimiles of the *M&V Report* are not acceptable under any circumstances.

***CO₂ Budget Trading Program
DNREC Division of Air Quality
100 W. Water Street, Suite 6A
Dover, Delaware 19904***

The *M&V Report* has three parts, as described below. Each part comprises specified forms and required documentation. The *M&V Report* has been created as a Microsoft Word document with editable fields. Enter information directly into the fields provided or submit information or documentation as an attachment, as directed. Include headers on all attachments indicating the form to which each is attached, the offset project name, and offset project ID code.

The Project Sponsor should save an electronic copy for his or her file to serve as a reference for any necessary remediation.

3. M&V Report Forms

The *M&V Report* consists of nine (9) forms, including coversheet, divided into three parts, as follows:

Part 1. General Information Forms

- Coversheet
- Form 1.1 – General Information
- Form 1.2 – Project Sponsor Attestations
- Form 1.3 – Project Sponsor Statement
- Form 1.4 – Disclosure of Greenhouse Gas Emissions Data Reporting



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 3 of 8**

Part 2. Category-Specific Information and Documentation Forms

- Form 2.1 – Demonstration of Conformance with M&V Plan
- Form 2.2 – Determination of Reporting Period Sequestration

Part 3. Independent Verification Form

- Form 3.1 – General Information
- Form 3.2 – Independent Verifier Certification Statement and Report

The following instructions address each of the forms in numerical order. Note that the forms themselves include many embedded instructions.

Part 1. General Information Forms

The five (5) forms, including coversheet, in Part 1 of the *M&V Report* address general requirements applicable to U.S. Forest – Improved Forest Management offset projects. Instructions for the Part 1 forms are provided below.

Coversheet

Enter the offset project name and ID code in the editable text fields.

Check the boxes to indicate which forms are being submitted. For information about entering the Project Sponsor, offset project name and offset project ID code, and RGGI COATS account name and number, see instructions below for Form 1.1, General Information.

Submit all forms including the Coversheet. If a required form is not submitted, the *M&V Report* will not be considered complete for commencement of review by the Department.

Form 1.1. General Information

Enter the requested information in the editable text fields in the Form. If a text field is not applicable or is unanswerable, enter “NA.” Note the following:

Offset Project ID Code: Enter the offset project ID code. The offset project ID code is the alphanumeric code generated when the Project Sponsor creates a record of the offset project in the RGGI CO₂ Allowance Tracking System (RGGI COATS). See the RGGI COATS User’s Guide for more information about creating an offset project record in RGGI COATS, available at: <https://rggi-coats.org/eats/rggi/>

Project Information: Enter project information. The name of the offset project should be the same name entered by the Project Sponsor when creating a project record in RGGI COATS. The project location entered should be the primary location of the project if the project consists of actions at multiple locations. The summary narrative of the project should indicate all locations where project actions occur or will occur.



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 4 of 8**

Project Sponsor: Identify the Project Sponsor and provide his or her contact information. The Project Sponsor is the natural person who is the Authorized Account Representative for the RGGI COATS general account identified in the *Consistency Application*.

Project Sponsor Organization: Provide the full legal name of the organization the Project Sponsor represents, including any alternative names under which the organization also may be doing business (e.g., John Doe Enterprises, Inc., d/b/a JDE). If the Project Sponsor is representing himself or herself as an individual, enter “NA”.

RGGI COATS General Account Name and Number: Enter the RGGI COATS general account name and number. The RGGI COATS general account identified in the *Consistency Application* is the RGGI COATS account into which any awarded CO₂ offset allowances related to the offset project will be transferred.

Form 1.2 Project Sponsor Attestations

Sign and date the form. Submit the originally signed form as part of the paper hardcopy *M&V Report*. Scan the signed and dated form for submission as part of the electronic version of the *M&V Report*.

Form 1.3 Project Sponsor Agreement

Sign and date the form. Submit the originally signed form as part of the paper hardcopy *M&V Report*. Scan the signed and dated form for submission as part of the electronic version of the *M&V Report*.

Form 1.4 Disclosures of Greenhouse Gas Emissions Data Reporting

Check the appropriate box in the form to indicate whether greenhouse gas emissions data related to the offset project have been or will be reported to any voluntary or mandatory programs other than the CO₂ Budget Trading Program. For each program for which data have been or will be reported, provide the program name, the program type (voluntary or mandatory), program contact information (website or street address), the categories of data reported, the frequency of reporting, when the reporting began or will begin, and reporting status (prior, current, future). The Project Sponsor must disclose future reporting related to current commitments made to voluntary programs as well as future reporting mandated by current statutes, regulations, or judicial or administrative orders.

Part 2. Category-Specific Information and Documentation Forms

The two (2) forms in Part 2 of the *M&V Report* address category-specific requirements and documentation of conformance with the Monitoring and Verification Plan (M&V Plan) and determination of net carbon sequestered during the reporting period. Instructions for the Part 2 forms are provided below.

Form 2.1 Demonstration of Conformance with M&V Plan

Provide documentation that procedures and protocols specified in the M&V Plan were performed and records specified in the M&V Plan were generated and retained. Check the boxes where indicated in Form 2.1 to indicate that the referenced documentation is provided as an attachment to Form 2.1. Each attachment must include a header that indicates M&V Report Instructions: U.S. Forest Projects – Improved Forest Management, Version 3.0 – *March 14, 2019*



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 5 of 8**

it is an attachment to Form 2.1 and includes the offset project name and offset project ID code. Documentation must include the following:

1. Documentation of Inventory Methodology. Describe the inventory design, detailing the year of the inventory and how the sampling plots were selected. If the project is stratified, include the stratification rules, attach a map of vegetation strata, and describe the results of stratification (area by strata) and the tools for application (GIS, aerial photos, etc.). The inventory methodology must be cross referenced with the information provided in the M&V Plan.
2. Identification of Sampling Plots. Attach a map depicting the project boundary and the locations of the sampling plots as well as a list of the number, sizes, and coordinates of the plots. The attachment must include recent photos of the plots and distinct plot identifiers to provide for verification of reported sequestered carbon by an independent verifier or the Department.
3. Documentation of Field Measurements. Attach a list that documents all field procedures that were used to take measurements and monument the sampling plots. All procedures must be cross referenced with the M&V Plan.
4. Documentation of the Modeling Plan. Attach the project modeling plan that was used to update the inventory and describe the approved model, cross referencing all procedures with those specified in the M&V Plan. The modeling plan must contain all of the elements specified in Appendix B.3.
5. Assessment of Forest Management Practices if Commercial Timber Harvest Activities Have Occurred. If commercial timber harvest activities occurred during the reporting period, attach the assessment or certification issued by the American Tree Farm System (ATFS), Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), or other similar organizations as approved by the Department ensuring that the land within the offset project boundary is being managed in accordance with environmentally sustainable forestry practices. If no commercial timber harvesting occurred, do not check box number 4 in Form 2.1.
6. Documentation of Quality Assurance Procedures Conducted. Document the quality assurance procedures that were conducted during the reporting period to ensure accuracy in data collection, data analysis, and data storage, and cross reference all procedures with those specified in the M&V Plan.

Form 2.2 Determination of Reporting Period Sequestration

Provide documentation of the carbon sequestered during the reporting period where indicated in Form 2.2 or as an attachment to Form 2.2, as directed below. Each attachment must include a header that indicates it is an attachment to Form 2.2 and includes the offset project name and offset project ID code. Multiple attachments may be integrated into a single document, as appropriate, as long as each element is clearly identified, as specified below. For submission of the electronic version of the M&V Report, spreadsheets must be provided as a distinct electronic file or files (distinct spreadsheets may be incorporated into a single spreadsheet file, as appropriate, as long as each element is clearly identified, as specified below). Check the boxes in Form 2.2 to indicate that required documentation is attached and includes the required components.

The following documentation must be provided:



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 6 of 8**

1. Identify Reporting Period. Enter the dates of the reporting period (start and end dates) and the dates when the field measurements were made (may include a range), where requested in Form 2.2.
2. Net Carbon Sequestered. Enter the values (in metric tons of CO₂-equivalent) for the following, where requested in Form 2.2: reporting period actual carbon stocks; baseline carbon stocks or actual carbon stocks as of previous reporting period; net carbon sequestered in reporting period. Enter the confidence deduction and the Reversal Risk Rating where requested in Form 2.2.
3. Reporting Period Carbon Pools. Enter calculated carbon content in metric tons of CO₂-equivalent for the carbon pools included in the reporting period, where requested in Form 2.2:
 - IFM-1: Standing live carbon
 - IFM-3: Standing dead carbon
 - IFM-6: Soil carbon (included if significant soil disturbance during site preparation)
 - IFM-7: Carbon in in-use forest products
 - IFM-8: Forest product carbon in landfills (included if project harvest is below baseline)
 - IFM-14: Biological emissions/removals from changes in harvesting on forestland outside the Project Area
 - IFM-17: Biological emissions from decomposition of forest products

Values for all required carbon pools must be entered. Note that some carbon pools are calculated as a component of other pools. In those cases, enter “included” in Form 2.2.

4. Field Measurement Data. Attach a spreadsheet that contains the field measurement data collected from each project inventory sampling plot that was randomly selected for the site visit verification. Data that must be entered in the spreadsheet include:
 - Sampling plot IDs, dimensions, and slopes
 - Standing live tree species, diameters (DBH), and heights
 - Standing dead tree species, diameters, heights, and decomposition classes
 - File names for plot photographs
5. Documentation of Carbon Stocks. Attach a spreadsheet that documents all carbon stock calculations for each pool. The spreadsheet must include the following:
 - a. Document use of the inventory data and modeling outputs to estimate actual onsite carbon stocks for the current reporting period. Modeling outputs must include project harvest, inventory, and growth estimates presented in total and per acre as well as harvest yield streams on modeled stands. Document that approved volume equations, biomass equations, and growth models were used per Appendices A and B of the protocol. Document the calculation of the confidence deduction applied to actual onsite carbon stocks per Appendix A.4.
 - b. If the fair market value of the anticipated alternative land use for the project area is not more than 80% greater than the value of the current forested land use, document the application of the avoided conversion discount factor.
 - c. Document that the actual carbon in harvested wood products was calculated based on harvest volumes during the current reporting period and the guidance in Appendix C.
 - d. Document that the project’s secondary effects were calculated per Equation 6.12.
6. Documentation of Reversal Risk Rating. Attach a spreadsheet that documents the determination of the project’s reversal risk rating. The spreadsheet must document that the reversal risk rating was calculated per the guidance in Appendix D.



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 7 of 8**

Part 3. Independent Verification Form

The two (2) forms in Part 3 of the *M&V Report* addresses requirements and documentation related to the independent verifier general information and certification statement and report. Instructions for the forms in Part 3 are provided below.

Form 3.1 General Information

Enter the requested information in the editable text fields in the form. If a text field is not applicable or is unanswerable, enter “NA.”

Form 3.2 Independent Verifier Certification Statement and Report

An accredited verifier must sign and date the form. Submit the originally signed form as part of the paper hardcopy of the *M&V Report*. Scan the signed and dated form for submission as part of the electronic version of the *M&V Report*.

Provide the independent verifier report as an attachment to Form 3.2. The verifier report must include a header that indicates it is an attachment to Form 3.2 and includes the offset project name and offset project ID code.

The verifier report must document the following:

1. The verifier has reviewed the entire *M&V Report* and evaluated the contents of the report in relation to the applicable requirements of 7 DE Reg. 1147-10.
2. The verifier has evaluated the adequacy and validity of information supplied by the Project Sponsor to determine CO₂-equivalent sequestration in accordance with 7 DE Reg. 1147-10.5, and the documentation required in the *M&V Report*.
3. The verifier has evaluated the adequacy and consistency of methods used by the Project Sponsor to quantify, monitor, and verify CO₂-equivalent sequestration in accordance with 7 DE Reg. 1147-10.5 and the Monitoring and Verification Plan submitted as part of the *Consistency Application*.

The verifier report must include the following contents, in the order listed below:

- Cover page with report title and date
- Table of contents
- List of acronyms and abbreviations
- Executive summary
- Description of objective of report
- Identification of the client, including name, address, and other contact information
- Identification of the offset project
- Description of evaluation criteria (applicable regulatory provisions and documentation required in the *Consistency Application*)
- Description of the review and evaluation process, including any site visits and interviews
- Identification of individuals performing the verification work, including the verification team leader and key personnel, and contact information for the team leader
- Description of the materials provided to the verifier by the Project Sponsor



**DNREC – Division of Air Quality Form
CO₂ Budget Trading Program
M&V Report Instructions –
U.S. Forest Projects – Improved Forest Management
Page 8 of 8**

- Evaluation conclusions and findings, including level of assurance provided