

**Forest Project Protocol**

**Project Design Document**

The Project Design Document (PDD) Template must be completed for the project’s initial reporting period. This template is only intended as guide and provides the minimum required information to be reported. This template is designed for use with the Forest Project Protocol Version 5.0 (FPP). The Forest Owner has the option to include additional information at their discretion.

|  |  |
| --- | --- |
| **Project Operator**  |  |
| **Project ID** |  |
| **Project Name** |  |
| **Initial Reporting Period Dates** |  |

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# Introduction

**REQUIRED:** Provide a general description of the project.

# Project Definition

## Project Definition

**REQUIRED:** Identify the type of project and describe how the project meets the definition. See Section 2.1 of the Protocol.

##  Forest Owners and Project Operators

**REQUIRED:** List the entities which have any amount of legal control over the forest carbon within the project area and identify the mechanism through which the Forest Owner has the legal authority to effect changes to forest carbon (e.g. fee ownership, deeded encumbrances, etc.). In addition, please state which entity will be designated as the Project Operator and will sign the Project Implementation Agreement (PIA). See Sections 2.2, 2.3, and 2.4 of the Protocol. Identify the Project Operator. If the Project Operator is not a Forest Owner (or is not the sole Forest Owner), explain how they have obtained the right to operate the project on behalf of the Forest Owner(s).

## Aggregation

**OPTIONAL:** If the project is participating in an aggregate, identify the Aggregator, and other projects in the aggregate.

# Project Eligibility

## Project Location

**REQUIRED:** The Project Location must satisfy the requirements of Section 3.1. If an IFM taking place on public lands, describe the public vetting and government agency approval process. Identify the project’s Supersection(s) and Assessment Area(s).

## Project Start Date

**REQUIRED:** Describe the activities initiated that will lead to increased GHG reductions or removals with long-term security relative to the project’s baseline. If applicable, please provide supporting documentation and evidence supporting the action designating the date as the project’s commencement. Where project submittal is used as the start date, no further information is required beyond identifying the date. See Section 3.2 of the Protocol.

## Additionality

### Legal Requirement Test

**REQUIRED:** Attest that the project activities are not legally required. Identify any federal, state or local laws, statues, rules, regulations, or ordinances, including court orders or other legally binding mandates, which are relevant to the project area and may impact forest management. Avoided conversion projects must demonstrate that the anticipated land conversion (baseline scenario) is legally permissible. Please refer to section 3.3.1 of the FPP for further information.

### Performance Test

**REQUIRED:** IFM project automatically meet the Performance Test. Avoided Conversion projects must provide appraisal(s) and describe the appraisal process, and that it is in conformance with Section 3.3.2.2 of the Protocol. Identify the market value of the alternative land use, and that it is at least 40% greater than the value of the current forested land use.

### Enhancement Payments

**REQUIRED:** Disclose the types of financial assistance (if any – for instance, grants or California Climate Investments) received by the project. See Section 3.3.3 of the Protocol.

## Project Crediting Period

**REQUIRED:** State the crediting period for the project. See Section 3.4 of the Protocol.

## Qualified Conservation Easements or Qualified Deed Restrictions

**OPTIONAL:** State whether the project is employing a Qualified Conservation Easement or Qualified Deed Restriction. See Section 3.7 of the Protocol.

## Regulatory Compliance

**REQUIRED:** Disclose any instances of non-compliance during the initial reporting period. Describe how the project intends to monitor for compliance during future reporting periods. See Section 3.8 of the Protocol.

## Sustainable Harvesting

**REQUIRED:** Identify whether Commercial Rotational Harvesting has been initiated on any of the Project Operator (and its Affiliate(s)) landholdings within the project’s Assessment Area(s). If so, identify the sustainable long-term harvesting option to be used. See Section 3.9.1 of the Protocol.

## Natural Forest Management – Native Species

**REQUIRED:** Identify the composition of native species, and whether the project consists of 95% native species by basal area/acre. Specify whether the project Assessment Areas consist of a diversity of species, wherein no single species’ prevalence exceeds the percentage value listed in the Assessment Area Data File. See Section 3.9.2 and Table 3.3 of the Protocol.

## Natural Forest Management – Distribution of Age Classes

**REQUIRED (at first Commercial Rotational Harvest):** On a watershed scale up to 10,000 acres, or the Project Area, whichever is smaller – identify whether less than 40% of the forested acres are in ages less than 20 years. Identify whether any areas impacted by Significant Disturbance have been excluded from the analysis. If not being met currently, identify how the project will make progress toward this requirement. See Section 3.9.2 and Table 3.3 of the Protocol.

## Natural Forest Management – Structural Elements

**REQUIRED:** Identify the relevant test for structural elements (Option I, II, or III) and describe how the project has met the relevant requirements. If not meeting the requirement, describe how the project will make progress. See Section 3.9.2 and Table 3.3 of the Protocol.

## Natural Forest Management – Even-Aged Management

**REQUIRED:** Identify whether the project employs even-aged rotations. If so, confirm the retention guidelines are met (and how they will be monitored during future harvests). See Table 3.2 of the Protocol.

## Promotion of the Onsite Standing Live Carbon Stocks

**REQUIRED:** Describe the ongoing management activities on the Project Area that will lead to increased carbon stocks in the Project Area compared to the baseline.

# Project Area

## Project Area and Configuration

**REQUIRED:** Identify the project area, including a map or maps that display public and major private roads, major watercourses (fourth order or greater), topography, towns, and Public Land Survey Townships, Ranges, and Sections or latitude and longitude. The maps must be of adequate resolution to clearly identify the required features. A KML file must be submitted with the PDD, as well as a list of the current assessor’s parcel identification numbers included in the project area. See Section 4 of the Protocol for more information. Confirm that the requirements in Section 4.1 of the Protocol have been met. Include the total project acres, and the comparison of AP and GIS acres required by Section 4.2, and whether any acreage disputes were resolved with the county assessor(s).

## Assessment Area Identification

**REQUIRED:** Describe the process for identifying the Assessment Area(s). See Section 4 of the Protocol.

# GHG Assessment Boundary

## GHG Assessment Boundary

**REQUIRED:** List the sources, sinks, and reservoirs (SSRs) that are included in the Project, according to the requirements listed in Table 5.1 or 5.2.

# Inventory Methodology

## Inventory Design and Sampling Process

**REQUIRED:** Describe the inventory design, detailing the year of the inventory, the number of sample plots, dimensions and distribution of the plots, the sampling process, and any stratification process (either pre or post data collection). If the project will be using the Standardized Inventory Methodology, mention this here.

## Field Measurement and Plot Monumenting

**REQUIRED:** Describe the selection process for inventory point locations and the tools used to monument plots. Include descriptions of the field procedure including locating plot center, plot layout, sampling method, sampling intensity, and measurement methodologies. Describe how special plot conditions are treated (hazardous plots, roads/landings, watercourses, and edge plots) in the field. Include a list of the plots as an appendix to the PDD.

## Data Collection and Management System

**REQUIRED:** Describe the organization of data for the project, including the software and tools used to manage and store data, as well as any QA/QC measures in place. If the project will be using the Climate Action Reserve Inventory Tool (CARIT), mention this here.

## Quantification Methodology

**REQUIRED:** Describe the methodology for translating the sampling and inventory process into a figure for metric tons CO2e per acre, including conversion factors and units. All methods must meet the requirements in the Quantification Guidance document.

## Inventory Update Process

**REQUIRED:** Describe the process for which the Project will update its carbon stocks from year to year. Also specify the schedule for conducting new inventories, how any new inventory plots will be incorporated into the inventory estimate, how strata will be updated (if applicable), and how any harvests or disturbances will be addressed. Specify the model used as well as explicitly state that the project will comply with the requirement that any field inventory data used cannot be more than 12 years old.

# Baseline Carbon Stocks

## Improved Forest Management Projects *(select the applicable baseline approach)*

### Default Baseline Approach

**REQUIRED:** Discuss the project’s inputs into the Baseline Screening Tool to confirm that it is eligible to use the default approach, and confirm that no deeded encumbrances exist limiting forest management. Include the calculation of Common Practice for the project’s Assessment Area(s), and compare to the project’s initial stocks. Calculate High Stocking Reference (if applicable), and determine the project’s initial baseline. Calculate the adjusted initial baseline, and baseline harvest volume using the protocol equations. Provide the results of the Harvested Wood Products Calculation Tool, and calculate the final baseline.

### Modeling Approach

**REQUIRED:** Describe the processes and results from following the steps and requirements as described in Section 6.1.2 of the Forest Project Protocol. Identify intial carbon stocks for the relevant pools, and describe the process and the result of the analysis for determining the baseline carbon stocks over 100 years. Describe considerations for legal constraints and financial constraints. Explain whether legal constraints result in an increasing trend of aboveground standing carbon stocks, and calculate the preliminary unadjusted baseline carbon stocks. Evaluate the performance standard criteria by comparing initial carbon stocks to Common Practice, and calculating High Stocking Reference (if applicable). Calculate the adjusted averaged baseline. Provide a calculation of each proportionally adjusted carbon stock, and the final combined adjusted average baseline for all required SSRs. Include diagram(s) of the baseline components.

### Estimate Baseline Onsite Carbon Stocks (Public Lands)

**REQUIRED:** Describe the process for generating the COLE 1605(b) report, and include the results. Identify the project’s rotation lengths (based on the Assessment Area(s)) and calculate the live and dead tree values, converting to metric tonnes per acre. Identify and describe any legal constraints, and include maps of the affected areas with calculated acres. Determine the forest structure needed to comply with each constraint, and adjust accordingly to the appropriate age class needed to meet the constraint. Estimate baseline harvest volume and calculate harvested wood products using the Harvested Wood Product Calculation Tool. Calculate the final baseline.

## Avoided Conversion

### Baseline Characterization and Projection

**REQUIRED:** In this section, provide details on what the expected alternative highest-value land use for the project area would be, with supporting information from an appraisal. Provide evidence that the conversion would be legally permissible. Further, describe the process and the results for estimating the rate of conversion/removal of onsite carbon stocks. Onsite carbon stocks must be modeled over 100 years based on this estimated rate of conversion/removal, including changes in carbon stocks for all required and selected optional pools. If the protocol provides standardized values for baseline carbon emissions of specific carbon pools, the project must use those values. Calculate the Conversion Risk Adjustment factor, and adjust the baseline accordingly.

### Estimating Baseline Carbon in Harvested Wood Products

**REQUIRED:** Describe the process, as well as the result, used to estimate baseline carbon in harvested wood products according to the guidance from Section 6.2.2. Specifically, determine the carbon equivalent of biomass that would have been harvested in each year, and the amount of harvested carbon that would have remained stored in wood products averaged over 100 years. These estimations should use the Harvested Wood Products Calculation Tool.

# Project Carbon Stocks

## Improved Forest Management

### Actual Onsite Carbon Stocks

**REQUIRED:** Describe the results of the project inventory. Specifically, please describe the approved model being used to project prior-year data, ensuring that any sampling done in the previous year is incorporated in the modeling. Describe how the forest inventory estimate has accounted for any harvests and/or disturbances that occurred in the previous year. Also include a section describing how the confidence deduction for statistical uncertainty was derived, and show that it was applied appropriately to the forest inventory.

###  Actual Carbon in Harvested Wood Products

**REQUIRED:** In this section, describe the process (and the result) used to determine the actual amount of carbon in standing live carbon stocks harvested in the current year. Further, determine the amount of harvested carbon that will remain in wood products averaged over 100 years, in accordance with the Quantification Guidance.

### Quantifying Secondary Effects

**REQUIRED:** In Improved Forest Management projects, emission from Secondary Effects can occur when a project reduces harvesting in the Project Area, resulting in an increase in harvesting on other properties controlled by the Forest Owner. In this section, describe the calculation of Equation 6.10, which quantifies the impact of this activity shifting.

## Avoided Conversion

### Actual Onsite Carbon Stocks

**REQUIRED:** Describe the results of the project inventory. Specifically, please describe the approved model being used to project prior-year data, ensuring that any sampling done in the previous year is incorporated in the modeling. Describe how the forest inventory estimate has accounted for any harvests and/or disturbances that occurred in the previous year. Also include a section describing how the confidence deduction for statistical uncertainty was derived, and show that it was applied appropriately to the forest inventory.

### Actual Carbon in Harvested Wood Products

**REQUIRED:** In this section, describe the process (and the result) used to determine the actual amount of carbon in standing live carbon stocks harvested in the current year. Further, determine the amount of harvested carbon that will remain in wood products averaged over 100 years, in accordance with the Quantification Guidance.

### Quantifying Secondary Effects

**REQUIRED:** Describe the inputs and the result from calculating Equation 6.13 of the Forest Project Protocol Equation 6.13 quantifies Secondary Effect emissions resulting from shifting the anticipated land use conversion on the Project Area to other forest land.

# Calculation of GHG Reductions and Removals

## All Project Types

**REQUIRED:** According to Equation 6.1, and based on the information provided above in the Project Design Document, describe the methodology as well as the final result for determining the GHG Reductions and Removals. Provide the Forest Project Calculation Worksheet with all project data input.

# Reversal Risk Rating

## Reversal Risk Rating by Category

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk Category** | **Source** | **PIA Only** | **PIA and Qualified Conservation Easement and/or Qualified Deed Restriction and/or Public Ownership and/or Tribal Land** |
| Financial Failure | Default Risk – Remedies for reversals addressed in PIA | 5% (Default Value) | 1% (Default Value) |
| Illegal Forest Biomass Removal | Default Risk | 0% (Default Value) | 0% (Default Value) |
| Conversion | Default Risk – Remedies for reversals addressed in PIA | 2% (Default Value) | 0% (Default Value) |
| Over-harvesting | Default Risk – Remedies for reversals addressed in PIA | 2% (Default Value) | 0% (Default Value) |
| Social | Default Risk | 2% (Default Value) | 2% (Default Value) |
| Wildfire, Disease, or Insect Outbreak  | Calculated Risk from worksheet | Click here to enter text.% (Must be supported per Appendix A Table A.8 and Table A.9) or default value from the Assessment Area Data File | Click here to enter text.% (Must be supported per Appendix A Table A.8 and Table A.9) or default value from the Assessment Area Data File |
| Other Catastrophic Events | Calculated Risk from worksheet  | 3% (Default Value) | 3% (Default Value) |

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| --- | --- | --- |
|  | **Subordination Clause Type 2** | **Subordination Clause Type 1** |
| PIA Subordination Type | 10% | 2% |

## Project Reversal Risk Rating

**REQUIRED:** Show the calculation of the project’s reversal risk rating and contribution to the Buffer Pool per Appendix A of the Protocol. This should be calculated according to the following equation: 100% - (1-*Financial Failure%*) x (1-*IllegalForestBiomassRemoval%*) x (1-*Conversion%*) x (1-*OverHarvesting%*) x (1-*SocialRisk%*) x (1-*Wildfire%*) x (1-*Disease/InsectOutbreak%*) x (1-*OtherCatastrophicEvents%*) x (1-*PIASubordination%*)

## Permanence

**REQUIRED:** Discuss how the project will monitor for reversals.

#  Calculating Total GHG Reductions and Removals

## Total GHG Reductions

**REQUIRED:** According to Equation 6.1, and based on the information provided above in the Project Design Document, describe the methodology as well as the final result for determining the GHG Reductions and Removals. Provide the Forest Project Calculation Worksheet with all project data input.

## Contributions to the Buffer Pool

**REQUIRED:** State the number of credits generated by the project which will be allocated to the Reserve’s Buffer Pool upon project registration.

## Final CRT Summary

**REQUIRED:** Summarize the final result for determining the net GHG Reductions and Removals.