

**Appendix C.1: Instructions for Project-level NEPA Template**  
USDA Forest Service, Office of Sustainability and Climate

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## Project-Level NEPA Template Overview

The project-level National Environmental Protection Act (NEPA) template is an **optional** tool to facilitate creation of a carbon specialist report for projects primarily affecting biogenic carbon. Biogenic carbon refers to carbon in organic materials and biomass. Examples of biogenic projects include timber harvesting projects, fuels reductions treatments, range permitting, forest restoration, or reforestation. This template is not intended for projects primarily affecting fossil fuel emissions.

The information in this report can help inform the carbon section of an environmental assessment (EA) or environmental impact statement (EIS), and the entire carbon specialist report can be incorporated by reference. The document provides rationale to disclose a project's potential environmental consequences on greenhouse gas emissions, carbon sequestration (uptake and storage), and climate change.

The Council on Environmental Quality Guidance (CEQ) advises agencies **not to compare project effects to global climate change impacts**, as any action could be considered insignificant at that scale. Providing [context](#) in terms of climate action goals can help to determine whether carbon effects may be [significant](#).

The Responsible Official may determine how to apply guidance and the type and level of analysis appropriate to a project. The contents of this document should be tailored to reflect the specific conditions and needs of the forest or grassland in which the project is being implemented; **this template is not intended to be copied verbatim** without field-based knowledge and customization.

This template uses and references information in the Carbon White Paper. **Therefore, any forest using this project-level template for an effects analysis must first complete a Carbon White Paper, which should be included in the project record.** Similar to the Carbon White Paper, throughout the template are instructions that will prompt you to make changes that reflect conditions for your project.

Lastly, this template should be used alongside the January 2023 [CEQ Interim Guidance](#) as well as the December 2023 [USDA FS Step-down Guidance](#). The USDA FS Step-down Guidance in particular offers clear guidance on NEPA requirements for taking a hard look at carbon and will ensure that NEPA requirements are fulfilled for any related EA and EIS analyses.

## General Instructions/checklist

- 1) Click the **[project name]** box in the first line and type the project name. Click the **[National Forest name]** box in the second line and type your forest name. Click the **[Region name]** box in the second line and type your region name. This will auto-populate all instances of your project, forest, and region name throughout the entire document.
- 2) If you are working in a National Grassland, word search “NF” and “National Forest” in the document and replace with NG or National Grassland.
- 3) Determine the scope of your project activities. Delete any sub-sections in section 2 and 7 that describe activities outside the scope of your project.
- 4) Have your Unit’s Carbon White Paper, Land and Resource Management Plan, CEQ Guidance, and FS Step-down Guidance readily accessible as you complete the carbon template.
- 5) Carefully read through the document. There are paragraphs throughout that are noted as optional which can be deleted depending on your project (for example, if your project area does not contain non-forested areas, you can delete the paragraphs on grasslands).
- 6) Special formatting instructions:
  - 1) **[guidance text]** Square brackets (and yellow highlight) denote all text requiring an insertion or replacement. Search (Home > Editing > Find OR Ctrl + F) “[“ to confirm that you have located and replaced all text when you complete your document.
  - 2) **{Instructional text}** Curly brackets (and green highlight) denote instructions. These should be deleted once you have implemented the instructions and they are no longer needed. They are typically used at the beginning of a section or paragraph. Search (Home > Editing > Find OR Ctrl + F) “{“ to confirm that you have removed all instructions after completing your document.
- 7) Verify all information is relevant and accurate according to your specific project and local knowledge.
- 8) Delete or replace references in the text and **reference section** that do not correspond to your region or to forest types within your region. The references section has citations for all papers in the full template; therefore, deleting sections not pertinent to your project will require deleting associated references, unless they were cited elsewhere in the text.
- 9) Update table or figure numbers to ensure they are sequential (deleting optional tables and figures can change their numbering). Be sure to update in-text references to tables and figures as well.

## Section-specific instructions

### 1.5 Issues addressed

Is your resource related to an issue identified and approved by the responsible official for analysis? Is there potential for a substantial effect to your resource from the proposed activities? The following should be considered in evaluating intensity (as applicable to your resource):

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial

(2) The degree to which the effects on the quality of the human environment are likely to be highly controversial

(3) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks

(4) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts... ([40 CFR 1508.27](#))

### 2.0 Methodology

The Responsible Official may opt to report emissions for projects that include relatively large acreage of prescribed fire or that receive public comments requesting greenhouse gas emissions data. However, for most projects, the information contained in the Carbon White Paper is suitable for analysis. For timber harvests, Option A pertains to the Carbon White Paper. Option B is the more intensive analysis which quantifies emissions. **Instructions and resources for harvest Option B are available on the OSC Carbon SharePoint site, in a subfolder titled “PLACE” within the NEPA project template folder.**

If additional analysis is chosen to be conducted beyond the Carbon White Paper, you may choose to use the following methods based on the project type. Below is a table which serves as a menu of options for different project actions. Keep in mind, many projects that reduce fuel loads are essentially reducing carbon stocks on a per-acre basis for the long term. Interdisciplinary teams should disclose this effect and state that carbon stewardship aligns with the need to reduce carbon stocks in some forests where this action is needed to stabilize the remaining carbon, given projected future climate conditions.

Project Action	Quantitative Data	Qualitative Resources
Harvest	PLACE Framework <a href="#">Social Cost calculator or Equivalency calculator</a>	<a href="#">Tools for Carbon Inventory, Management, and Reporting</a> <a href="#">Forest Carbon Management   Climate Change Response Framework (forestadaptation.org)</a>
Prescribed Burning	<a href="#">BlueSky Playground (airfire.org)</a>	
Rangeland Management	BLM GHG Calculator, Soil Carbon where available, <a href="#">App: Rangeland Allotment Monitoring System (arcgis.com)</a> ; <a href="#">Rangeland Productivity Z-Scores (1984-2022) (arcgis.com)</a> ; Rangeland Vegetation Simulator (RVS; Reeves 2016)	<a href="#">Rangeland Carbon Stock Methodology</a>
Restoration		<a href="#">Reforestation: USDA Forest Service Reforestation Strategy (USDA 2022)</a> <a href="#">Invasive Species: Restoration of Landscapes and Habitats Affected by Established Invasive Species (usda.gov)</a>
Non-biogenic carbon (oil and gas; mining; facilities; roads; recreation); or fossil fuel emissions associated with biogenic projects	<a href="#">EPA Tools + GHG Quantification Tools</a> <a href="#">GHG Emissions FS Calculator</a> <a href="#">Infrastructure Carbon Estimator</a> <a href="#">Oil and Gas specific tools</a> <a href="#">Methane and heavy equipment emissions for grazing projects</a> <a href="#">Lookup tables and scenarios</a> EPA's <a href="#">Greenhouse Gas Inventory Data Explorer</a> for contextualizing GHG contributions	<a href="#">Context Tools</a>

## 2.1 Harvest Option A

All numbers come from the final table in the [Carbon Dashboard](#), “Forest-Level Disturbances.” For your NF, take the change in non-soil carbon due to harvest (Mg/ha) and multiply it by the forested area (ha, constant) value to calculate total carbon lost to harvest in Mg. Divide by the total estimated area of forest disturbed by harvest to calculate the loss of carbon, in Mg/ha, in harvested areas from 1990-2011 (Eq 1). You can multiply this number by your proposed harvest acres to estimate carbon loss over a 22-year period for your project (Eq 2).

$$\text{Eq. 1} \quad \left[ \text{Change in carbon, total forest} \right] \frac{\text{Mg}}{\text{ha}} * [\text{Forested area}] \text{ ha} * \frac{1}{[\text{Harvested area}] \text{ ha}} = \\ \left[ \text{Change in carbon, harvested area} \right] \frac{\text{Mg}}{\text{ha}}$$

$$\text{Eq. 2} \quad \left[ \text{Carbon transfer in harvested areas} \right] \frac{\text{Mg}}{\text{ha}} * [\text{Project area}] \text{ ha} = \\ \left[ \text{Carbon transferred by project} \right] \text{ Mg}$$

## 7.0 Direct, Indirect, and Cumulative Effects of the Proposed Action

Address the likely duration and spatial extent of each effect described. What is likely to happen, and what is the potentially affected environment in which that might happen and the likely degree of that effect?

Generally, **do not include**:

- Effects that are remote in time, geographically remote, or the result of a lengthy causal chain.
- Effects that the agency has no ability to prevent due to limited statutory authority or that would occur regardless of the proposed action.

**Do:**

- Incorporate resource indicators, if you identified them for your project.
- Quantify indicators of change where possible, or describe the degree of change qualitatively with likelihood, magnitude, extent, duration, speed, or a combination of these things.
- Cite references to support your conclusions and draw conclusions around potentially affected environment and degree of effects as pertains to each effect identified above in this tool.
- Include the **relevant** references suggested by commenters.
- Use the suggested text and layout as a guide that you customize for your project.

## 7.1 Harvest Option A

To calculate the average annual net carbon uptake rate, take the “change in carbon density, 1990-2020” value and multiply by the forested area in 2020 (both from the Forest-Level Carbon table in the Carbon Dashboard). You now have change in carbon in Mg. Divide by the number of years (31) to calculate change in carbon (Mg) per year for your national forest.

$$\left[ \text{Change in carbon density} \right] \frac{\text{Mg}}{\text{ha}} * [\text{2020 forested area}] \text{ ha} * \frac{1}{31 \text{ years}} = \left[ \text{Change in carbon} \right] \frac{\text{Mg}}{\text{year}}$$

To calculate time until net growth recovers the carbon transferred, convert the annual rate to a monthly rate (divide by 12). Divide the total carbon transferred out of the national forest by the monthly growth rate.

$$[Change\ in\ carbon] \frac{Mg}{year} * \frac{1\ year}{12\ months} = [Change\ in\ carbon] \frac{Mg}{month}$$

$$\frac{[Carbon\ transferred]Mg}{[Change\ in\ carbon] \frac{Mg}{month}} = [Time\ to\ recover\ transferred\ carbon] Months$$

For the percentages of current total national forest aboveground carbon and total ecosystem carbon removed, divide carbon transferred by harvest by the pools in Mg (multiply by 1,000,000 to convert from Tg on the dashboard to Mg). Aboveground carbon pools can be calculated by total ecosystem carbon by the percentage of carbon stock pools in aboveground live (figure 2 on the dashboard) and dividing by 100. Most projects will remove a very small fraction of carbon; ensure the units are correct for these calculations.