



Environmental Management Plan

Using Green Sheets to Track Environmental and Related Commitments

Office of Environmental Stewardship

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1) Introduction

The Environmental Management Plan (EMP), also called the Green Sheet, is the process for the Minnesota Department of Transportation (MnDOT) to track National Environmental Policy Act (NEPA) environmental commitments, Minnesota Environmental Policy Act (MEPA) environmental commitments, environmental permit requirements, and related public commitments made during the course of project delivery. The EMP is flexible and can adapt to different project scopes; from smaller projects with limited environmental effects to large and complex projects that require extensive tracking and reporting. Currently, the EMP applies only to the state highway construction program and does not apply to state aid projects.

For purposes of this guide, “environmental commitments” include mitigation activities and public commitments made during NEPA/MEPA, environmental permit requirements, and other legal and regulatory requirements related to environmental compliance. This method of tracking environmental commitments from project scoping, into project design, and through construction, is necessary for four reasons:

1. to ensure that environmental commitments are carried into final design
2. to help contractors comply with construction components
3. to track and document compliance
4. to promote consistency

Environmental commitments are identified at several points during project development. The EMP begins with commitments listed in the approved NEPA/MEPA environmental review decision document. Initial commitments are often general in nature (e.g., “2:1 slopes from Station 1+00 to 2+00”). Commitments are refined as more project details become known and additional activities are identified. During final design, the EMP is reviewed to ensure that all mitigation and environmental commitments are part of the plans, specifications, and estimates (PS&E) package. The EMP is incorporated into the plan to serve as a checklist of environmental commitments and a reference of how each commitment will be implemented. During construction, the EMP is used to ensure and document completion of mitigation and environmental commitments.

Beginning December 1, 2018, a project-specific EMP is required for all MnDOT projects with a NEPA Environmental Assessment (EA), NEPA Environmental Impact Statement (EIS), or MEPA Environmental Assessment Worksheet (EAW), including design-bid-build, design-build, and construction manager general contractor (CMGC) procured projects.

The EMP is currently only required for projects that require a NEPA EIS or NEPA EA, or MEPA EAW. However, all MnDOT projects subject to NEPA, MEPA, or regulatory compliance must continue to meet environmental commitments. A Project Manager may elect to use the EMP process on any project, regardless the level of environmental document. This should also be considered for projects with complex or sensitive environmental challenges, including the use of a contractor environmental manager bid item.

Note: the EMP process intends to capture all environmental commitments. However, any commitments included in permits or other legal documents, or elsewhere in special provisions, that are not included in the Green Sheet, must still be completed by the contactor.

2) Regulatory Requirement

MnDOT is required to ensure that federal-aid projects comply with all environmental commitments, laws, and regulation. The FHWA Minnesota Division has directed MnDOT to demonstrate compliance to the Code of Federal Regulation (CFR) including NEPA design and construction phases. The Environmental Management Plan (EMP) is the MnDOT process for complying with these requirements.

23 C.F.R. Part 771.109(d):

(d) When entering into Federal-aid project agreements pursuant to 23 U.S.C. 106, it shall be the responsibility of the State highway agency to ensure that the project is constructed in accordance with and incorporates all committed environmental impact mitigation measures listed in approved environmental review documents unless the State requests and receives written FHWA approval to modify or delete such mitigation features.

While not a specific regulatory requirement, MnDOT has elected to use Green Sheets for projects that trigger a MEPA EAW because these projects can be large, complex, and may have similar commitments to a NEPA EA or EIS (just without federal money).

3) Mitigation Measures

Title 40 CFR 1508.20 outlines mitigation as a 5-step sequence of priorities with step 1 being the highest priority.

1. Avoid the impact altogether by not taking a certain action or parts of an action.
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
4. Reduce impact over time by preservation and maintenance operations during the life of the action.
5. Compensate for the impact by replacing or providing substitute resources or environments.

What mitigation measures need to be tracked in the Green Sheets?

The MnDOT Early Notification Memo (ENM) can be used as a starting point for the Design Green Sheet. At the close of the NEPA process, the Finding of No Significant Impact (FONSI) (EA-level project) or the Record of Decision (ROD) (EIS-level project) includes the list of official NEPA and MEPA environmental commitments that must be incorporated into the EMP Tracking Spreadsheet. These commitments may require further refinement as design of the project progresses.

Commitment areas commonly represented within the EMP typically include:

- Tribal Lands
- Rivers, Lakes, Wetlands
- o Coast Guard
- o Wetland replacement
- o DNR permitting
- o Impaired/Special waters
- o 401, 404
- SWPPP
- Water Appropriations
- Watershed District Permitting
- 100-year floodplain impacts
- Federally listed species (USFWS)
- State listed species (DNR)
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- Vegetation Avoidance and Protection
- Vegetation Installation and Establishment
- Aquatic Invasive species
- Terrestrial Invasive species (weeds)
- Blowing and Drifting Snow
- Visual Quality & Aesthetics
- Scenic Byways
- Other nearby Trails
- Aquifer protection
- Contaminated/Regulated Materials
- Historic properties/Cultural Resources
- Section 4(f)6(f) Properties
- Farmland Impacts
- Air and Noise construction impacts
- Traffic Disruption (detours)
- Environmental Justice
- Accessibility
- Bicycle/Pedestrian

4) Creating and Using the Environmental Management Plan

The EMP has three phases. Phase one (Design Green Sheet) is completed prior to letting and Phase two (Construction Green Sheet) is placed in bid documentation and carried through construction. Phase three tracks compliance during construction.

Phase 1: Tracking environmental commitments through project development

The Design Green Sheet spreadsheet is a live document that gets updated as the project develops. It starts as a partially pre-populated template with generic text for common environmental commitments on typical MnDOT projects. During Design, the Project Manager transfers project-specific environmental commitments from the FONSI/ROD to the Design Green Sheet by selecting the appropriate pre-populated options and refining them, as necessary. Environmental commitments that are not provided on the pre-populated Design Green Sheet template are added. The template can be found on the MnDOT Highway Project Development Process (HPDP) website.

Phase 2: Adding commitments into the contract

During Final Design, environmental commitments are refined and verified. The template is filled out to show plan locations where each commitment applies and which specifications and provisions are included to ensure each commitment is completed.

Non-applicable columns and rows are hidden, the background coloring is changed from tan to light green, and the header/title is changed from the Design Green Sheet to the Construction Green Sheet. At this point, the spreadsheet becomes the Construction Green Sheet, which is imported into the plans using a CADD template. The Construction Green Sheet is placed just before the SWPPP Narrative section of the plan. Some commitments may be the sole responsibility of MnDOT, not the contractor. These are still included in the Construction Green Sheet to give MnDOT a single location for storing and tracking commitments

Note that the Construction Green Sheet is a reference tool to guide project personnel during construction. The actual commitment documents (e.g., permits, NEPA/MEPA documents, plans, and special provisions) are the definitive source for environmental commitments, permit conditions, and related actions for compliance.

Phase 3: Tracking commitments through construction

During construction, a MnDOT representative (e.g., Project Engineer, Construction Supervisor, or Construction Inspector) verifies that the contractor has met each commitment by initialing the Construction Green Sheet after each individual commitment is met. See MnDOT Highway Project Development Process (HPDP) website for examples.

The Project Manager will save the completed Construction Green Sheet in project files as part of the administrative record for NEPA compliance. It should also be available to MnDOT Maintenance to help them continue to meet commitments in the project area.

5) Design-Bid-Build and CMGC Process, Roles, and Responsibilities

Phase 1 - Design Green Sheet	
Step 1	Project Manager (PM) coordinates with OES staff to identify potential environmental commitments through ENM and the NEPA document.
Step 2	PM, or delegate, enters project-specific environmental commitments into the <i>Design Green Sheet</i> spreadsheet template. Items are updated during Preliminary Design, as needed ¹ , may include the project layout.
Step 3	After ROD (EIS) or FONSI (EA), PM verifies that commitments in the NEPA document and Final Design are incorporated into the <i>Design Green Sheet</i> and coordinates with functional groups to reconcile any differences between NEPA, permits, Final Design, etc.
Phase 2 - Construction Green Sheet	
Step 4	During Final Design the PM refines, verifies, and adds environmental commitments; The template is filled out to show plan locations where each commitment applies and which specifications and provisions are included to ensure each commitment is completed.
Step 5	Non-applicable fields are hidden; and the background coloring is changed from tan to light green for plan turn-in. The spreadsheet now becomes the <i>Construction Green Sheet</i> , which is imported into the plans using a CADD template. The <i>Construction Green Sheet</i> is placed just before the SWPPP Narrative.
Phase 3 – Tracking Commitments	
Step 6	After project award, the Project Engineer discusses the <i>Construction Green Sheet</i> with contractor during pre-construction meeting (or equivalent).
Step 7	During construction, Project Engineer verifies that contractor has met environmental commitments by initialing the <i>Construction Green Sheet</i> after each commitment is met. This updated sheet should be available, upon request, during construction.
Step 8	During construction, if changes are made that affect environmental commitments, Project Engineer must notify PM before making changes ¹ . PM describes rationale for changes in the “Notes” column.
Step 9	Prior to Final Acceptance, PM ensures that all commitments have been met and signed off on by MnDOT. PM saves the completed <i>Construction Green Sheet</i> to eDOCs as part of the NEPA administrative record and sends to MnDOT Maintenance for their help continue meeting commitments.

(1) Note: if project scope or design changes from prior plan review, PM coordinates with functional areas to re-evaluate changes and updates environmental commitments, as necessary.

6) Design-Build Process, Roles, and Responsibilities

EMPs must be included in all projects with an EIS or EA, regardless of the procurement method. Design-Build Requests for Proposals must include an EMP, in addition to the Environmental Compliance Quality Management Plan.

Phase 1 - Pre-Letting Green Sheet	
Step 1	Project Manager (PM) coordinates with OES staff to identify potential environmental commitments through ENM and the NEPA document.
Step 2	PM, or delegate, enters project-specific environmental commitments into the MnDOT <i>Pre-Letting Green Sheet</i> template. This <i>Pre-Letting Green Sheet</i> is used to guide the development of any documents affected by the environmental commitments.
Step 3	After ROD (EIS) or FONSI (EA), PM verifies that commitments in the NEPA document and RFP are incorporated into the <i>Pre-Letting Green Sheet</i> and coordinates with functional groups to reconcile any differences between NEPA, permits, etc.
Step 4	During RFP development, environmental commitments are refined, verified, and added; non-applicable fields are hidden; and the background coloring is changed from tan to light green. This is now the <i>Project Green Sheet</i> and is included in the RFP.
Phase 2 – Project Green Sheet	
Step 5	After project award, the Environmental Compliance Manager (ECM) discusses the <i>Project Green Sheet</i> with Contractor Environmental Compliance Officer at the kick-off meeting (or equivalent). The Design Build Contracting team submits an updated project green sheet or review each time a new phase of work (such as a Released for Construction Submittal or an Early Start of Construction package) would affect commitments in ways that have not already been accepted in the Project Green Sheet.
Step 6	During construction, the Contractor denotes that they have met environmental commitments by initialing the <i>Project Green Sheet</i> after each commitment is met. MnDOT Verification initials after the Contractor initial to Accept and verify that the commitment was met.
Step 7	During construction, if changes are made that affect environmental commitments, the Contractor must inform the MnDOT Project Manager before making changes and describe the rationale for the changes in the “Notes” column ¹ . MnDOT (and perhaps the FHWA) must Approve the changes prior to their implementation.

Step 8

Prior to Final Acceptance, PM verifies with the ECM that the Contractor's Quality Manager has certified Work is completed in accordance with the requirements and the *Project Green Sheet* is complete. The Completed *Project Green Sheet* is uploaded to the Projects Document Control System and a copy is sent to MnDOT Maintenance for their help continued meeting of commitments.

(1) Note: if project scope or design changes from prior plan review, PM coordinates with functional areas to re-evaluate changes and updates environmental commitments, as necessary.