

AASHTO PRACTITIONER'S HANDBOOK

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TRACKING COMPLIANCE WITH ENVIRONMENTAL COMMITMENTS/ USE OF ENVIRONMENTAL MONITORS

This Handbook provides recommendations for tracking compliance with environmental commitments from the environmental review phase through the design, construction, operations, and maintenance phases of a transportation project.

Issues covered in this Handbook include:

- Making environmental commitments
- Creating a commitments tracking database
- Identifying and entering commitments in the database
- Tracking the status of commitments in the database
- Using the database during design and construction
- Organizing the environmental monitoring team
- Environmental monitoring procedures
- Special considerations for design-build projects
- Keys to success in tracking compliance with environmental commitments

The Practitioner's Handbooks are produced by the AASHTO Center for Environmental Excellence. The Handbooks provide practical advice on a range of environmental issues that arise during the planning, development, and operation of transportation projects.

The Handbooks are primarily intended for use by project managers and others who are responsible for coordinating compliance with a wide range of regulatory requirements. With their needs in mind, each Handbook includes:

- key issues to consider;
- a background briefing;
- practical tips for achieving compliance.

In addition, key regulations, guidance materials, and sample documents for each Handbook is posted on the Center's web site at <http://environment.transportation.org>



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Overview



As part of the environmental review process for a complex project, a project sponsor may make hundreds of specific commitments to avoid, minimize, and mitigate environmental impacts. Some of these commitments may be made voluntarily; others may be required as permit conditions. Regardless of the original source, it is important to ensure that commitments made during the environmental review process are implemented during design, construction, and maintenance.

Effective implementation of environmental commitments requires established procedures for communicating and tracking these commitments through to implementation and maintenance. For a major project, a systematic approach typically involves the creation of an environmental commitments database. It may also involve the designation of an environmental lead who is given responsibility and authority to oversee compliance with the environmental commitments. For some projects, the implementation effort may also include a formal process for ensuring regular coordination with permitting agencies.

This handbook primarily addresses implementation of environmental commitments for relatively large and complex projects. For smaller projects, many of the techniques described in this handbook will still be applicable, but they may need to be adapted to be consistent with the scale and complexity of the project.

Key Issues to Consider

Tracking Environmental Commitments

- What are the environmental commitments on your project?
- What system will be used to track compliance with environmental commitments?
- What procedures will you establish for entering and tracking commitments from source documents?
- When will you enter commitments into a tracking system?
- What quality control measures will you implement for inputting and tracking commitments?
- How will you update the commitment tracking database?
- How will the database be used during design, construction, and maintenance phases?
- How will you provide continuity for commitments from the environmental review process to design, construction, and maintenance phases?
- What types of reports will you need to prepare to track compliance with commitments?
- Who will be responsible for individual commitments?
- Does your agency have an Environmental Management System (EMS)? If so, can the tracking of environmental commitments be handled as part of the EMS?
- How will the completion of environmental commitments be verified?

Using an Environmental Monitor

- Will you designate an environmental monitor?
- What responsibilities and authority will be given to the environmental monitor?
- How will you ensure the objectivity of the environmental monitor?

- How will you coordinate with environmental agencies during the design and construction phases?
- If disagreements arise regarding compliance with environmental commitments, how will those be resolved?
- How will the Environmental Monitor report back to the Environmental Lead?
- What type of compliance reports will need to be prepared and at what intervals for review by environmental agencies?

Background Briefing

Types of Environmental Commitments. As used in this Handbook, the term environmental commitment includes any action that (1) is intended to avoid, minimize, and mitigate environmental impacts of a project, and (2) is required to be implemented as a condition of project approval, or has been committed to by the project sponsor as part of the environmental review process.

Examples include:

- Project design—using a retaining wall rather than a fill slope in order to minimize impact on an adjacent wetland, or using native plant species when revegetating disturbed areas;
- Construction—using construction equipment that has been retrofitted with technologies to minimize the emission of mobile source air toxics;
- Mitigation—constructing replacement wetlands;
- Stewardship—retrofitting existing roadways with stormwater management facilities;
- Maintenance—maintaining a storm water facility to a certain level of sedimentation.

Sources of Environmental Commitments. Environmental commitments may arise out of various documents and at various stages of the environmental review process. The task of preparing a single comprehensive list of environmental commitments can be a substantial undertaking in its own right. Potential sources of environmental commitments include:

- National Environmental Policy Act (NEPA) documents, including a Categorical Exclusion (CE), Environmental Assessment (EA), Finding of No Significant Impact (FONSI), Environmental Impact Statement (EIS), and Record of Decision (ROD);
- Section 106 Memorandum of Agreement (MOA);
- Biological Opinion/Incidental Take Statement issued by the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act;
- Section 404 permit issued by the U.S. Army Corps of Engineers/delegated states under the Clean Water Act;
- State environmental agency permits;
- U.S. Army Corps of Engineer permits;
- State, regional, and local permits;

Texas Department of Transportation's (TxDOT) State Highway 130 project, a 49 mile north-south tollway in the Austin-San Antonio corridor, required close cooperation between TxDOT and the design-build developer to ensure adherence to environmental permits and other commitments during the design and construction phases of the project.

To achieve the overall project commitment of environmental protection, environmental impacts to resources, such as wetlands, water quality, hazardous materials and noise, are being aggressively monitored by independent environmental compliance teams. These teams review design and monitor construction to achieve maximum avoidance and minimal impact to the environment. The Project Mitigation Plan and Construction Monitoring Plan provide a basis for sound environmental management throughout the project. Daily monitoring logs are compiled into weekly reports that are reviewed by the management team. These reports provide documentation of achievement of commitments as well as tracking of violations and potential violations and appropriate responses.

- Other study documents, agreements, Memoranda of Understanding (MOUs), permits, or approvals; and
- Commitments to stakeholders.

Consequences of Non-Compliance with Commitments. Compliance with environmental commitments is not just a matter of good stewardship; compliance is a legal requirement that must be met. The consequences of non-compliance can be severe. Under Federal Highway Administration (FHWA) regulations, environmental commitments that are incorporated into a project during the NEPA process are required to be implemented as a condition of FHWA's approval of the project. Failing to implement those commitments can jeopardize the availability of Federal funding for the project. In addition, violations of permit conditions can lead to substantial penalties, litigation, and work stoppages, as well as cause long-term damage to relationships with resource agencies.

System for Tracking Commitments. Environmental commitments are generally made during the environmental review process, but are implemented, for the most part, in later stages of project design and construction. As a result, the agency staff and technical experts involved in making the commitments are often not the same individuals responsible for implementing them. To provide a smooth transition from the environmental team to the design, construction and maintenance teams, it is essential to establish a comprehensive system for tracking commitments throughout the project. Potential elements of a commitment tracking system include a commitment tracking database, environmental lead, environmental monitors, agency coordination, and an Environmental Management System (EMS).

Commitment Tracking Database. The basic function of an environmental commitments database system is to maintain a comprehensive record of the environmental commitments for a project and to track compliance with those commitments.

Environmental Lead. The environmental lead is the single point of contact for all matters relating to commitments in the commitment tracking database system. The environmental lead ensures that all commitments have been entered into the database and oversees the work of individual environmental monitors to ensure that their reports are entered into the database. Coordination and communication with the resident engineer is an important aspect of the environmental lead's role.

Environmental Monitor. An environmental monitor is a person or team designated by a project sponsor to oversee compliance with environmental commitments. Typically, the environmental monitor's responsibilities extend throughout project design and construction. The specific responsibilities and authority of environmental monitors are defined on a project-by-project basis. Multiple environmental monitors may be assigned to larger projects. If an environmental monitor determines that a contractor is not complying with an environmental commitment, the monitor is responsible for notifying the resident engineer or other official, who has the authority to halt work on a project.

Resident Engineer. The resident engineer serves as a project's authorized representative to respective construction contractors. The resident engineer may be employed by the project sponsor or by a consultant. The resident engineer is responsible for the organization and direction of construction field office staff and activities relating to construction engineering, subcontracts, and engineering liaison to the design offices. The resident engineer supervises field verification of materials. The resident engineer also provides technical direction to field engineers in a wide range of construction engineering and design functions relating to an area or to a single discipline on the overall project. The resident engineer plans and recommends procedures to be implemented by field engineers to ensure that construction operations are within requirements of engineering design, specifications, and environmental commitments. The resident engineer administers major contract changes and represents the project in major contractual discussions and negotiations. The resident engineer has the authority to shut down work on the construction site.

Environmental Agency Coordination. Environmental agencies are typically most involved during the environmental review and permitting stage of project development; their involvement often decreases during design and construction, except for compliance site visits or when problems arise. For complex projects involving numerous environmental commitments, it may be advantageous to establish procedures for ensuring continuing coordination with environmental agencies during project design and construction. Continued coordination with agencies is an additional tool to ensure compliance with environmental commitments. A clear protocol for all agency staff visiting construction sites needs to be established through the resident engineer's office, principally for safety and liability reasons.

Environmental Management Systems (EMS). Recent years have seen an increase in the use of Environmental Management Systems (EMS) by organizations, including state transportation agencies. An EMS involves a continual cycle of planning, implementing, reviewing, and improving the processes and actions that an organization undertakes to meet its business and environmental goals. A system for tracking environmental commitments made in the NEPA process could be

implemented as part of an EMS. Technical assistance for the development of EMSs is available from the AASHTO Center for Environmental Excellence. For additional information about EMSs, please visit the Center's web site at www.environment.transportation.org.

Practical Tips

1 | Making Environmental Commitments

The environmental review process for a major transportation project typically generates thousands of environmental commitments. These commitments may be made by many different individuals, at different times, in different places. Some commitments may be defined very specifically, while others may be defined only as broad concepts or principles. There may be significant overlap among commitments made under different laws, regulations, or procedures. All of this can result in commitments that are unclear, inconsistent, or even contradictory. These problems can be avoided by establishing a systematic process for reviewing potential environmental commitments during the environmental review process, when there is the greatest opportunity to clarify requirements and resolve inconsistencies.

To create the foundation for a strong compliance program, it is important to pay attention during the environmental review process to the commitments that are being made. Factors to consider include:

- Ensuring that commitments are clearly worded,
- Ensuring that commitments are not mutually contradictory,
- Considering the practical impact of the commitments on design, construction and maintenance,
- Providing flexibility to adapt (change) commitments in the future, and
- Determining which commitments should be included in the NEPA document and which should be included as permit conditions.

Some methods for reviewing potential environmental commitments are:

- Including a chapter or section in the EIS or EA/FONSI that lists all environmental commitments, organized by subject matter.
- Including a section or matrix in the ROD that summarizes all environmental commitments. If the commitments are voluminous, this section can be included in the ROD as an appendix.
- Coordinating with environmental agencies to resolve any inconsistencies or contradictions among different environmental commitments.
- Coordinating with project sponsor's staff or technical experts in design, construction, and maintenance in order to identify any potential implementation problems.

2 | Creating a Commitment Tracking Database

There are many existing, commercially available database software programs that can be used to track environmental commitments. In cases where there will be multiple users, system compatibility is an important consideration. A few State DOTs have statewide systems in place. These statewide systems provide the most comprehensive and efficient method for tracking environmental commitments. However, most states do not yet have such systems, and therefore will find it is necessary to customize the database to the needs of each project. The most important task is creating the appropriate database fields, which establish the types of information that will be captured in the database. It is also necessary to create data entry forms and standard reports.

Database Fields

The field types for the commitment tracking database should be defined on a project-by-project basis. Fields types, as referenced in the Appendix, typically include the following: