

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>



AASHTO Center for Environmental Excellence



American Association of State Highway and Transportation Officials

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?

Agency Coordination and Oversight

- 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:

- **Description of Commitment.** This field describes the essential elements of the commitment. It may quote or paraphrase the commitment as stated in the source document or quote from it directly. If the commitment is paraphrased, it is important to make sure that important aspects of the commitment are not omitted. For example, if a permit restricts certain activities during specific times of day or times of year, it is important to include those specific time periods in the database.
- **Subject.** This field assigns each commitment to one or more subject categories (e.g., air quality, water quality, traffic, noise). Subject categories are defined on a project-by-project basis, but typically reflect the major topics addressed in the environmental documentation. This field allows for sorting of commitments by environmental topic. For example, it is possible to print a report listing all commitments that relate to air quality.
- **Responsible Party.** This field identifies the entity with the most significant responsibility for carrying out or addressing the commitment. For example, a commitment regarding project design would typically be assigned to the design consultant, and a commitment regarding construction methods would typically be assigned to the construction contractor. For a design-build project, the design-build contractor may be listed for both design and construction tasks.
- **Assigned Contracts.** This field identifies the contract or contracts with which the commitment is associated. This field makes it possible to print out a report showing all commitments applicable to a specific design or construction contract.
- **Source Documents.** This field lists the source document(s) that provide the basis for the commitment (e.g., the FEIS, ROD, or Section 404 permit). If the source document is voluminous, it may be helpful to include a reference to the specific page or section of the source document.
- **Status.** This field describes the current status of the commitment. For example, a commitment may be designated as “pending,” “ongoing,” “on hold,” or “completed.”
- **Due Date.** This field gives the due date for the commitment.

Other Database Features

- **Data Entry Form.** This form is used to enter information about a commitment into the database. The form includes each of the fields and may include features to facilitate consistency and minimize errors in data entry (e.g., drop-down menus).
- **Keyword Search.** A keyword search is used to find all entries containing a specific keyword.
- **Standard Reports.** Each database can be configured to print standard reports, such as all commitments applicable to a specific contract, or all commitments associated with a particular permit, agency or resource.
- **Contract Alignment.** A contract alignment tool can allow an agency to develop a matrix of the specific environmental commitment and how that commitment will be implemented in the construction contract (or Design Build contract).
- **Standard Queries.** Queries allow the user to search the database for selected data. Queries can be tailored to show only commitments relevant to the construction contractor or for a specific resource topic such as water quality.
- **Levels of Access.** Varying levels of access can be provided to different users—ranging from “read-only” access to full control over the database. Access should be carefully managed to ensure that changes, additions, and deletions are made only by those authorized to do so. Access controls are especially important if the database will be made available to a wide range of users.

3 | Identifying and Entering Commitments

A commitments tracking database can be established at any stage of project development, but experience has shown that the most efficient approach is to create and populate the database around the time of publication of the FEIS. By that stage, the environmental commitments are relatively well-defined, but the design and construction work has not yet begun. While developing an electronic database, a simple checklist could be created to organize and track commitments. The process for entering commitments into the database includes several tasks:

Identifying Commitments. The project sponsor should establish a systematic process for identifying commitments that need to be entered into the database. This process should include a review of all potential sources of commitments, such as

the EA, FONSI, FEIS, ROD, and all agreements, permits, and other approvals. If the NEPA team is not directly responsible for compiling this list, those who are handling it should meet with the NEPA team to ensure that all potential sources of commitments have been reviewed.

Entering Commitments. It is important that the full intent of each commitment be captured in the database so that the appropriate level of effort and scope of the commitments are met. If a commitment is paraphrased, it is essential that important details are not omitted from the database. This could be accomplished by referencing the source documents or attaching the permits to the database as an exhibit. Because there are significant legal consequences for non-compliance with permit conditions, it may be beneficial to include some permit conditions verbatim in the database (i.e., directly quote the permit requirements). Also, to the extent possible, environmental commitments should be entered in language that can be expressed in unambiguous contract provisions for design and construction contractors.

Oversight/Quality Control. An experienced environmental specialist or professional who is knowledgeable about the project should be responsible for screening all commitments to be entered into the tracking database. (This could be the Environmental Lead.) That person should be alert for potential errors or inconsistencies in data entry, as well as potential contradictions between different commitments in the database. Creating a user manual with detailed instructions on how to use and maintain the database is also recommended to maintain consistency and provide instructions for new users. In addition, the database should be “backed up” on disk routinely.

Confidential Data. Some commitments may include confidential data, such as data regarding the location of archeological sites. If this information is included in the database, it should be protected with appropriate security (password-controlled access) in order to maintain the necessary level of confidentiality.

4 | Tracking Status of Commitments in Database

Fields to Update. After entering all commitments made during the NEPA process, it is important to be alert for any new commitments that may be made during permitting and to keep the database current. In some cases, permitting will result in entirely new commitments; if so, the new commitments should be added to the database. In other cases, permitting will impose requirements that were already incorporated into the project during the NEPA process. In the latter situation, an existing commitment in the database should be updated to show an additional source document (i.e., the permit) for that commitment. Updates should include:

- Assigning commitments to specific design and construction contracts,
- Updating implementation status of commitments, and
- Updating the due dates for commitments.

Update Procedures. The project sponsor should establish procedures for updating the records in the database. The procedures should establish a regular schedule for updates (e.g., monthly, quarterly, bi-annually), which can be established based on commitments from the FEIS, ROD, or other source documents. The procedures should assign responsibility for specific tasks. For example, design and construction contractors may be assigned responsibility for reporting on the status of their implementation of specific commitments. Alternatively an overall project management consultant may be assigned responsibility for receiving the updates and entering them into the database. Posting reports from the database in read-only format on-line allows information to be shared while maintaining control of the data. In addition, sharing information among projects enables comparison of results across projects, which will contribute to improved methods and potential cost savings.

Oversight/Quality Control. To a large extent, the success of meeting commitments is established early on by those responsible for providing updates that are both accurate and timely. With a large number of responsible parties across numerous disciplines providing updates on a regular basis, a project can build momentum in meeting its commitments. An experienced environmental specialist or professional who is knowledgeable about the project should be responsible for tracking environmental commitments.

5 | Use of the Database during Design and Construction Phases

The key to implementing environmental commitments is to ensure that they are communicated effectively to design consultants and construction contractors. This can be accomplished by using the environmental commitments database to generate a list

of the commitments that apply to each design and construction contract. The database manages the information related to commitments, but compliance is managed in the field.

Project-Wide vs. Section-Specific Commitments. The database should include a field that allows each commitment to be assigned to one or more contracts. Project-wide commitments are assigned to all contracts. For example, a project-wide commitment regarding construction noise mitigation would be assigned to all construction contracts. Section-specific commitments apply to a single section or group of sections. For example, a commitment regarding the construction of a particular bridge would be assigned to the design and construction contracts regarding that bridge. Mitigation commitments can be considered project-wide and combined in a single list or listed by specific resource area, such as water quality or air quality.

Design Commitments. Design commitments may include guiding design principles as well as specific requirements that must be met by the design. Examples of design commitments are “Land acquisition will be avoided to the greatest extent possible,” “A retaining wall will be used to minimize wetland impacts,” and “Continued coordination with the municipalities and neighborhood associations will be undertaken to minimize any socioeconomic impacts of the project.” Each design consultant should receive a report listing project-wide design commitments and any design commitments that apply to the section (or sections) for which that consultant is responsible. For design-build projects, the design commitments should be incorporated with construction commitments into the design-build contracts.

Construction Commitments. Construction commitments also may be project-wide and section-specific. Examples of construction commitments include “Alternate travel routes will be provided to the extent feasible to replace affected routes” and “Residential and business access will be maintained.” For each construction contract, the project sponsor should include in bid documents the commitments that must be complied with during construction or other phases of the project, or both. This will make sure that contractors take those commitments into account when developing their bids for the project. As noted above, for design-build contracts, the bid documents should include any design commitments that apply to the design work that needs to be completed by the design-build contractor. Post-construction monitoring is also important to ensure that mitigation measures are successful.

Modifying Commitments. During the design and construction phases, it sometimes is necessary to seek changes in environmental commitments. Changes may be warranted because the project itself has changed, because new information is acquired about environmental conditions, because new technologies are available, or for other reasons. Changes to environmental commitments generally require additional coordination with the agencies that granted the environmental approvals for the project. For example, if a commitment was incorporated into a Biological Opinion issued by the U.S. Fish and Wildlife Service, then any change in that commitment would require the Service’s approval (and may involve re-initiating formal consultation with the Service). Similarly, if a commitment was incorporated into a Section 404 permit issued by the U.S. Army Corps of Engineers, then changing that commitment may require a modification to the Section 404 permit. Thus, while environmental commitments can be changed, it is essential to understand why those commitments were adopted in the first place and to ensure that any change is made with the approval of the appropriate agencies.

6 | Organizing the Environmental Monitoring Team

A key element in the execution of a commitment tracking database is organization of an environmental monitoring team that spans the phases of the project from the environmental review process through design and construction. An environmental team typically includes both an environmental lead and a team of environmental monitors. (The terms “environmental lead” and “environmental monitor” are used in this handbook as a means of describing distinct roles with the team responsible for overseeing implementation of environmental commitments. These specific terms need not be used; in many states, similar functions are performed by state DOT staff or consultants with different titles.)

Environmental Lead. As the single point of contact for all matters relating to commitments in the commitment tracking database, the environmental lead should have relevant experience in one or more phases of project development (environmental documentation, design, permitting, construction, and maintenance). The environmental lead works closely with the NEPA team to ensure that all commitments from source documents have been entered into the database and checked for accuracy and completeness. During design and construction, the environmental lead oversees the work of individual environmental monitors to ensure that their reports are entered into the database and that any concerns identified by the monitors are addressed. The lead also provides a broader understanding of issues affecting one or more contracts.

Environmental Monitors. Environmental monitors are responsible for directly overseeing compliance with environmental commitments. This requires daily contact with the resident engineering staff and the construction contractors. The monitors

should have sufficient independence from the construction contractors to ensure that the monitor can effectively oversee compliance with environmental commitments. The number of environmental monitors, as well as their skills and assignments, will vary from project to project. Environmental monitors may be environmental engineers, scientists, or planners with construction and compliance experience. They should be familiar with NEPA documents and permits and should meet with designers, resident construction staff, and contractors throughout the process. On a large job that requires several environmental monitors, a single monitor can be designated as the point of contact for the environmental lead.

7 | Environmental Monitoring Procedures

On-Site Monitoring. Environmental monitors can be most effective if they regularly visit the construction site to observe construction activities and build direct working relationships with the construction contractors. On-site monitors can react to changing conditions in the field and provide timely information to the resident engineer for corrective actions (if needed).

Reporting. It is critical to establish a reporting protocol for documenting each inspection by the environmental monitor. This protocol should include informing the design or construction contractor in writing of commitments that are completed as well as non-conformities and recommended corrective actions. All such inspections should be documented by the field monitors and reported to the environmental lead. Protocols should be established for reporting such violations (such as spills or illegal discharges), to project staff for notification to agencies. Since the protocol could vary from project to project, procedures should be established for each project.

Coordinating with Environmental Agencies. Ongoing coordination with environmental agencies helps to ensure that environmental commitments are met and adapt designs to changing conditions on the project site as well as avoid delays and maintain relationships. Prior to any site visits by agency staff, the environmental monitor must coordinate access to the project site with the resident engineer for safety and liability concerns.

Corrective Actions. In the event of an unanticipated field condition, the environmental monitor can assist in expediting a corrective action based on best management practices. In such instances, the environmental monitor typically reports the action to the environmental lead, who in turn notifies the resident engineer. The resident engineer is responsible for informing the client, contractor project manager, and agencies. In certain cases, this scenario could lead to stop work orders issued by the resident engineer.

8 | Special Considerations for Design-Build Projects

Design-Bid-Build vs. Design-Build. The traditional project delivery method for highway construction is known as design-bid-build. Under this method, the design and construction phases of a project occur sequentially: design plans are fully completed; the final design is incorporated into bid packages for construction contractors; and a contractor is then selected and construction begins. With design-build projects, the design and construction phases overlap: bid packages are issued to design-build contractors based on 30% (or less) design plans; the project sponsor then seeks bids from design-build contractors; and the selected design-build contractor is responsible for completing the design and building the project.

Responsibility for Design Decisions. With a design-bid-build project, decisions about how to implement environmental commitments are made during the design phase; the construction contractor must then build the project according to the approved design plans. For a design-build project, decisions about how to implement environmental commitments may be made by the design-build contractor. For example, a FEIS may call for replacement of wetlands as a mitigation measure, which would be included later in the detailed design. In a design-bid-build project, this wetland mitigation would be fully designed during the final design process; the construction contractor would only be responsible for building it. By contrast, on a design-build project, the same commitment would be identified from the FEIS, but the design of the wetland mitigation would be the responsibility of the design-build contractor.

Responsibility for Permitting. With a design-bid-build project, the project sponsor typically obtains permits for the project, which makes it possible for the project sponsor to enter permit conditions into the commitments tracking database before construction begins. In a design-build project, the project sponsor does not always provide permits to the contractor; instead, the design-build contractor may be responsible for obtaining some of the permits for the project. The timing of the permitting can add a layer of complexity in terms of first identifying all permit conditions and then tracking them in the field for compliance, especially where the design-build contractor (not the project sponsor) is responsible for obtaining the permits. Tracking these permit conditions on a regular and frequent basis enhances successful implementation.

Oversight of Design-Build Contractor. The design-build contractor has significant responsibility for implementing environmental commitments related to both design and construction. The project sponsor (state DOT) remains ultimately responsible for ensuring that those commitments are implemented. Therefore, some procedure will be needed for overseeing the design-build contractor's compliance with the environmental commitments. These issues—including the ongoing roles of the environmental lead and environmental monitors—should be addressed in the design-build contract.

9 | Keys to Success

Coordination with NEPA/Permitting Team. Coordination between preparers of NEPA documents and permit conditions (the “NEPA team”) and environmental monitors provides important information as to the expectations of the permitting agencies during the construction phase. The NEPA and permitting team can help the environmental monitors understand what the environmental commitments are intended to accomplish.

Coordination with Design Construction and Maintenance Staff. The environmental lead should work closely with the design and construction staff to emphasize the importance of the environmental commitments and to clarify any confusion as to what the commitments actually mean. The ability of the environmental monitoring team to work closely and constructively with the design staff and contractors enables commitments to be met and situations in the field to be addressed effectively and promptly. The environmental lead needs to establish and maintain a strong relationship with the design and construction staff to strike a balance between the work and being responsive to the established commitments. Coordination with operations and maintenance staff should also occur if the project includes commitments that extend beyond design and construction.

Coordination with Resource Agencies. Frequent communication with resource agencies helps build trust and confidence in the project by regulatory agencies and interested third parties. This coordination can be achieved informally or through a written partnering agreement that provides a framework for ongoing communication with the agencies during design and construction of the project. If a statewide system is in place for tracking all EIS projects, the commitment tracking database could become part of this system.

Continuity of Staffing. Environmental monitors function most effectively when they have a strong understanding of the environmental commitments, the individuals involved in design, construction, and maintenance, and the overall context for the project. For this reason, it is advantageous to maintain continuity within the environmental monitoring team.

Training of Resident Engineers. The resident engineer plays a key role in enforcing compliance with environmental commitments, because it is the resident engineer that exercises direct authority over construction contractors (and can halt work on the site). Therefore, it is important to provide training so that resident engineers clearly understand the role of the environmental monitors, the importance of meeting environmental commitments, and the steps that need to be taken when commitments are not being followed.

Clear Responsibilities. The project sponsor should establish a clear hierarchy of reporting relationships within the environmental monitoring team. The establishment of an environmental lead in the construction phase fosters a more streamlined and unified field presence and offers a specific point of contact when reporting to the sponsoring agency and regulatory agencies.

Project Sponsor Support. The project sponsor should convey to all project staff and consultants that meeting environmental commitments is a high priority. The project sponsor's actions send a strong message to all project staff that environmental commitments must be met, and that non-compliance will not be tolerated.

Documentation. Documentation of daily field inspection reports from the environmental monitor should be a compilation of the daily inspections conveyed to the resident engineering staff in the field, so that there will be no surprises when bi-weekly, monthly, or quarterly reports are issued. The reports can be used to update records in the database.

Reference Materials

Statutes, regulations, and guidance documents cited in this Handbook, along with additional materials and sample documents, are available on the AASHTO Center for Environmental Excellence web site, <http://environment.transportation>

The AASHTO Center for Environmental Excellence's Technical Experts are available to provide strategic environmental and focused environmental management technical advice. For more information on the Center Technical Assistance Program (CTAP) please visit: http://environment.transportation.org/center/tech_experts/

Glossary

AASHTO	American Association of State Highway and Transportation Officials
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
RE	Resident Engineer
ROD	Record of Decision

Appendix A

Suggested Environmental Impact Categories/Fields for Environmental Commitments Database

Air Quality
Coastal Resources
Commitment Description
Compatible Land Use
Construction Impacts
Date Completed
Department of Transportation Act: Section 4(f)/6(f)
Farmlands
Fish, Wildlife, and Plants
Floodplains
Hazardous Materials, Pollution Prevention, and Solid Waste
Historical, Architectural, Archeological, and Cultural Resources
Light Emissions and Visual Impacts
Natural Resources and Energy Supply
Noise
Reference
Responsibility for Commitment Implementation/Verification
Secondary (Induced) Impacts
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks
Water Quality/Permit Compliance
Soil Erosion and Sedimentation Control
Wetlands
Wild and Scenic Rivers

ADDITIONAL RESOURCES

PRACTITIONER'S GUIDES AVAILABLE FROM AASHTO CENTER FOR ENVIRONMENTAL EXCELLENCE:

- 01 Maintaining a Project File and Preparing an Administrative Record for a NEPA Study
- 02 Responding to Comments on an Environmental Impact Statement
- 03 Managing the NEPA Process for Toll Lanes and Toll Roads
- 04 Tracking Compliance with Environmental Commitments/Use of Environmental Monitors
- 05 Utilizing Community Advisory Committees for NEPA Studies
- 06 Consulting Under Section 106 of the National Historic Preservation Act

For additional Practitioner's Handbookss, please visit the AASHTO Center for Environmental Excellence web site at: <http://environment.transportation.org>

Comments on the Practitioner's Guides may be submitted to:
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