Implementation of Community and Cultural Resource Commitments

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Disclaimer

Abstract

State departments of transportation (DOTs) make commitments as they plan transportation projects, and the tracking of commitments is a necessary component to ensure adequate implementation. As DOTs consider "environmental" commitments, those related to community impact assessment and cultural resources are some of the most particular. This study analyzed the practices and methods used by DOTs to track and enforce the implementation of community and cultural resource commitments. DOT responses to the research survey, primarily from cultural resources personnel, revealed three basic tracking systems - the Green Sheet process, use of Excel spreadsheets, and electronic database systems - as the primary means of tracking and managing commitments. In addition to methodology, the survey asked about the effectiveness of commitment tracking and what practitioners saw as strengths and weaknesses in their processes. This report forefronts three examples of electronic database tracking systems, and the discussion of "best practices" centers on the advantages of an electronic database system to DOT project management activities. The study goes on to recommend a workshop where states share the work they've done in developing tracking systems related to community and cultural resource commitments.

Contents

1. Background and Organization

A. Rationale

As a state department of transportation (DOT) plans a transportation project, it inevitably commits to doing some things and not doing others. *We will design this overpass to match the local architecture; we will not fill that wetland.* But commitments like this will not be fulfilled if the people who are in positions to fulfill them do not know about them, do not understand them fully, or don't manage the process well. The responsibility for commitments is sometimes vague, commitments can overlap and conflict with one another, and implementation can play out over long time periods.

Commitments often involve community and historic preservation issues raised during review of projects under the National Environmental Policy Act (NEPA), and codified at the completion of the NEPA process in Section 106 agreement documents or findings, a record of decision (ROD), a finding of no significant impact (FONSI), or other decision-making documents. These commitments can easily "fall through the cracks" during the course of a large project. To keep track of commitments and how they are fulfilled, state DOTs set up tracking systems. However, even the transition from tracking a commitment to its implementation is a significant step.

A study conducted for the Federal Highway Administration (FHWA) in 2003 characterized the ways in which state DOTs track environmental commitments – generally commitments made during review of projects under NEPA. In 2006, AASHTO issued the *Practitioners' Handbook 04, Tracking Compliance with Environmental Commitments/Use of Environmental Monitors* with guidance on developing commitment tracking systems. Now, through the National Cooperative Highway Research Program (NCHRP), ICF International (ICF) was asked to pursue a related but somewhat more specific analysis, addressing the practices and methods used by state DOTs to track and enforce the implementation of community and cultural resource commitments.

The first objective of this research was to describe the range of existing practices for tracking cultural resource and community commitments. The methodology for collecting information on current practices included review of background data and administration of a survey. Survey methodology is detailed in Section II of this report. Sections III and IV synthesize the data obtained through the survey and review of background information.

The other major objective of the research was to use the results of the survey and literature review to develop "best practice" guidelines for tracking community and cultural resource commitments. This objective is addressed in Section VII and followed by recommendations for further research.

B. DEFINITIONS

1. What Are "Cultural Resource Commitments?"

The term "cultural resource" describes a broad range of historic and cultural elements of society. It is generally associated with historic districts, archaeological sites, buildings, structures and objects included in or eligible for the National Register of Historic Places – the class of resource that is the subject of the National Historic Preservation Act (NHPA). "Cultural resource commitments" are generally taken to mean commitments made in memoranda of agreement (MOAs), programmatic agreements (PAs), or conditional "no adverse effect" findings under Section 106 of NHPA, but may arise outside of these formal assessments under the auspices of planning, design and development, or right-of-way (ROW) negotiations.

There are also several federal legal authorities other than NHPA that deal with different kinds of "cultural resources." The Native American Graves Protection and Repatriation Act (NAGPRA) deals with Native American graves and cultural items; the Archaeological and Historic Preservation Act addresses historic, archaeological, and scientific data; Section 4(f) of the DOT Act preserves historic sites of national, State or local significance by limiting the circumstances under which such land can be used for transportation projects. Executive Order 13007 protects Indian sacred sites on tribal and federal land, and the Archaeological Resources Protection Act protects places and things of archaeological interest on such lands. The American Indian Religious Freedom Act protects tribal religious practices, and the Religious Freedom Restoration Act demands respect for religious practices generally. Many states, Indian tribal governments, and local governments have "cultural resource" laws and regulations that overlap with the federal ones.

For purposes of this analysis, we define "cultural resource commitment" to include <u>all</u> commitments made by a State DOT that have to do with places, things, and institutions that are regarded as somehow "cultural" or "historical" by any group of people. Such commitments include, but are not limited to, those made under Section 106 of NHPA and/or Section 4(f) of the DOT Act with regard to historic properties.

2. What Are "Community Commitments?"

"Community commitments" are generally obligations arising from one of several types of community impact assessments (CIA). Guidance on CIA includes *Community Impact Assessment: A Quick Reference for Transportation* (FHWA 1996), online sources such as the Community Impacts website (www.ciatrans.net), and other research projects such as *NCHRP 25-25 Task 36: Recurring Community Impacts Guidelines* (Grant et al. 2008). As described in those sources, CIA includes a broad range of issues from Environmental Justice (EJ) to community cohesion and traffic use patterns. CIA analyses extend from legislation such as Title VI of the Civil Rights Act of 1964, Executive Order 12898 on Environmental Justice, the "Uniform Act" of 1970, and others. "Community impacts" have been defined as "any effects on the quality of life of people living in communities or as part of social groups resulting from a project," and have been linked to seven broad categories of effect including sociocultural, health/safety, sensory/aesthetic, displacement, economics, land use, and mobility/accessibility (Grant et al. 2008). These issues are generally part of NEPA analyses and the public involvement process, and

their implementation can be tracked by DOTs in a number of ways under the rubric of environmental commitment tracking. The community impacts considered under CIA make up a substantial array of social science studies, and have very little overlap with processes of cultural resource assessment or management.

This report does not consider community commitments and CIA in any depth. The survey for this project received little information on community commitments and readers interested in that topic are directed to the sources on CIA cited above. CIA and cultural resources comprise two areas of impact assessment dealt with under distinctly different regulations, procedures, and staff. One exception, in terms of regulation is NEPA, which requires disclosure of impacts to cultural resources revealed as part of the Section 106 process. Another exception, related to management procedures and staff, is Native American tribal issues which are sometimes considered cultural resource work but at other times as community commitments.

GOVERNMENT-WIDE DIRECTION

From the perspective of the lead agency, FHWA has the authority and responsibility to meet the requirements of the various laws, regulations, and executive orders related to highway development, including Section 106, Section 4(f) and NEPA. The onus for implementing commitments arising out of these requirements often falls to the state DOT, and tracking commitments is recommended as the most effective means of ensuring implementation. Some DOTs must adhere to statewide directives requiring all environmental commitments be tracked, but for others it is not so clear what constitutes a commitment and which of them should be tracked.

From the perspective of resource management agencies, the federal agency with the most direct oversight and involvement with cultural resource commitments is the Advisory Council on Historic Preservation (ACHP). The ACHP's NHPA Section 106 regulations (36 CFR 800) require consultation with State Historic Preservation Officers (SHPOs), Tribal Historic Preservation Officers (THPOs), Indian tribes and Native Hawaiian groups, local governments, and other interested parties, which typically results in documented commitments to methods of resolving adverse effects on historic properties.[1]

The ACHP has provided no guidance to federal agencies about tracking the commitments they enter into under Section 106 of NHPA beyond that found in the regulations.[2] The ACHP's FHWA liaison advises that the ACHP expects FHWA to ensure state DOTs carry out commitments to which FHWA, or a state DOT on FHWA's behalf, have agreed to, and recognizes that tracking of some kind is necessary to achieve this purpose.[3]

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[1] That is, districts, sites, buildings, structures and objects included in or eligible for the National Register of Historic Places.

[2] Which require, at 36 CFR 800.5(d)(1) and 800.6(c), that agency officials ensure that commitments reached through consultation are implemented

[3] Carol Legard, personal communication, July 22, 2008.

2. Research Methodology

Background research on tracking and implementation of commitments focused on previous studies of related topics, primarily the 2002 FHWA "domestic scan" of environmental commitment tracking systems (FHWA 2003), ICF staff research into commitment tracking systems (FHWA 2006), and the 2006 AASHTO practitioner guide (AASHTO 2006).

The method employed in gathering new data involved a two-page written survey administered to State DOTs and interpretation of the results. This survey method was modeled on the one used in the 2002 survey of environmental commitment tracking processes and reflected some topics from subsequent ICF system reviews, so that results would be comparable. An example of the questionnaire distributed for this research is shown in Appendix A, as well as an example of the cover letter that accompanied it.

The survey questionnaire began by asking whether the state had a system for tracking community and cultural resource commitments made under NEPA, Section 106 of NHPA, and/or other authorities. It then posed eighteen questions that required written responses, and provided space for an open-ended description of a DOT's tracking system. The survey questions were based on the following seven more general questions developed in planning the research:

a. How do states define community and cultural resource commitments?

b. What commitments are tracked (and how) during construction, operation, and maintenance?

c. How is tracking information recorded, retrieved, and reported according to class of action (e.g. Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement)?

d. How effective are these methods?

e. What enforcement tools are being used to ensure implementation of commitments?

f. What penalties are applied for non-implementation or improper implementation?

g. How do states assess their success in fulfilling commitments?

Brief descriptions of relevant literature are described below, and the survey methods and responses are summarized in Section IV.

3. Review of Previous Studies

Evaluation of Wetland Mitigation Measures (FHWA 1993)

This study was conducted by the FHWA Office of Program Review as part of an examination of the general issue of mitigation. Representatives from FHWA, state, and resource agencies were interviewed and site visits were conducted in seven states. Several recommendations were made regarding

methods to monitor and ensure the implementation of commitments including 1) development of a model follow-up procedure by FHWA Headquarters; 2) use of Mitigation Summary sheets ("Green Sheets") in NEPA documents; and 3) inclusion of environmental mitigation in Stewardship Agreements.

Domestic Scan: Environmental Commitment Implementation Innovation and Successful Approaches (FHWA 2003)

This study, referred to as a "scan" following an earlier international model, was sponsored by the FHWA Office of Project Development and Environmental Review. It focused on successful practices and procedures for following through on "environmental commitments" entered into during the NEPA process. The team included FHWA, state, resource agency, and consultant representatives and site visits were conducted in seven states. The report identified several best management practices and recommended approaches for effectively implementing environmental commitments including: 1) adopting an environmental ethic at all levels of the agency; 2) cradle-to-grave communication; 3) environmental education and training; 4) strong stakeholder relationships; and 5) sharing successful practices. One important aspect of the recommended cradle-to-grave communication was the assignment of responsibility for monitoring compliance with environmental commitments.

Many of the tracking practices discussed in the report of the domestic scan are very relevant to this study and are summarized below. Direct quotes are italicized.

States that successfully implement environmental commitments do so by adopting effective means to communicate these commitments throughout each phase of the transportation project development process. Examples cited in the scan include:

- Post commitments on website for reference by contractors, etc. (Kentucky)
- Hold Project Engineer responsible for fulfilling commitments. (Connecticut)
- Environmental plan sheets in project plans. Checklists. (New Jersey)
- Environmental compliance certification at four stages in design. (Indiana)

<u>Commitment summaries</u> included in design and construction plans are just one of the mechanisms that State DOTs can use to clearly communicate commitments from the environmental analysis stage of project development through the planning/design, construction, and maintenance stages. Examples cited in the scan include:

- Mitigation Memo documents how commitments are implemented in final design. (Indiana)
- Environmental staff participate in pre-bid and pre-construction meetings with contractors. (New Jersey, Texas)
- Randomly selected construction field reviews. (New Jersey).
- Quality Assurance Reviews and Audits. (Connecticut, New Jersey)
- Automated system for self-reporting violations and initiatives. (New York).

<u>Databases</u> are tracking systems that allow States to catalogue and share project information, including documentation, status of commitment implementation, and records of completion of environmental

commitments. Databases are useful tools that outline details about a project from planning through maintenance. Examples cited include:

- Mitigation Compliance Tracking System (Connecticut)
- Environmental Permits, Issues, and Commitments (EPIC) system (Texas)
- ETRACK database (New York)

Forms are a static type of tracking that States can use to follow a project's commitments through the lifetime of the project. The success of these forms is dependent on how the form is transmitted from one project phase to another. Forms ensure that the information listed for a project is implemented and not forgotten. Examples cited include:

- Guidance Accountability Form (GAF) and Project Impact Profile (PIP) fed into the "Communicating All Promises" (CAP) system (Kentucky).
- Environmental Commitment and Obligations Package for Construction (ECOPAC) to communicate commitments to construction staff and record how compliance with commitments is carried out (New York)
- Commitments page of Environmental Permits, Issues, and Commitments (EPIC) system (Texas)

States often use lists to track issue-specific commitments, such as cultural resource commitments. Therefore, a State may utilize a variety of lists to delineate the commitments made for each resource impacted by a project. Lists can be designed to serve a variety of functions, including acting as a monitoring list, checklist, or punch list as part of the construction assurance process. Examples cited include:

- Cultural Resource Commitments List shared with SHPO and FHWA, contains project description, names of program and project managers, mitigation cost estimates, and status. Updated quarterly (New Jersey).
- Environmental Commitment Checklist, with yes/no/non-applicable options to document compliance with permits, control measures, inspections, water resource standards, and other environmental requirements (Texas).
- Program Support System (PSS), list providing information about project costs, status, and anticipated milestones (New York).

Federal Highway Administration Office of Federal Lands Highways Commitment Tracking System, Task 3, Benchmarking, Findings and Recommendations Report (*FHWA 2006*)

To more reliably assure and document Federal Lands Highways (FLH) adherence to environmental commitments, FLH examined current methods for tracking environmental commitments in each of its three divisions. The effort detailed FLH processes, identified risks and opportunities, and also researched leading state DOT and commercial-off-the-shelf (COTS) systems, to evaluate FLH's investment options in extending the agency's environmental commitment tracking capabilities. FLH's final choice was to explore the ability to incorporate environmental commitment tracking screens and notifications into its divisions' recently purchased project management systems (e.g. Open Plan, Primavera).

***AASHTO Practitioners' Handbook* (AASHTO 2006)**

Based in part on the above studies, AASHTO developed one of its *Practitioners' Handbooks* addressing environmental commitment tracking and the use of monitors to ensure that such commitments are carried out. *Practitioners' Handbook 04, Tracking Compliance with Environmental Commitments/Use of Environmental Monitors,* was published in November 2006. Focused on tracking and fulfilling commitments reached under NEPA and other more or less specifically "environmental" authorities (Clean Water Act, Endangered Species Act, Executive Order 11988 on floodplain protection), its recommendations are nevertheless relevant to addressing community and cultural resource commitments, and are addressed in detail in section VII of this report.

4. The Survey and Results

This section presents an overview and synthesis of the survey results, and is followed by evaluation. A brief summary of the survey process is presented first, as it is important to know the methods and limitations of the information. This is followed by summaries of survey responses. Responses to comments are included in Appendix A; they have been slightly edited for clarity and to avoid identification of specific DOTs.

A. Analysis of Survey Process

The survey of 50 DOT offices resulted in 14 responses to the questionnaire, a response rate of 28 percent of those asked to complete the survey. The survey was also sent to the Virginia, Maryland and North Carolina State Historic Preservation Officers, although no responses were received. Table 1 provides a list of state DOTs that replied. This sample size is not large, but the surveys received display common patterns that suggest a representative view of how DOTs track the implementation of cultural resource and community commitments. The individual respondents to the survey were generally cultural resource specialists or staff in an environmental department who oversee cultural resource issues, a fact that shaped the information received.

Table 1: State DOTs that Responded to Survey

California	Nebraska	Utah
Georgia	New Jersey	Virginia
Indiana	New Mexico	Washington
Iowa	North Dakota	Wisconsin
Maryland	Oregon	

Among the tracking systems described, three categories were apparent:

1. Electronic database systems – technically sophisticated database management systems that are web-based with hyperlinked information, some with GIS capabilities, and which generally contain all environmental commitments for a project.

2. "Green Sheet" method – a paper file system in which a hardcopy sheet of commitments pertinent to a specific project is kept with the project folder.

3. Excel method – a process in which a list of commitments is kept electronically in a spreadsheet (or tables in a Word file) enabling them to be managed and tracked by an individual specialist. These are usually organized by specific resource category and maintained and monitored by the manager or specialist for that resource area, with the cultural group having its tracking list, the biology group another, etc.

Of the 14 responses to the questionnaire, these three methods were distributed somewhat evenly across the DOT responses, with 36 percent using an electronic database system, 21 percent using a Green Sheet method, and 43 percent using an Excel-based system. In some cases there is overlap, with DOTs using a combination of the Green Sheet and Excel methods.

B. Responses to Questionnaire

Fourteen states returned ICF's questionnaire and participated in follow-up telephone interviews. Answers to the questions varied and responses are summarized below with the descriptions presenting the theme of responses as well as the range of variation. Because it is sometimes helpful to hear what other practicing professionals think about an issue, Appendix B contains direct excerpts from the questionnaires that provide additional perspective on tracking the implementation of cultural resource commitments.

Existence of Tracking Systems

The questionnaire first asked whether the state had a tracking system for community and cultural resource commitments, however the state defined them, and went on to ask whether the system tracked commitments under a series of legal authorities – NEPA, Section 106, Section 4(f) of the Department of Transportation Act, and "other." All states responding reported that they did have tracking systems.[4]

All fourteen states responded that they track commitments made under NEPA and Section 106. At least ten track commitments made under Section 4(f). Seven states cited "other authorities" as bases for commitments; one state said that it did not track commitments under other authorities, and two states did not answer that section.

Summary: All reporting states say they have systems for tracking at least those community and cultural resource commitments entered into under the authority of Section 106. It may be that at least some states that failed to respond to the research questionnaire did so because they do not have such systems.

Longevity of Tracking Systems

[4] One state said it did not have a tracking system, but then went into considerable detail describing it.

The questionnaire asked how long the state's tracking system had been in place. Answers ranged considerably, from "twenty years" in one case to "a few months" in another. Those in place for ten or more years seem to be paper-based systems, probably employing variants of the common FHWA "green sheet." Most electronic database systems are reported to have been in place for the last one to five years; many appear to be still in formative stages.

Assignment of Responsibility

Allowing for variation in terminology used by different states, it appears that in virtually every reporting state, the DOT's environmental and/or cultural resource staff either bear the responsibility for tracking commitments or have a leadership role in doing so. This should not be taken to imply that there is a standard or uniform assignment of responsibilities, however. In one state there are different databases for commitments of different kinds, each the responsibility of its own manager. In another, responsibility varies by geographic region. Commitments that involve permits (e.g. under Section 404 of the Clean Water Act) are sometimes the responsibility of specialized permit staff. In many cases project managers play important roles in cooperation with planning staff.

Others Involved

Asked to identify other parties outside the state DOT involved in tracking community and cultural resource commitments, respondents most often mentioned the State Historic Preservation Officer (SHPO). Others identified included FHWA, the Corps of Engineers, the U.S. Fish and Wildlife Service, state environmental, health, and planning agencies, local governments, contractors and consultants. "Involvement," however, seemed often to mean involvement in the development or implementation of commitments, rather than in tracking them. In the words of one DOT manager, "We hand off the implementation to consultants. I don't really track it, per se… They get done." As another pointed out, "The DOT proposes mitigation to the SHPO, but the SHPO generally has not been involved in developing the mitigation."

Comprehensiveness

State DOTs were asked whether tracking applied to all commitments or only those in specified categories – for example, those required to ensure that a categorically excluded project involved no unusual circumstances, or to guarantee that a project would have no significant impact under NEPA or no adverse effect under Section 106. Most respondents said that all commitments were tracked, but details in their answers suggest that this is not quite the case. Tracking in some cases was described as "informal" or "individualized," seemingly meaning that commitments are tracked to the extent someone on staff takes the initiative to do so. One state said that it did not track "no effect" determinations under Section 106 – a determination type that has not been allowed for in the Section 106 regulations since 2000. One state said it used the FHWA "green sheet" to make sure that information on commitments is transferred to those responsible for implementing it, but had no system to determine whether the information on the green sheet was actually used. In most if not all cases, the responses indicate a focus largely on Section 106-based cultural resource commitments. It is not clear what happens with commitments made under other laws, or to commitments without explicit legal bases.

Status Reports

No state reported routinely preparing reports on the status of commitments made with respect to community or cultural resource concerns. Some prepare "internal" reports – apparently meaning internal to the office responsible for commitment tracking. Some prepare status reports on particularly large and complicated projects, or do so when requested by a SHPO, FHWA, or some other outside entity such as a Tribe or the Corps of Engineers. One state identified the Green Sheet as a kind of "running status report," and said that a Geographic Information System-based procedure will produce regular status reports. One DOT reported using commitment-tracking data to "certify" that a project was ready for construction, but there was no indication that status reports of progress towards that point were part of the procedure. Several states produce general annual reports on their work under Section 106.

Translation into Construction Documents

States were asked how commitments were included in construction documents and contracts. About half the reporting states identified the FHWA Green Sheet or some variant as the vehicle by which this is done – in other words, that commitments are listed on a piece of paper that accompanies the project file as it moves along toward execution. Some respondents said they included the provisions of NEPA documents in project plans, but did not say how. One state said it designates a specific "construction liaison," apparently on its cultural resource staff, to ensure that cultural resource commitments are included in the contractor's bid package, plans, and specifications. Another state reported that it makes project management responsible for reviewing the Green Sheet or its equivalent, with help from specialists as needed; others, we suspect, did not report this because they thought it inherent in the Green Sheet system. Most of the states reported that they distribute commitment information to planning offices, design teams, construction staff, and asset management personnel. This distribution seems in most cases to be the responsibility of environmental staff, which in at least one case regularly works with the project team to write any "out of the ordinary" specifications.

Updating System

States were asked when they had last updated their tracking systems, and how. Three states responded that they do so continually, incorporating new categories and additional information. Five states said they were in the process of moving to online web-based systems. Two reported recent development of, or substantial improvements to, electronic database systems. Only one state reported never having updated its tracking system since it was developed.

Utility as a Communication Device

States were asked whether their tracking systems have "helped communication between functional areas and outside agencies and contractors." Five states said their systems had helped; one said it had not, and another said they expected their system to assist communications with internal functional

areas and external agencies and contractors once it was updated. One state noted that its tracking data were not shared outside the DOT, but that its system had facilitated internal communication. Another state said it did not routinely share data outside the DOT, but mentioned that it has a quarterly status meeting with the SHPO, and shares tracking data in that context. One state said that its tracking system was the one constant in project planning and implementation, guaranteeing that nothing is lost or left behind as personnel and responsibilities change.

Weaknesses

Asked about weaknesses in their systems, three states identified lack of uniformity and quality of data as significant. Commitments are not consistently or reliably recorded, and it is not always clear when and how a commitment has actually been met. One state noted confusion between regulatory requirements and commitments as a problem. For example, to "identify historic properties" is a regulatory requirement, while "conduct such-and-so mitigation" is a commitment, but both kinds of requirements sometimes are logged into commitment tracking systems. Several states identified the interface between personnel and the tracking system as a problem area – for example, maintaining a tracking system tends to be a managerial responsibility, and when management staff changes, gaps may develop in institutional memory. Another state discussed problems involved in building consensus about entering and verifying entries. Personnel responsible for entering data were hesitant to spend time entering material that would not be verified and used, while management staff did not want to spend time verifying records if the data were not complete. Communication breakdowns were also identified as a weakness, in which information is not shared about commitments made or the status of their fulfillment. Problems with project definition were also noted; projects may be defined in different ways, and definitions may change through time, so it becomes difficult to maintain connections between project plans and commitments made. One state found its system too reliant on the project engineer's ability to manage the project components, and expressed the desire to move toward something more "automatic."

Possible Improvements

States with decentralized tracking systems tended to say that more centralization would be an improvement. One state suggested putting a geographic information system (GIS) at the heart of the tracking process. One state proposed that commitment tracking should be mandatory, rather than the tracking system serving as merely an available tool. One state indicated that improvements would depend on what the regulatory agencies say they want tracked. Rather surprisingly, only one state said that more time and resources should be assigned to tracking.

Long-term Responsibilities

Little commitment monitoring is done outside the context of particular projects, even though a state DOT's interaction with community and cultural resource issues may be a continuing issue in infrastructure management. Ten of the fourteen states responding to our questionnaire said that cultural resource commitments were not yet tracked over the long-term, and none indicated long-term

tracking of community commitments. Two states expressed interest in developing long-term planning systems, and one state asked for information on what a DOT resource management plan might look like.

State DOTs do take actions to manage cultural resources under their long-term management, however. Two states discussed systems they have in place for managing historic bridges, and three states mentioned GIS programs either in place or being developed that could aid in long-term management. Another state pointed to the use of deed restrictions and conservation easements. These preservation mechanisms did not seem to be integrated into any state's commitment tracking system though. One state responded that its tracking system could mark a commitment as being relevant to the "asset management" phase of a project, but noted that its system would no longer track the commitment if it wasn't part of transportation development.

Ensuring Fulfillment

States were asked how they made sure that commitments, once entered into, were actually fulfilled. Several respondents pointed to MOAs executed under Section 106, which articulate commitments; however, the MOAs do not guarantee fulfillment.

Most of the states reporting said that fulfillment of commitments depends on the personnel involved. As one state put it, "Commitments are ultimately fulfilled by people and it takes people to ensure that they're carried out." Key personnel involved in promoting compliance with cultural resource commitments, predictably, are the DOT's cultural resource staff. One state's response indicated that the cultural resource specialist(s) send letters to project managers and engineers to remind them of commitments adopted in Section 106 MOAs. Another has cultural resource staff coordinate with environmental compliance personnel who visit project sites to verify compliance. One state has set up project inspection teams that monitor compliance with commitments during both construction and post-construction phases. Another state has passed the monitoring responsibility for cultural resources to the State Historic Preservation Office (SHPO). A couple states indicated that ensuring fulfillment of commitments was FHWA's job, and one indicated that the goal of tracking commitments was to make FHWA review easier.

When is a Commitment Fulfilled?

The questionnaire asked how the responding state determined that a commitment had been completed, who makes this determination, and how. Four states said that the SHPO signs off in one way or another on completed commitments, while three pointed to FHWA as the arbiter of completion. Some states noted that other agencies – for example, federal land managing agencies and the Corps of Engineers – may be the deciders when it comes to completion of commitments on their lands or requiring their permits. In eight states, the state DOTs have internal monitoring programs to verify that commitments have been fulfilled; these programs appear in most cases to be the responsibility of the environmental staff.

What if a Commitment is Not Fulfilled, or is Inadequately Completed?

Three states commented that they have little or no recourse if commitments are not satisfied. Two states said that contractors are contractually obligated to fulfill commitments, and did not comment on what happens if they do not. One state reported that once a project is approved by the SHPO[5] and by the DOT landscape and environmental staff, there is no recourse if the contractor does something wrong. Another state said that if its personnel were notified of a problem, they would immediately require an alternative negotiated settlement. Two states discussed cases where a task not performed correctly could be re-done, but noted that this is not always the case. Three states alluded to the dangers of losing FHWA funding if commitments were not fulfilled, and one mentioned project delay as a possibility. Another alluded to litigation, while another referred to undefined administrative resolutions. These responses were discussed as apparently hypothetical outcomes; DOTs did not discuss experiences they had or might have had with unfulfilled commitments.

Enforcement

None of the responding DOTs described cases in which it had been necessary to apply any enforcement to commitments. One state said flatly that it had never faced the need for enforcement. Three others said that no enforcement options were available to them, and another commented that it had had a good response to requests for compliance. Other states discussed hypothetical possibilities, mostly for outside enforcement through litigation or other means by SHPOs, Indian tribes, FHWA, EPA, state environmental agencies, permitting agencies or the public.

Public Access to Commitment Data

In the questionnaire, respondents were asked whether the public has access to data on community and cultural resource commitments. Two states said no. Since many commitments themselves are adopted in public documents like EISs, records of decision, and MOAs, the research team understands that no public access means that the public is not given access to data on commitment tracking and monitoring. Three states alluded to making commitment data available in NEPA documents, but did not report whether the public has access to tracking data.

One state produces an annual report of all actions carried out under a Section 106 programmatic agreement it has executed with the SHPO and others. Another uses its commitment tracking database to produce a public document, but it was not clear whether this is done on a project-by-project basis, annually, or on some other schedule.

Two states post copies of permits, MOAs, and Section 106 summary documentation on their websites. One state also routinely posts such information at local municipal buildings. Other states, while they carry out various forms of public participation during planning and environmental review, do not appear routinely to keep the public apprised of how commitments are being fulfilled.

[5] The SHPO does not have project approval authority under either the NEPA or Section 106 regulations.

5. Database Systems: Three Examples

Further consultation with three states produced more detailed information on their tracking systems. Examination of these systems can help us understand how such systems are evolving, and allow us to identify evident strengths and weaknesses.

Virginia's Comprehensive Environmental Data and Reporting (CEDAR)

The Virginia Department of Transportation's (VDOT) Comprehensive Environmental Data and Reporting (CEDAR) system was implemented in May 2004. It was the culmination of a five-year effort to streamline VDOT's business and technology needs with respect to environmental data. VDOT developed the tool out of the growing realization of the need for environmental team members to have a consolidated, automated tool to track the work they perform. CEDAR replaced the more than 73 tracking systems previously in use throughout the state and resolved issues of data redundancy and duplicative work. Environmental staff now have a single, centralized data repository that is integrated with GIS databases, offers full integration with VDOT's project management system, provides improved accountability, and improves the documentation and communication of environmental decisions and commitments. Figures 1 through 4 show how commitments can be represented in CEDAR.

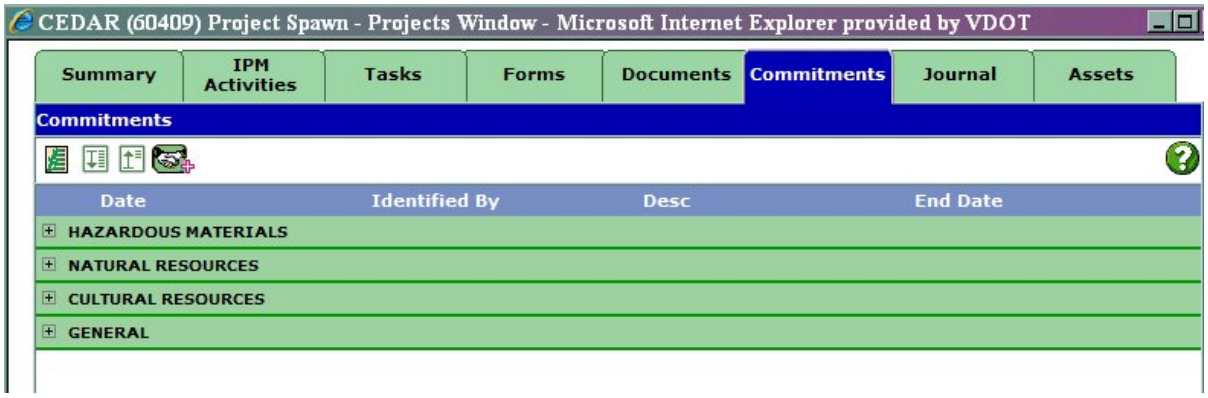


Figure 1: Commitment Tab of an Individual Project in CEDAR

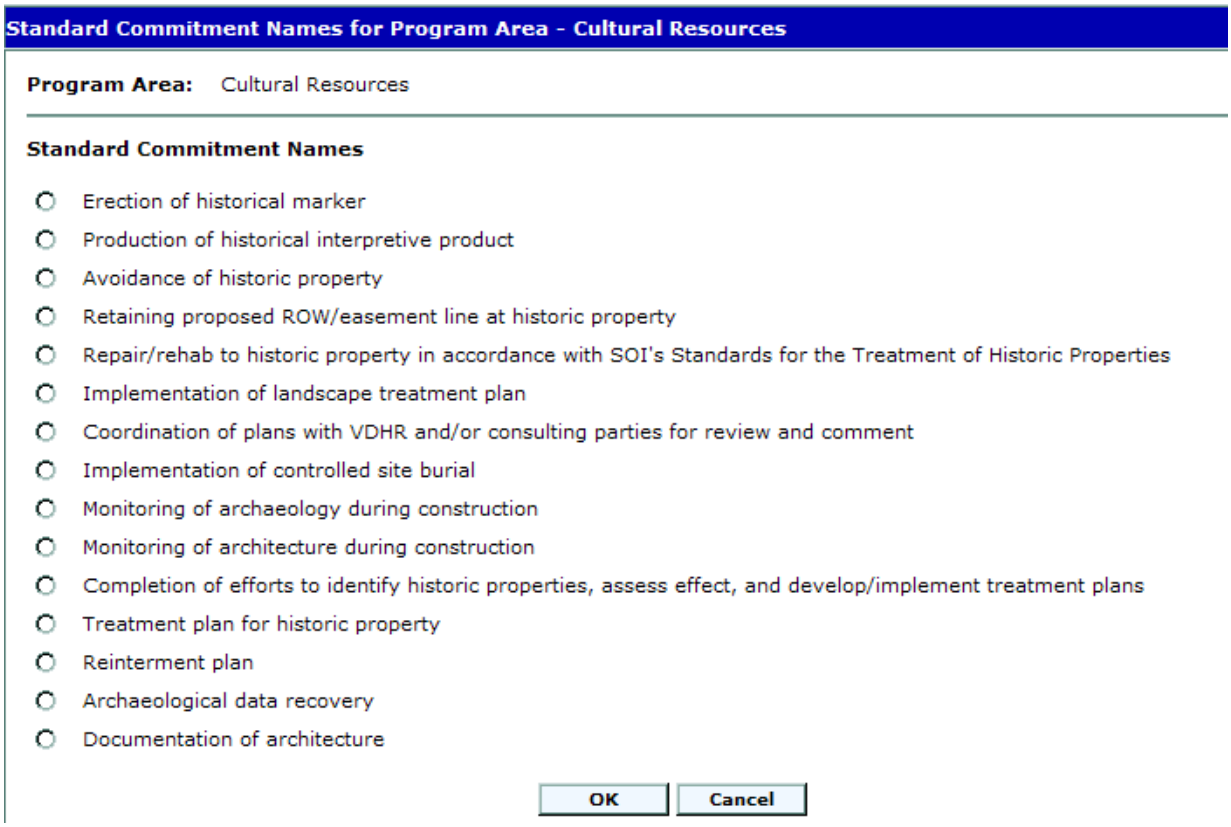


Figure 2: The Standard Commitment Screen for Cultural Resources in CEDAR

When entering a new commitment, VDOT staff can choose from the "standard commitment" list (Figure 2), or type the commitment name into CEDAR if nothing on the list is accurate. The screen assigned to each commitment permits considerable elaboration on the character of a commitment. Many cultural resource commitments are initially identified through the *State Environmental Review Process (SERP (VDOT 2008)).* As soon as state funding is approved for a project, the SERP process is initiated (VDOT 2008). A project description and map are entered into CEDAR, and state resource agencies submit data on the potential effects to resources. The web-based CEDAR database facilitates the SERP review into a fast and efficient means of gathering early input from many state resource agencies. CEDAR's cultural resource data forms are shown in Appendix C. These commitment-specific data forms allow for identification of commitment documents, the assignment of deadlines, and identification of the party responsible for implementation. The actual implementation of a commitment may have an extended lifecycle. For example, data recovery excavations at a complex archaeological site may take a year to carry out and involve considerable coordination with other agencies and stakeholders. The implementation process may involve contractors, city agencies, and others, and must be managed and monitored throughout that time. The specific cultural resource data forms provide an effective way for the cultural resource manager (or other environmental commitment manager) to track the details of implementation through to completion.

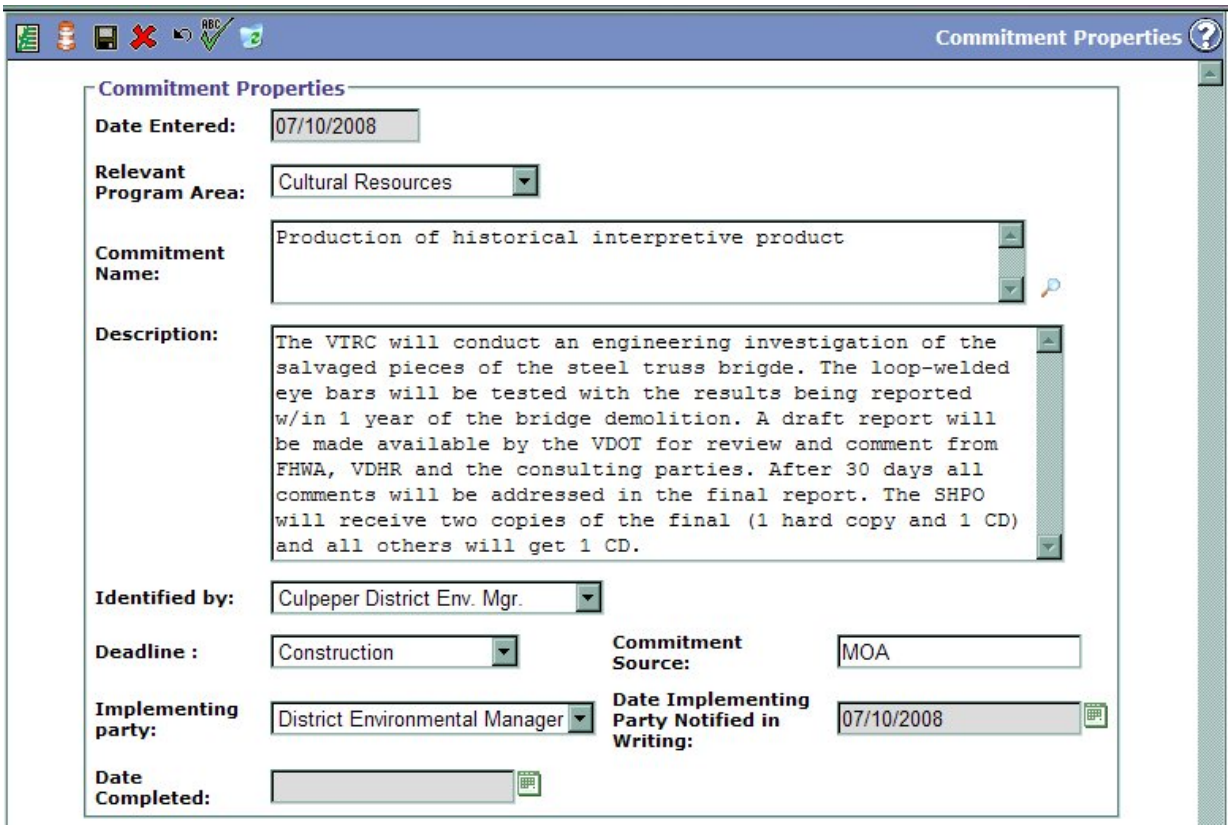
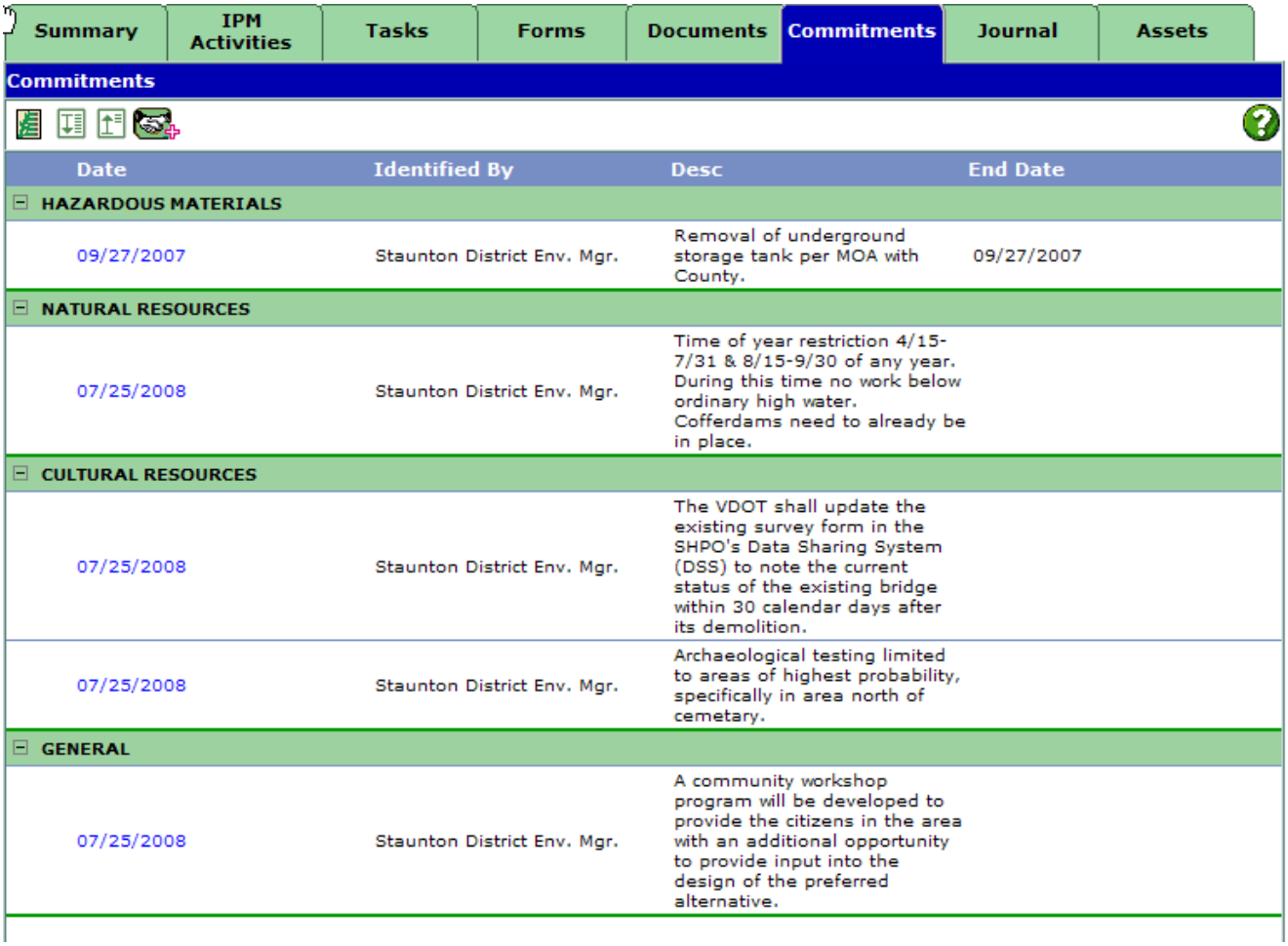


Figure 3: Individual Commitment Opened – the Commitment Properties Screen

Once a commitment is entered in CEDAR it is part of a project's electronic record. The Commitment Properties screen (Figure 3), gives a summary overview of the commitment's important management characteristics. The CEDAR system groups all commitments by project, and can display an overall list of project commitments and their status (Figure 4). Note that a general community commitment – holding a public workshop – is listed under the "General" category. This list is most useful as a quick overview for project participants who do not need to know the specifics of commitment implementation. CEDAR uses a tool called "Business Objects" to generate user-defined reports, including commitment reports for quality control monitoring of the implementation process.



Summary | IPM Activities | Tasks | Forms | Documents | Commitments | Journal | Assets

Commitments

Date	Identified By	Desc	End Date
HAZARDOUS MATERIALS			
09/27/2007	Staunton District Env. Mgr.	Removal of underground storage tank per MOA with County.	09/27/2007
NATURAL RESOURCES			
07/25/2008	Staunton District Env. Mgr.	Time of year restriction 4/15-7/31 & 8/15-9/30 of any year. During this time no work below ordinary high water. Cofferdams need to already be in place.	
CULTURAL RESOURCES			
07/25/2008	Staunton District Env. Mgr.	The VDOT shall update the existing survey form in the SHPO's Data Sharing System (DSS) to note the current status of the existing bridge within 30 calendar days after its demolition.	
07/25/2008	Staunton District Env. Mgr.	Archaeological testing limited to areas of highest probability, specifically in area north of cemetary.	
GENERAL			
07/25/2008	Staunton District Env. Mgr.	A community workshop program will be developed to provide the citizens in the area with an additional opportunity to provide input into the design of the preferred alternative.	

Figure 4: Expanded View of Project Commitments

As a web-based system, CEDAR is accessible “just about anywhere with broadband or decent wireless,” whether that is the office, a project site, or a coffee shop. Not only does CEDAR allow for easy input from state agencies at the start of a project, the ‘commitments’ function in CEDAR is designed to operate in conjunction with the VDOT "certification" process through which the status of commitments is reviewed and a project is “certified” as ready to be advertised for construction. CEDAR operates on an “all-inclusive” premise, being the repository for all environmental commitments to which a specific project must adhere. Despite the “all-inclusive” nature of CEDAR, VDOT staff report that commitments made outside of environmental compliance are tracked elsewhere within the department. Presumably a community impact commitment established in a ROW negotiation would not be included in CEDAR unless it was identified and included in the NEPA process.

VDOT cultural resource staff report that CEDAR generally works well for them, but note that its success is dependent on the actual entry of commitments. Obviously if this fails, there is less assurance that the implications of the commitment will be coordinated among all parties and that the commitment will be

fulfilled effectively. This issue seems manageable, but highlights the need for clear protocols governing the use of a tracking system, and for training personnel in how to use it.

Washington State's Commitment Tracking System (CTS)

Washington State DOT's (WSDOT) automated commitment tracking system (CTS) is intended to be comprehensive, enabling WSDOT personnel to track all environmental commitments of any kind in a single on-line database through design, construction, and maintenance. However, only projects included in WSDOT's Capital Management System (CPMS) can be accessed by CTS; this excludes pure maintenance projects, which do not appear in the CPMS.

As Figure 5 shows, cultural resource commitments are listed along with other environmental commitments; in the example shown, the cultural resource commitment is one made in an exchange of letters documenting a determination of no adverse effect (NAE) on a historic property under Section 106 of NHPA.

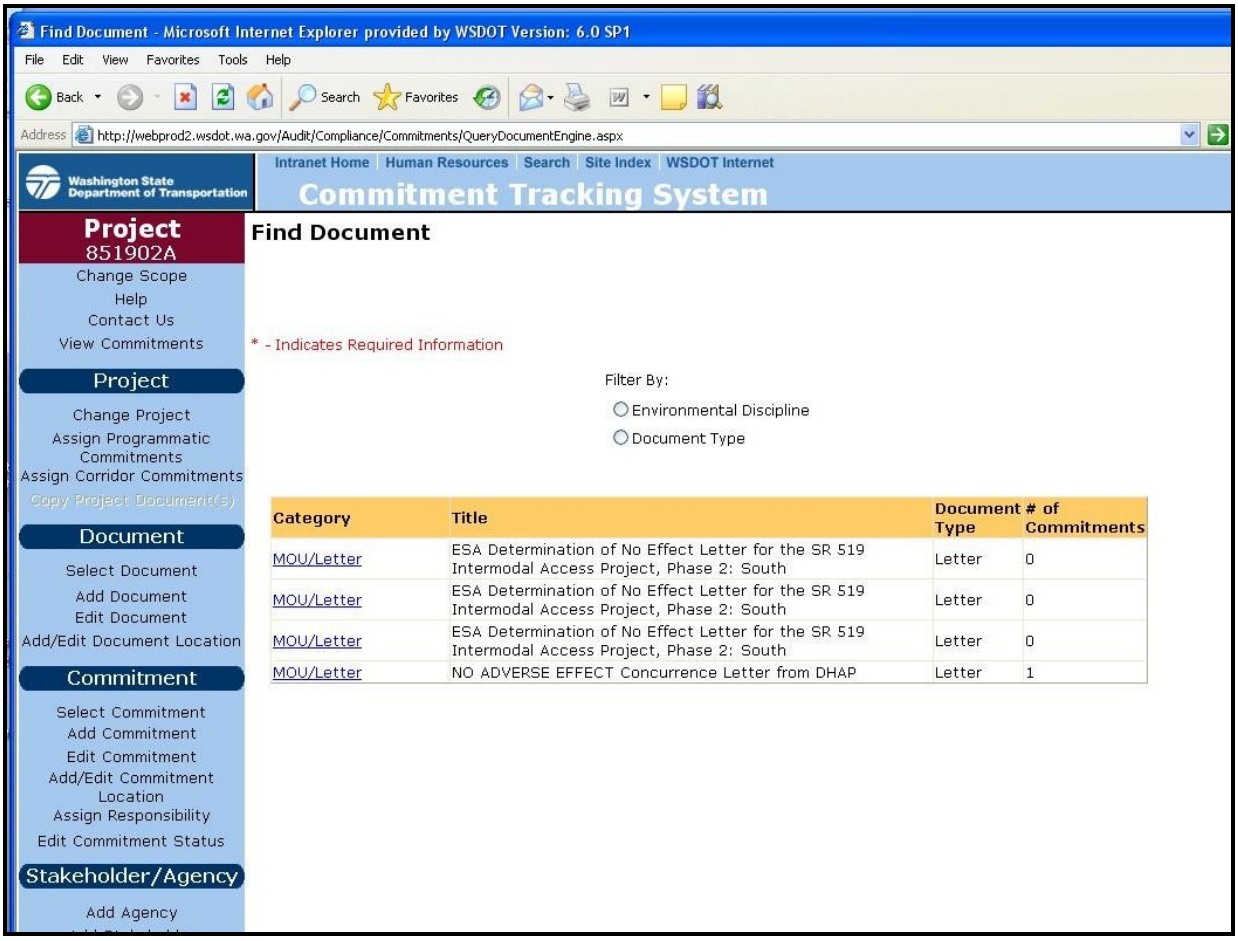


Figure 5: CTS Project Screen Showing Cultural Commitment, with Links to Documents

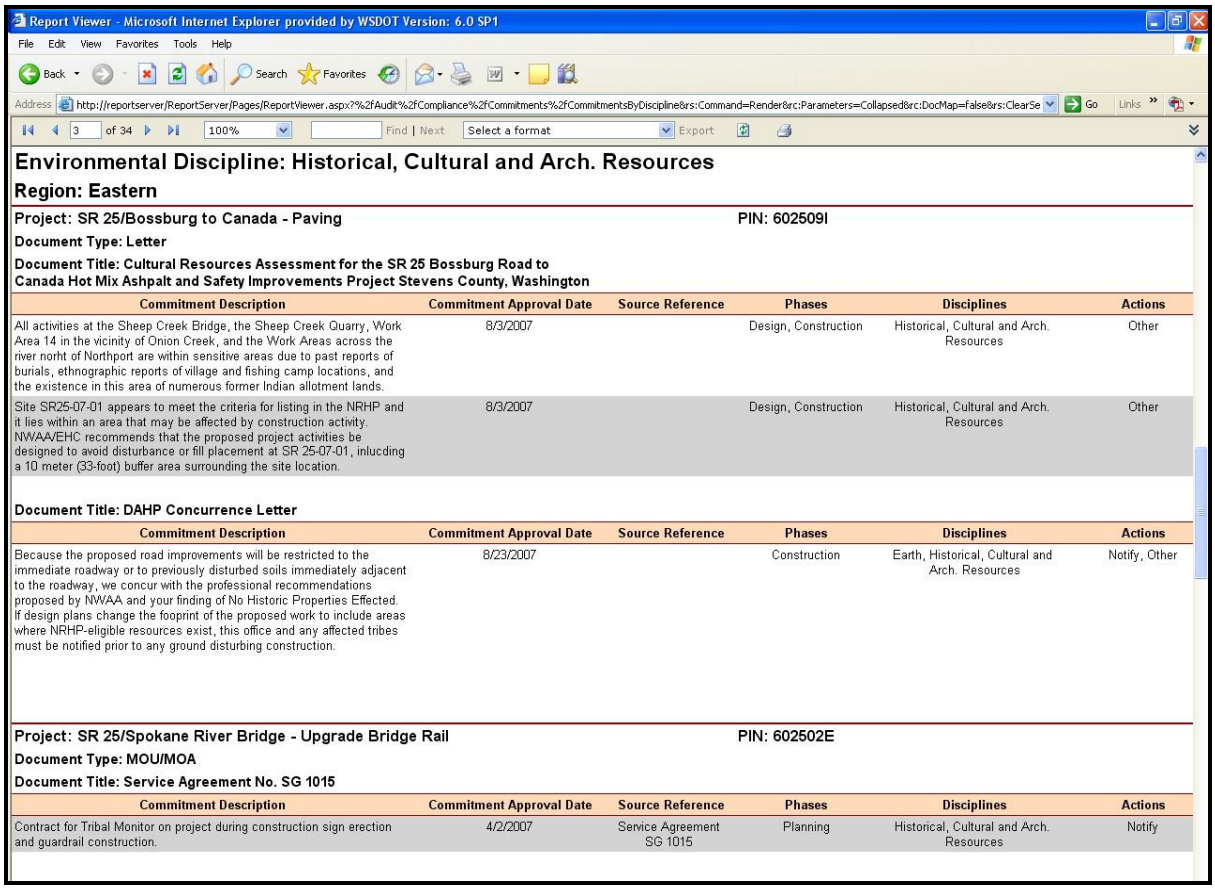
As with CEDAR in Virginia, the CTS includes detailed data on cultural resource commitments (shown in Figure 6). Cultural resource commitments are typically cut and pasted directly out of compliance

documents like Section 106 MOAs. Commitment characterizations are linked to more detailed data and assignments of responsibility.

WSDOT cultural resource personnel report that the CTS is fairly easy to use, but like VDOT staff, emphasize the need for discipline in the actual entry of data. Personnel unfamiliar with practices and terminology related to a given commitment can describe the commitment inaccurately, and commitments that are not memorialized in formal documents like MOAs (but rather, included in exchanges of letters or other forms of documentation) may not be entered at all. An overall CTS manager handles training and generally oversees operation of the system. The commitments database is generally maintained by a staff member in the Environmental Services Office, but anyone can enter commitments.

Specific features of the database are controlled by setting roles and responsibilities, and granting certain levels of administrative access to the system. Approximately 150 users are currently using the system, and the database is only available internally.

WSDOT regions use CTS for storing project-level commitments, contract building, and managing the status of commitments between Environmental/Design/Construction Offices. The staff at WSDOT headquarters use it for purposes of oversight, informing discussions with resource agencies, compiling large data sets on commitments, and analyzing commonalities among commitments to explore ways to improve efficiency.



Report Viewer - Microsoft Internet Explorer provided by WSDOT Version: 6.0 SP1

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Address http://reportserver/ReportServer/Pages/ReportViewer.aspx?%2fAudit%2fCompliance%2fCommitments%2fCommitmentsByDiscipline&rs:Command=Render&rc:Parameters=Collapsed&rc:DocMap=false&rs:ClearSe Go Links

3 of 34 100% Find | Next Select a format Export

Environmental Discipline: Historical, Cultural and Arch. Resources

Region: Eastern

Project: SR 25/Bossburg to Canada - Paving **PIN: 602509I**

Document Type: Letter

Document Title: Cultural Resources Assessment for the SR 25 Bossburg Road to Canada Hot Mix Ashpalt and Safety Improvements Project Stevens County, Washington

Commitment Description	Commitment Approval Date	Source Reference	Phases	Disciplines	Actions
All activities at the Sheep Creek Bridge, the Sheep Creek Quarry, Work Area 14 in the vicinity of Onion Creek, and the Work Areas across the river norht of Northport are within sensitive areas due to past reports of burials, ethnographic reports of village and fishing camp locations, and the existence in this area of numerous former Indian allotment lands.	8/3/2007		Design, Construction	Historical, Cultural and Arch. Resources	Other
Site SR25-07-01 appears to meet the criteria for listing in the NRHP and it lies within an area that may be affected by construction activity. NWAA/EHC recommends that the proposed project activities be designed to avoid disturbance or fill placement at SR 25-07-01, inlucding a 10 meter (33-foot) buffer area surrounding the site location.	8/3/2007		Design, Construction	Historical, Cultural and Arch. Resources	Other

Document Title: DAHP Concurrence Letter

Commitment Description	Commitment Approval Date	Source Reference	Phases	Disciplines	Actions
Because the proposed road improvements will be restricted to the immediate roadway or to previously disturbed soils immediately adjacent to the roadway, we concur with the professional recommendations proposed by NWAA and your finding of No Historic Properties Effected. If design plans change the footprint of the proposed work to include areas where NRHP-eligible resources exist, this office and any affected tribes must be notified prior to any ground disturbing construction.	8/23/2007		Construction	Earth, Historical, Cultural and Arch. Resources	Notify, Other

Project: SR 25/Spokane River Bridge - Upgrade Bridge Rail **PIN: 602502E**

Document Type: MOU/MOA

Document Title: Service Agreement No. SG 1015

Commitment Description	Commitment Approval Date	Source Reference	Phases	Disciplines	Actions
Contract for Tribal Monitor on project during construction sign erection and guardrail construction.	4/2/2007	Service Agreement SG 1015	Planning	Historical, Cultural and Arch. Resources	Notify

Figure 6: Detail of Cultural Resource Commitment in CTS

WSDOT currently uses the CTS consistently only for tracking "environmental" commitments – that is, those entered into under NEPA or another legal authority like Section 106 of NHPA. However, WSDOT personnel advise that the system can be modified easily to accommodate other kinds of commitments, including those that may be entered into with communities outside the NEPA and Section 106 processes.

Kentucky's Communicating All Promises (CAP) System

At the Kentucky Transportation Cabinet, Project Managers use the "Communicating All Promises" (CAP) screen of their project management system to capture community commitments, particularly commitments that may not be captured in construction documents or drawings. Figures 7 and 8 show screens shots of how CAP manages commitments made to individual community members and a school district.

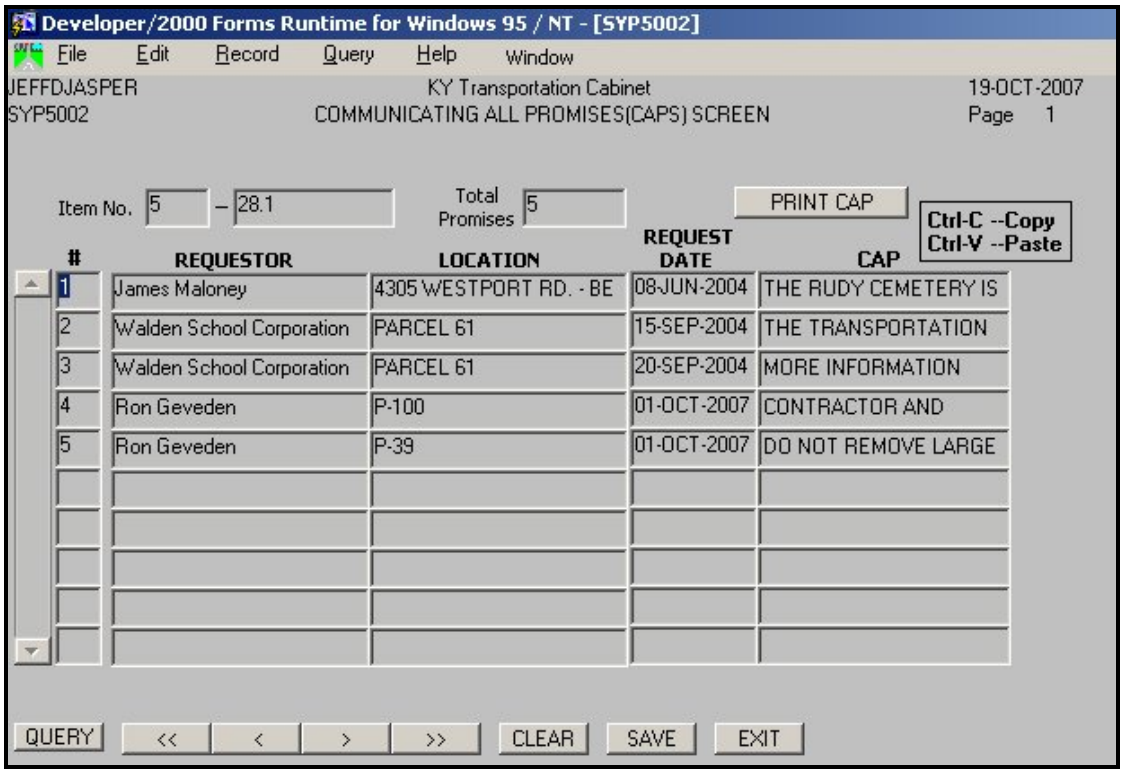
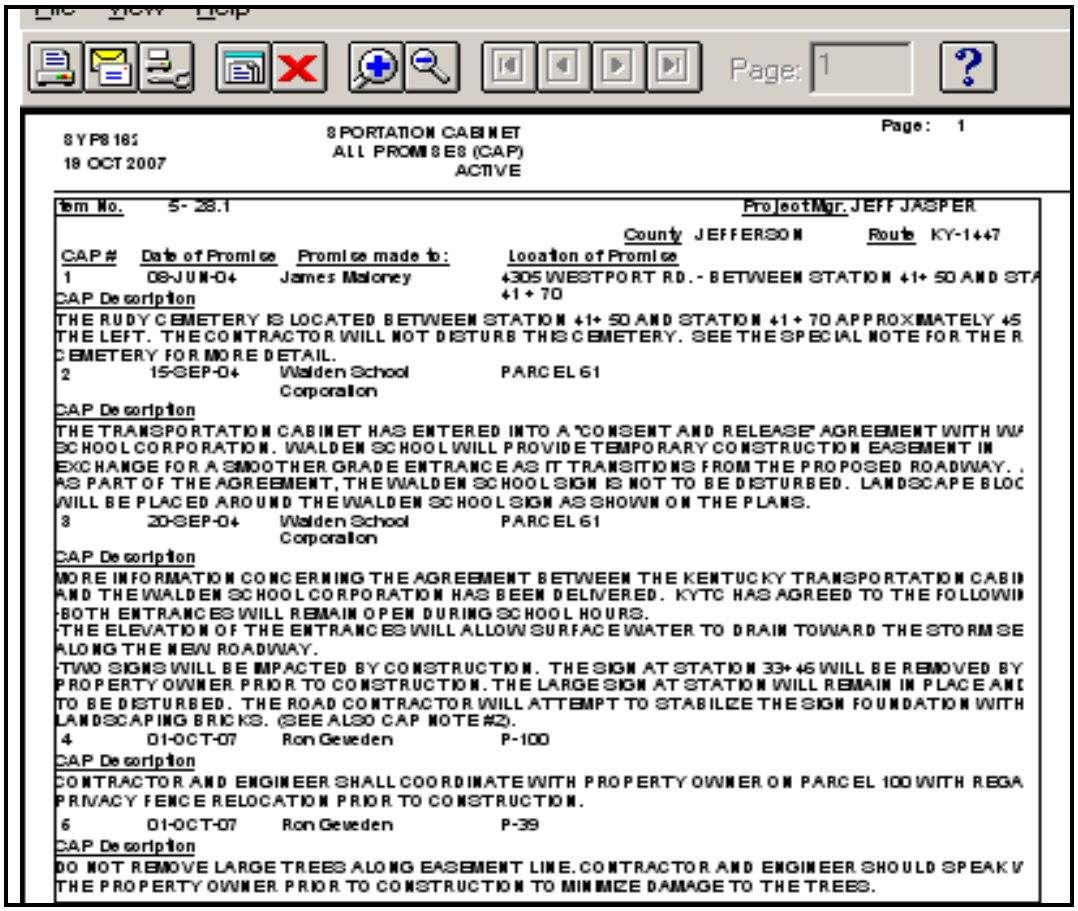


Figure 7: Query Screen for Community Commitments in Kentucky's CAP



SYP8 161
18 OCT 2007

SPORTATION CABINET
ALL PROMISES (CAP)
ACTIVE

Page: 1

Item No. 5- 28.1 Project Mgr. JEFF JASPER

County JEFFERSON Route KY-1447

CAP #	Date of Promise	Promise made to:	Location of Promise
1	08-JUN-04	James Maloney	4305 WESTPORT RD. - BETWEEN STATION 41+ 50 AND STA 41 + 70

CAP Description

THE RUDY CEMETERY IS LOCATED BETWEEN STATION 41+ 50 AND STATION 41 + 70 APPROXIMATELY 45 THE LEFT. THE CONTRACTOR WILL NOT DISTURB THIS CEMETERY. SEE THE SPECIAL NOTE FOR THE R CEMETERY FOR MORE DETAIL.

2	15-SEP-04	Walden School Corporation	PARCEL 61

CAP Description

THE TRANSPORTATION CABINET HAS ENTERED INTO A "CONSENT AND RELEASE" AGREEMENT WITH WA SCHOOL CORPORATION. WALDEN SCHOOL WILL PROVIDE TEMPORARY CONSTRUCTION EASEMENT IN EXCHANGE FOR A SMOOTHER GRADE ENTRANCE AS IT TRANSITIONS FROM THE PROPOSED ROADWAY. . AS PART OF THE AGREEMENT, THE WALDEN SCHOOL SIGN IS NOT TO BE DISTURBED. LANDSCAPE BLOC WILL BE PLACED AROUND THE WALDEN SCHOOL SIGN AS SHOWN ON THE PLANS.

3	20-SEP-04	Walden School Corporation	PARCEL 61

CAP Description

MORE INFORMATION CONCERNING THE AGREEMENT BETWEEN THE KENTUCKY TRANSPORTATION CABI AND THE WALDEN SCHOOL CORPORATION HAS BEEN DELIVERED. KYTC HAS AGREED TO THE FOLLOWI
-BOTH ENTRANCES WILL REMAIN OPEN DURING SCHOOL HOURS.
-THE ELEVATION OF THE ENTRANCES WILL ALLOW SURFACE WATER TO DRAIN TOWARD THE STORM SE ALONG THE NEW ROADWAY.
-TWO SIGNS WILL BE IMPACTED BY CONSTRUCTION. THE SIGN AT STATION 33+ 46 WILL BE REMOVED BY PROPERTY OWNER PRIOR TO CONSTRUCTION. THE LARGE SIGN AT STATION WILL REMAIN IN PLACE AND TO BE DISTURBED. THE ROAD CONTRACTOR WILL ATTEMPT TO STABILIZE THE SIGN FOUNDATION WITH LANDSCAPING BRICKS. (SEE ALSO CAP NOTE #2).

4	01-OCT-07	Ron Geueden	P-100

CAP Description

CONTRACTOR AND ENGINEER SHALL COORDINATE WITH PROPERTY OWNER ON PARCEL 100 WITH REGA PRIVACY FENCE RELOCATION PRIOR TO CONSTRUCTION.

6	01-OCT-07	Ron Geueden	P-39

CAP Description

DO NOT REMOVE LARGE TREES ALONG EASEMENT LINE. CONTRACTOR AND ENGINEER SHOULD SPEAK W THE PROPERTY OWNER PRIOR TO CONSTRUCTION TO MINIMIZE DAMAGE TO THE TREES.

Figure 8: Description Screen for Community Commitments in CAP

In KYTC's CAP system the preconstruction program manger has access privileges to add commitments. It was set up to function essentially as a project manager's notepad, and places the PM in the central responsible role. Use of CAP is mandatory on all projects, regardless of size, however the PM has discretion regarding what is included in the CAP, so it is used in different ways. Regular environmental practices and otherwise known and documented commitments from a NEPA process are not included in CAP, as they are captured elsewhere. CAP is most commonly used for unusual or non-standard commitments, especially ROW commitments and commitments to property owners. In terms of tracking implementation, the CAP system operates on a "safety-net" premise, recording and tracking commitments that don't fit in elsewhere. Kentucky's environmental manager reported "They (Project Managers) are pretty picky about what they put in there. The majority are typically ROW issues, (such as) commitments to property owners that an entrance will be done a certain way."[6] A comparison of the three systems is presented in Table 2.

Table 2: Comparison of CEDAR, CTS and CAP

[6] Personal communication, David Waldner, KYTC Environmental Director, 2007.

Data Base Feature	Virginia CEDAR	Washington State CTS	Kentucky CAP
Integrated with project management system	Yes	*	Yes
Integrated with GIS	Yes	*	*
Comprehensive list of commitments?	Mostly - • Commitments made outside of the environmental process may fall through the cracks	No - • Only tracks NEPA commitments or those with a legal authority such as Section 106 of the NHPA • Terminology can vary with personnel and result in different interpretations of the commitment • Informal commitments, i.e., letter exchanges, may fall through the cracks	No – • Includes only unusual or non-standard commitments that don't fit in elsewhere – typically ROW issues
Detailed description of commitments	Yes	Yes	Yes
References source document for basis of commitment	Yes	Yes	*
Tracks coordination with resource agencies	Yes	*	*
Assigns responsible party for carrying out commitment	Yes	Yes	*
Status of commitment	Yes	Yes	*
Used as a Mechanism to incorporate commitments into construction contracts	*	*	*
Due date or project phase for completion	Yes	Yes	*

Data Base Feature	Virginia CEDAR	Washington State CTS	Kentucky CAP
of commitment			
Tracks commitments through design, construction and maintenance	*	Includes Capital Project Management System. Excludes pure maintenance projects.	*
Commitments can be modified to fit field conditions	*	*	*
Oversight/Quality control monitoring	Yes	*	*
Who maintains the data base?	*	Environmental Services Office	*
Level of Access	*	Controlled access based on roles and responsibilities	Preconstruction program manager – PM has discretion regarding what is included

*Information not provided in the survey response.

6. The Current State of Practice

Based on the results of the study, answers to some of the seven questions posed in the problem statement on which this study is based can be offered, as follows:

How Do States Define Community and Cultural Resource Commitments?

Most state DOTs defined cultural resource commitments as "commitments entered into with regard to historic properties under Section 106 of NHPA," generally involving MOAs, PAs, and conditional no adverse effect findings. Nearly all the DOTs do not distinguish between community resources and cultural resources. As a result, it is possible in many systems for cultural and community resource commitments entered into under other authorities (e.g. the American Indian Religious Freedom Act or the Native American Graves Protection and Repatriation Act) to be excluded from commitment databases. Many of these non-Section 106-based issues would hopefully be identified through the Section 106 or NEPA processes, and may be formalized in a FONSI or ROD. There are concerns, however, that these commitments can be variously defined as either community or cultural resource commitments, the responsibility for them may not be clear between the cultural specialists and the NEPA practitioners, and they may consequently not be captured in a tracking system.

What Commitments are Tracked (and How) during Construction, Operation, and Maintenance?

It is clear from the research that deciding what commitments are tracked is the main issue for DOTs, and is closely tied into the question of definitions. Nearly all respondents, regardless of the type of tracking system their state uses, pointed out that deciding what constitutes a commitment was the central issue. For VDOT, procedures and tasks that are mandated statutorily are not commitments, only those that commit the agency to something over and above the standard process. For KYTC, even those types of commitments aren't accorded special tracking in CAP if they have already been recorded in an MOA or EIS.

Overall, cultural resource commitments made under Section 106 and NEPA (usually the same commitments) appear to be tracked fairly routinely through project construction by whatever system the state DOT applies. Other cultural resource commitments are not routinely tracked. As one responder put it, "Currently, any cultural resource commitments are treated and tracked pretty much the same as any other environmental commitment. Although we have a great need for a statewide consistent 'system' for the big commitments (i.e., permit conditions, mitigation requirements, land use actions, etc.), we see even a larger need for tracking commitments made to local communities, stakeholders, and other constituencies that don't normally get 'tracked' per se." Community commitments are tracked if they fall into categories that are the subjects of federal or state regulation or guidance (e.g. social impacts, environmental justice); otherwise, tracking appears to be rare.

Community commitments established in the context of CIA appear to be tracked by whatever system the DOT employs. The CEDAR database system in Virginia shows how community commitments are tracked in a category of "General" commitments (see Figure 4). Alternatively, Kentucky's CAP system tracks community commitments that aren't otherwise memorialized in another legally binding document such as a ROD or a FONSI. The decision as to whether an item should be entered into the CAP system rests in the hands of the project manager.

There is no information on tracking commitments through operations and maintenance. Most states have identified environmental stewardship as a valuable component of transportation development, but generally engage it only as an element of planning through the NEPA process. Systems for tracking environmental commitments could effectively link environmental issues to operations and maintenance, and would provide the "check" stage in the "plan, do, check, act" cycle of a long-term management system. Many community impact issues can have lasting and recurring impacts, and cultural resources can have long-term management concerns. In many cases, commitments dealt with at the project level during planning should be transferred to the equivalent of the program level for oversight during operations and maintenance.

How is Tracking Information Recorded, Retrieved, and Reported According to Class of Action?

The answer to this question varies widely from state to state. Most states have had tracking systems in place for only a few years. It appears that state systems for tracking cultural resource commitments are usually parts of systems for tracking "environmental" commitments entered into under NEPA. Most respondents indicated their states are working toward automated systems, and some have them in

place. Those that are in place seem to continue to evolve. A couple DOT responses indicated that they organize and categorize commitments according to which phase of the project they effect, such as planning, design, construction, etc. In no case was the environmental class of action (i.e. EA or EIS) specifically a factor in whether tracking was used or in how it was used; rather, the deciding factor at DOTs appears to be whether something qualifies as a commitment or not. If it is a commitment, it is tracked by whatever system the state DOT applies.

How Effective are These Methods?

System effectiveness cannot be judged based on available data. Most of the tracking systems are too new and untried to have produced much of a record upon which to measure and assess performance. Additionally, the answer to this question is a qualitative one. If a project management team ensures that all commitments are implemented, the true measure of effectiveness is whether the process was made smooth and efficient for the DOT through certain tools. In many cases, however, the desired outcome was ultimately achieved but the process that brought them to that point was laborious and protracted with redundancy and cost overruns. Given the weaknesses and problems identified by many of the states in this survey, even the best DOT tracking systems are only as effective as the people working with them and the management skills they can bring to the process.

What Enforcement Tools are being used to Ensure Implementation of Commitments?

Respondents seemed reluctant to discuss enforcement tools, perhaps because it would reflect on their own performance. Many indicated simply that enforcement "hasn't been an issue." Some of the "tools" reported for this question (including commitments in Section 106 MOAs or NEPA documents, for example) are not really enforcement tools at all; they are simply ways of memorializing the existence of commitments. Additionally, this question, as with the question above, comes down to qualitative variables. The concept of *enforced* implementation suggests that satisfying cultural resource or community commitments is a clear process that can be measured as a Yes/No. Experience suggests that the details of the process would be more complex, and would be a measure of efficiency. For instance, was the commitment only recognized and engaged at the last minute, when options for avoidance or redesign had narrowed and time was of the essence? Was the commitment implemented only after one contractor botched the job and the SHPO requested a supplemental report that took nine months to produce? With this in mind, ensuring implementation means ensuring adequate management and oversight of the process. That can be facilitated through DOT management structure, but in some cases it may be a personnel action.

What Penalties are applied for Non-Implementation or Improper Implementation?

DOTs did not cite any specific penalty actions related to non-implementation or improper implementation of commitments. However, the implications of these present two different situations. There is a divide in the process between making commitments and implementing them. In the case of cultural resources, much implementation, such as data recovery excavations or recording of a structure, is done by consulting firms external to the DOT. Externally, penalties like permit withdrawal, cost overruns, project delays, and litigation are all possible, but these were not linked to commitment

tracking. These are patron-client business contracts and guided by the principles of that relationship. If a cultural resources firm is doing a poor job, most often they will be expected to complete the current project to a satisfactory level, and they won't be considered for the next contract. By extension, the improper implementation of a commitment usually means the cultural resources consultant loses revenue on a project as a result of extra labor hours, and jeopardizes the possibility of winning future business from the DOT.

Non-implementation is an issue much more internal to the DOT. In terms of non-implementation, several states cited the possibility of losing Federal highway funding if commitments weren't carried out, suggesting that the constraints of project financing were among the main motivators to ensure implementation of commitments. The loss of FHWA funding is a high-stakes consequence for a DOT, and the corollary may be a certain internal ethos at the DOT that they will "implement commitments at all costs."

How do States Assess their Success in Fulfilling Commitments?

On balance, it appears that DOTs feel that their tracking systems are positive tools, they are making a difference in managing commitments, but the scope and reliability are a concern. While the necessity for process improvements in tracking cultural resource and community commitments is acknowledged, many still struggle with finding a means to ensure commitments are satisfactorily implemented in construction, particularly in the absence of a PA or MOA. In addition, the Cultural Resource specialist who is most familiar with the commitments is not responsible for sign-off post-construction.

Although none of the states responding reported any failures, they also did not indicate they had performance measures with which to determine the success or failure of the commitments when implemented. DOTs have little to no recourse if commitments are inadequate or not implemented, nor the means to enforce mitigation requirements other than the threat of the loss of federal funding. Faced with such an uphill battle, post-construction monitoring may not been seen as the best use of limited resources.

7. Best Practices

The single best practice that this research can recommend is that DOTs develop an electronic database system for tracking the implementation of commitments. The research has also shown that even the most sophisticated tracking tools require careful consideration in their design, can have issues with defining commitments and responsibilities, and are only as effective as the staff using them. The survey responses discussed many of these considerations. The following section briefly discusses the advantages of an electronic database system. That is followed by a review of additional considerations for any commitment tracking process. These are structured on the recommendations in the 2006 AASHTO Practitioners' Handbook. The Handbook provides good overall direction on best practices for tracking "environmental" commitments. We have re-examined those suggestions in light of the survey results and provided additional thoughts and recommendations for how each can be translated into

meaningful management of community and cultural resource commitments. The Handbook listed databases as their second "Practical Tip." It is listed here first to reflect its primary importance. All other best practices are relative to the central tracking system.

Best Practice 1: Develop a Sophisticated Database Tracking System

The efficiencies gained from an electronic data management and tracking system are enormous. These systems, such as those described in Section V, provide a central repository of information for projects and their commitments. Most of the states responding to our questionnaire either have some sort of database in place, or are developing one, a finding that is consistent with the results of the Domestic Scan (FHWA 2003). A robust database system will streamline the environmental assessment and review process, and translate into a tracking mechanism for ensuring commitments established in those reviews are adequately fulfilled. Generally, a single database system can manage all environmental commitments, eliminating the need for multiple separate lists or spreadsheets. Input and output of information is made much simpler. Resource agencies can add data online to a file, reports and auditing are accomplished with the click of the mouse, and the system can automatically archive an administrative record. Multiple users can access the information as needed, and managers can have automated emails or calendar notifications sent to them when deadlines are approaching. If something new comes up, these systems can be readily adapted to accommodate the situation.

Development of a database requires consideration and planning, as well as a commitment from the DOT. Enough good systems exist, however, that DOTs can learn from the efforts and trials of others to create a system, without "reinventing the wheel." VDOT's CEDAR and WSDOT's CTS are good models of DOT systems that have made significant progress in the development of comprehensive, systematic tracking systems. Both provide a centralized database to eliminate ad hoc lists of commitments, and improve the documentation and communication of environmental decisions and commitments. The systems are easy to use and proved quick access to commitment details, due dates, the status of commitment implemention and identification of the person responsible for final approval. In addition, CEDAR is integrated with GIS databases and offers full integration with VDOT's project management system. The CTS system has the capability to track commitments through design, construction and maintenance.

The effectiveness of database systems is linked to how well they are used, but standard operating procedures can be developed to guide the roles and responsibilities of database use within the DOT structure. One of the recommendations (below) is a conference or workshop where information on database systems can be compared and discussed so that all can share in the lessons and experience of others.

There is no hard data on the reliability of these systems, but intuitively they would seem to be more effective at ensuring implementation of commitments. Database systems integrate project data in such a way that there is more oversight of the commitments and their status than if a single resource specialist managed them. Provided that the entry of commitments into a database system is done well, these systems seem to be the best way to ensure an implementation process of high quality.

Best Practice 2: Pay Attention to Commitments As They Are Made

The recommendation to use a database system comes with the caveat that commitments must be formulated well and entered into the system for it to be effective. The *AASHTO Handbook* notes that:

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.*

It is standard practice for NEPA documents to list commitments that have been identified during NEPA review. The concluding chapter of an EIS, or other NEPA document, will be comprised of those commitments (sometimes referred to as conditions, stipulations, provisions, or another similar term). In the NEPA document they are conditional, but when translated into a ROD they become firm, and many will need to be tracked. Additionally, other "conditions" identified under NEPA may also need to be tracked, even if they don't make it into a ROD as a codified commitment. These items need to be closely evaluated and cross-referenced as decisions about tracking and implementation are made. NEPA documents can be long and complex, and their production is often compartmentalized, with different chapters farmed out to subject matter experts. In reviewing the quality of commitments, it is not sufficient to have only the cultural resource people review the cultural commitments, or a public involvement specialist the EJ assessment. Commitments can overlap or have inconsistencies, and only a complete review of them in their totality will identify this. Ideally the DOT design and construction teams, the resource agencies, and the stakeholders will examine all of the potential commitments during their development as well, making them as robust as possible. CEDAR replaced the more than 73 tracking systems previously in use throughout the state and resolved issues of data redundancy and duplicative work. Environmental staff now have a single, centralized data repository that is integrated with GIS databases, offers full integration with VDOT's project management system, provides improved accountability, and improves the documentation and communication of environmental decisions and commitments.

While these are not tracking devices per se, there is a link between how well commitments are established and how well they can be implemented, and this will affect what sort of tracking is required.

Best Practice 3: Systematically Identify and Enter Commitments

Systems such as the VDOT CEDAR database have sophisticated tracking capabilities, but information must make it into the system for them to work. A high level of quality assurance and quality control

measures should be developed around getting commitments entered into a tracking system. Just as attention to detail is important as the commitments are being made, a similar attention to detail is also important in transferring commitments into a tracking system. Getting commitments into a tracking system requires both identifying and understanding commitments, and entering them adequately into the tracking process. Many of the respondents to this research identified a problem with determining what is or is not a commitment. The majority of commitments will arise from the NEPA review, and creating and populating the commitments database at the publication of the FEIS, ROD, or FONSI will generally be the most efficient opportunity to transfer commitments to a tracking system (AASHTO 2006). Commitments in a NEPA document have usually been vetted by several sources. A systematic identification of other commitments could be more time consuming. Surely any tracking process should capture all commitments made under formal agreements, such as Section 106 MOAs and conditional no adverse effect findings, in plans of action under NAGPRA, and in agreements under other legal authorities, and these may or may not be listed individually in a NEPA document.

Commitments must be thoroughly and accurately described. If a DOT resource specialist is managing a spreadsheet, for example, he/she should enter the information so that others can understand the commitment, if necessary. For community and cultural resource commitments, we suggest that the description – or a separate field – identify the party to whom the commitment has been made, and/or the instrument in which it was made (the party responsible for executing the commitment should also be identified). For example:

- *Commitment to the Northwest Neighborhood Association to avoid damage to the recently constructed bandstand at the corner of Elm and Maple Streets (community commitment).*
- *Condition on "no adverse effect" determination under Section 106 of NHPA, that no construction will be permitted within 50 feet of the edge of archaeological site 53ARC987 as shown on site plan attached to determination (Section 106-based cultural resource commitment).*
- *Commitment to Ebert Tribe of Indians (letter dated April 1, 2012) to avoid application of herbicides to roadside plants used in basketmaking (potentially considered a community or a cultural resource commitment).*

A commitment tracked over a long period of time could easily take on a life of its own. Therefore, the description of commitments should identify the original documents in which the commitment is memorialized and/or described in detail. An EIS, ROD, EA or FONSI might be such a document, as might a Section 106 MOA, a letter exchange documenting a conditional no adverse effect determination, an agreement with a local government or neighborhood or other group, or an agreement with the government of an Indian tribe. Some of the database systems discussed in Section III promote "cutting and pasting" commitments out of documents such as Section 106 MOAs. Where the document description is clear and complete this can work, but the structure of such documents – often featuring long lists of commitments phrased as dependent stipulations and written in legal terminology – may make this practice less effective. This emphasizes the need for careful assignment and training of those

responsible for data entry and for close communication with knowledgeable specialists. The context of a commitment will not be lost if it is clearly described and its sources can be referenced and retraced.

Different commitments will have different qualities that can be accommodated and specifically noted in a database system. The Practitioner's Handbook (AASHTO 2006) recognized the differences between project-wide and site-specific commitments, as well as design or construction commitments, and respecting other commitments as key considerations. Date and status information will be central to tracking and implementation, regardless of the tracking system. Some commitments may have a clear end date, for instance a commitment to hold a public workshop meeting is largely fulfilled when it is finished; others, however, may be general commitments that should be considered in every aspect of a project.

Commitments would most likely be assigned to one or more subject categories such as air quality, water quality, traffic, or noise. "Community Commitment" might be one such category, and might be broken down into subcategories linked to the appropriate legal authority, such as Title VI, EO 12898, etc. Commitments could also be categorized according to the target group, such as "commitment to local government," "commitment to Indian tribe," and "commitment to neighborhood group." It might be more useful to identify the authority under which such a commitment has been made ("Section 106," "NAGPRA," "EO 13175," etc.). Cultural resource commitments that cannot be assigned to a particular legal authority would almost certainly be community commitments and could be categorized as such. A database system should be adequately structured to allow for variation in the types of schedules and status that different commitments may have. A Green Sheet or spreadsheet tracking system will have far fewer options for linking commitments and their characteristics, and will rely more heavily on the commitment description text as well as user knowledge and experience for ensuring implementation.

To attain adequate quality control and cross-references when identifying and entering commitments, involve as many perspectives as possible. Carefully consider what qualifies as a commitment, since numerous measures, such as community commitments or design variations that are not driven by legislation may nonetheless need to be documented. If, for example, a community workshop concludes that a sound wall must be of a specific aesthetic style and this change is included in the designs at the 15 percent stage, it may be necessary to record this as a commitment so that an engineer doesn't change it two years later when the DOT is trying to trim project costs. Involve members of the NEPA team in identifying the commitments as final NEPA documents are prepared. If community and cultural resource commitments are the province of parties other than the NEPA team, they should also be consulted on the commitment designation. Be clear and comprehensive about the intent of each commitment, because a commitment's intent is the basis for establishing the level of effort and scope of work needed to fulfill the commitment. If many eyes conduct quality control when entering commitments, it is more likely that the full intent of each commitment is captured. Ideally, the description of the commitment could be taken directly from the tracking database and incorporated into contract provisions.

Best Practice 4: Categorize Tribal Commitments as Community Commitments

DOTs will have to examine their policies regarding how to manage commitments entered into with local governments, neighborhood groups, Indian tribes, etc. that may not derive from clear legal authority. This is particularly important for Native American tribal issues. There is a tendency for everything "tribal" to be considered "cultural (i.e. historical)." Commitments that aren't clearly linked to Section 106, or related to a Section 4(f) historic resource, however, should be carefully scrutinized. Most would be commitments made to an Indian community – thus a community commitment. There is the potential for NEPA practitioners to assume the cultural resources experts are handling it, and vice versa. A written set of guidelines or criteria will help make consistent decisions regarding commitments.

Best Practice 5: Systematically Track the Status of Commitments in Database

Consistency in determining commitments and in entering them into a database must be followed with consistency in tracking them. Procedures must be established, and understood by all involved, for using the database and updating its contents in a manner that maintains quality control. It is also important to keep track of new commitments that may be made as planning progresses, and to update pertinent fields in the database when modifications are made. Complex projects may take years to move through planning, design and construction. Over that time, there will likely be numerous commitments made during public meetings and the NEPA process that can easily fall through the cracks if they are not systematically tracked throughout. Commitments tracked via paper trails, individual specialists' lists, or reliance on the memory of resource specialists can easily be lost when there is staff turnover.

Where a database system is used and many different people have access to the information and use it for differing purposes, a regular schedule for updates, such as monthly or quarterly, would improve predictability and reliability in the system. The responsibility for updates should be specifically assigned. Many cultural resource commitments are refined over time; for example, many Section 106 MOAs provide for adjustments to be made in activities depending on how fieldwork progresses, and these would be updates that affect other project planning activities.

It is important to be clear about the assignment of responsibility not only to those maintaining the database—in the case of a cultural resource commitment, perhaps the DOT's cultural resource staff—but also to those who actually implement commitments. Both the CEDAR and CTS systems are used to assign responsibility for assuring the completion of commitments and the CTS system tracks commitments through design, construction and maintenance.

Design and construction contractors should be assigned responsibility for reporting on how they are implementing specific commitments, as should such specialist contractors as those carrying out archaeological data recovery or monitoring construction-induced vibrations in historic buildings.

Best Practice 6: Use the Database during Design and Construction Phases

Some tracking systems, such as an Excel spreadsheet, can be little more than a record of when commitments have been completed. This research has shown, however, that tracking commitment implementation is not a means of ensuring a commitment is fulfilled. Most commitments will be implemented one way or another so that federal funding is not jeopardized. However, the goal of a

tracking system for a DOT should be to manage the implementation process to ensure that quality outcomes are achieved with maximum efficiency of cost and labor time. While some aspects of efficiency rely on a manager's experience and skill, an electronic database system is the best means of facilitating a good process. A project database such as CEDAR helps immensely with cross communication among different divisions of the DOT. Within the "commitments" function, milestones can be established, progress benchmarks created, and links can be made integrating related actions and processes. In short, a database system allows the implementation process to be envisioned, framed-out, checked, gauged, evaluated, compared – in short, tracked – at many levels and in relation to many other variables.

As a Project Manager is using tracking capabilities, regardless of the type of system, they may have to be proactive in communicating commitment information outside of the DOT. This is especially the case in dealing with consultants and construction contractors. Where community and cultural resource commitments are involved, this can often be a particularly serious issue. For example, a construction contractor may expect that archaeological data recovery will be completed on the due date indicated in the database, but if excavations uncover something unexpected, like a large historic cemetery, due dates may have to be adjusted dramatically, with ripple effects through the entire construction schedule or implications for project design itself. The database is a useful tool, but it should not be taken as set in stone.

Some commitments may require follow-through to maintenance; however, none of the DOTs responding indicated they had a mechanism to track commitments or transfer responsibility of such commitments to maintenance. At construction project closeout, the DOT maintenance staff may participate in a walk-through and review of the subsequent responsibilities for implementing any remaining commitments. To track the status of commitments post-construction, maintenance staff would need access to the commitment tracking tools or databases that should include a clear description of the maintenance responsibilities, an assignment of responsibility, due dates, and procedures for communicating with the Cultural Resource specialist and updating the database. As important, maintenance staff will also need to know what sites and features do not need to be maintained or should not be disturbed.

Best Practice 7: Thoughtfully Organize the Commitment Monitoring Team

In addition to quality control in developing and entering commitments, there needs to be adequate quality assurance and quality control in overseeing how commitments are met. Many if not most of the states responding to our questionnaire indicated that their environmental or cultural resource offices were responsible for monitoring compliance with commitments, but these are probably not the offices that should be considered the responsible party. Environmental and cultural resource offices seldom are in position to ensure that plans and specifications, contracts, and budgets reflect compliance with commitments; parties that do have such authority are the design offices and contracting offices and they need to understand the commitments and their implications. An integrated database system would provide access to the data by all parties, distributing the responsibility for coordination away from the resource specialists or compliance monitors.

The tracking system should be a means of ensuring the highest feasible quality of performance in fulfilling commitments. It will be necessary to strike a balance between the experience needed to understand a given set of commitments and the authority necessary to take corrective action if the process starts to go off track. On a large and complicated project with many commitments, it may not be possible to task one individual or even one office with overseeing fulfillment of all obligations, but of course if responsibility is divided, ways must be established for the responsible parties to coordinate their efforts. Project Managers overseeing implementation will need to be adept at coordinating between use of the database as a management tool, conceptualizing the different processes for fulfilling commitments, and motivating their staff to complete the processes efficiently.

Best Practice 8: Develop Standard Operating Procedures for Database Use

A tracking system is only as good as the people who use it, so it should be clearly determined how people use it. The Practitioner's Handbook (AASHTO 2006) recommends creating a user's manual for overseers to employ in keeping track of commitment fulfillment. A commitment database and its operation should be able to sustain the project needs even if there are staff changes. Responses to this research have recognized potential problems originating from the interface of tracking systems and their users. If a DOT develops a sophisticated tracking system, such as the database systems recommended here, they should likewise develop a set of operating procedures to structure the use of the tracking system. Operating procedures should cover many of the points that have been discussed above. The goals and purposes of using a tracking system should be made clear. Procedures should distinguish who uses the system, explaining that there may be different levels of access and what the expectations are for certain users. Criteria for defining commitments should be established, even if they are somewhat flexible. Methods for consistently entering commitments into a database should be developed.

Databases are repositories of project information, and can provide continuity to project actions independent of the operator of the system. It should be possible for a new employee to step into the role of tracking commitment implementation, and have a set of procedures to guide how tracking should be conducted. Operating procedures should emphasize for managers the role of using the system actively to check and monitor commitment implementation processes, and not to assume that everything is going as expected.

8. Conclusions and Recommendations for Further Research

Among the states that responded to the questionnaire, there is little consistency in the way community and cultural resource commitments are tracked. Some states like Virginia and Washington have quite highly developed systems, but even the best organized and most high-tech systems recognize the human element to the process and admit they can't completely ensure that community and cultural resource commitments are carried out, or that the process was the best it could be.

Understanding the implications of this survey has involved a certain amount of interpretation of the responses, analyzed in regard to hypothetical scenarios and environmental regulations. Readers will hopefully be able to place their own perspective on tracking and implementation of community and

cultural resource commitments within the discussions presented here, and find information and examples that help improve their process. Additional research on the topic of tracking and implementing community and cultural resource commitments might include some of the following suggestions.

Information Sharing among DOTs

Among the state DOTs participating in this study, several have strikingly well developed database tracking systems. We have given special attention in this report to Virginia, Washington, and Kentucky, but others like Texas have equally strong systems. While some independent system development is necessary and appropriate given the varying organizations of different states' programs, there are probably fruitful opportunities for cross-pollination and for avoiding the re-invention of wheels. Some state DOTs are already communicating usefully with each other about their systems. For example, in 2005 WSDOT and TxDOT carried out an expert practice exchange/review that both found informative and helpful in system development. Building on this sort of interstate cooperation could be beneficial to all states. A substantial hands-on conference of state DOT tracking system managers could be a useful next step in research. Such a conference – or even a series of such conferences (workshops might be a better forum) – would not likely develop a single model system usable by all states, but instead would facilitate dialogue on the topic. This could identify both common and state-specific strengths upon which to build, as well as weaknesses to correct.

Study the Issues of Large Projects

Some DOT commitments are small considerations, and may be most pertinent in planning and design phases of a project. Large mega-projects, and even some moderate sized projects, are different. These can involve ongoing cultural resource considerations throughout a long project cycle that might last 10 years and involve tiered environmental reviews, numerous supplemental assessments, and other types of unanticipated actions that have associated commitments. This research obtained information mostly on cultural resource and community commitments that were clearly identifiable during the NEPA environmental review process. The research team, however, has been involved in projects where not all cultural resource commitments could be identified in advance and the project moved forward into an extended construction phase under a PA or a "process-MOA" in which the assessment and evaluation of cultural resources, as well as community impacts, was an ongoing process. In these cases, as the project moves into different phases, some commitments may be satisfied while new commitments are being forged. Often the people involved in starting the project move on, and new staff must assume their role. In addition, large projects have much more potential for community impacts such as community disruptions and traffic management issues. These projects often have numerous contractors and subcontractors, and sub-subcontractors, all working around each other. Even the management and tracking of environmental commitments and their implementation may be contracted out. Examples of the structure and process of commitment management in a few very large projects may help DOT staff that are not familiar with how to approach the size, scope, and duration of the process. Such a research project would likely require searches of project files and interviews of project personnel to fully understand the role of commitments and tracking over time.

Long-term Management Issues

Commitments are generally made because there is an issue, and some issues have long-term considerations. Community impacts of a project can have recurring effects that go on for years (e.g. Grant et al. 2008). Some resources, such as an archaeological site in a ROW, can present long-term management challenges that are relevant to facility use and maintenance activities. Research into topics such as asset management and recurring impacts have examined similar topics, but may not capture all the issues involved. For instance, one response to this research pointed out how: "Many of the archaeological resources in [our] ROW are on land under the jurisdiction of a federal agency (BLM, Forest Service) and are managed by them."

The commitments discussed in this report focus primarily on the development of a project and the NEPA and Section 106 review processes that are part of planning. However, effective stewardship means considering the long-term implications of resource management. Some community and cultural resource commitments that are identified and evaluated at the project management level should subsequently be transferred to program management or long-term asset management after environmental review is complete, and few mechanisms for this are in place.

To improve the long-term management of community and cultural resources, DOTs need to be able to document the presence of the resource and quickly recover the information prior to maintenance activities, the sale of DOT property, and future project planning. Most agencies, at a minimum, keep lists of environmental assets although these are frequently maintained by individual resource specialists and can easily be lost when there is a turnover in staff. Increasingly, many agencies also use GPS to track the location of select environmental features, particularly water quality features, culverts, wetlands and stream restoration areas for general maintenance. Typically, GIS is used to capture, store and manage the data but there is not a formal, integrated process to ensure all information is entered into the system and ensure staff from planning to maintenance staff have access to the information.

Future research could target three to five DOTs leading the way in the development of integrated GIS and project management systems, including an in-depth analysis of the successes, failures and lessons learned. The study would identify internal and external data sources, methods used for inter-agency collaboration and buy-in, staff and funding commitments, the internal organizational structure needed to support long-term resource management and the steps for program implementation. Based on the results, the study could propose steps other DOTs can take to implement small to large scale programs based on their needs and available resources.

9. References

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Appendix A: Survey Cover Letter, Questionnaire and Responses

Dear Friends and Colleagues,

Your assistance is needed to assess the practice among state Departments of Transportation (DOT) of tracking community and cultural resource commitments. ICF International is undertaking the research on behalf of AASHTO under NCHRP Project 25-25 Task 41. In the course of planning transportation projects, DOTs often commit to actions designed to alleviate, resolve, or compensate for impacts to communities and cultural resources. Usually they are formally articulated in agreement documents (memoranda of agreements or programmatic agreements) under Section 106 of the National Historic Preservation Act (NHPA), or in records of decision under the National Environmental Policy Act (NEPA), but may be found in other agreements with environmental agencies or in permits.

The goal of this research is to establish "best practices" for tracking community and cultural resource commitments from their establishment through their completion. In order to streamline effective implementation of project commitments, we need to understand the types of cultural resource and community commitments that your DOT regularly encounters, as well as how they are tracked and managed throughout the life of a project. Some commitments involve a process and may be resolved using "standard" mitigations. For example effects to archaeological or architectural properties might result in data recovery or HABS/HAER recordation. Other commitments may stipulate that a particular outcome would result. These commitments can take many different forms and are more difficult to quantify, track, and mitigate.

Enclosed is a questionnaire. Examples of the types of commitments and how they are tracked will be most valuable for this research. Please provide as much information as you can and return it by March 21. Even if your DOT does not have a formal tracking system, it will be useful to understand the types of commitments that are encountered in your state. Proper execution and documentation of cultural and community resource commitments is a key step in the process of developing transportation improvements. A systematic study of this subject will be extremely valuable in developing examples and processes for others. If your office has a proven tracking system, we may want to follow-up with a telephone interview.

Email submissions are preferred, but any format is acceptable. If this survey is best answered by another individual, please feel free to pass it on, or take a moment to notify me. I'll be happy to answer any questions: tcuddy@icfi.com (703-218-2779). Thank you.

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NCHRP 25-25 (41) Survey Questionnaire

Name and Contact Information: _____

_____

(You can email back this document, or mail or fax hardcopies)

Do you have a system for tracking cultural resource and community commitments made under:

NEPA?	Yes_____	No_____
Section 106 of NHPA?	Yes_____	No_____
4(f)	Yes_____	No_____
Other authorities?	Yes_____	No_____

If you have such a system (formal or informal), please give a brief description/overview of how these commitments are tracked and the technology used. For example, do you or another staff person maintain your tracking system on your desktop computer? Do you use Excel or Access? Are cultural resource commitments tracked in a larger (web-based or other) system used for all environmental work and commitments? Please describe.

Documenting Commitments:

1. Do you categorize types of commitments (e.g., mitigation, educational)? Or is commitment tracking linked to class of action (e.g., NEPA documentation)?

2. Do you differentiate between community/cultural resource commitments and other environmental commitments?

3. How are commitments made in the planning process recorded, and how are they transferred into tracking?

Tracking Commitments:

3. How long has your current system for tracking community and cultural resource commitments been in place?

4. Who is responsible for tracking at the DOT?

5. Identify others involved in developing and/or implementation of commitments and how (e.g., SHPO, FHWA, Corps of Engineers, consultants/contractors, etc.).

6. Is tracking required within the agency, or is it required for projects in certain categories (e.g., commitments made to ensure a categorical exclusion, in a FONSI, or in a ROD, or commitments made as

a “no adverse effect” condition or in a MOA under Section 106)? Are there commitments that aren’t tracked?

7. Do you submit reports on the status of commitment implementation? If so, to whom do you submit them? Would such a report be available for the research team to study?

8. What is the process by which commitments are included in construction documents and contracts? How do Design, Construction, and Maintenance receive needed information and direction on commitments related to cultural resources?

9. When was your system for tracking these commitments last updated, and why? Are you anticipating any next steps in updating the process?

10. Has your system for tracking helped communication between functional areas and outside agencies and contractors?

11. What weaknesses have been encountered? Are there problems with tracking certain types of commitments?

12. What improvements do you think should be made to the system, if possible?

13. How are cultural resources in DOT right-of-way or otherwise DOT responsibility managed over the long-term (e.g., in a resource management plan)? Are these tracked?

Assurance Mechanisms

14. How do you ensure that commitments are actually fulfilled, and has tracking them helped?

15. Who decides a commitment has been satisfied? Is there an external sign-off, such as by a SHPO or FHWA?

16. What recourse do you have if a commitment has not been satisfied, or the work appears to be inadequate?

17. If enforcement is necessary, how does it work? Are there legal penalties? Please explain or give examples.

18. Does the general public have access to information on commitments, or are there plans for future external access?

Please return to:

Thomas Cuddy, ICF International, 9300 Lee Highway, Fairfax, VA 22031
tcuddy@icfi.com, (703) 218-2779

Summary of Survey Responses[7]

1. Do you have a system for tracking cultural resource and community commitments made under:

	Yes	No	N/A	No Response
NEPA	11	1	-	2
Section 106 of NHPA	11	1	-	2
Section 4(f)	10	2	-	2
Other Authorities	7	3	2	2

2. If you have such a system (formal or informal), please give a brief description/overview of how these commitments are tracked and the technology used. For example, do you or another staff person maintain your tracking system on your desktop computer? Do you use Excel or Access? Are cultural resource commitments tracked in a larger (web-based or other) system used for all environmental work and commitments? Please describe.

- NEPA, 4(f), and Section 106 compliance milestones for cultural resources (such as execution of an MOA), and all environmental work under NEPA are tracked in Excel databases but none that specifically track mitigation commitments.
- Most districts maintain individual databases for tracking cultural information related to their specific areas or regions of responsibility; the information tracked varies widely from district to district.
- HQ is currently developing a large web-based application that will provide a standard framework for managing environmental projects and documents, including mitigation and commitments. It will supersede the Excel databases.
- Project commitments are recorded on a "Green Sheet" in the project file. As project moves from office to office during development, the "Green Sheet" is transmitted with the project file.
- A web-based system is used to track NEPA and Section 106 commitments. Anyone can access the database but only managers can enter and edit data. All of the commitments are carried through to the contracting phase, so that contractors and construction engineers will be aware of them.
- There is not a system to track the commitments of local projects that use FHWA funds.
- All commitments are included in the NEPA document, entered into an Excel spreadsheet and subsequently into the Plans. There is no formal sign-off on commitment completion, but the

[7] Responses edited for clarity and anonymity.

Project Engineers in the Districts are responsible to see that everything in the plans is carried out.

- The DOT uses a paper trail.
- Cultural resources commitments are listed an Excel spreadsheet with a description of any agreements, due dates, and the status completion. The list is updated upon receipt of the Section 106 comments or signed MOA.
- The DOT uses an Environmental-wide database in Access called SEMI (System for Environmental Management of Information) that includes entry forms for NEPA, Permits, Ecology, and Cultural Resources. The database can be married into the larger department-wide Project Management database. All the databases are updated by the Environmental or Cultural Resources managers.
- FHWA and the DOT did a joint review of environmental commitment tracking practices and made recommendations to institute a consistent statewide system. Currently, each Region is tracking commitments to one degree or another using methods ranging from very detailed Excel spreadsheets to simple tables in MS Word. The GIS staff is in the very early stages of developing a web-based system for cultural resources.
- Currently, any cultural resource commitments are treated and tracked in much the same way as any other environmental commitment. There is a great need for a statewide consistent 'system' for the big commitments (i.e., permit conditions, mitigation requirements, land use actions, etc.), and an even a larger need for tracking commitments made to local communities, stakeholders, and other constituencies that don't normally get 'tracked', per se. Hence, and as part of the DOT's adherence with SAFETEA-LU regulations, the PDU database staff are building onto the existing project delivery tool for entering information at the Planning phases, to be used in the Environmental and Design stages and eventually becoming commitments to be implemented as part of the project. It is expected that with increased success, the DOT will be in a better position to gain support/funding for a more encompassing state-of-the-art tool in the future.
- After the environmental document is approved, the region environmental staff create a spreadsheet in Excel that lists all of the environmental mitigation commitments made, including cultural. The commitments are separated by what phase they need to be completed in: design, construction, and post-construction. The spreadsheet is given to the designers and put into the plan sheets for the contractor. Mitigation commitments for cultural resources are documented in a Memorandum of Agreement as well as in standard specifications and special provisions. Each region archaeologist maintains a spreadsheet of cultural mitigation commitments.
- The DOT is in the process of developing an electronic EMS in an electronic Program Management (ePM) system that will allow each commitment to be entered, checked off when it is completed, and a report generated.
- The DOT has defined commitment tracking functionality on a Comprehensive Environmental Data and Reporting (CEDAR) system that covers all forms of environmental commitments. CEDAR is a custom-designed and web-enabled system with associated GIS functionality. The DOT purposely included a commitment tracking functionality in CEDAR to provide structure in commitment tracking and to ensure those commitments are documented and communicated to all responsible parties. Commitments are part of each project record.
- All environmental commitments are tracked in a single on-line database. The database is available only internally. The project list is populated by linking to the larger project database.
- The commitments database is maintained by a staff member in the Environmental Services Office, and there is a single Cultural Resources Program person who enters all cultural commitments.

- Recently, the Cultural Resources Program started to keep a database of cultural resource compliance activities to make sure information can be cross-checked so nothing slips through the cracks.
- The DOT uses both hard copy memos and 3-ring binders and electronic data bases to pass on to others in project development and as a "tickler tool" as a reminder of environmental commitments. The challenge is to keep "everyone" in the loop, without overwhelming "everyone."
- N/A

Documenting Commitments

3. Do you categorize types of commitments (e.g., mitigation, educational)? Or is commitment tracking linked to class of action (e.g., NEPA documentation)?

- Tracking is very general – e.g. NEPA documentation, MOA executed for Section 106, etc.
- Commitments are not categorized but they are described, first by the class (e.g., Section 106 MOA mitigation) and then by the actual commitment (e.g., a stand of oak trees will be planted at such-and-such location in front of the historic home).
- Tracking is linked to NEPA documentation.
- Currently, commitments are categorized by project development phase: i.e., Planning, NEPA/Project Development, anything additional in Final Design, and Post-Construction Monitoring. In the future, this may change to categorizing commitments by regulation/overseeing agency, commitment type, and/or by project phase and/or a combination of those, or some other type of appropriate category to make it easier to find/enter the commitment and track it.
- Commitments are categorized according to a menu-defined class of action and environmental program area.
- Commitments are categorized by environmental discipline (e.g., Land Use, Water Quality) and by when the commitment is supposed to be implemented (e.g., Planning, Design, or Construction).
- Commitments are tracked by project and not by commitment or activity type.
- Commitment tracking is primarily linked o NEPA documents.
- Yes to both questions.
- No – Two responses.
- Linked to class of action.

4. Do you differentiate between community/cultural resource commitments and other environmental commitments?

- Each of the division Environmental branches tracks its own commitments. Biology, for instance, has its own system.
- No, but each commitment is listed separately.

- Not really. The only place to differentiate a community from a cultural resources commitment would be in the Memorandum of Agreement where responsibility would be spelled out. The Project Manager, on the other hand, would enter into a legal agreement with the community for future maintenance and ownership of an amenity.
- Commitments are categorized by discipline. Cultural resources commitments are generally filed under "Historical, Archaeological, and Cultural," although some "community" commitments may be filed under any of the following categories:
  - Land Use, Land Use Plans, and Growth Management
  - Agricultural and Farmland
  - Public Lands
  - Environmental Justice
  - Visual Impacts, Aesthetics, Light and Glare
  - Transportation
  - Public Services and Utilities
  - Social & Economic
- Yes – Four responses
- No - Two responses

5. How are commitments made in the planning process recorded, and how are they transferred into tracking?

- For cultural commitments, it is believed there is an informal system whereby an individual within a district would be responsible for following through on mitigation commitments for projects assigned to him/her. If that particular district is tracking mitigation commitments (exactly what is tracked varies among districts) that individual would input the information.
- Commitments are tracked on the Green Sheet. The DOT also has a project tracking system called TPRO which includes environmental commitments. Commitments are also listed on an Access spread sheet and the DOT is working on a GIS based tracking system.
- The Cultural Resources specialist enters the Section 106 commitments, but not community commitments.
- Commitments are entered on an Excel spreadsheet and Environmental Commitment Plan Sheet.
- Currently commitments are recorded on a Green Sheet and forwarded to individuals that can implement what is needed.
- Commitments are entered on SEMI.
- The DOT has recently instituted a formal, consistent statewide process through an operational notice called the 'Part 5' which is an addition to the project management (database) tool that is intended to capture issues discovered and commitments made in planning which need to be carried through into project development. The planning phases that result in projects are captured in refinement or facility plans which contain specific commitments that would be handed off to project development/NEPA phases through the completion of the Part 5. The project development and/or NEPA project managers may also want/need to coordinate with the planners or local community staff to determine any number of relevant aspects developed in the planning stage that may be carried over into consecutive project phases as issues and/or commitments to be tracked through project development, in addition to or as verification of the Part 5.

- Commitments are recorded in the NEPA document and put on a spreadsheet.
- The commitments are entered into the system by the responsible staff at the time they are made (Section 106 MOA, NEPA ROD, etc.). CEDAR tracks projects during preliminary engineering and construction. Planning commitments are not entered directly unless they are tied to an existing project.
- Cultural resources commitments are made through either a signed agreement (Section 106 MOA or PA), or a letter to the Department of Archaeology and Historic Preservation (SHPO Office) and tribes.
  If a project has a staff member dedicated to tracking commitments, that person enters into the commitments database (just a few large projects do this). For the remainder of projects, the Cultural Resources specialist who reviewed the project is responsible to do two things: (1) check the commitments box in the Cultural Resource program compliance database, and (2) pass along the document(s) for entry into the commitments database.

- For Section 106 the DOT has both a hard copy and an electronic copy of each MOA, with the stipulations identified. The DOT does an annual review on the progress of completion for each MOA.

Tracking Commitments:

6. How long has your current system for tracking community and cultural resource commitments been in place?

- The cultural resources/Section 106 tracking system has been in place since May 2004. The NEPA database was established roughly July 2007.
- Approximately 8 to 10 years.
- Since 2004.
- A few months.
- One Year.
- A paper trail is available on a project by project basis. About two years ago the DOT started developing a more formal process.
- The Cultural Resources Commitments list dates from 1996; SEMI dates from 2007 and is being populated.
- Differs by Region. The DOT does not have a formal consistent statewide process in place; however the Regions do track commitments. A more formal, consistent statewide process is being developed at this time.
- About a year.
- Approximately 4 years.
- The commitments database for cultural resources has been in use for about a year.
- Hard copy, 20 years; electronic 3 years and still being developed.

7. Who is responsible for tracking at the DOT?

- Each database has a manager, but they are dependent on individuals to input the data to be tracked for specific projects.

- Each specialist (archaeologist or historian) who makes the commitment. Also, the NEPA specialist tracks all environmental commitments for their projects and Project Managers tracks all project commitments for their projects.
- Each section.
- The Office of Environmental Services spearheaded the effort, but each office will have a manager responsible for the commitments of that area.
- The Environmental Section of Environment and Transportation Services Division.
- It varies: for Section 106 issues, it is the Project Development Environmental Staff; for permit conditions it is the Construction Project Managers with oversight from Project Development.
- All environmental staff. The DOT has two groups of environmentalists/cultural resources personnel. The staff are located in the Planning and Scoping program as well as in Capital Program Support. The latter group receives the completed and signed NEPA document from the Planning division and then applies for permits, ensures that HABS/HAER, data recovery, and design commitments move with the project into Final Design. The group which is also comprised of professional landscape staff is responsible for including all commitments in the Plans and Specs. The latter group also visits the projects to ensure compliance.
- Differs by Region.
- The region environmental manager.
- The District Environmental Manager is responsible for certifying that a project is clear for advertisement, and the commitments recorded in the system are communicated/reported by the system through related environmental certification functionality in CEDAR.
- The Environmental Services Office maintains the commitments database. Project and/or environmental program staff are responsible for entering commitments.
- Either of two Cultural Resources specialists in the central office (in the Bureau of Equity and Environmental Services.)

8. Identify others involved in developing and/or implementation of commitments and how (e.g., SHPO, FHWA, Corps of Engineers, consultants/contractors, etc.).

- The DOT proposes mitigation to the SHPO, but the SHPO generally has not been involved in developing mitigation.
  If it is a local government project, the local agency will conduct the mitigation, but the DOT remains ultimately responsible for ensuring that it is carried out appropriately. The MOAs generally specify a time frame by which its terms will be completed; if terms are completed sooner, the DOT consults with the SHPO and other MOA parties to reach agreement that terms have been fulfilled satisfactorily. But the SHPO is not tracking the MOAs or following up to see if the DOT is carrying out the terms – the DOT is initiating the contact. Until recently, FHWA had the legal responsibility for ensuring that commitments are made, but this changed with the DOT's July 2007 assignment of FHWA's environmental reviewing role under SAFETEA-LU 6004/6005.

- For cultural resources it is the lead federal agency and all signatories to the MOA/consulting parties—DOT, SHPO, FHWA, etc. Consultants and contractors are also responsible based on

their position in the project (i.e., turnkey consultant contract, during or post construction commitments, etc.).

- All of the above. Contractors will implement the commitments.
- Commitments that are MOA stipulations are developed between consulting parties (including FHWA and SHPO) through the consultation process.
- The SHPO, FHWA, Corps of Engineers, Tribes, US Fish & Wildlife, Game & Fish, and the Department of Health.
- For 106 issues, MOAs are developed with input from SHPO, FHWA and the project sponsor. Permit conditions are typically directed by the Corps of Engineers or the Department of Environmental Quality with input from the project sponsor. Implementation is the responsibility of the project sponsor.
- FHWA, State Historic Preservation Officer, local units (communities and counties) and historic preservation advocates, and property owners through Section 106 consultation.

  The Department of Environmental Protection (DEP) – Land Use Regulation Program through issuance of a wetland, stream encroachment or Flood Hazard Area Control Act, and coastal permits (the Historic Preservation Office which is housed in DEP is consulted by permit reviewers through a Section 106-like component of the permit process).

  The DOT has a working agreement with the District Army Corps of Engineers whereby they are at the table as Section 106 Areas of Potential Effect are being developed so that they can delineate their Permit Area. To enable the Corps to satisfy their NEPA requirements, the DOT merges the Section 106 processes and is designated as an agent of the Corps, i.e., the same way the DOT is for the Federal Highway Administration. This way there is no redundancy of effort; all consultation runs on the same track and in the same manner.

- Cultural resources commitments are typically developed through consultation with the SHPO and the responsible federal agency. Typically, they are implemented by VDOT.
- Commitment tracking is totally internal.
- The consultant or regional staff develop specific stipulations. The BEES Cultural Resources Specialists have standard format shell agreements that they share.
- To be determined.
- Yes to all of these.

9. Is tracking required within the agency, or is it required for projects in certain categories (e.g., commitments made to ensure a categorical exclusion, in a FONSI, or in a ROD, or commitments made as a "no adverse effect" condition or in a MOA under section 106)? Are there commitments that aren't tracked?

- The DOT definitely has commitments that are not tracked. The system for tracking MOA commitments is at best informal; tracking other commitments such as conditions proposed to reach a "no adverse effect" finding is equally individualized.
- Commitments are tracked for all projects.
- The "green sheet" ensures that the commitment is transferred to those that are responsible. Once the commitments leave the environmental office, the specialists do not track them.

- The DOT tries to track all of them.
- The DOT tracks all commitments for CatExs, made in the FONSI or ROD, and commitments made through MOAs under Section 106, etc.
- The goal of the system in development is to cover all commitments.
- Tracking is required within the agency and as part of the Environmental Process Review conducted by FHWA. The DOT tracks "No Adverse Effects and "Adverse Effects" for cultural resources.

  We do not track "No Effects "even though design commitments may be part of the process. The DOT established a compressed Section 106 process, which is the Section 106 consultation level of effort is commensurate with the undertaking. In one letter report, the DOT initiates Section 106, establishes the Area of Potential Effect, identifies known significant cultural resources, talks about the design details of the project, and then asks for a No Effect. This works for bridge deck replacements where the new construction will mimic the extant deck. That activity is not listed on the Cultural Resources Commitments list, but it is in SEMI.

- To be determined.
- Tracking is required for every project where there are mitigation commitments. All commitments are tracked.
- All environmental commitments are tracked that are the outcome of required statutory or regulatory processes. Commitments made outside of environmental compliance are tracked elsewhere within the department. Tracking of environmental commitments related to statutory or regulatory processes is required by the DOT.
- Tracking of some kind is required, although some regions don't use the commitments database if they have another method of tracking in place.
- The DOT is moving toward more rigor and more consistency in tracking, and looking to improve "passing the baton" of responsibility for environmental commitments. Commitments that are not tracked would generally be those that "fell through the cracks."

10. Do you submit reports on the status of commitment implementation? If so, to whom do you submit them? Would such a report be available for the research team to study?

- Typically not; however, MOAs for some of the larger projects with a long life-span (such as the replacement of a bridge) specify that the DOT will prepare annual status reports.
- The Green Sheet is a running report of commitment status that stays with the NEPA document. The GIS tracking system the DOT is working on will produce a status report which can be submitted monthly, quarterly, etc. to state and federal agencies.
- The DOT used to submit a monthly update of the Cultural Resources Commitments List report to upper management; in fact, it was actually established for upper management. Now it is not; the list is used internally.
- There are monitoring reports, done annually or other timeframes as warranted by the resource agency the DOT is reporting to, for certain commitments such as wetland mitigation. However, until a statewide commitment tracking process is implemented, Regions may report or not and could do so differently (unless required by other agency/process). There is no statewide process in place for all commitments. Reporting is done if the agency (i.e., SHPO, Tribes, FHWA, etc.) requires it. Recently, FHWA has requested in writing that the DOT develop a consistent

statewide system for tracking environmental commitments; and the DOT is looking at making it comprehensive (i.e., not just 'environmental').

- Reports are provided to or requested by District Environmental Managers and other DOT staff.
- The DOT does not submit reports, although the database can be marked when commitments are open, closed, cancelled etc. and reports can be generated at any time.
- For Section 106 the results of the annual review is a report to each DOT Regional Office, FHWA and to the SHPO.
- No – Four responses

11. What is the process by which commitments are included in construction documents and contracts? How do Design, Construction, and Maintenance receive needed information and direction on commitments related to cultural resources?

- Non-cultural resources personnel are responsible for ensuring that the information goes into the contractors' bid package, and that it is listed in the contractors' plans and specs. Most districts have a position called a "construction liaison" to handle this task.
- Commitments are included as Special Provisions, Contract Stipulations, and on Plan Sheets. The contractors also receive the Green Sheet.
- Commitments are transmitted via the "green sheet" and direct communication.
- The idea is that the commitments in the database follow the project file from office to office and person to person.
- Commitments are in the NEPA document and in the Plans for each project.
- Currently, potential commitments are reviewed with the project design team and when commitments are determined they are recorded on the Green Sheet and forwarded to the appropriate sections in Design, Construction, Contracts and Maintenance.
- The commitments are within the Plans and Specifications. Additionally, there are Environmental Plan sheets in the beginning of the plan set that call out all commitments, both permitting and cultural resources.
- Differs by Region.
- At this time, spreadsheets are included in the plan set and standard specifications and special provisions included. The spreadsheet is given to design to make sure it is included in the plan set.
- The commitments defined in CEDAR are communicated to the party responsible for carrying them out. Outside of CEDAR, commitments to be included in plans, construction documents, and contracts are coordinated by the responsible environmental staff with the appropriate authority in the Location and Design, Construction, or Asset Management Divisions.
- There is no established process for entering commitments into contracts. The project management is supposed to be checking the commitments database and coordinating with the Cultural Resource specialists. Usually, this happens as it is supposed to. There are a few standard specifications for archaeology available, and the project team writes any "out of the ordinary" specifications.
- Each environmental document has a commitments sheet. The process calls for items on that sheet to be put into the contract special provisions.

12. When was your system for tracking these commitments last updated, and why? Are you anticipating any next steps in updating the process?

- It is anticipated that both the existing cultural resources tracking system and the general NEPA database will be replaced by a web-based application in fall 2009.
- Continually updated to add new categories, additional information, etc.
- No change since it was developed.
- N/A – two responses
- Updated last year because commitment tracking wasn't systematic. For Section 106 it was kept in the head of a resource specialist and on a project basis in the data base, but it was not readily accessed by others. The specialist sent an email to Districts if they had responsibility in the Section 106 commitment process and the specialist had to remember to contact them again and again to ensure all went well.
- A process is in development.
- As the information comes in and the status changes, the databases are to be updated.
- It is constantly being updated, and the DOT is in the process of developing an electronic tracking system.
- The DOT started using the commitments database about a year ago, and added the cross-checking feature to the compliance tracking database a few months ago.
- It is in the process of being updated. It is anticipated to be electronic in the next two years. It is being updated for greater consistency and ease of communication.

13. **Has your system for tracking helped communication between functional areas and outside agencies and contractors?**

- Five "Yes" responses
- One "No" response.
- Two "N/A" responses.
- Not exactly. The DOT meets quarterly with SHPO representatives to share the cultural resources database and apprise them of projects the DOT plans to consult them about in the coming quarter.
- The tracking system is the one common denominator for a project. Staff is being shuffled and their responsibilities to a project are being shifted to others. The tracking system ensures that nothing is lost or falls by the wayside.
- Yes, internally. It's not available to outside agencies and contractors.
- It is in the process of being updated. It is expected to be fully electronic in the next two years. It is being updated for greater consistency and ease of communication.

14. What weaknesses have been encountered? Are there problems with tracking certain types of commitments?

- One weakness is that the DOT does not yet have a uniform system for tracking commitments. Because tracking individual project commitments is left to the staff person in charge of the

project, should that person leave the DOT, there may not be a clear record of what commitments have been agreed to or completed/not completed.

Also, occasional breakdowns in communication of cultural resources commitments to Design, Construction, or Maintenance have occurred. For example, Design personnel may determine (without consulting cultural resources personnel) that provisions for cultural resources mitigation did not need to be included on the contractors' plans. This has led to consequences such as areas designated as environmentally sensitive being breached and cultural resources damaged through construction activities.

- Coordination issues caused by turnover in specialists, project moving from preconstruction to construction.
- N/A – Four responses.
- There have been serious problems, which is why the DOT implemented the commitments database.
- The DOT would like to have a formal automatic sign-off system for tracking rather than manually entering data in a spreadsheet. There is no formal sign-off to ensure commitments have been followed; the PE is relied upon to follow the Plans.
- Garbage in; garbage out. A tracking system is only as good as the person entering the information.
- The principal "weakness" has been the tendency to view commitments so broadly to include processes required by law or regulation. The definition of commitment is limited to actions that are the outcome of statutory or regulatory processes and are conditions of environmental approval. Commitments are not the processes themselves. For example, "identify historic properties" is a regulatory process requirement while "excavate the affected archaeological site" is a commitment. This is less a weakness than a matter of internal training and communication over definitions.
- The system relies on environmental staff entering commitments, and project managers checking them as the project proceeds through design to construction. This has lead to a bit of a chicken-and-egg dilemma. Environmental staff don't want to spend time entering data if the PMs aren't checking, and the PMs don't want to spend time checking if not all commitments are entered. The DOT is now close to critical mass, though, and the commitments database is used more and more.

  The other problem is that in at least one region, the projects listed in the database don't correspond very well to the actual projects (due to the vagaries of how projects are defined and funds allocated in that region) – this makes the commitments database unusable for that region. This is being worked on now.

- Yes – One response.

15. **What improvements do you think should be made to the system, if possible?**

- A centralized method of tracking mitigation commitments.
- Lead agency oversight and GIS system.
- Improvements or further refinement to the commitment tracking is possible, but is dependent on regulatory entities dictating what additional details are desired for commitment reporting.

- Tracking could be improved if the commitments database were: (1) modified so all regions could use it; and (2) required.
- Time and resources to properly manage the tracking effort.
- N/A – Six responses.

16. **How are cultural resources in DOT right-of-way or otherwise DOT responsibility managed over the long-term (e.g., in a resource management plan)? Are these tracked?**

- The DOT has very few resources management plans in place. The future tracking system will have GIS mapping capability to map cultural or sensitive sites in the ROW.
- All state-owned resources have preservation plans, but there is no plan for long term management.
- A statewide management plan is being developed for cultural resources.
- The DOT does not have a management plan yet.
- The DOT addresses resources only on a project basis. Known sites within the ROW are on file at SHPO, but the DOT also has a GIS layer for completed projects which lists sites and SHPO reference numbers. The DOT also has a GIS layer with sites and site information. They are not tracked.
- Historic bridges are covered by a management plan. Those actions resulting in the removal of historic bridges are summarized and a report is provided to FHWA and SHPO periodically.
- Any commitments concerning right-of-way, for instance, a site left in place, are noted on the Straight Line Diagrams and through a deed restriction or conservation easement.
- The DOT has a bridge GIS tracking system (log of all bridges in the state) and is in the process of determining eligibility for them all. Otherwise, the DOT just gathers the information project by project and other than bridges, the DOT does not appear to have a specific cultural resources database per se. Information sharing between other agencies is occurring but not consistently, and the DOT uses a SHPO database, and has catalogued some cultural resources found in previous projects. The DOT also has some existing information in their GIS databases, but there does not appear to be a consistent or comprehensively required method for cataloguing project information (cultural resources, wetlands, stream channels, etc.) in the GIS databases. There are some formalized agreements with other agencies. Especially for cultural resources, the DOT uses GPS and other field tools to gather information into GIS. *(A resource management plan is a really good idea and could help pull together all the various 'baby steps' we are taking for this effort. We'd like to see what that might look like, if other DOTs are doing these could they be shared?)*
- The DOT is not. Many of the archaeological resources in the DOT ROW are on land under the jurisdiction of a federal agency (BLM, Forest Service) and are managed by them.
- These resources are not tracked at this time unless they are related to a commitment arising from development of a transportation project.
- There is no long-term tracking or resource management plan, although the Cultural Resources program staff have long suggested both.
- The DOT needs to have a more certain link between the project development process and the construction (implementation) process. The DOT will probably need to simplify the electronic data base as they get experience in using it.

Assurance Mechanisms:

17. **How do you ensure that commitments are actually fulfilled, and has tracking them helped?**

- MOAs generally stipulate consultation with the SHPO and other MOA parties to reach agreement that mitigation terms have been satisfactorily fulfilled. When the parties agree, the DOT notifies the parties in writing, so the DOT at least has this record. Otherwise, commitments are not being formally tracked.
- Through the use of the Green Sheet. Yes, tracking has helped. The Environmental Compliance Bureau visits construction sites to ensure commitments are carried out.
- N/A – One response.
- Tracking has helped. The DOT currently sends letters to project managers and project engineers reminding them of their MOA commitments.
- Tracking has helped. People in Construction and the Districts have the responsibility to ensure commitments in the Plans are followed. Cultural Resource specialists hope to have a monitor in place in the next couple of years.
- Project inspection teams have been implemented to check projects in the construction and post construction phase. The system is a reminder of promises made.
- Having SHPO staff at the table with Landscape specialists and the designer to talk about aesthetics, having SHPO review final Plans and Specs, and providing close-out photographs upon completion of construction. During construction, Landscape staff, who ensure compliance of aesthetic commitments as well as soil erosion and sediment control actions, visit the sites.
- Depends on the type of commitment. Assuming this question is talking strictly about those spelled out in an MOA (thus only those with an "adverse effect" which thereby require some level of "commitment" to mitigate), they are usually carried out prior to the project's completion in order to not lose the necessary funding which comes with the project budget (though we give ourselves a longer window, up to 10 years sometimes, we almost always complete it within the project framework, or at least set the commitment in motion, even if it isn't completed until later). Tracking could help, though usually we are self-monitoring and provide documentation to the necessary Federal and State parties (i.e. FHWA and SHPO) during and at the end.
- Currently it is hit-or-miss, but as the DOT constantly improves the system, it is working better. Tracking has definitely helped.
- Yes, tracking helps significantly both in standardizing how the commitments are recorded and in how they're communicated. But commitments are ultimately fulfilled by people and it takes people to ensure that they are carried out. The commitment tracking component of CEDAR provides the information to the people who carry out the commitments and is used by staff who make sure it happens. Environmental Monitors who oversee projects during construction have access to commitments by project prior to the start of construction.
- Tracking has helped, especially on big projects, but often commitment fulfillment still comes down to the vigilance of the Cultural Resource specialist and the Environmental/Permitting Coordinator.
- Commitments are recorded but the challenge is to remind DOT personnel to check the files.

18. **Who decides a commitment has been satisfied? Is there an external sign-off, such as by a SHPO or FHWA?**

- The DOT has a formal sign-off. FHWA formerly handled this, but it is now the responsibility of the DOT HQ.
- FHWA (or lead agent) and SHPO. There is no sign-off for post construction commitments. The DOT is exploring the idea of adding a contractor sign-for post construction commitments.
- The SHPO comments on mitigation products.
- It is internal.
- The PE is responsible for ensuring implementation of the Plans. Although if there are 106 avoidance issues or monitoring or other 106 issues, the Cultural Resource Section of ETS is always involved. The DOT does not usually have SHPO sign-off. However, for some environmental commitments outside agencies require their own sign-off; e.g., the Corps requires documentation that their permit stipulations have been followed.
- MOAs with SHPO typically require a submittal to that office and then an acceptance letter is issued.
- The DOT provides close-out photograph documentation upon completion of construction.
- While it is often whoever signed the MOA, FHWA usually has the final say as they are usually the lead Federal agency. SHPO will also provide comment, and usually an equally vital sign-off as they frequently understand the work and resource the best (though again, FHWA has the "trump" card). Sometimes other Federal agencies will decide, like USFS (as projects have been contained on their land).
- Reports of completed commitments for cultural resources are submitted to the SHPO and the FHWA. SHPO sends a letter that they have been satisfied.
- That depends, in part, on what kind of approval authority is granted to other parties when the commitment is negotiated. Typically, the responsible environmental staff records when a commitment is satisfied in accordance with the characteristics of that commitment.
- Unless there is a signed agreement document (MOA or PA) with an external sign-off requirement, the decisions are internal.
- For cultural resources, there is often a stipulation that the material will flow through BEES to SHPO. Yes, tracking helps us remind project staff that they still have a commitment to fulfill.

19. **What recourse do you have if a commitment has not been satisfied, or the work appears to be inadequate?**

- Very little. In one case where the work was deemed inadequate, the FHWA refused to reimburse.
- If the project is under contract, the consultant or contractor will be required to fulfill the commitment. If the commitment is in-house, the DOT would be required to fix it.
- N/A – One response
- Since most cultural commitments are stipulations in a legal MOA, the DOT or the local client are legally obligated to implement them or put their FHWA funding at risk.
- If the 106 commitment is not followed, the DOT would require it to be followed when they were alerted to the problem, or it would require an alternative negotiated settlement to be immediately implemented.
- In some cases the option to re-do the task is available; in other cases there may not be that option.
- We call for mock-up panels to ensure that color and stone work and formwork is correct. Once approved by SHPO and Landscape and Environmental staff in a field meeting, we trust that the

contractor gets it right. If the RE approves something and it is wrong, we are stuck with it. The DOT has no recourse.

- All the way up to project funding cancellation. FHWA must satisfy the provisions of Section 4(f) and failure to do so can spell litigation. So the DOT/FHWA could be subject to a lawsuit if we inadequately provide or fail to meet a commitment otherwise spelled out in an MOA, for example. For obvious reasons, we have yet to and would unlikely let this occur.
- It depends on the phase of work. Some commitments have to be completed before construction begins, so the project may be delayed. Some commitments can be completed at any time before the MOA expires, so they are tracked until they are completed. If the resource has been destroyed or demolished before the commitment was completed, we have had to work with the SHPO to determine what to do. If the work is inadequate, it is done over.
- Unsatisfactory implementation of a commitment would be resolved within the department administratively.
- No formal recourse.
- It depends on the stipulations. Most often, some SHPO concurrence is required.

20. **If enforcement is necessary, how does it work? Are there legal penalties? Please explain or give examples.**

- Because the DOT operates under a Programmatic Agreement (PA) for compliance with Section 106, if a signatory to the PA, an Indian Tribe, or a member of the public objected to the manner in which any action under the PA was being carried out, the signatories would consult to review the problem, and the DOT could risk termination of the PA.
- This has not been an issue.
- N/A – One response.
- For 106 – no. But the EPA and Corps, for example, have enforcement issues and penalties for environmental commitments not followed.
- Various options are available such as closing down the construction activities, fines assessed by USEPA or DEQ. DOR projects typically are developed through FHWA – withdrawing federal aid from a project is another possible penalty.
- Enforcement of permit conditions and violation of said conditions will generate a fine by DEP. If the contractor is remiss and does not follow the plans, the contractor will incur the fine. Once again though if the RE approves a change in the field without talking to Environmental staff, and the change is contrary to the permits, the DOT is responsible and incurs the cost of the remediation.
- Does not appear this has occurred to date. Certainly there is legal liability. There is likely a protocol that is spelled out in the Federal Register, or certainly one could look at case studies if you needed these particulars, however in my experience we have not had this occur at the DOT.
- Enforcement is difficult and we have not imposed legal penalties to date.
- Not all commitments are equal in relation to consequences. Since this survey involves cultural resources, failure to carry out cultural resource commitments could put project funding and/or regulatory permits in jeopardy, thus interfering with getting the project built.
- No existing mechanism for enforcement.
- If the project is closed to charges, it is very difficult to rectify an oversight. This is where the tracking and "tickler file" helps. If the project is still open, we have had good response to our requests for compliance.

21. **Does the general public have access to information on commitments, or are there plans for future external access?**

- Neither of the current databases is available externally, not even to partners such as the SHPO. The DOT HQ uses data from the cultural resources database to prepare an annual report of all actions under the PA, including any mishaps or mistakes, and the reports are made available for public review.
- Yes. They are set forth in environmental/public documents.
- N/A – One response.
- No – One response.
- Yes, through NEPA document and Plans.
- The public involvement process is considered on all projects and on a project by project basis various meetings are held to discuss project impacts, potential mitigation, etc. Due to the complexity of some projects the public outreach will extend from project development through construction.
- Copies of the permits are provided on the DOT web site. The general public can avail themselves of the Section 106 Summary Documentation that the consulting parties should receive as well as the Memorandum of Agreement. The consulting parties include the local units so a person could certainly go to their municipal building and ask to see the document. However, most of the time, even though it is the FHWA's process, people call the Historic Preservation Office rather than us at DOT. Most of the SHPO staff have those people contact DOT, explaining that it is the DOT/FHWA's process and project.
- Yes, by virtue of the public involvement process. We frequently post the proposed work on the web at a minimum, but also make it available to anyone who would like a hardcopy. We normally would provide the plans in open forum so the public can voice their opinions. Section 4(f) and Section 106 both have this as part of the regulatory process so this information has to be vetted, and usually it is done in several ways to, again, not only insure public participation, but legally satisfy the necessary process to support our case against potential litigation.
- Public access to commitments is through the NEPA document.
- There is no external access at this time, nor are there plans for external access.
- The public doesn't have access to the database, but the commitments are usually recorded in a public document. When entering commitments, we're encouraged to cut-and-paste directly from the relevant document, so the information in the database is generally exactly the same as that available to the public in its original form.
- We have not had any useful experience in the enforcement of Cultural Resource provisions in contentious situations.

Appendix B: Selected Quotations from Responses

"We instituted the database because of problems in the past."

"The challenge is to keep "everyone" in the loop, without overwhelming "everyone."

"We definitely have commitments that are not tracked. As noted, the system for tracking MOA commitments is at best informal; tracking other commitments such as conditions proposed to reach a "no adverse effect" finding is equally individualized."

"We track all commitments – (those) made to ensure a CatEx, made in the FONSI or Rod, made through MOA under 106, etc."

"Tracking is required within the agency and as part of our Environmental Process Review conducted by FHWA."

"There is no established process for entering commitments into contracts. The project management is supposed to be checking the commitments database and coordinating with Cultural Resource specialists, and this mostly happens as it is supposed to."

"Garbage in; garbage out. A tracking system is only as good as the inputter."

"There is no long-term tracking or resource management plan, although CR program staff have long suggested both."

"[Commitments] are recorded but the challenge is to remind DOT personnel to check the files."

"In one case where the work was deemed inadequate, the FHWA refused to reimburse."

"If the RE approves something and it is wrong, we are stuck with it. We have no recourse."

"The risk is too great for me to suppose a scenario where we'd be remiss in any process to allow this to occur."

"The tracking system is the one common denominator for a project."

"Currently it is hit-or-miss, but as we constantly improve the system, it is working better."

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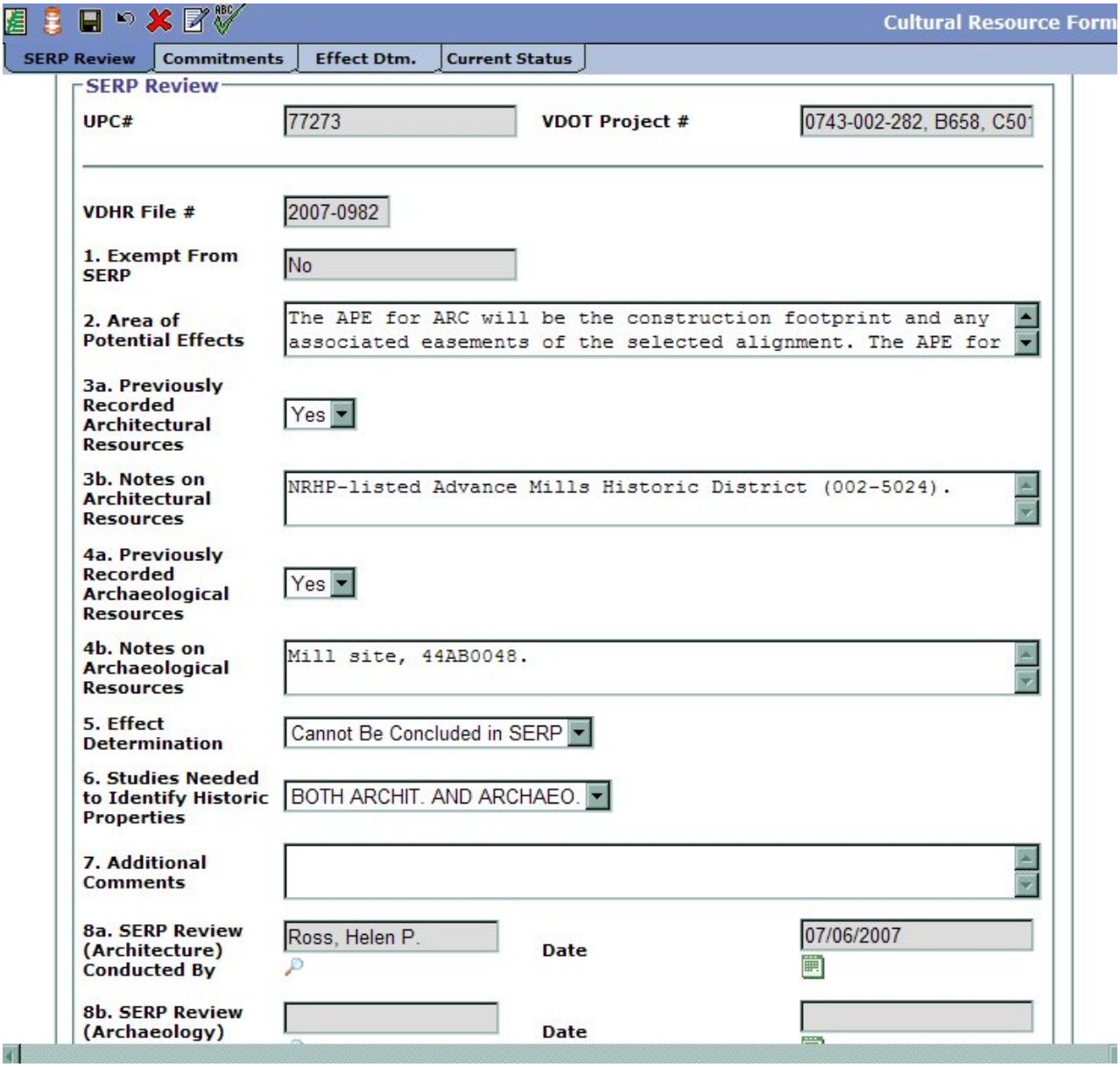
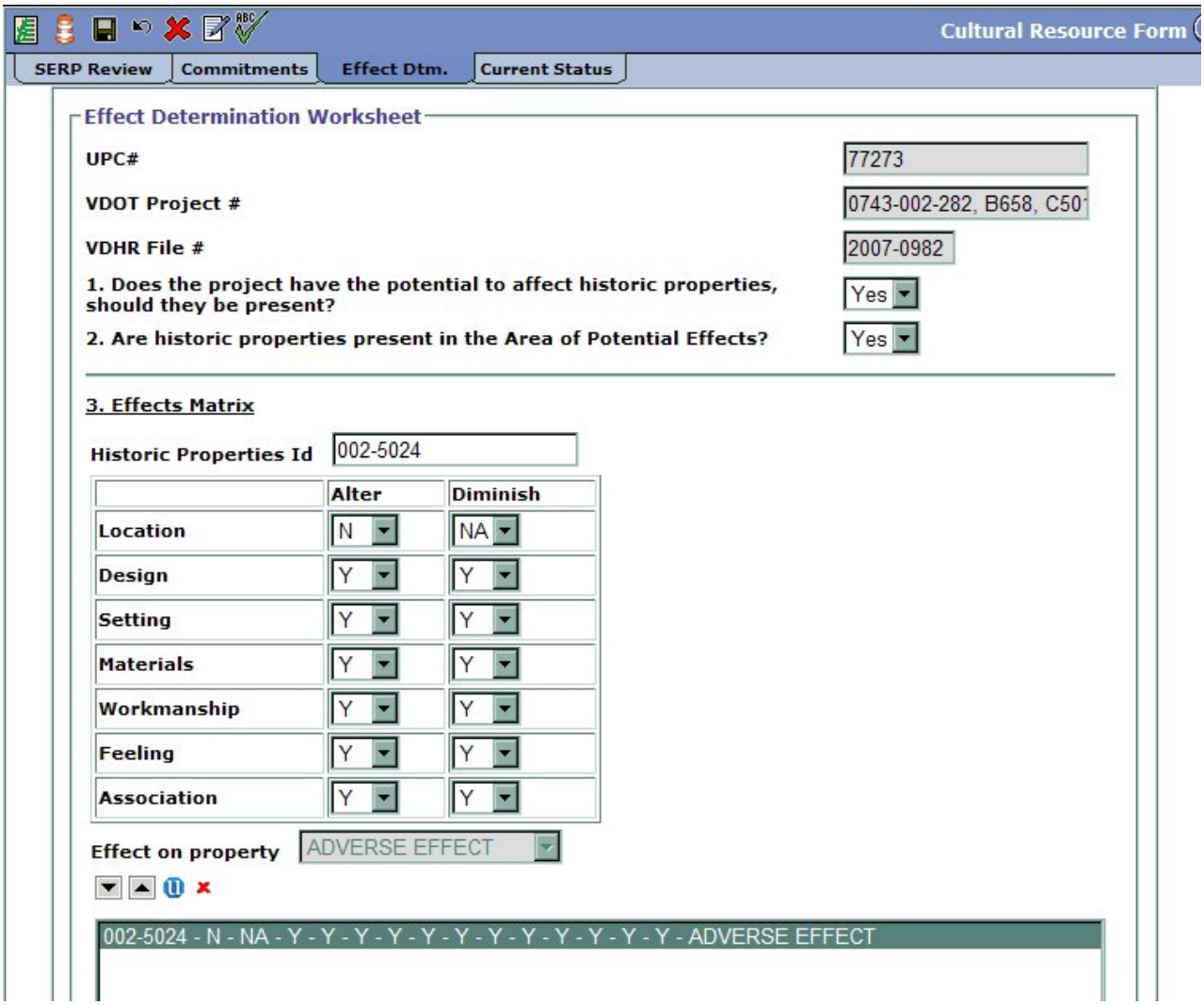
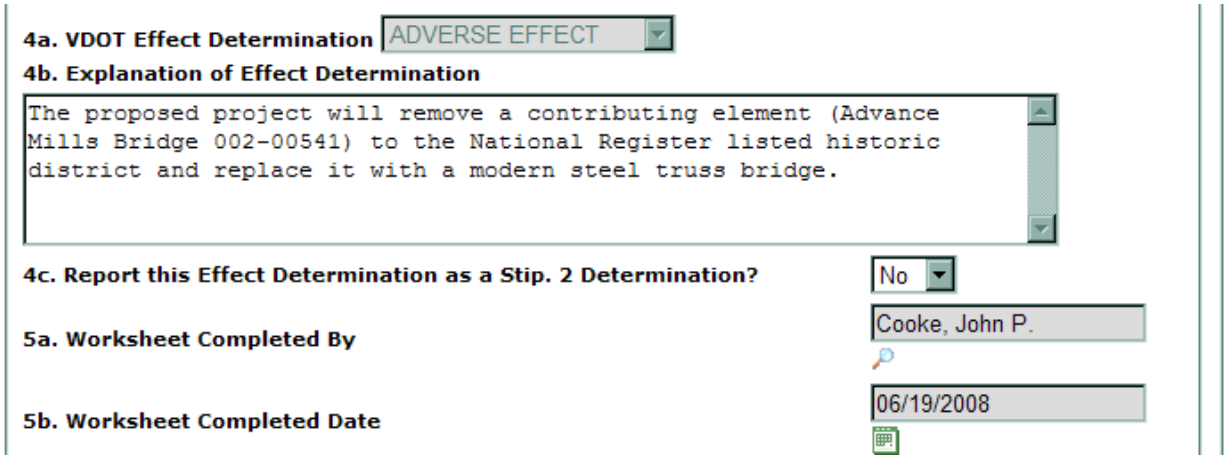
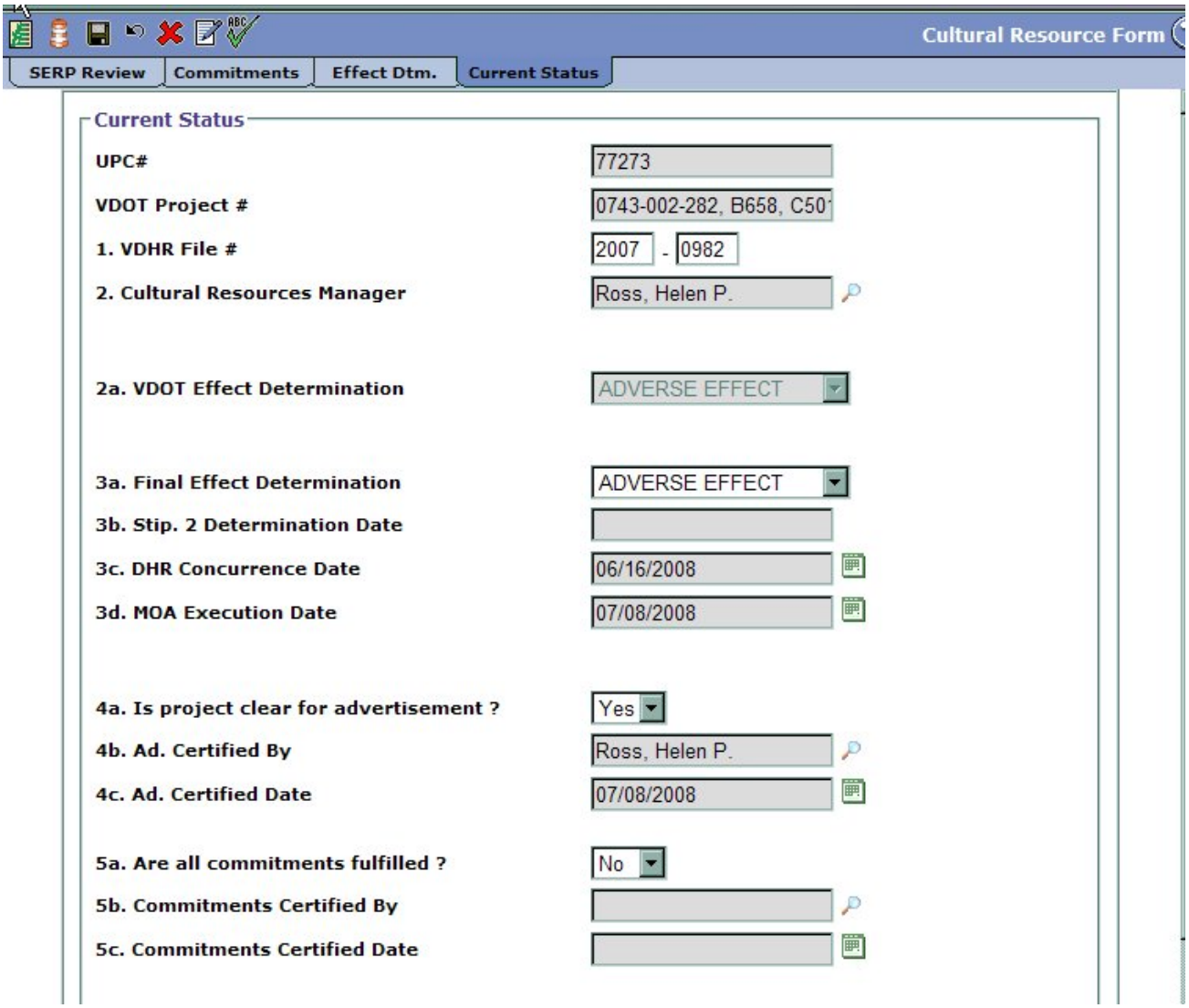
Appendix C: CEDAR's Cultural Resource Data Forms

CEDAR's cultural resource data forms, used for the SERP review and to store specific details of resource assessment, commitment management, and implementation.




Cultural Resource Form
SERP Review
Commitments
Effect Dtm.
Current Status
Effect Determination Worksheet
UPC#
77273
VDOT Project #
0743-002-282, B658, C501
VDHR File #
2007-0982
1. Does the project have the potential to affect historic properties, should they be present?
Yes
2. Are historic properties present in the Area of Potential Effects?
Yes
3. Effects Matrix
Historic Properties Id
002-5024
Alter
Diminish
Location
N
NA
Design
Y
Y
Setting
Y
Y
Materials
Y
Y
Workmanship
Y
Y
Feeling
Y
Y
Association
Y
Y
Effect on property
ADVERSE EFFECT
002-5024 - N - NA - Y - Y - Y - Y - Y - Y - Y - Y - Y - Y - Y - Y - ADVERSE EFFECT


4a. VDOT Effect Determination
ADVERSE EFFECT
4b. Explanation of Effect Determination
The proposed project will remove a contributing element (Advance Mills Bridge 002-00541) to the National Register listed historic district and replace it with a modern steel truss bridge.
4c. Report this Effect Determination as a Stip. 2 Determination?
No
5a. Worksheet Completed By
Cooke, John P.
5b. Worksheet Completed Date
06/19/2008



6. General Comments

Please assign appropriate level CR tasks and plans when ready to initiate studies (HPR 7/6/7). Consulting parties identified and invited to participate in Sxn 106 process. CP status to 6 individuals/groups granted by FHWA 9/20/7. Letter to DHR and CPs defining APE and identifying hist properties sent out today. Upon