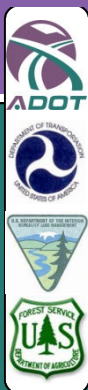


Arizona Department of Transportation



Guidelines for Highways on Bureau of Land Management and U.S. Forest Service Lands 2008

Acknowledgments:



Arizona Department of Transportation

Guidelines for Highways on Bureau of Land Management and U.S. Forest Service Lands



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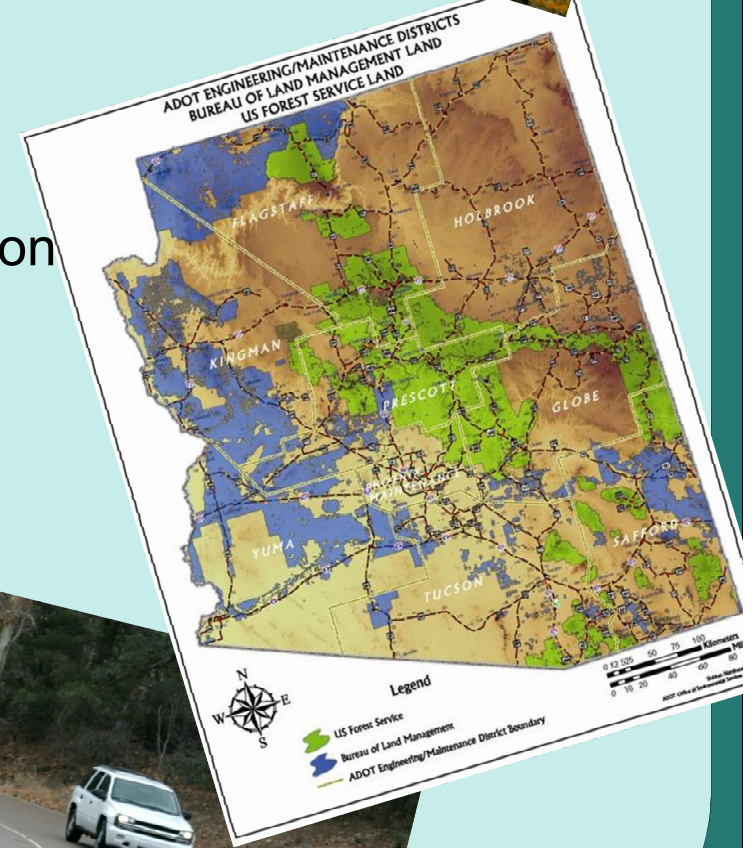
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Contents-Chapters



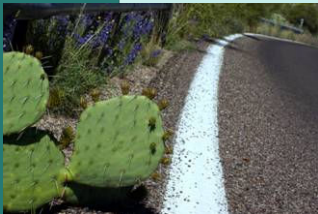
- 1 Introduction
 - 2 ADOT Development Process on BLM and USFS Lands
 - 3 Habitat Connectivity
 - 4 Roadway Design and Construction
 - 5 Major Structure Design and Construction
 - 6 Drainage Design and Construction
 - 7 Landscape Restoration
 - 8 Stormwater and Pollution Control
 - 9 Material Sites
 - 10 Construction
 - 11 Maintenance Operations
- Appendices A - O



1: Introduction



- Purpose and Intent
 - Provide guidance for design, construction and maintenance of ADOT projects on lands managed by BLM and USFS.
 - Describe accepted procedures, and the needs and concerns of each agency to facilitate creation of safe, environmentally sound and aesthetically pleasing highway corridors.
 - Communicate philosophy, approach and examples from which new applications and techniques can be developed.
- Memoranda of Understanding
 - The ADOT-FHWA-BLM MOU and the ADOT-FHWA-USFS MOU outline policies and procedures to establish and improve cooperative working relationships.



APPENDIX D
APPENDIX D: MOU BETWEEN ADOT, FHWA AZ, AND THE BUREAU OF LAND MANAGEMENT, AZ
Appendix D consists of sections I – X of the ADOT FHWA BLM MOU. The entire MOU is a digital appendix included only with the ADOT website Guidelines document. Access the website document at:
http://www.adot.gov/itg/Highways/Highways/RoadsideDevelopment/ADOTGuidelinesForHighwaysOnBLM_USFSLands.asp



APPENDIX C
APPENDIX C: MOU AMONG ADOT, FHWA AZ, AND THE USDA FOREST SERVICE, SOUTHWESTERN REGION
Appendix C consists of Sections I – X, Addendum Number 1 and Illustration 1: Highway 1.

MEMORANDUM OF UNDERSTANDING
Amended
AMONG
THE DEPARTMENT OF TRANSPORTATION,
ADMINISTRATION, ARIZONA DIVISION
SOUTHWESTERN REGION
MAINTENANCE OF
FOREST

1: Introduction



- Agency Mission Statements
 - ADOT BLM FHWA USFS
- Additional Resources
 - Links at the end of every chapter provide access to additional sources of information.



Center for Environmental Excellence by AASHTO

One Stop Source of Environmental Information for Transportation Professionals



Wildlife Crossings Toolkit

www.wildlifecrossings.info



United States Department of Agriculture

Natural Resources Conservation Service



2: ADOT Development Process on BLM/USFS Lands



- Chapter Goals

- Outline the ADOT Development Process and describe information typically prepared at each stage in the process.
- Describe types of information typically included in the Environmental Review Process so the design team can anticipate and integrate these concerns into the ADOT Development Process.
- Identify BLM and USFS policies that may affect the ADOT Process.



2: ADOT Development Process on BLM/USFS Lands



- ADOT Project Development Process
 - Long Range Planning *begins 5 - 20+ years prior to construction.*
 - Project Scoping *begins 5 - 7 years prior to construction.*
 - NEPA Process *begins during Project Scoping*, culminates in the Environmental Document.
 - Project Development: Stages I-V *begins 1 - 3 years prior to construction.*
 - Construction
 - Maintenance *begins after project completion and formal acceptance by ADOT.*



2: ADOT Development Process on BLM/USFS Lands



- National Environmental Policy Act
 - Requires that social, economic and environmental issues, concerns and values be considered along with technical aspects in the decision-making process.
 - All projects on BLM/USFS lands must be in compliance with NEPA.
 - End product of the NEPA process is the Environmental Document:
 - *Categorical Exclusion (CE)*
 - *Environmental Assessment (EA)*
 - *Environmental Impact Statement (EIS)*

The screenshot shows the EPA's NEPA webpage. At the top, the EPA logo is on the left, and the text "U.S. ENVIRONMENTAL PROTECTION AGENCY" is on the right. Below this is a dark blue banner with "National Environmental Policy Act (NEPA)" in white. To the right of the banner is a "Bookmark" button. Below the banner is a search bar with "Search:" and two radio buttons: "All EPA" (selected) and "Compliance and Enforcement". To the right of the search bar is a "Go" button. Below the search bar is a breadcrumb trail: "You are here: [EPA Home](#) » [Compliance and Enforcement](#) » National Environmental Policy Act". On the left side of the page, there is a blue sidebar with the EPA logo and the text "Compliance and Enforcement Home" and "National Environmental". On the right side of the page, there is a yellow shield logo with "EPA Report Environmental Violations". At the bottom of the page, there is a paragraph: "The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions."

2: ADOT Development Process on BLM/USFS Lands



- Project Reference
 - Is an electronic document that serves as compilation of decisions made during the planning and design processes that need to be implemented during design and construction.
 - Is accessed directly through the ADOT Information Data Warehouse (AIDW).
 - Is the way to do business on all ADOT highway projects.

APPENDIX K

GUIDELINES

APPENDIX K: PROJECT REFERENCE FACT SHEET

Purpose

It is imperative that the Arizona Department of Transportation (ADOT) process benefits ADOT and all project stakeholders by providing the most current project information available.

The development of the Project Reference began as a cooperative effort of the Arizona offices of the Bureau of Land Management, the Federal Highway Administration and ADOT in early 2001. ADOT management embraced the concept and encouraged the continuing development of this system. In 2005, the Project Reference Subgroup was established to refine what began in 2001 as a hardcopy “document **distribution** system.” As a result of the efforts of this Subgroup, ADOT now has established an electronic, paperless Project Reference. This “document **availability** system” can be accessed directly through the ADOT Information Data Warehouse (AIDW). The Project Reference is “the way to do business” on all ADOT highway projects.

2: ADOT Development Process on BLM/USFS Lands



- Arizona Parkways, Historic and Scenic Roads Program
 - ADOT is charged with nomination, designation and maintenance of Parkways, Historic and Scenic Roads.
- FHWA National Scenic Byways Programs,
- USFS National Forest Scenic Byways, and
- BLM Back Country Byways

are other programs that recognize, preserve and enhance selected roads in Arizona.



2: ADOT Development Process on BLM/USFS Lands



- USFS Processes that Affect ADOT Highway Development
 - National Forest Land and Resource Management Plan
 - Access Management Objectives and Process
 - Letter of Consent
 - Merchantable Timber
- BLM Development Process
 - Is similar to the USFS process and is described in detail in the MOU (Appendix D).



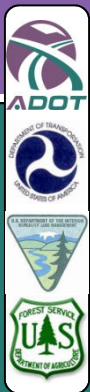
3: Habitat Connectivity



- Chapter Goals
 - Review means by which highways can be made more permeable to wildlife movement and to render them safer for both motorists and wildlife.



3: Habitat Connectivity



- Design Considerations



Wildlife Overpass



Wildlife Underpass



High bridges to preserve riparian ecosystems



Fencing to guide wildlife crossing



Pipe culvert for small animal use

3: Habitat Connectivity



- Environmental Mitigation
 - Restoration of degraded habitat.
 - Restoration of damaged wildlife corridor (i.e. riparian area).
 - Combination of techniques to improve connectivity among isolated habitat patches.
- Monitoring



4: Roadway Design & Construction



- Chapter Goals

- Describe Context Sensitive Design strategies that may be used to address impacts caused by proposed highways projects.
- Describe the planning, design and construction of highway alignments and engineered slopes that are visually integrated with the surrounding landscape.
- Discuss slope design for successful revegetation.
- Summarize mitigation techniques that may address NEPA requirements for grading, slope configuration and earthwork balance.



4: Roadway Design & Construction



- Design Considerations
 - Integrate highway corridor with surrounding natural landscape.
 - Consider existing topography.
 - Evaluate alternative highway alignments.
 - Identify environmental mitigation requirements.



4: Roadway Design & Construction



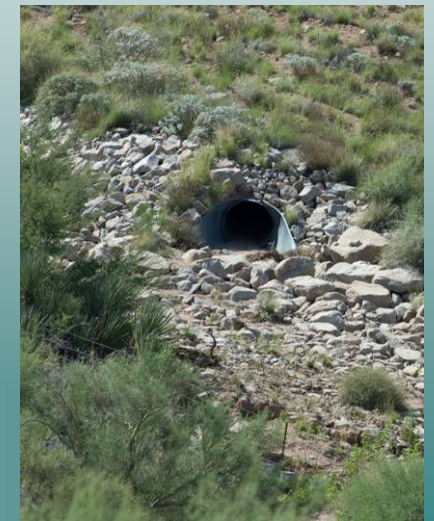
- Design
 - Safety
 - Slope Stability
 - Earthwork
 - Revegetation
 - Cut Slopes
 - Embankments
 - Obliteration
 - Retaining Walls



4: Roadway Design & Construction



- Construction
 - Resource Management
 - Water sources
 - SWPPP-Erosion Control Plans
 - Topsoil salvage
 - Noxious/invasive plant species control
 - Erodible slope treatment
 - Permanent drainage control devices
 - Temporary erosion control devices



5: Major Structure Design & Construction



- Chapter Goals

- Describe opportunities and concerns for the design, construction and maintenance of bridges and box culverts to best integrate them into the existing landscape.



5: Major Structure Design & Construction



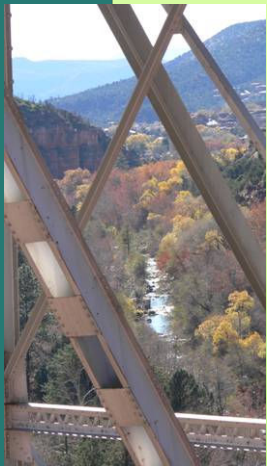
- Scoping and NEPA Considerations
 - Protection of Riparian Areas.
 - Visual Impacts- Bridges are usually more attractive than large slopes.
 - Geotechnical Investigations- limit disturbance and obtain necessary clearances.
 - Right of Way- easement acquisition should not be a limiting factor in the design of major structures.



5: Major Structure Design & Construction



- Design
 - Sections 404 and 401 of the Clean Water Act
 - Impact on Riparian Areas
 - Bridge Design
 - Construction and Access Requirements
 - ADOT Structure Design and Review Process
 - Project Scoping
 - Stage II
 - Stage III



5: Major Structure Design & Construction



- Construction
 - Maintain strict controls over contractor access.
 - Remove temporary access and restore disturbed areas per project plans and specifications.

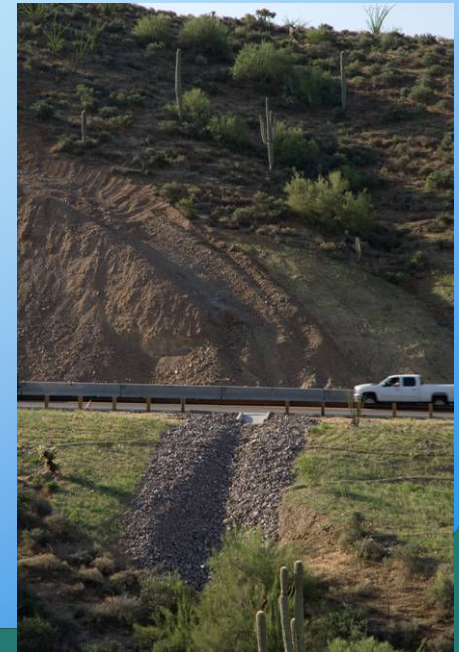


6: Drainage Design & Construction



- Chapter Goals

- Describe opportunities and concerns for the design, construction and maintenance of new drainage facilities (pipe culverts, channels, ditches) to best integrate them into the existing landscape.
- Introduce the Arizona Pollution Discharge Elimination System (AZPDES) requirements.



6: Drainage Design & Construction



- Design
 - The ADOT Drainage Report includes information on:
 - Floodplain Jurisdictional Delineation.
 - Assessment of existing and future conditions impacting watersheds, flow patterns, and flood areas.
 - Peak run-off rates from each drainage area.
 - Stream channel flows and streambed materials.
 - Topographic and drainage features.
 - Design criteria, procedures, methods and assumptions for analysis and design.
 - Initial size and location of major drainage structures and channels that affect the roadway location.
 - Sections 404 and 401 of the Clean Water Act
 - Any proposed work in washes, rivers, streams, lakes and wetlands requires a permit from the U.S. Army Corps of Engineers.

6: Drainage Design & Construction



- Design

- Riparian Areas

- Inventory during the design process.
 - Minimize change to natural stream channel dynamics.
 - Consult wildlife experts regarding species negatively impacted by drainage structure design and preventative measures to consider.
 - Avoid or minimize armored bank protection.
 - Minimize sediment transport into riparian areas.

- Drainage Structures

- Ditches and Dikes
 - Oversize Drains
 - Culvert and Channel Inlets and Outfalls
 - Aesthetics



6: Drainage Design & Construction



- Construction

- Ensure that elevations of concrete culvert forms are properly set prior to concrete installation.
- Review and adjust proposed crown ditch alignments prior to excavation.
- Minimize potential for erosion of disturbed soil into natural drainages with respect to contractor staging areas adjacent to drainages.
- Remove temporary access and restore disturbed areas promptly.



7: Landscape Restoration



- Is the integration and blending of the highway facility with the surrounding natural landscape.
- Includes aesthetic considerations in earthform design of slopes, rounding and transitions between cuts and fills.

Reclamation, revegetation and stabilization of disturbed soils for the purposes of erosion control are predicated on successful earthform design.

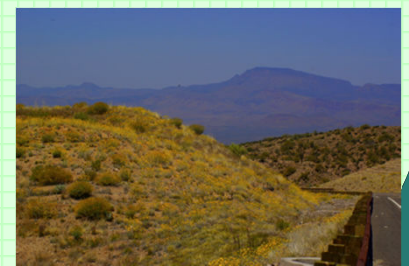


7: Landscape Restoration



- Chapter Goals

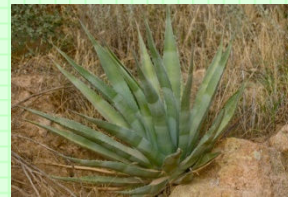
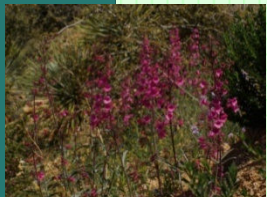
- Describe the issues relating to preservation and restoration of native vegetation that are critical to the visual integration of the highway corridor with the surrounding landscape.
- Define the steps necessary to achieve successful restoration of disturbed soils.



7: Landscape Restoration



- Design
 - Slopes
 - Existing Vegetation
 - Revegetation
 - Topsoil Salvage
 - Slope Finishes
 - Native Plant Salvage
 - Container-Grown Stock
 - Noxious and Invasive Vegetation
 - Existing Boulders
 - Salvage for reuse



7: Landscape Restoration



- Construction
 - Application of stormwater BMPs must be coordinated with slope construction and revegetation.
 - Successful restoration considerations:
 - Condition of the finished grade (compacted/loose, crusted/friable).
 - Timing of seed applications.
 - Inspection of fertilizer, compost, mulch, tackifier and seed mixes.
 - Adherence to proper seed application techniques.



8: Stormwater & Pollution Control



- Chapter Goals
 - Comply with requirements for control of stormwater quality as described in the National Pollution Discharge Elimination System (NPDES) and the Arizona Pollution Discharge Elimination System (AZPDES).
 - Employ Best Management Practices (BMPs).
 - Temporary
 - Permanent

EPA NPDES - Office of Wastewater Management

U.S. ENVIRONMENTAL PROTECTION AGENCY

National Pollutant Discharge Elimination System (NPDES)

Recent Additions | Contact Us | Print Version Search NPDES: **GO**

EPA Home > OW Home > OWM Home > NPDES Home

NPDES Alphabetical Topics Index Glossary About NPDES

NPDES Current Issues

- Final 2008 MSGP
- Final 2008 CAFO Rule
- Guide for Building an Effective Post-

ADEQ: Permits: Arizona Pollutant Discharge Elimination System (AZPDES)

ADEQ Arizona Department of Environmental Quality

Protecting public health and the environment

Keyword Search: **GO**

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BROWSE WATER QUALITY

- Water Quality Home
- Compliance
- Data Management
- Monitoring & Assessment
- Permits**
- Aquifer Protection
- AZPDES
- Dredge and Fill
- Drywell
- Permits Assistance
- Reclaimed Water
- Related Statutes & Rules
- Subdivisions, Sewage Collection Systems & Onsite Systems
- Safe Drinking Water
- Wastewater Management
- Watershed Management
- Water Quality Standards

BROWSE BY CATEGORY

- About ADEQ
- ADEQ Newsroom
- Assistance
- Compliance
- Education & Outreach
- Laws, Rules & Policies
- Permitting
- Publications & Forms
- Employment
- Doing Business with ADEQ

BROWSE BY PROGRAM

- Air Quality
- Tank Programs

PERMITS: ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

On Dec. 5, 2002, Arizona became one of 45 states with [authorization from EPA](#) to operate the National Pollutant Discharge Elimination System (NPDES) Permit Program (Section 402 of the Clean Water Act) on the state level.

Under the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Program, all facilities that discharge pollutants from any point source into waters of the United States (navigable waters) are required to obtain or seek coverage under an AZPDES permit. Pollutants can enter waters of the United States from a variety of pathways, including agricultural, domestic and industrial sources. For regulatory purposes these sources are generally categorized as either point source or nonpoint sources.

AZPDES Rules

ADEQ developed rules for the AZPDES program in 2001 and revised them in 2002 and 2004. The most recent revision was published in the [Arizona Administrative Code](#) on Dec. 26, 2003. View the final version of the AZPDES rules at [18 A.A.C. 9, Art 9](#), effective on Feb. 2, 2004 (page 82).

- [Overview of the AZPDES Process](#)
- [Individual Permits](#)
- [General Permits](#)
 - [De Minimis](#)
 - [Concentrated Animal Feeding Operations](#)
- [Stormwater](#)
 - [Phase II](#)
 - [Construction Activities](#)
 - [Multi Sector \(Industrial Activities\)](#)
 - [Municipal Stormwater Program](#)
- [Pretreatment Program](#)
- [Biosolids/Sewage Sludge](#)
- [Forms and Guidance](#)
- [FAQs](#)
- [NOI Construction Database Search](#)
- [Other Programs Affecting AZPDES](#)
- [Contacts](#)

News Releases

- [06/25/07: ADEQ Director Steve Owens' Statement on U.S. Supreme Court Decision Upholding Arizona's Water Quality Permitting Program](#)

8: Stormwater & Pollution Control

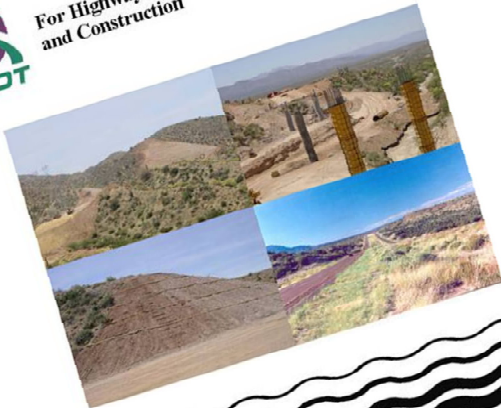


- Design
 - ADOT Erosion and Pollution Control Manual
 - Roadway and Drainage Plans
 - Stormwater Pollution Prevention Plans (SWPPP)

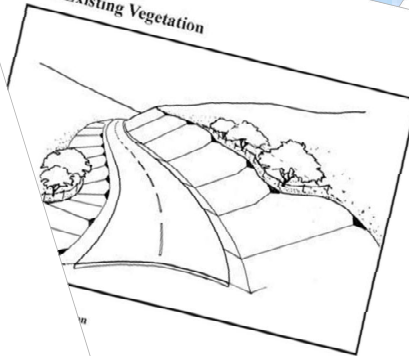
ADOT EROSION AND POLLUTION CONTROL MANUAL



For Highway Design and Construction



Preserve Existing Vegetation



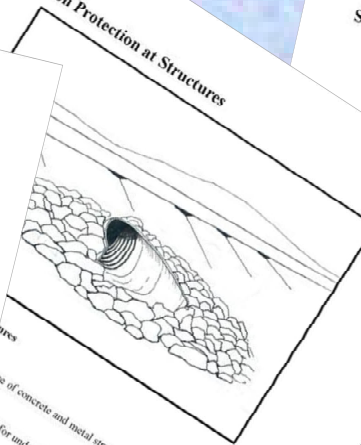
of trees and natural vegetated areas within the construction
minimize the amount of bare soil exposed to erosive forces and
water runoff.

port, and tracking.

conflict with construction activities.

construction activity.

Erosion Protection at Structures



ures

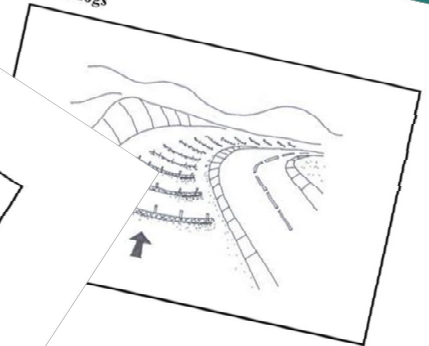
face of concrete and metal structures

ential for undercutting at structures.

a soil surface and where concentration and/or
high to cause erosive flows.

when the rock is sized and placed
documents or as direc-

Sediment Logs



sior, straw, flax, compost, or other material that has been bound into a tight
sediment from runoff.

A runoff and reduce flow velocities.

Applications

check dams in roadway ditches and channels downstream of disturbed soils.
round storm drain inlets associated with disturbed areas.
outfalls of small drainage channels or structures.

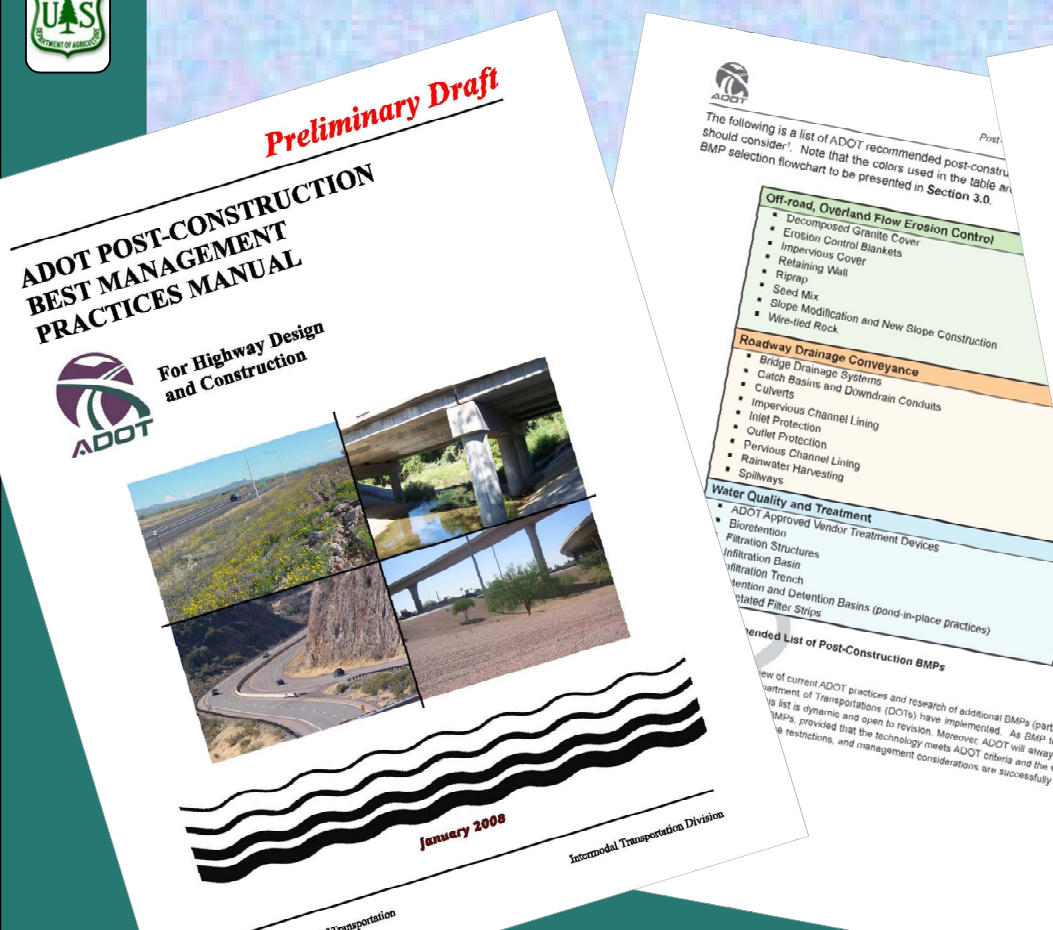
Not practicable where large flows are involved.
Offer a potential for accidental introduction of undesirable weed species if filled
with straw.

Not suitable for rock subgrades where stakes cannot be securely installed

8: Stormwater & Pollution Control



- Additional Resources
 - ADOT Post-Construction Best Management Practices Manual for Highway Design and Construction



8: Stormwater & Pollution Control



- Construction
 - Prior to earth-disturbing activities, the contractor prepares and delivers to ADOT the proposed SWPPP for approval.
 - Maintain temporary BMPs during the construction process.



9: Material Sites



Material Sites are locations outside the highway corridor easement from which rock and soil materials may be mined and processed for new construction or maintenance needs. They may also serve as repositories for excess materials generated by construction or maintenance activities.

- Chapter Goals
 - Describe development of material sources.
- Scoping
 - Authorization Process
 - Source Development Plan
 - Appendix I – Summary chart of BLM/USFS approval issues
 - Geotechnical Investigations are usually needed for Material Sources.

9: Material Sites



- Operation
 - ADOT operates source sites in accordance with the approved Source Development Plan.
 - Contractor or public agency use of material sources requires preparation of a Plan of Operations.
 - Joint Use Material Sources
 - Excess Material (Waste)
 - Inspections



9: Material Sites



- Restoration of Material Sources and Waste Sites
 - Final site grading.
 - Distribution of stored topsoil.
 - Erosion control, restoration and revegetation of disturbed soils.
 - Access roads should be regraded to original contour, ripped, drained, blocked to traffic and seeded.



Salvaging topsoil for reuse



Revegetation

10: Construction



- Chapter Goals
 - Describe ‘Partnering’
 - Discuss Erosion and Pollution Control
 - SWPPP- Stormwater Pollution Prevention Plan
 - NOI- Notice of Intent
 - Seeding
 - NOT- Notice of Termination requirements
 - Discuss resource protection
 - Vegetation
 - Archaeological and Cultural
 - Wildlife
 - Define Acceptance of Work
 - Phased Acceptance
 - Final Project Acceptance



10: Construction



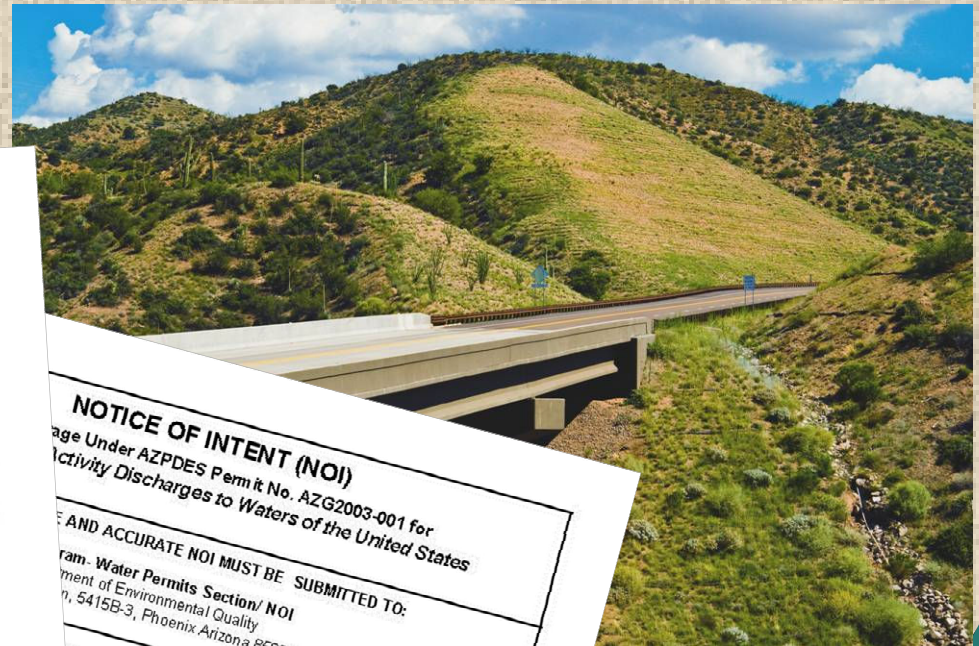
- ADOT-FHWA-BLM/USFS Interaction during Construction: Partnering
 - Is defined as the cooperative management of project development activities.
 - Fosters open communication necessary to successfully manage highway projects on lands managed by BLM or USFS.
 - Includes a contractor hosted 'Partnering' meeting prior to the onset of construction activities.

A screenshot of the Arizona Department of Transportation (ADOT) website, specifically the 'Communication and Community Partnerships' section. The header includes the ADOT logo and the text 'Arizona Department of Transportation Communication and Community Partnerships'. There is a 'KEYWORD SEARCH:' box with a 'GO' button. Below the header, there is a 'CCP Home Page' section with a list of links: 'Adopt a Highway Program', 'Dust Storms in Arizona', 'Government Relations', 'Highway Hawk', 'Kids Zone', 'Know Snow', 'News Releases', 'Partnering', 'Roundabouts', and 'TRANsend Magazine'. To the right of the links is a large graphic with the text 'Partnering Office' and a quote: 'Collaborative teamwork. Measurable Results.' Below the graphic, there is a paragraph defining 'Partnering' as a process of collaborative teamwork that allows groups to achieve measurable results through agreements and productive working relationships. The paragraph also mentions that ADOT's Partnering program provides feedback to project teams through the Partnering Evaluation Program (PEP) software.

10: Construction



- Erosion and Pollution Control
 - SWPPP and NOI
 - Equipment Washing
 - Spill Prevention Containment and Countermeasures
 - Seeding
 - NOT Requirements



2008 Construction General Permit SWPPP Guidance Checklist



This optional checklist is provided to assist owners and operators in preparing their AZPDES Stormwater Pollution Prevention Plan (SWPPP) to meet the requirements of Arizona's 2008 Construction General Permit (AZG2008-001). The "Descriptions" provided below do not necessarily reflect the exact wording used in the permit; rather these are stated in simplified language to provide additional guidance. (Note if any inadvertent conflict exists between this document and the permit, the permit language prevails). The "Permit Citation" column shows you where each particular requirement is found in the 2008 CGP. Use the "Location" column to note the page where the requirement is addressed in your SWPPP. Please leave the "For ADEQ Use Only" column blank. Using this SWPPP checklist will help you ensure that all the permit requirements are addressed in your SWPPP and will also assist the Department in conducting a more efficient review of your SWPPP if it is required to be submitted.

Please note that your SWPPP does not have to follow the format of this checklist; the purpose of this checklist is only to ensure that your SWPPP contains all required components. While this checklist is intended for use in preparing your initial SWPPP, your SWPPP is a "living" document and it is important that it be updated to document changes in your project, best management practices (BMPs), inspections, and other pertinent information.

Permit Citation	Description	Location in SWPPP & Notes	For ADEQ Use Only

NOTICE OF INTENT (NOI)
 Page Under AZPDES Permit No. AZG2003-001 for
 Activity Discharges to Waters of the United States

AND ACCURATE NOI MUST BE SUBMITTED TO:
 Stormwater Permits Section/ NOI
 Department of Environmental Quality
 Phoenix, 5415B-3, Phoenix Arizona 85007

AZPDES Construction General Permit?
 Authorization No. _____

Is the Site Located on
 Indian Country Lands?
 Yes _____ No _____

10: Construction



- Clearing Limits and Vegetation Protection during Construction
 - Clearing and Grubbing
 - Merchantable Timber
- Water
 - Riparian Awareness
 - Water Source Development
- Archaeological/Cultural Awareness



10: Construction



- Wildlife Encounters
 - Awareness training
 - Worker safety
 - Wildlife safety



- Acceptance of Work
 - Phased Acceptance of Work
 - Final Project Acceptance



11: Maintenance



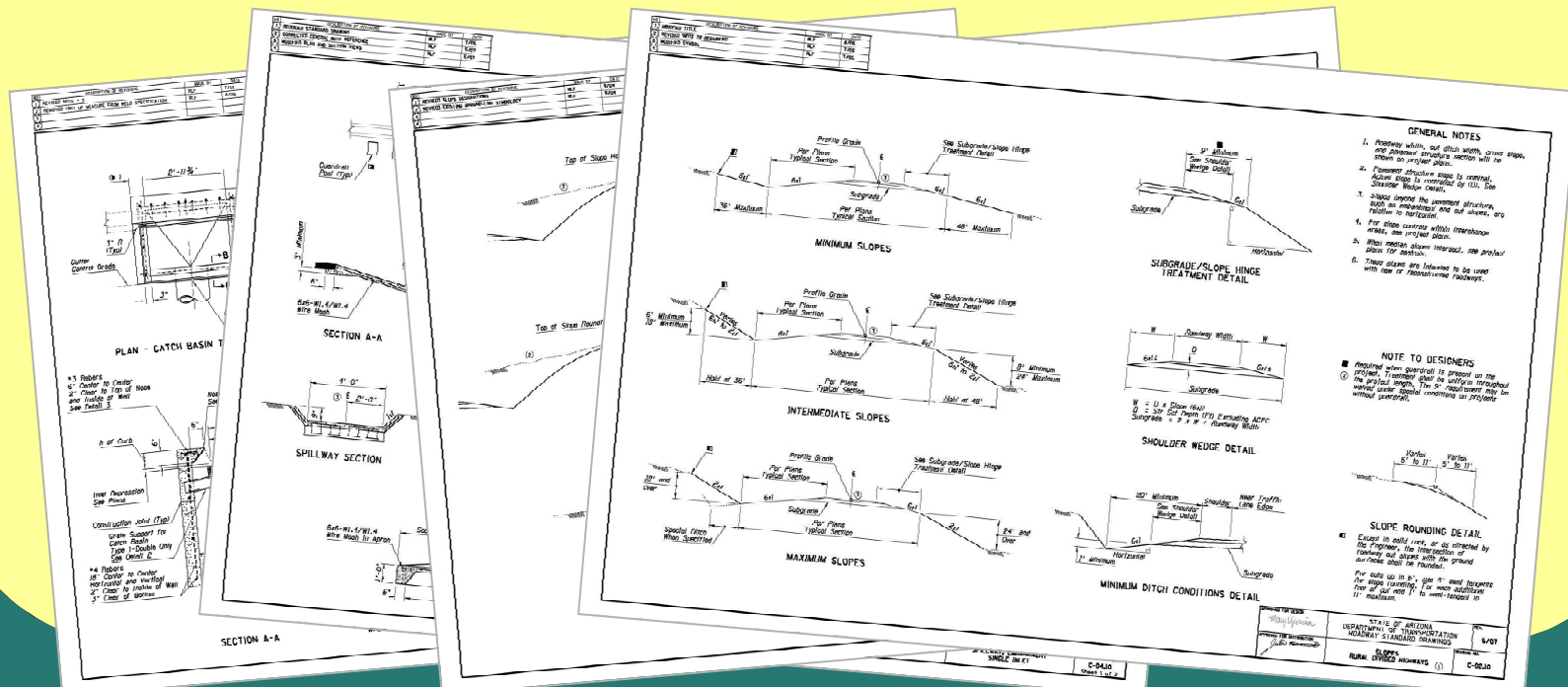
- Chapter Goals
 - Describe how ADOT maintenance activities are best integrated with BLM/USFS resource management concerns.
 - Describe the Annual Highway Maintenance Partnering Meeting.
 - Outline opportunities for ADOT maintenance personnel to provide input during the design of proposed highway corridors.
 - Outline routine ADOT maintenance activities and appropriate strategies for accomplishing those activities.



11: Maintenance



- Maintenance Participation in Planning and Design
 - Plan reviews during the project development process provide an opportunity to review and comment on proposed designs.
 - Review should include written comments from the *ADOT District Maintenance Supervisor*, *District Environmental Coordinator*, the *ADOT Natural Resources Management Group Regional Manager*, the *local BLM office* or *USFS District Ranger* and *USFS Engineer*.



11: Maintenance



- Maintenance Operations on BLM/USFS Lands
 - Annual Highway Maintenance Partnering Meeting.
 - Environmental Compliance and Documentation for Maintenance Operations.
 - Usually the funding source dictates which agency is responsible for NEPA compliance.
 - Additional NEPA documentation is **not** required for maintenance activities on existing alignments within BLM/USFS lands.
 - Rehabilitation and reconstruction activities on BLM/USFS lands where all activities stay within the existing ROW **do** require an additional NEPA decision.

BLM National
Environmental
Policy
Act Handbook H-1790-1

BLM



11: Maintenance



- ADOT Maintenance Operation Activities include



Vegetation Management activities



Bridge maintenance



Drainage Structure maintenance



Winter Storm Management Program activities



Noxious and Invasive Species management

11: Maintenance



- Emergency Procedures
 - Maintain contact lists for notification.
 - Prioritize repairs.
 - Repairs and maintenance should focus on restoring features to their pre-incident state.

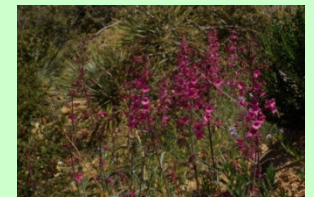
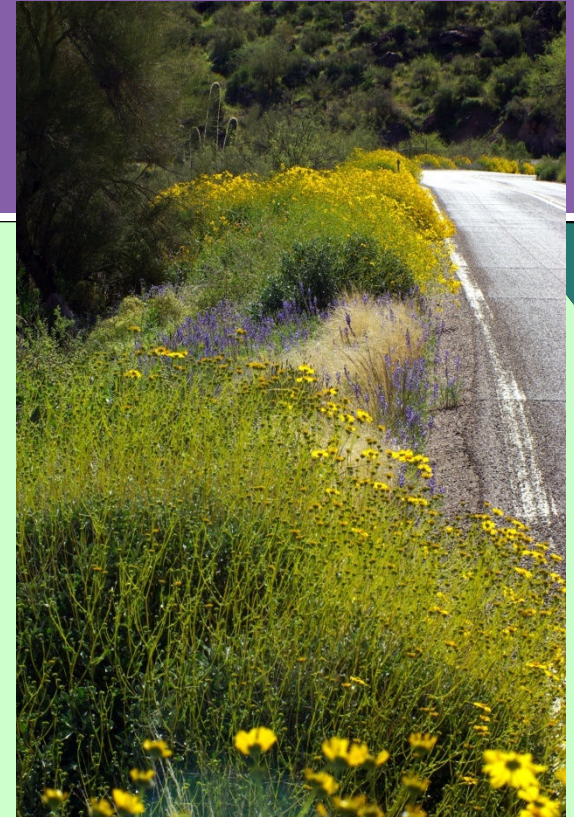


- BLM/USFS Maintenance Operation Activities
 - Coordinate with ADOT District Highway Traffic Division and ADOT Maintenance Operations.

Appendices



- Acronyms and Abbreviations
- Glossary of Terms
- ADOT-FHWA-USFS MOU
- ADOT-FHWA-BLM MOU
- Slope Design Details
- Easement Development
- Section 106 Process on Forest Service Lands
- Typical Blasting Plan Content
- Comparison of Permit Processes for Material Sites
- Signing
- Project Reference Fact Sheet
- Native Plant Salvage and Replanting Evaluation Guidelines
- References and Photography Credits
- Additional Photos (online appendix)
- Document Revision History



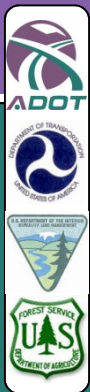
Conclusion



- Use the Guidelines.....
 - Before beginning projects on Federal Lands.
 - As a reference for the planning, design, construction and maintenance of ADOT projects on lands managed by BLM and USFS.
 - To review accepted procedures, and the needs and concerns of each agency to facilitate creation of safe, environmentally sound and aesthetically pleasing highway corridors.
 - As a touchstone throughout projects.
 - As a resource to locate additional information sources.



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Arizona Department of Transportation

Guidelines for Highways on Bureau of Land Management and U.S. Forest Service Lands

