

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



Chapter Overview Presentations

Twelve Chapter Overview presentations supplement the Guidelines document. Chapters 1-11 each have a Chapter Overview and an additional one summarizes appendices A-O.

These self-paced presentations are designed for individual use or for small group presentations where discussion can be accommodated. It is helpful to have the Guidelines document as a reference when viewing the presentations.

The Chapter Overview presentations are available on the ADOT Roadside Development Section website.

<http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-design-standards-and-guidelines/guidelines-for-highways-on-bureau-of-land-management-and-us-forest-service-lands>

Navigate the Chapter Overview by scrolling through the pages.



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Chapter 11: Maintenance



Acknowledgments:



Arizona Department of Transportation

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



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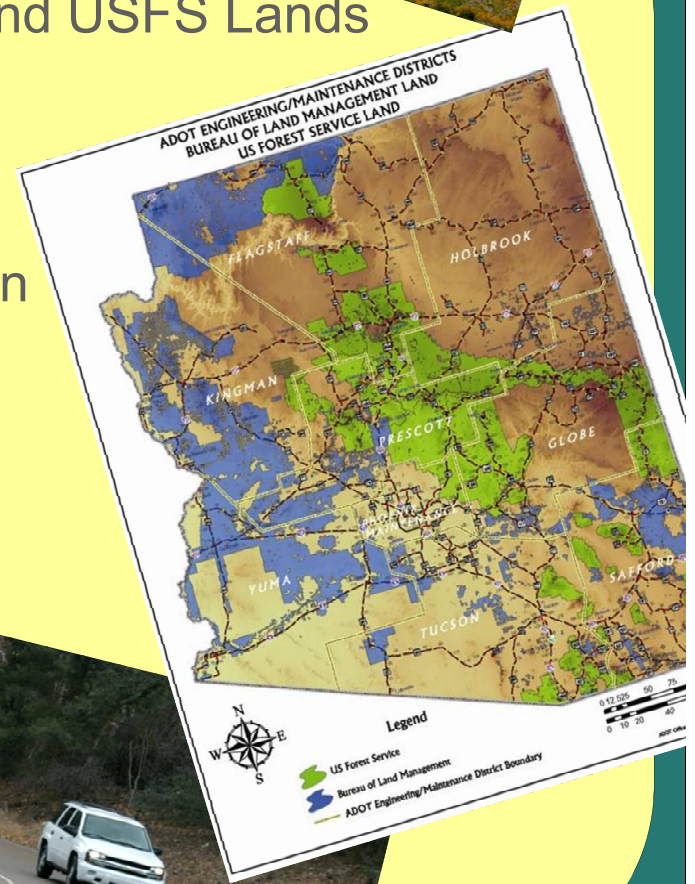
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Guidelines Contents



- 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 Storm Water and Pollution Control
 - 9 Material Sites
 - 10 Construction
 - 11 Maintenance Operations**
- Appendices A - O



After reviewing the Chapter 11 Tutorial you should.



- Understand Maintenance Operations' role in the highway planning and review process.
- Know the purpose of the Annual Highway Partnering Meeting and the *Annual Draft Maintenance Plan*.
- Be able to discuss the following typical ADOT maintenance operation activities:
 - Equipment Parking
 - Waste Disposal
 - Staging Area Maintenance
 - Vegetation Management
 - Noxious/Invasive Species Management
 - Tree Removal
 - Hazardous Vegetation
 - Brush Removal
 - Herbicide use
 - Ditch Cleaning and Shoulder Maintenance
 - Cut Slope Maintenance
 - Bridge, Fence, Wall Maintenance
 - Winter Storm Management

And you should also...



- Know to verify if NEPA compliance is required for your maintenance activities.
- Have a basis understanding of Emergency Maintenance Procedures.
- Know that the following BLM/USFS activities require coordination with the ADOT District Maintenance Traffic Division and ADOT Maintenance Operations:
 - Slash burning and other controlled burns
 - Logging across highways
 - Temporary access to highways
 - Maintenance of minor roadways intersecting with highways

Chapter 11 Contents



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11.3 Maintenance Operations on BLM/USFS Lands

11.4 ADOT Maintenance Operation Activities

11.5 Emergency Procedures

11.6 BLM/USFS Maintenance Operation Activities

11.7 Additional Resources

11.1 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.



11.2 Maintenance Participation in Planning & 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.*



11.3 Maintenance Operations on BLM/USFS Lands



- Annual Highway Maintenance Partnering Meeting.
 - Reestablish working relationships.
 - Review, amend, approve or reject proposed maintenance activities.
 - Agenda should include:
 - Review of past maintenance performed and lessons learned.
 - General review of routine, non-routine and unplanned maintenance.
 - Review and exchange of information on Threatened and Endangered species, archaeological sites and noxious or invasive species.
 - Discussion of environmental documentation for maintenance activities.
 - NEPA planning updates.



11.3 Maintenance Operations on BLM/USFS Lands



- 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.
 - Maintenance activities that utilize federal funding will require NEPA clearance and will coordinate with FHWA as the lead agency.
 - Demolition of load bearing structures requires National Emission Standard for Hazardous Air Pollutants (NESHAPs) compliance.

11.4 ADOT Maintenance Operation Activities



- ADOT Maintenance Operation Activities include:
 - Parking of maintenance equipment in acceptable overnight locations.
 - Designation of proper storage, staging and waste disposal areas.
 - Utilize existing storage and waste disposal areas to the fullest extent possible.



11.4 ADOT Maintenance Operation Activities



- ADOT Maintenance Operation Activities include:



Vegetation Management activities



Bridge maintenance



Drainage Structure maintenance



Winter Storm Management Program activities



Noxious and Invasive Species management

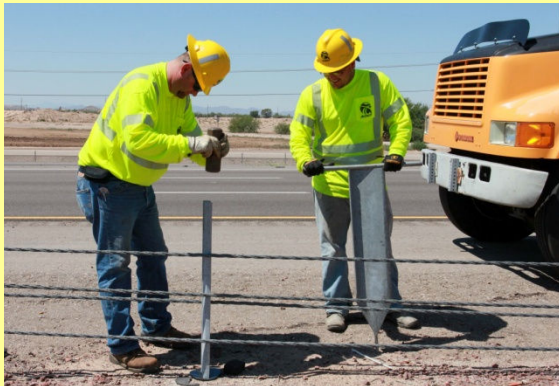
11.4 ADOT Maintenance Operation Activities



- ADOT Maintenance Operation Activities also include:



Ditch Cleaning and Shoulder Maintenance Activities



Roadside Barriers



Fences

11.5 Emergency Procedures



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



11.6 BLM/USFS Maintenance Operation Activities



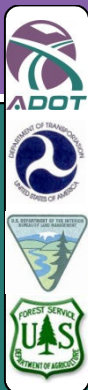
- Coordinate with ADOT District Highway Traffic Division and ADOT Maintenance Operations.
 - Slash burning and other controlled burns.
 - Logging across highways.
 - Temporary road access to highways.
 - Maintenance of minor roads intersecting with highways.
 - Avoid damage to guardrail, fence, fence supports and signs.
 - BLM/USFS need to maintain approaches of minor roads to highways to minimize tracking of unacceptable quantities of mud and debris onto the highway.

11.7 Additional Resources



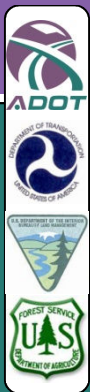
- ADOT Stormwater Program including Maintenance and Facilities BMP Manual and Erosion and Pollution Control Manual
<http://www.azdot.gov/business/environmental-services-and-planning/water-quality/manuals>
- State Noxious Weed List (R3-4-244 and R3-4-245)
http://www.azsos.gov/public_services/Title_03/3-04.htm
- Federal Noxious Weed List
<http://plants.usda.gov/java/noxious?rptType=Federal>
- Report 341, Integrated Roadside Vegetation Management, National Cooperative Highway Research Program
http://gulliver.trb.org/publications/nchrp/nchrp_syn_341.pdf
- Arizona Wildlands Invasive Plant Working Group (AZ-WIPWG): Invasive Non-Native Plants That Threaten Wildlands in Arizona
<http://sbsc.wr.usgs.gov/research/projects/swepic/SWVMA/InvasiveNon-NativePlantsThatThreatenWildlandsInArizona.pdf>

11.7 Additional Resources



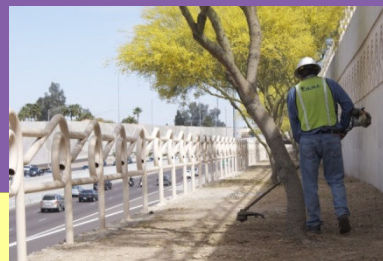
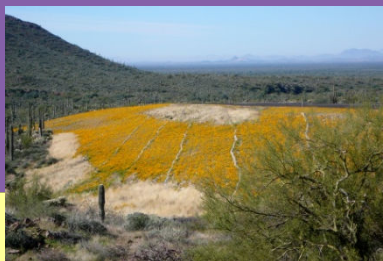
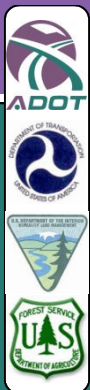
- AASHTO
<http://www.transportation.org/Pages/default.aspx>
- ADOT Roadway Design Guidelines
<http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-design-standards-and-guidelines/roadway-design-guidelines>
- USFS publication “Landscape Aesthetics, A Handbook for Scenery Management”
http://www.fs.fed.us/cdt/carrying_capacity/landscape_aesthetics_handbook_701_no_append.pdf
- Environmental Assessment for Management of Noxious Weeds and Hazardous Vegetation on Public Roads on National Forest System Lands in Arizona
<http://www.fs.usda.gov/main/r3/landmanagement/projects>
- Forest Service Pesticide Use Proposal Form (FS 2100-2)
http://www.fs.usda.gov/detail/tonto/landmanagement/resourcemanagement/?cid=fsbdev3_018789

11.7 Additional Resources



- BLM Vegetation Management EIS
http://www.blm.gov/wo/st/en/prog/more/veg_eis.html
- BLM Pesticide Use Proposal Form
<http://www.azdot.gov/docs/default-source/business/blm-pesticide-use-proposal-form.doc>
- ADOT Winter Storm Management Environmental Overview and Operations Manual
<http://www.azdot.gov/business/environmental-services-and-planning/programs/winter-storm-management>
- Federal-Aid Highway Emergency Relief Program
<http://www.fhwa.dot.gov/specialfunding/er/guide.cfm>
- Phoenix Interagency Fire Center
Phone 480.457.1551

Highlights



- Read Chapter 11.....
 - For an overview of the Annual Highway Maintenance Partnering Meeting and Annual Maintenance Plan content.
 - To understand required environmental compliance and documentation for maintenance operations.
 - For a discussion of typical ADOT maintenance activities and tasks.
 - For an awareness of Emergency Maintenance Procedures.
 - For a list of BLM/USFS maintenance activities that require coordination with ADOT.



Knowledge Check: Do you.....



- ✓ Understand Maintenance Operations' role in the highway planning and review process?
- ✓ Know the purpose of the Annual Highway Partnering Meeting and the *Annual Draft Maintenance Plan*?
- ✓ Be able to discuss typical ADOT maintenance operation activities including:
 - ✓ Equipment Parking
 - ✓ Waste Disposal
 - ✓ Staging Area Maintenance
 - ✓ Vegetation Management
 - ✓ Noxious/Invasive Species Management
 - ✓ Tree Removal
 - ✓ Hazardous Vegetation
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 - ✓ Cut Slope Maintenance
 - ✓ Bridge, Fence, Wall Maintenance
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And do you.....

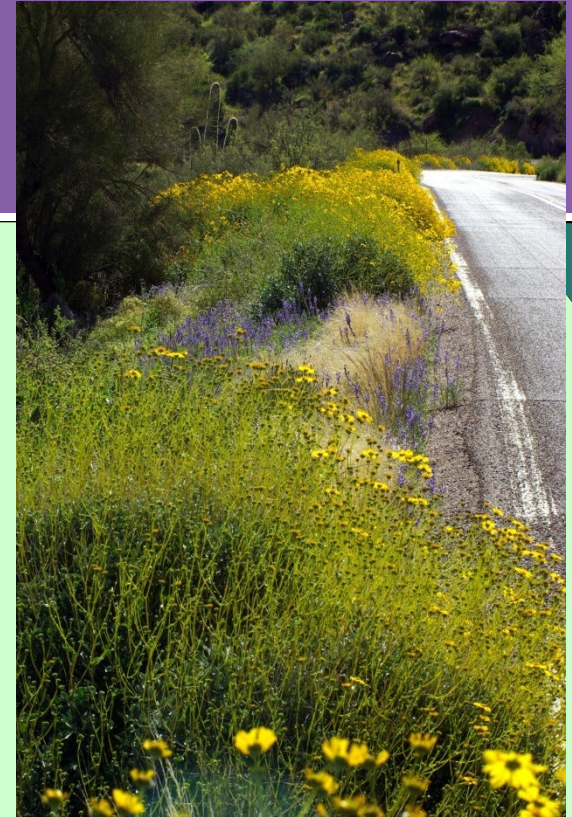


- ✓ Know to verify if NEPA compliance is required for maintenance activities?
- ✓ Understand Emergency Maintenance Procedures?
- ✓ Know that the following BLM/USFS activities require coordination with the ADOT District Maintenance Traffic Division and ADOT Maintenance Operations:
 - ✓ Slash burning and other controlled burns
 - ✓ Logging across highways
 - ✓ Temporary access to highways
 - ✓ Maintenance of minor roadways intersecting with highways

Guidelines 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 & Replanting Evaluation Guidelines
- References and Photography Credits
- Additional Photos (online appendix)
- Document Revision History



Document Availability



Purchase from:
ADOT Engineering Records Section
1655 W. Jackson Room 175
Mail Drop 112F
Phoenix, Arizona 85007-3217
Telephone: 602-712-8216 or 712-7498
Fax: 602-712-3235

For availability and cost:
[http://www.azdot.gov/business/Contracts
andSpecifications](http://www.azdot.gov/business/ContractsandSpecifications)

Download from:
[http://www.azdot.gov/business/engineering-and-construction/roadway-
engineering/roadway-design-standards-and-guidelines/guidelines-for-
highways-on-bureau-of-land-management-and-us-forest-service-lands](http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-design-standards-and-guidelines/guidelines-for-highways-on-bureau-of-land-management-and-us-forest-service-lands)

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