

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



Chapter Overview Presentations

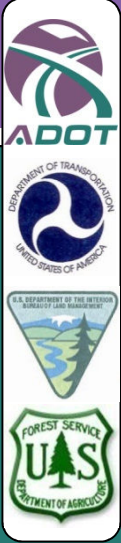
Twelve Chapter Overview presentations supplement the Guidelines document. Chapters 1-11 each have a Chapter Overview and an additional one summarizes appendices A-O.

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.

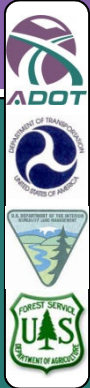


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Chapter 8: Storm Water and Pollution Control



Acknowledgments:



Arizona Department of Transportation

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



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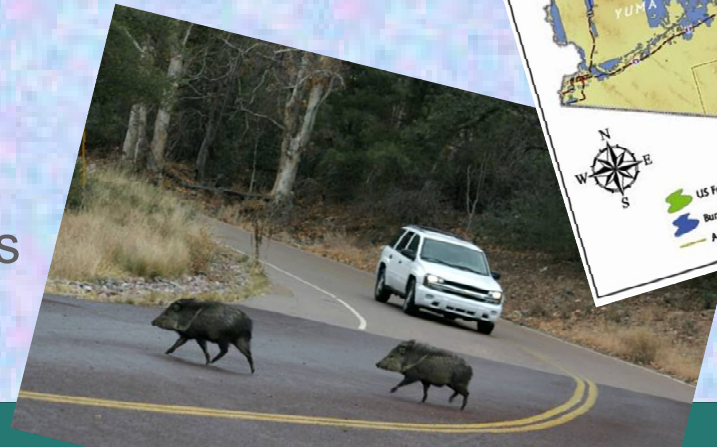
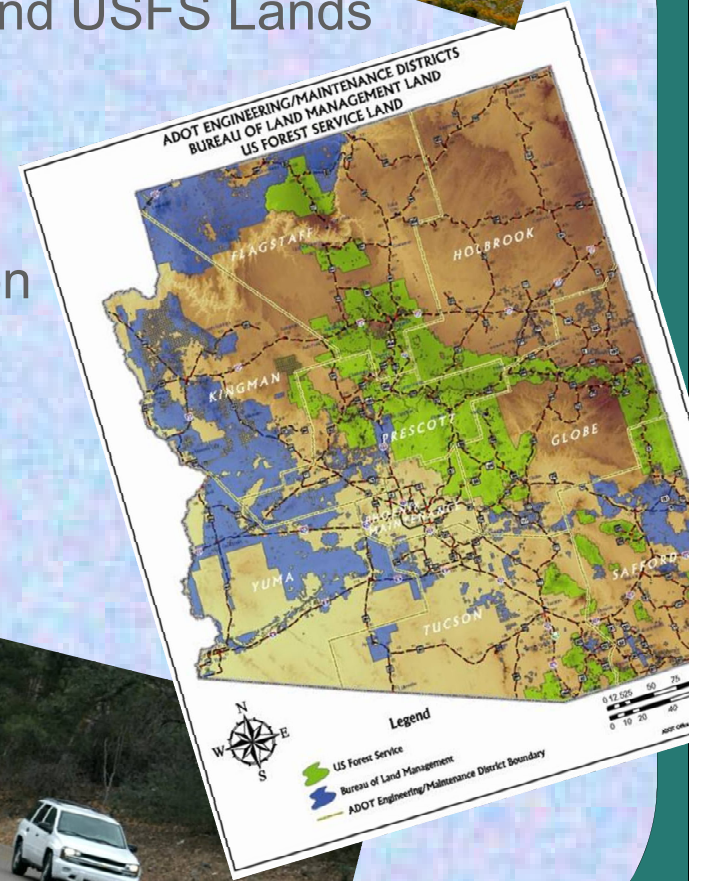
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Prepared by Wheat Scharf Associates and the Guidelines Steering Committee

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
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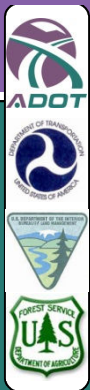


After reviewing the Chapter 8 Tutorial you should...



- Know to refer to the *ADOT Erosion and Pollution Control Manual* for erosion control requirements on ADOT projects and BMPs.
- Be able to define NPDES and AZPDES and their role in water quality control.
- Be able to give examples of Temporary and Permanent BMPs.
- Know what SWPPP stands for.
- Be able to access the ADOT Storm Water Program webpage.
- Know how to access the *ADOT Post-Construction BMP Manual*.

Chapter 8 Contents



8.1 Chapter Goals

8.2 Design

8.3 Construction

8.4 Additional Resources



ADOT EROSION AND POLLUTION CONTROL MANUAL



For Highway Design
and Construction



Arizona Department of Transportation

Intermodal Transportation Division

8.1 Chapter Goals

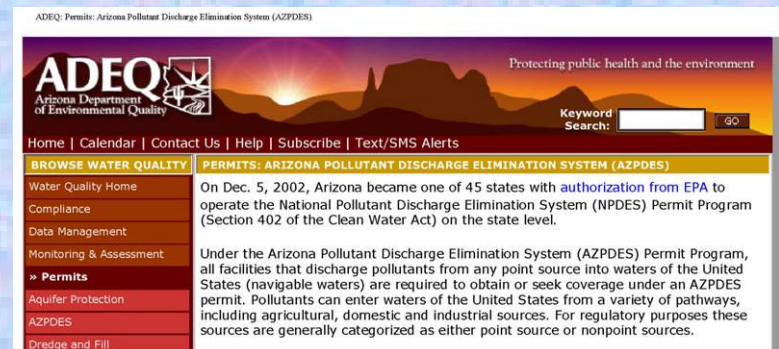


- Direct the reader to the ADOT Erosion and Pollution Control Manual.
- Introduce the National Pollutant Discharge Elimination System (NPDES) and the Arizona Pollutant Discharge Elimination System (AZPDES).
- Define Best Management Practices (BMPs).
 - Temporary
 - Permanent

ADOT EROSION AND POLLUTION CONTROL MANUAL



For Highway Design and Construction



8.1 NPDES / AZPDES



- The Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES) and the Arizona Department of Environmental Quality's Arizona Pollution Discharge Elimination System (AZPDES) describe requirements for control of storm water quality.

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

8.1 BMPs



- Temporary Best Management Practices are intended to improve storm water quality during the construction process and include:
 - Sediment Logs
 - Silt Fence
 - Gravel Bags
- Permanent Best Management Practices are intended to improve storm water quality both during and after construction and include:
 - Preservation of Existing Vegetation
 - Sediment Wattles
 - Sediment Control Berm

8.2 Design

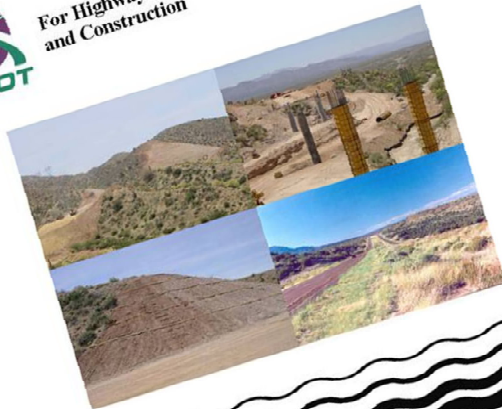


- The *ADOT Erosion and Pollution Control Manual* describes in greater detail the goal for erosion control on ADOT construction projects. Each BMP is illustrated and defined with information provided on appropriate use, limitations and typical materials.

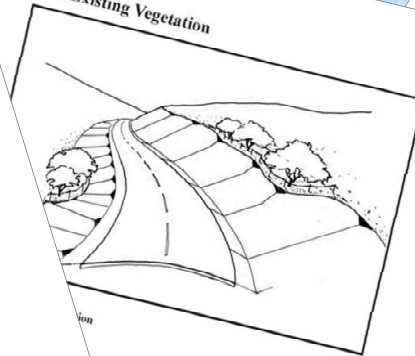
ADOT EROSION AND POLLUTION CONTROL MANUAL



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Preserve Existing Vegetation



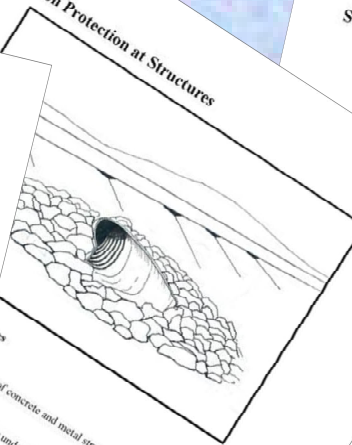
...on of trees and natural vegetated areas within the construction
...minimize the amount of bare soil exposed to erosive forces and
...water runoff.

...port, and tracking.

...of conflict with construction activities.

...for construction activity.

Erosion Protection at Structures

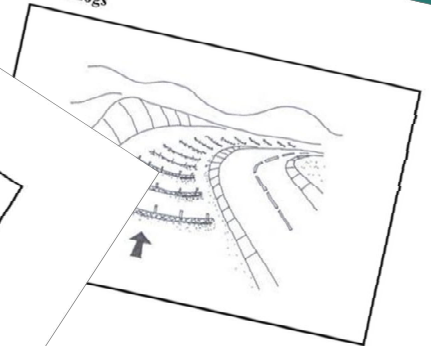


...ices
...face of concrete and metal structures
...ential for undercutting at structures.

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

...when the rock is sized and placed
...documents or as disc-

Sediment Logs



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

... runoff and reduce flow velocities.

...ifications
...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.

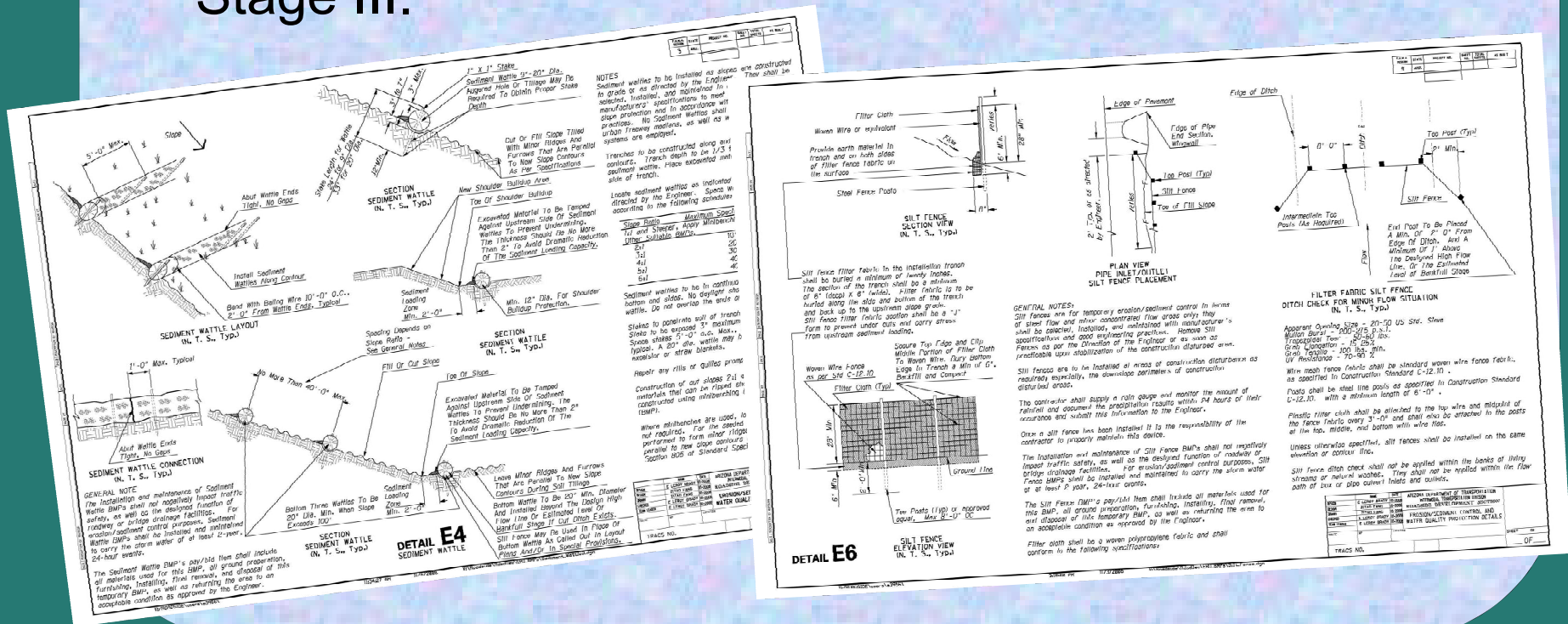
...Not practicable where large flows are involved.
...Offer a potential for accidental introduction of undesirable weed species if filled
...with straw.

...Not suitable for rock subgrades where stakes cannot be securely installed

8.2 Design



- Roadway and Drainage Plans include Permanent BMPs.
- Storm Water Pollution Prevention Plans (SWPPP) describing Temporary BMPs are typically prepared at Stage III.



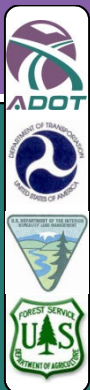
8.3 Construction



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



8.4 Additional Resources



- ADOT Storm Water Program
<http://www.azdot.gov/business/environmental-services-and-planning/water-quality>
- ADOT Post-Construction BMP Manual
[http://www.azdot.gov/docs/planning/post-construction-best-management-practices-\(bmp\)-manual.pdf?sfvrsn=0](http://www.azdot.gov/docs/planning/post-construction-best-management-practices-(bmp)-manual.pdf?sfvrsn=0)

STORMWATER MONITORING GUIDANCE MANUAL for Construction Activities



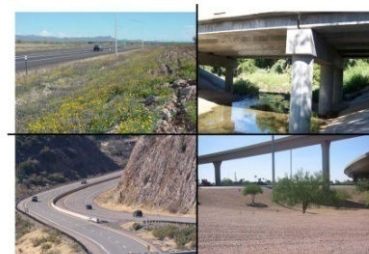
ARIZONA DEPARTMENT OF TRANSPORTATION

August 23, 2006

Preliminary Draft ADOT POST-CONSTRUCTION BEST MANAGEMENT PRACTICES MANUAL

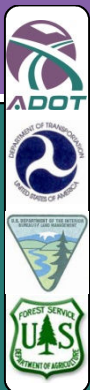


For Highway Design
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January 2008

Highlights



- Read Chapter 8.....
 - As an introduction to storm water and pollution control on ADOT projects.
 - For examples of Temporary and Permanent BMPs and how they differ.
 - For the meanings of NPDES, AZPDES, and SWPPP.
 - To locate additional erosion and pollution control information.



Knowledge Check: Do you.....

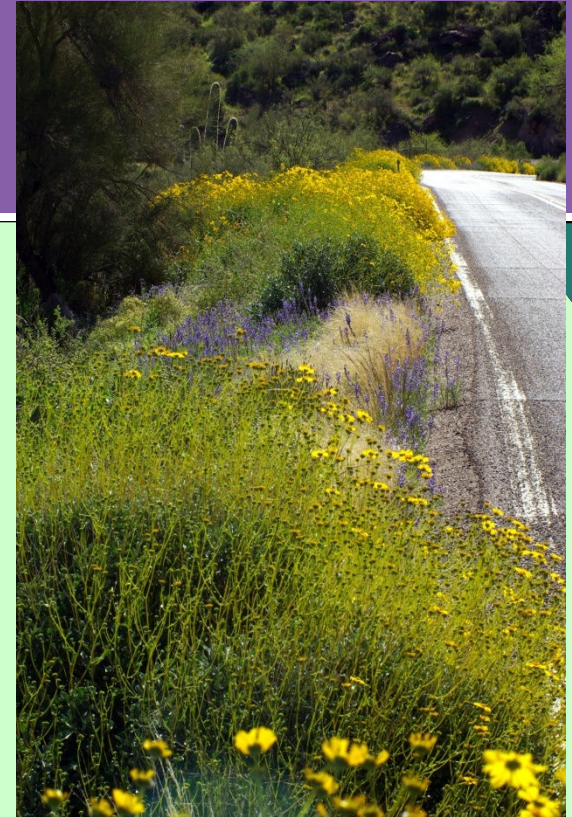


- ✓ Know to refer to the *ADOT Erosion and Pollution Control Manual* for erosion control requirements on ADOT projects and BMPs?
- ✓ Know what NPDES and AZPDES and understand their role in water quality control?
- ✓ Recognize Temporary and Permanent BMPs?
- ✓ Know what SWPPP stands for?
- ✓ Know how to find the ADOT Storm Water Program webpage?
- ✓ Know how to access the *ADOT Post-Construction BMP Manual* on the ADOT website?

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/Contract
sandSpecifications](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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