

TABLE OF CONTENTS

CHAPTER 9: MATERIAL SITES

9.1 CHAPTER GOALS..... 95

9.2 SCOPING..... 95

Authorization Process..... 95

Geotechnical Investigations for Material Sources..... 96

9.3 OPERATION..... 97

Material Sources..... 97

Plan of Operations..... 97

Joint Use Material Sources..... 98

Excess Material (Waste)..... 98

Inspections..... 98

9.4 STORMWATER MANAGEMENT GUIDELINES FOR MATERIAL SOURCES
AND STOCKPILE SITES..... 99

9.5 FINAL RESTORATION OF MATERIAL SOURCES AND WASTE SITES..... 99

9.6 ADDITIONAL RESOURCES..... 99



CHAPTER 9: MATERIAL SITES

9.1 CHAPTER GOALS

ADOT desires to establish a statewide network of materials sources, some of which will need to be located on USFS and BLM lands. Each source may require environmental documentation, geotechnical investigation, and master planning in addition to analyses of accessibility, haul distances, other potential users and long- and short-term needs.

Through interagency cooperation and communication, existing and potential material source and waste sites throughout the state can be utilized efficiently and meet environmental standards.

Material sites are locations outside the highway corridor easement from which rock and soil materials may be mined and processed to serve the needs of new construction and/or maintenance activities, *Figure 9.1*. Material sites may also serve as repositories for excess materials generated by new construction and/or maintenance activities. Activities associated with the development of material sources may include constructing access to and excavation of the material site as well as treatment of the excavated material such as crushing, sorting and stockpiling, *Figure 9.2*. Because they take place outside of the easement and on lands managed by USFS or BLM, these activities require a USFS or BLM permit as will be discussed below.



Figure 9.1 Material sites located outside of the highway corridor.

Excess material is defined as solid by-products of highway construction, reconstruction and maintenance, and as materials source by-products including removed vegetation, timber, stumps and slash. The following examples are not considered excess materials: used cans, oils, machine and equipment parts, paint, fresh concrete, wash water from concrete operations, cement, hazardous materials, plastic and rubber products, discarded metals, and building materials. This unacceptable waste should be disposed of properly at a designated landfill or other acceptable disposal facility. BLM/USFS has discretion regarding acceptable waste to be placed on BLM or USFS land.

9.2 SCOPING

Authorization Process

Because they often take place outside of the ROW, the development of materials sources requires that ADOT obtain approval from BLM or USFS for sources on Federal Lands. A chart summarizing the main issues is shown in Appendix I. Requirements typical for the authorization process include the following:

- Preparation of a Source Development Plan. The purpose of the plan is to anticipate, direct and document the proper management of the source. The plan should address the following:
 - Site location and survey (which requires a licensed land surveyor).
 - Estimated lifespan, estimate of volumes of usable and unusable material, basis of estimate and horizontal and vertical extent



Figure 9.2 Locations need to be set aside for site stockpiling.



Figure 9.3 Excavation work.



Figure 9.4 Batch plant and crusher.



Figure 9.5 Waste areas and stockpiles.

of differing materials.

- Anticipated construction activities: excavation work, *Figure 9.3*, batch plant with crusher, *Figure 9.4*, and/or waste areas and stockpiles, *Figure 9.5*.
- Existing features or planned activities that require special attention (e.g., visual concerns, public safety, pollution control, blasting concerns, etc.).

- Design and maintenance of long-term site access.
- End use of the site (e.g. reclamation, campground, wildlife/stock pond, day use area, helicopter pad, waste area). Site activities should be consistent with this end use design.
- The authorization process may require NEPA documentation in addition to archaeological and biological clearances, 404 permits and others. The design team should anticipate that the authorization process might require months to complete (or years for projects that disturb significant natural resources).
- A fee may be assessed to materials wasted off of USFS lands.
- Material sources are classified as industrial facilities for the purposes of stormwater management. Material sources that are used for multiple construction projects and that discharge to Waters of the US are eligible for coverage under ADOTs Individual Permit (AZPDES Individual Permit No. AZS000018-2008) for ADOT activities or the AZPDES Construction General Permit (AZG2008-001) for activities associated with construction projects.
- The preparation of a Stormwater Pollution Prevention Plan (SWPPP) or Erosion and Pollution Control Plan (EPCP), installation of Best Management Practices (BMPs), inspections and possibly two types of monitoring: analytical and compliance (pit dewatering only) may be required. Additional information on material source SWPPP and EPCP preparation and monitoring requirements may be found in the ADOT Material Source SWPPP Template or the ADOT EPCP Template and the ADOT Stormwater Monitoring Guidance Manual for Industrial Activities. Additional information is available from the ADOT Stormwater Group website listed at the end of this chapter.

Geotechnical Investigations for Material Sources

Geotechnical investigations are usually needed to evaluate the extent, type and engineering properties of the materials encountered. They typically consist of constructing access to the proposed material source, backhoe test pits and/or borings by drill rigs. Since they may also take place outside of the existing right-of-way, geotechnical investigations for



Figure 9.6 Location needed for drilling equipment.

material sources require authorization from BLM/USFS as described above. In order to meet the requirements of that authorization, the following information is typically included:

- Environmental Clearance (NEPA)
- Access to the material source site:
 - Use of existing roads (if adequate to meet requirements of equipment).
 - If necessary, new road location and design (amount of cut/fill required, width, length) and type of equipment required for road construction (e.g. bulldozer, grader, backhoe).
 - Descriptions of existing streams or natural drainages that must be traversed and proposed drainage improvements (e.g. water bars, culverts).
 - Access road maintenance schedule.
 - Methods for controlling unauthorized access.
- Geotechnical investigation schedule.
- Possible need for phased investigations.
- Locations for drilling equipment, *Figure 9.6*, (typically, a 30-foot by 20-foot cleared, graded pad is constructed).

- Clearing limits and locations for topsoil salvaged from material source site.
- Methods for erosion control of disturbed sites.
- Rehabilitation of disturbed areas.

9.3 OPERATION

Material Sources

ADOT will operate source sites in accordance with the approved Source Development Plan. When unanticipated construction activities are deemed necessary or desirable, ADOT will need to amend the Plan in consultation with BLM/USFS.

ADOT may inform its contractors of available material sources in the project contract documents. BLM/USFS will typically allow access only to those material sources where ADOT has previously received authorization. Contractors may pursue authorization for other material sources on BLM/USFS lands, but should be reminded that this process is lengthy and may require months to complete as discussed above.

Plan of Operations

A contractor or public agency may make application to ADOT to utilize a material source or waste site for which an approved Source Development Plan has been developed. It will do so by preparing a Plan of Operations, which must be consistent with the goals of the Source Development Plan described above. The Plan will require BLM/USFS approval and, at a minimum, will include the following information:

- Name and address of the permit holder (typically ADOT Materials Group) and names of ADOT field contacts.
- Name/number of the materials source and location map and probable start/end dates. When necessary, the plan should be amended in consultation with BLM/USFS to adjust these dates.
- Plan drawings showing views of clearing limits, areas of excavation and elevation/section views of benches and cut faces. Note that this work will require engineer designs for which ADOT is ultimately responsible as the party authorized by BLM/USFS.
- Project access, drainage design and environmental mitigation.
- Clearing limits including methods of vegetation removal and locations for salvaged topsoil.
- Type and magnitude of operations (e.g. batch plant, equipment area, stockpiles) and haul routes.
- Anticipated type(s) and volume(s) of material to be excavated.
- Locations and methods of excavation.
- Volume and usage of oversize material produced.
- Blasting plans.
- SWPPP or EPCP to address erosion control, storage and cleanup for fuels, oils and explosives.
- Site monitoring schedule including required SWPPP reviews.
- Restoration plan including proposed end-of-project grading plan. Stockpiles, if not utilized, may require ongoing maintenance by ADOT.
- Prior to the contractor's release from an ADOT materials source, BLM/USFS and ADOT will determine compliance with the terms of the authorization permit and the Source Development Plan.

Joint Use Material Sources

"Joint use" refers to use by more than one agency or party (e.g. USFS, BLM, ADOT, city, county). Typically, within a joint use source, each user has a designated area. It is recommended that each designated area be a discreet area and not immediately adjacent to another user's designated area. Each user must provide a Plan of Operations to ADOT that is consistent with the Source Development Plan. BLM/USFS, in conjunction with ADOT, may designate which portion of the source site is assigned for use to a specific user. Plans of Operation for joint use areas are usually developed by ADOT and BLM/USFS, but ADOT may be required to provide a plan for the entire site. A third party user will be required to abide by the approved ADOT plan.

As described in the authorization permit, ADOT will act as the manager of the site and will assume responsibility for complying with the requirements of the permit.

Excess Material (Waste)

Waste sites are typically identified during project planning and design and should be described in the project contract documents. However, contractors may request additional (unplanned) waste sites. For unplanned waste sites and all other waste sites outside of the highway corridor right-of-way, the contractor or ADOT will need to apply for a permit from BLM or USFS similar to that required for material sites. Other possible options for excess material disposal during construction are described in Chapter 4.

Inspections

During both the geotechnical investigation and early development materials sites, representatives from both BLM/USFS and ADOT should provide regular inspections so that adjustments can be made and undesirable consequences minimized. Once operational, it is important that sites be inspected on a regular basis to evaluate compliance with requirements described in the Source Development Plan, the Plan of Operation, and applicable state and/or federal pollutant discharge elimination system programs.

9.4 STORMWATER MANAGEMENT GUIDELINES FOR MATERIAL SOURCES AND STOCKPILE SITES

The Guidelines for Standard Operating Procedures to Control Stormwater on Forest Service and Bureau of Land Management Material Mining Sources and Stockpile Sites in Arizona and used by ADOT will assist ADOT, Arizona BLM, Arizona USDA FS and the FHWA Arizona Division in identifying roles and responsibilities regarding stormwater pollution control for material mining sources and stockpile sites as used by ADOT.

The purpose of this document is to establish a Standard Operating Procedure regarding ADOT stormwater management associated with material mining sources and stockpile site authorized for exclusive ADOT use as well as sites authorized for non-exclusive ADOT use on Federal BLM or USFS Lands.

Refer to Appendix P for the Guidelines document, Application SF 299 and the EPCP Template and annotated Table of Contents. These documents will be updated to reflect any new permit conditions in 2013.

9.5 RESTORATION OF MATERIAL SOURCES AND WASTE SITES

Because removal of existing vegetation and below-grade excavation are involved, material sources are typically susceptible to erosion. Upon completion of excavation activities, the site should be prepared for its end use as described in the Source Development Plan. Typically, this requires final site grading, distribution of stored topsoil, erosion control and restoration and revegetation of disturbed soils. Unless needed for other reasons, access roads to the site should be regraded to original contour, ripped, drained, blocked to traffic and seeded.

9.6 ADDITIONAL RESOURCES

ADOT Stormwater Program:

<http://www.azdot.gov/business/environmental-services-and-planning/water-quality>

Arizona State Mine Inspector:

<http://www.asmi.state.az.us/>

ADOT Environmental Planning Group:

<https://www.azdot.gov/business/environmental-planning>

This page intentionally left blank