APPENDIX B – BEST MANAGEMENT PRACTICES

The publications referenced in this appendix are sources of "Best Management Practices" (BMPs). BMPs are measures that have been developed by agency, industry, scientific, and/or working groups as voluntary methods for reducing environmental impacts associated with certain classes of activity. BLM typically uses these measures as guidelines or "project design features" during implementation planning at the activity and/or project-specific levels.

The list included in this appendix is not all-inclusive, but references the most frequently used sources. As new publications are developed, BLM may consider those BMPs. In addition, many BLM handbooks (such as BLM Manual 9113-Roads and 9213-Interagency Standards for Fire and Aviation Operation) also contain BMP-type measures for minimizing impacts. These BLM-specific guidance and direction documents are not referenced in this appendix.

Planning implications: Use of Best Management Practices is not mandatory, since individual measures may not be appropriate for use in every situation. They may be added, dropped, or modified through plan maintenance.

NEPA implications: Only the wind energy development BMPs have been analyzed in a NEPA process. The use of other BMPs should be analyzed on a case-by-case basis in NEPA documents associated with projects on the public lands. These case-by-case analyses should not "tier to" the BMP publication as a way to dismiss environmental impacts (i.e., must still analyze and disclose the environmental considerations and effects associated with use of the BMP).

Montana Best Management Practices for Grazing

Developed by: Working group with representation from: MSU College of Agriculture, Society of American Fisheries, Montana Stockgrowers Association, Montana Woolgrowers Association, USDI Bureau of Land Management, USDA Forest Service, USDA Natural Resources Conservation Service, Montana Farm Bureau, and Montana Dept. of Natural Resources and Conservation.

Publication reference: N/A, first printed in 1999

Available From: Conservation Districts Bureau, DNRC, PO Box 201601, Helena MT 59620-1601 (406-444-6667).

Description: Describes BMPs for livestock grazing designed to protect and enhance water quality, soils, plant communities, and other rangeland resources. Explains how and why to use BMPs to manage upland rangeland, forested rangeland, and riparian areas; and describes how grazing BMPs fit into a grazing management plan

Water Quality BMPs for Montana Forests

Developed by: Montana State University Extension Service

Publication reference: Logan, R. 2001. Water Quality BMPs – Best Management Practices for Montana Forests. EB158, MSU Extension Forestry, Missoula, MT. 58pp.

Available from: MSU Extension Forestry, 32 Campus Dr, Missoula MT 59812, OR MSU Extension Publications, PO Box 172040 Bozeman MT 59717

Description: Discusses methods for managing forest land while protecting water quality and forest soils. Intended for all forest land in Montana, including non-industrial private, forest industry, and state or federally-owned forests. These are preferred (but voluntary) methods that go beyond Montana State Law (Streamside Management Zones). Includes definitions, basic biological information, and BMPs for Streamside Management Zones; road design, use, planning and locating, construction, drainage, and closure; stream crossings, soil, timber harvesting methods, reforestation, winter planning, and clean-up.

Montana Placer Mining BMPs

Developed by: Montana Bureau of Mines and Geology

Publication Reference: Special Publication 106, October 1993

Available from: Montana Bureau of Mines and Geology, Main Hall, Montana College of Mineral Science and Technology, Butte MT 59701

Description: Provides guidelines for planning, erosion control, and reclamation in arid to semi-arid, alpine, and subalpine environments, to prevent or decrease environmental damage and degradation of water quality.

BMPs for Wind Energy

Developed by: Bureau of Land Management

Publication reference: Wind Energy Development Programmatic EIS

Available From: FEIS Chapter 2 (section 2.2.3.2) at http://windeis.anl.gov/

Description: As part of the proposed action, BLM developed BMPs for each major step of the wind energy development process, including site monitoring and testing, plan of development preparation, construction, operation, and decommissioning. General BMPs are available for each step, and certain steps also include specific BMPs to address the following resource issues: wildlife and other ecological resources, Visual resources, Roads, Transportation, Noise, Noxious Weeds and Pesticides, Cultural/Historic Resources, Paleontological Resources, Hazardous Materials and Waste Management, Storm Water, Human Health and Safety, monitoring program, air emissions and excavation and blasting activities.

Montana Guide to the Streamside Management Zone Law

Note: The Montana Guide to the Streamside Management Zone Law is a field guide to compliance with State of Montana Law 77-5-301[1] MCA.

Developed by: Montana Department of Natural Resources and Conservation Service Forestry Bureau, in cooperation with Montana Department of Environmental Quality, Montana Logging Association, Montana Wood Products Association, Plum Creek Timber LP, USDA Forest Service, USDI Bureau of Land Management

Publication reference: Revised August 2002

Available From: Montana Department of Natural Resources and Conservation, 2705 Spurgin Road, Missoula MT 59801-3199, (406)542-4300, or local MT DNRC field office.

Description: MT State Law (77-5-301[1] MCA). Complementary BMPs are found in the Water Quality BMPS for Montana Forests (also referenced in this appendix). Provides definitions, stream classifications, and guidelines on the seven forest practices prohibited by Montana law in SMZs (broadcast burning, operation of wheeled or tracked vehicles except on established roads, the forest practice of clearcutting, the construction of roads except when necessary to cross a stream or wetland; the handling, storage, application, or disposal of hazardous or toxic materials in a manner that pollutes streams, lakes, or wetlands, or that may cause damage or injury to humans, land, animals, or plants; the side casting of road material into a stream, lake, wetland, or watercourse; and the deposit of slash in streams, lakes, or other water bodies.

Erosion and Sediment Control Practices: Field Manual

Developed by: Prepared for the Montana Department of Transportation

Publication reference: FHWA/MT-030003/8165

Available From: National Technical Information Service, Springfield, VA 21161

Description: The Erosion and Sediment Control Best Management Practices Construction Field Manual was developed to assist in design, construction, and post-construction phases of MDT projects. This manual provides background to concepts of Erosion and Sediment Control. Most of MDTs Best Management Practices are listed within the manual based on application categories. Each BMP is described; its applications and limitations are listed, as well as its design criteria. Construction phase and post-construction phase BMPs are described. This manual is a field guide and condensed version of the Erosion and Sediment Control Design Construction Best Management Practices Manual. For more detailed discussion on topics found within, refer to the Erosion and Sediment Control Construction Best Management Practices Manual.

Erosion and Sediment Control Practices: Reference Manual

Developed by: Prepared for the Montana Department of Transportation

Publication reference: FHWA/MT-030003/8165

Available From: National Technical Information Service, Springfield, VA 21161

Description: The Erosion and Sediment Control Construction Best Management Practices Manual was developed to assist in the design, construction, and post-construction phases of MDT projects. This manual provides background to state and federal regulations associated with erosion and sediment control practices including a general overview of the erosion and sediment processes. Best Management practices are listed within the manual based on application categories. Each BMP is described; its applications and limitations are listed, as well as its design criteria. The design phase includes development of construction plans, NOI, and SWPPP. Construction phase includes the finalization of the SWPPP, NOI, and the implementation of BMPs. Post-Construction phase includes monitoring, maintenance, and removal activities.

BMPs for Fluid Minerals

Developed by: Bureau of Land Management

Publication reference: BLM/WO/ST-06/021+3071

Available from: Online at: http://www.blm.gov/bmp/
Online at: http://www.mt.blm.gov/oilgas/operations/goldbook/goldbook1.html
Online at: http://www.mt.blm.gov/oilgas/operations/goldbook/Stand_Enviro_Color.pdf
Online at: http://www.mt.blm.gov/oilgas/operations/color.pdf

Description: BMPs for oil and gas demonstrate practical ideas which may eliminate or minimize adverse impacts from oil and gas development to public health and the environment, landowners, and natural resources; enhance the value of natural and landowner resources; and reduce conflict. The publication reference is to the “Gold Book” which is formally titled “Surface Operating Standards and Guidelines for Oil and

Gas Exploration and Development." In addition, the first internet citation is to a location maintained by the Washington Office of the BLM containing general and technical information on the use and application of BMPs. The second location refers the reader directly to an online version of the "Gold Book." The third and fourth locations refer the reader to color charts for use in selecting paint colors for oil and gas facilities.

Montana Non-Point Source Management Plan

Developed by: Montana Department of Environmental Quality, Water Quality Planning Bureau, Watershed Protection Section

Publication reference: 2007

Available From: Montana Department of Environmental Quality, Water Quality Planning Bureau, Watershed Protection Section, P.O. Box 200901, Helena, MT 59620-0901

Online at: http://www.deq.state.mt.us/wqinfo/nonpoint/2007NONPOINTPLAN/Final/NPSPlan.pdf

Description: This document describes the Montana Department of Environmental Quality's (DEQ) updated strategy for controlling nonpoint source (NPS) water pollution, which is the state's single largest source of water quality impairment. NPS pollution is contaminated runoff from the land surface that can be generated by most land use activities, including agriculture, forestry, urban and suburban development, mining, and others. Common NPS pollutants include sediment, nutrients, temperature, heavy metals, pesticides, pathogens, and salt. The purpose of the Montana NPS Pollution Management Plan (Plan) is: 1) to inform the state's citizens about NPS pollution problems and 2) to establish goals, objectives, and both long-term and short-term strategies for controlling NPS pollution on a statewide basis. The goal of Montana's NPS Management Program is to protect and restore water quality from the impacts of non-point sources of pollution in order to provide a clean and healthy environment.