State of Nevada

STATE CONSERVATION COMMISSION

Capitol Complex

Carson City, Nevada 89710

Phone 775-687-6977

Best Management Practices Handbook

FOREWARD

In 1978, through the leadership of the Nevada Division of Conservation Districts, the Conservation Commission, and the Nevada Division of Environmental Protection, the first Handbook of Best Management Practices was developed as part of the water quality management planning process for addressing nonpoint sources of pollution in the nondesignated area in Nevada. The nondesignated area includes the entire state with the exception of Washoe and Clark counties, the Lake Tahoe Basin and the Carson River Basin. This 1994 revision, which was developed through a coordinated effort between these same groups, is applicable for remediating and eliminating nonpoint sources of pollution throughout the entire state.

Nonpoint sources of pollution, which include agriculture, grazing, silviculture, construction, hydrologic and habitat modification, mining, urban runoff and waste disposal, are now recognized as the major causes of water quality degradation in the nation's streams and rivers. It is also recognized that the most effective means of reducing nonpoint source pollution is through a grass root level, voluntary approach in implementing best management practices and through the cooperative efforts of all those affected by the water quality problems.

In Nevada, the Conservation Districts have provided leadership in soil and water conservation programs for many years and are now in a unique position to spearhead and coordinate programs aimed at reducing nonpoint pollution. By working in cooperation with the Nevada Division of Environmental Protection, National Association of Conservation Districts, U. S. Soil Conservation Service, Agriculture Stabilization Conservation Service and other federal land management agencies, Conservation Districts can develop and implement water quality management plans which incorporate best management practices.

As the statewide population continues to increase in both urban and rural areas demands placed on our limited surface and ground water resources also increase. Through a cooperative effort to develop water quality management plans which include the implementation of best management practices, it is hoped that the quality of Nevada's water resources can be improved and maintained. It is also hoped that this Handbook of Best Management Practices will serve as a useful guide toward meeting that goal.

This document was prepared for electronic distribution on NDEP's web site – Posted on 0205.

Approval Letter – State Environmental Commission

December 7, 1994

Mr. Christopher Freeman
Executive Secretary
Nevada State Conservation Commission
Capitol Complex
Carson City, Nevada 89710

Mr. Wendell McCurry, Chief
Bureau of Water Quality Planning
Nevada Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Sirs

The purpose of this correspondence is to notify you that the Nevada State Environmental Commission on November 9, 1994 conducted a public hearing and adopted without amendment the revised 1994 edition of the Handbook of Best Management Practices.

The Environmental Commission's action to adopt follows the Nevada State Conservation Commission's action of adoption on September 21, 1994. The Environmental Commission acted in accordance with Nevada Administrative Code 445.230 "State Handbook of Best Management Practices," subsequently replaced by 445A.336 in November 1994 by the Legislative Counsel Bureau.

If you have any questions regarding the Environmental Commission's action, please feel free to contact me at 702-687-4670 ext. 3118.

ACKNOWLEDGEMENTS

This revision of the Handbook of Best Management Practices represents a combined effort of the Nevada Division of Environmental Protection and the Nevada Division of Conservation Districts. Most of the material presented herein is not original but was developed from many sources including best management practice handbooks and technical guides from the U.S. Environmental Protection Agency, U.S. Soil Conservation Service, U.S. Forest Service, U.S. Bureau of Land Management and the Tahoe Regional Planning Agency.

Special thanks to Chris Heppe of the Environmental Protection Agency Region IX, Chris Freeman of the Nevada Division of Conservation Districts, Pat Murphy of the Nevada Division of Forestry and Dan Greenlee of the U.S. Soil Conservation Service for their preliminary reviews and comments on the document. All Division staff must be acknowledged for their dedication and extra effort devoted to completing the project.

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PURPOSE AND USE

This Handbook of Best Management Practices is intended as a general guidance and information resource to assist agencies, entities and individuals in water quality management activities aimed at reducing or preventing nonpoint source pollution. The handbook is intended to provide the framework for soil and water conservation programs for water quality improvement throughout the State, including areas where waters are not part of major basins or stream systems. The ring binder format is designed to allow for inserting updates and revisions as deemed appropriate by the Nevada Division of Environmental Protection, the Nevada Nonpoint Source Task Force cooperators and the public.

U.S. Environmental Protection Agency (EPA) guidelines define Best Management Practices (BMPs) as "methods, measures or practices to prevent or reduce water pollution, including but not limited to, structural and non-structural controls, operation and maintenance procedures and scheduling and distribution of activities. Usually BMPs are applied as a system of practices rather than a single practice. BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility".

Nevada Administrative Code 445.200 defines "Best Practices" as "measures, methods of operation or practices which are reasonably designed to prevent, eliminate or reduce water pollution from diffuse sources and which are consistent with the best practices in the particular field under the conditions applicable. This term is intended to be equivalent to the term "best management practices" as used in federal statutes and regulations".

In general, BMPs are site specific actions taken to prevent or reduce water pollution from nonpoint sources. Examples of operational BMPs include constructing water bars across roads or skid trails, spreading grass seed on exposed soil, placing jute matting or other types of temporary cover on cut or fill slopes and identifying or designating stream-side management zones. Organizational BMPs include scheduling activities to avoid wet seasons, incorporating water quality protection measures into contract provisions, requiring road locations on ridge lines rather than valley bottoms, reviewing project implementation documents to insure protection methods and measures are incorporated and inspecting project sites to insure protection measures are in place.

Effective BMPs must be based on consideration of all existing site specific conditions and must be cost effective. Factors which need to be considered include the occurrence and movement of surface and ground water, geology, soil type, climate, topography and habitat. Scheduling and timing are important, as are adequate design and application. BMPs should be designed and developed on a site specific basis by qualified professionals. Technical assistance needed for BMP installation and cost estimates for farms and ranches can be provided by the Soil Conservation Service.

In general BMPs are not meant to be minimum standards, nor are they meant to be used as a cookbook approach in lieu of good professional management experience and judgement; however, the BMPs outlined in this manual are considered as the minimum criteria in 404 certification and mining reclamation permits, although the use of other more specific BMPs as developed by other agencies such as the Soil Conservation Service (SCS), United States Forest Service (USFS), Bureau of Land Management (BLM), EPA, and the Army Corp of Engineers can be proposed. The BMPs presented here are expected to be compatible with requirements such as restrictions on pesticide application or building and zoning regulations. BMPs are expected to be planned and implemented with full consideration for existing water rights, including those based on return flows. Not all situations are covered in this Handbook, nor are the potential risks to water quality during the installation of some practices. Such issues should be evaluated during the resource or site specific planning process. The planning process should also consider economics and compatibility with existing operations.

The BMPs presented in this Handbook can be used to remediate or prevent pollution from numerous nonpoint source categories including construction, agriculture, grazing, silviculture, resource extraction, urban runoff, waste management activities and atmospheric deposition. The BMPs are written in general format; more detailed guidelines and specifications for BMP installation are included in the Appendices. Additional information for resource planning and BMP implementation can be obtained from the agencies listed in the section titled Sources of Assistance. The section on Selection of Best Management Practices contains an easy reference table for determining appropriate BMPs for specific nonpoint source pollution categories.

Nonpoint source pollution, whether natural or man-made, is a key factor in the degradation of Nevada's limited water resources. It is hoped this Handbook will be a useful resource for the voluntary implementation of best management practices in order to mitigate existing and prevent further nonpoint source pollution.

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