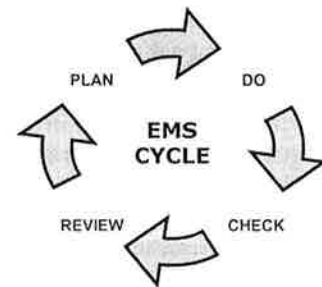


INTRODUCTION

Since 2004, the Oregon Department of Transportation Maintenance and Operations employees have been very successfully implementing the Environmental Management System for the storage, handling and use, and disposal of materials typically found at ODOT *maintenance yards*. The success of the program exceeded all expectations. The EMS is intended to provide straight forward best management practices for managing materials used in the day to day maintenance and operation of the highway system.

The ODOT EMS is part of the overarching Statewide Maintenance and Operations program that provides guidance and direction to ODOT Maintenance and Operations staff. As such, the EMS document complements and references other agency manuals, such as the ODOT Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices (Blue Book), the ODOT Emergency Operations Plan and the ODOT Employee Health and Safety manuals.

The ODOT Maintenance EMS is based on the four (4) principles of the EMS cycle: plan, do, check, and review.



The ODOT EMS program consists of two distinct documents. The Policy and Procedures Manual (Manual) describes the program in detail, with expanded discussion on individual materials, documentation and program components. This document is intended to be readily available to all Maintenance employees as a reference and to provide additional information as needed. All Maintenance Managers and Maintenance Coordinators have copies of the Manual. The 'Employee Handbook' complements the Manual and one is provided to each Maintenance employee. The 'Employee Handbook' synthesizes the best management practices for the materials found at the *maintenance yards*. The 'Employee Handbook' refers employees to the Policy and Procedures Manual for further information.

POLICY AND PROCEDURES MANUAL

The 'plan' of the ODOT EMS program includes the policy and technical guidance required to successfully implement the EMS. The policy and procedures included in the Manual have been developed by a technical team comprised of representatives from the Oregon Department of Environmental Quality (DEQ) and ODOT Fleet, Facilities, Safety, HazMat, and Maintenance. Developing procedures and directives for materials that cover every situation and product identified by ODOT Maintenance is an impossible task. The technical team brainstormed activities performed by Maintenance and the materials associated with the activities. These materials were then described in individual procedures, or through a procedure that describes a category of materials.

The EMS program was developed with the following assumptions:

- Safety of the employee is an overarching consideration and is to be considered at all times. As the EMS is intended to identify and minimize impacts to natural resources, the ODOT Safety and Health Manual is referenced throughout, to direct staff for specific information relating to employee health or the use of recommended personal protective equipment.
- A *maintenance yard* is defined as manned or unmanned, that comprise structures and buildings. Employees who work at the yards are expected to participate in the program.
- All best management practices described in the procedures will apply to all appropriate situations, regardless of location (along the road, stockpile sites, etc.)
- Emergency situations may present themselves and employees should review the ODOT Emergency Operations Plan for guidance and direction.

The EMS Policy and Procedure Manual is divided into three major sections delineated by colored tabs:

- **White tabs** identify support elements of the document: the EMS Policy, this Introduction, Acronyms, Definitions, and a Cross Reference for finding materials that may not be easily identified by reviewing the Brown Tabs. If a word is included in the Definition of Terms, the word has been italicized throughout the Manual
- **Brown Tabs** are the technical and most important component of the document and the EMS program. As a result of lessons learned over the first 3 years of implementation, two new sections have been added: Labels and Signs and Tanks. In addition, the sections on Good Housekeeping and Drainage have been expanded and designated as Brown Tabs.
- **Yellow Tabs** include all the appendices and supporting documentation required of the program. Included in the Yellow Tabs are samples of all forms to be completed, DEQ fact sheets, and other information that could assist the Maintenance staff in implementing the EMS.

PROCEDURES

The procedures, found in the Brown Tabs, are the implementation, or 'do' component of the EMS and are the most important element of the program. The intent of the procedures is to translate regulatory requirements and agency expectations into straightforward best management practices and guidance for the storage, use and handling, and disposal of materials typically found at *maintenance yards*. The procedures identified in this manual represent a broad spectrum of materials used in the operation and maintenance of the highway, including the materials used in fleet and facilities management. All effort was made to include as much information as possible to minimize the need for employees to seek answers to questions from other documents. The "Employee Handbook" supplements this manual.

Each procedure contains:

- **Purpose-** a description of what the procedure covers and its intent.
- **Regulating agencies-** a list of agencies that regulate the storage, use and handling or disposal of the material. Appropriate references or legal citations are located in Appendix A.
- **Alternatives and Pollution Prevention-** suggestions on ways to avoid or prevent a disposal issue associated with the material. ODOT Maintenance employees are creative, innovative, and resourceful. The ideas listed under alternatives and pollution prevention are examples to encourage brainstorming, discussion, and 'thinking outside the box' on alternative products or type of packaging. ODOT encourages employees to "reduce, reuse, recycle" materials. Suggestions on recycling and reuse are included.
- **Best Management Practices-** discussion on the storage, use and handling, and disposal of the materials. These best management practices are the critical element of the procedures and the EMS as a whole. The importance and requirements associated with the best management practices are specified in three distinct ways:
 - **Must-** Best management practices that reflect a legal requirement or reflect an ODOT directive are presented with the word 'must'. The word 'must' has been underlined throughout the Manual for emphasis.
 - **Should-** Practices that ODOT believes reflect good land stewardship and recommends implementing are presented with the word 'should'.
 - **Recommend-** Practices that are *just* good ideas are represented by the word 'recommend'.
- **Documentation-** requirements of the program or documentation required, as appropriate, for the material. Blank copies of all program documentation forms are located in Appendix B. Electronic copies of EMS documentation can be downloaded from the Office of Maintenance website <http://egov.oregon.gov/ODOT/HWY/OOM/EMS.shtml>

Examples of completed forms are located in the appendix for the subject (e.g. the Monthly Field Audit and Corrective Action Sheet are located in Appendix C and the Waste Generation and Waste Disposal Logs are located in Appendix D). A quick reference for waste management documentation is located in Appendix E.

EMS FIELD AUDITS

A successful EMS includes structured, regularly scheduled audits, or 'checks'. Implementing an EMS does not automatically demonstrate compliance to environmental laws and regulations. Rather, it provides an opportunity to prioritize and define solutions to systemic problems identified through the structured field audits, or reviews.

The ODOT EMS has developed two field audits, or 'checks'.

- **Maintenance Yard Field Audits:** This audit, the most important, evaluates each *maintenance yard* on a monthly basis: taking a critical look at storage areas, work areas, yard drainage, yard security, etc and identifying things that need to be corrected. Corrective actions that are identified are to be recorded as they are found. Significant corrective actions will be prioritized and corrected, as resources are available. The local maintenance crew will correct minor actions as soon as possible. Corrections that are outside the scope of the local maintenance crews' expertise or budget are to be 'rolled up' to the district or other appropriate office for resolution. Examples of the monthly field audit form and the corrective action forms are located in Appendix C.
- **Regional Field Audit:** The intent of this level of review is to be critical of the procedures, the program, and to identify where additional assistance is needed in implementing the program. The District Manager and a representative from HazMat or the Office of Maintenance are required to participate in the regional yard audits. Other representatives from Employee Safety, Facilities, Geo/Hydro/Environmental (other than HazMat staff) may be added at the discretion of the District Manager. It is preferable to have outside District staff participate in the regional yard audits, if possible, to bring fresh 'eyes' to the yards. The Office of Maintenance and Operations has developed a rotation and schedule to ensure that all yards and procedures are evaluated during the program three (3) year implementation cycle. The schedule and packet of procedures are periodically sent to the District Managers. In order to accommodate winter maintenance, these regional audits are performed between March and November.

STATEWIDE REVIEW

Review of the program occurs through a statewide steering team, led by the Office of Maintenance and Operations. This team reviews and evaluates issues or concerns that are identified during the two field audits, and develops the appropriate solution. In addition, this team reviews and revisits the Policy and Procedures Manual for updating and continued appropriateness.

At the end of each three (3) year implementation cycle, the Office of Maintenance will convene the technical team to review the procedures, identify any gaps, issues, or other element of the program that needs to be revisited. The Maintenance Leadership Team will approve these changes.

ACKNOWLEDGEMENTS

During the first three-year cycle, the EMS proved inordinately successful, statewide, in cleaning up the yards, complying with state and federal laws, and increasing awareness of the materials and wastes found at the yards. Each and every Maintenance employee has had a role in the success of this program. The technical team has worked hard at simplifying difficult laws and regulations and making the program as simple and as straightforward as possible.

The commitment and input from the Maintenance personnel is greatly appreciated.

