

Chapter 54

ENVIRONMENTAL ISSUES IN MAINTENANCE, OPERATIONS AND FACILITIES MANAGEMENT

MDT ENVIRONMENTAL MANUAL

October 2010

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Chapter 54

ENVIRONMENTAL ISSUES IN MAINTENANCE, OPERATIONS AND FACILITIES MANAGEMENT

54.1 OVERVIEW

The Environmental Services Bureau (ESB) provides a broad array of support services regarding environmental issues associated with the MDT Maintenance Program, MDT Departmental operations and management of MDT facilities (e.g., maintenance facilities, MDT buildings).

This Chapter provides an overview of the various ESB roles and responsibilities for providing these environmental support services.

54.2 MAINTENANCE

The following Sections describe functions ESB performs in relation to MDT maintenance activities. See [Section 54.4](#) for additional functions that ESB performs in relation to both MDT maintenance and overall MDT operations.

54.2.1 Control of Noxious Weeds/Invasive Species

Pursuant to provisions in Federal Executive Order 13112 “Invasive Species” and the Montana *County Weed Control Act (Montana Code Annotated (MCA) 7-22-2101 et seq.)*, MDT has adopted a *Statewide Roadside Vegetation Management Plan*, which includes an Integrated Weed Management Component. The purpose of the Integrated Weed Management Component is to:

- provide a conceptual framework and recommendations for actions to reduce existing weed infestations,
- maintain low noxious weed soil-seed bank levels,
- reduce susceptibility of road right-of-ways to weed establishment, and
- manage spread of noxious weeds along State roads in Montana.

A weed is defined as any plant that interferes with management objectives for a given area of land, or body of water, at a given point in time. Once a plant is classified as a weed, it attains noxious status by rule as described in the *County Weed Control Act*. The *Act* defines a “noxious weed” as any exotic plant species established or may be introduced into the State that may render land unsuitable for agriculture, forestry, livestock, wildlife or other beneficial uses or may harm native plant communities. “Invasive species” include plant species that readily move beyond their native habitat and invade new habitats. They are defined as alien species whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health.

The MDT Maintenance Program implements the *Statewide Roadside Vegetation Management Plan*, including the Integrated Weed Management Component. When requested by Maintenance, the ESB Botanist and District Biologists (DB) provide assistance in identifying noxious weed species and invasive species and recommending appropriate control methods.

In addition, as described in the *Statewide Roadside Vegetation Management Plan*, Integrated Weed Management Component, the Botanist, as well as the District Environmental Engineering Specialist (DEES), participate in the following noxious weed/invasive species control activities:

- Evaluate roadside vegetation restoration and rehabilitation projects annually for up to three years following seeding with desirable species to determine if seed establishment was successful.
- Work with highway design construction engineers to develop best management practices that facilitate establishment of desirable vegetation following construction (e.g.,

removal and stockpiling of topsoil for replacement following construction, avoiding steep cut slopes, consideration of certification for all borrow sites).

- Identify roadsides where restoration or reseeded is needed to improve weed resistance of roadside plant communities and develop projects to restore sites.

54.2.2 Removal of Lead-Based Paint

The role of the ESB Hazardous Waste Section (HWS) in maintenance activities involving removal of lead-based paint from bridge structures or buildings begins with Maintenance notifying the HWS of a proposed paint removal project, or with the HWS otherwise becoming aware of a proposed paint removal project.

Prior to initiation of the paint removal project, the HWS collects samples of the paint to be removed and has them tested by a qualified laboratory to determine if the paint contains lead. If the test results indicate the paint does not contain lead, the HWS provides the results to Maintenance.

If the testing indicates the paint contains lead, the HWS coordinates with Maintenance to evaluate alternatives that would avoid the need to remove the lead-based paint. If a suitable alternative is identified, Maintenance proceeds with that option and leaves the lead-based paint in place.

If a suitable alternative is not identified, the HWS coordinates with Maintenance to make them aware of the need for compliance with environmental regulations for containment, collection and temporary storage of lead-based paint debris and associated materials used in removing the lead-based paint (e.g., spent abrasives). The HWS also advises Maintenance of the need to address compliance with occupational safety and health requirements for worker protection.

The HWS informs Maintenance of the requirements for the following:

- install and maintain containment systems surrounding the work for the purpose of controlling dust and debris to maintain the work area free of visible emissions and prevent the escape of paint chips, abrasives and other debris into water bodies or onto the ground or other surfaces beneath or adjacent to the bridge/building;
- collect all debris within the regulated area and within the containment at the end of the last shift each day and properly store the debris in sealed containers; and
- conduct environmental monitoring (e.g., visual inspections, operation of high-volume ambient air monitoring equipment with laboratory analysis of monitoring results) to identify need for corrective actions (e.g., modifying the containment system to improve its effectiveness, cleanup of lead-based paint debris outside of the containment system).

The HWS also advises Maintenance to ensure compliance with Title 29 of the *Code of Federal Regulations* (CFR), Part 1926.62; the Section of the Occupational Safety and Health Administration (OSHA) Safety and Health Regulations for Construction that addresses requirements associated with lead.

The HWS coordinates with Maintenance to arrange for, or hire a qualified contractor to accomplish, the removal of lead-based paint from the structure. The HWS assists with monitoring the work to ensure compliance with applicable environmental requirements and may conduct, or task a term consultant to conduct, negative exposure testing to determine if there are occupational exposure issues related to paint removal practices.

The HWS arranges for transport of the lead-based paint debris and other lead-contaminated wastes associated with the paint removal operations by an appropriately licensed waste hauler to an appropriately licensed disposal facility. The HWS provides copies of documentation associated with the waste transport and disposal to Maintenance and retains copies for HWS files.

54.2.3 Pavement Preservation Projects

For Maintenance pavement preservation projects with no right-of-way involvement, Maintenance, with assistance from the DEES, if requested, makes a preliminary determination of whether the project is eligible for the “Statewide Pavement Preservation Projects Programmatic Categorical Exclusion” (Programmatic CE). Maintenance bases this determination on the criteria in the Programmatic CE for “Types of Projects” covered. Maintenance, with assistance from the DEES, if requested, completes the “Environmental Checklist for Maintenance Pavement Preservation Activities (e.g., Chip Sealing, Thin Lift Overlays and Cold In-Place Recycling)” and submits the completed Checklist along with a project map and description to ESB.

ESB staff reviews the completed Checklist and supporting documentation and determines if any restrictions or special procedures apply to the proposed project. The PDE prepares a letter to FHWA explaining the anticipated work and indicating the work is covered by the Programmatic CE. The letter includes any restrictions or concerns regarding the project. The ESB Environmental Engineering Section Supervisor signs the letter to FHWA and the completed Checklist. ESB sends the signed letter and Checklist to FHWA with a map showing the project location. ESB provides copies of the signed letter and Checklist to Maintenance.

For Maintenance pavement preservation projects that will disturb one acre (0.4 ha) or more of land area, Maintenance coordinates with the DEES to accomplish the actions necessary for compliance with the National Pollutant Discharge Elimination System (NPDES) or Montana Pollutant Discharge Elimination System (MPDES) permit requirements for storm water discharges associated with construction activity. (NPDES applies on Tribal lands and MPDES applies for other areas of the State.) The requirements include:

- submittal of a Notice of Intent (NOI), to the US Environmental Protection Agency (EPA) for NPDES or to the Montana Department of Environmental Quality (DEQ) for MPDES, for coverage under the general permit for construction activity; and
- preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies and documents sources of potential pollutants at the construction activity site and Best Management Practices (BMP) to be used to help ensure pollutants do not impact receiving surface waters through storm water runoff.

For Maintenance pavement preservation projects located entirely or partially within an urban area, Maintenance coordinates with the DEES to determine if the area is covered by NPDES or MPDES permit requirements for Municipal Separate Storm Sewer Systems (MS4s). If so, Maintenance coordinates with the DEES to ensure compliance with applicable effluent limitations and conformance with control measures described in the Storm Water Management Program (SWMP) for the area(s) subject to the NPDES or MPDES requirements.

54.2.4 Deer Composting

Maintenance may establish sites for disposal of road kill deer through composting operations. When Maintenance determines deer composting would be a preferred alternative for waste disposal, the HWS assists Maintenance with these sites in the following ways:

- determining suitable locations for deer composting operations that will satisfy small composting operator licensing requirements (e.g., well-drained sites with minimal slope, at least 200 ft from waterways and wetlands, 100 ft from residences, avoiding undesirable views or odors affecting neighboring residences);
- preparing application packages, including completed application forms (available on the DEQ website), small composter site operation and maintenance plan and required maps for submittal to DEQ for approval and licensing;
- providing supplies for composting operations (e.g., starter compost, thermometers); and
- providing support in meeting compost management and reporting requirements.

54.2.5 Emergency Spill Response

When a spill of hazardous or other potentially harmful substances occurs along MDT highway rights-of-way, the HWS assists in responding to the spill by performing the following functions:

- advising Maintenance personnel of spill response procedures;
- providing on-site assistance, including managing investigation and remedial activities through regulatory case closure;
- collecting samples for analysis;
- providing notification to appropriate regulatory agencies (e.g., DEQ, EPA), and to local authorities within an MS4 area;
- arranging for proper collection, transport and disposal of contaminants; and
- preparing necessary documentation and technical reports for regulatory authorities.

As a part of responding to a spill of hazardous or other potentially harmful substances on MDT highway rights-of-way, Maintenance coordinates with the DEES and DB to provide bioengineering and fish-friendly design of remedial actions, where practicable. Maintenance also coordinates with the DEES and DB in repairing damage to fishery or water resources resulting from the actions taken to contain and remediate the spill.

54.2.6 Bridge, Structure, Culvert and Ditch Cleaning, Repair and Maintenance

Maintenance notifies the DEES when the cleaning, repair or maintenance work will affect surface water resources or the natural existing shape and form of any stream or its banks or tributaries. In response to the notification from Maintenance, the DEES evaluates the location and scope of the work and its anticipated effects on surface water resources to determine applicable permit requirements. This may include the following:

- Stream Protection Act (SPA), SPA 124 Notification of Construction submitted to Montana Fish, Wildlife and Parks (FWP) for work that may affect the natural existing shape and form of any stream or its banks or tributaries;
- *Clean Water Act* Section 404 permit and Section 401 water quality certification, for work involving discharge of dredged or fill material into waters of the United States;
- *Rivers and Harbors Act of 1988* Section 10 permit, for placement/removal of structures, work involving dredging, disposal of dredged material, filling, excavation or any other disturbance of soils/sediments or modification of a navigable waterway;
- Short-Term Water Quality Standard for Turbidity (318 Authorization), for work that would cause short-term or temporary violations of State surface water quality standards for turbidity;
- Blackfeet Tribe Aquatic Lands Protection Ordinance 90-A (ALPO) permit, for construction or fill projects that occur in wetlands, riparian areas and streams on the Blackfeet Indian Reservation;
- Confederated Salish and Kootenai Tribe (CSKT) Aquatic Lands Conservation Ordinance 87-A (ALCO) permit, for any proposed work in, over or near any stream, river, lake or wetland on the Flathead Indian Reservation; or
- CSKT Tribal Ordinance 64-A Shoreline Protection permit, for work affecting Flathead Lake, lakeshore property or navigable waters within the exterior boundaries of the Flathead Reservation.

When the work may affect water bodies with fishery resources or significant habitat elements, Maintenance coordinates with the DEES and DB to include appropriate mitigation measures and to make every attempt to incorporate fish passage to the extent practical consistent with the engineering solution.

When work would be in a water body that FWP has identified as requiring fish passage, Maintenance follows guidelines and requirements approved by the FWP Regional Biologist and implements the work in coordination and cooperation with the DB and DEES.

Based on the location and anticipated effects of the work, the DEES coordinates with ESB and other MDT staff (e.g. Hydraulics, Maintenance and the Bridge Bureau) to obtain information necessary for completing applications for permits and water quality certification needed for the work. The DEES then prepares and submits to ESB the necessary permit applications, location maps and cover letters; see the “[404/401/ALPO/ALCO Process for Maintenance](#)” in Appendix C of this *Manual* for additional information on the submittal of permit applications for maintenance actions. When the needed permit(s) and water quality certification(s) are received, the DEES ensures that Maintenance receives all information necessary for compliance with the permit(s)/certification(s). The DEES coordinates with the PDE, DB and permit agencies, as necessary, to address any Maintenance concerns regarding permit conditions. The DEES also coordinates with Maintenance to ensure conditions associated with the permits/certification are implemented when the work is performed..

If the work will disturb one acre (0.4 ha) or more of land area, Maintenance coordinates with the DEES to accomplish the actions that may be necessary for compliance with NPDES or MPDES permit requirements for storm water discharges associated with construction activity. NPDES applies on Tribal lands and MPDES applies for other areas of the State. The requirements may include:

- submittal of a NOI to EPA for NPDES or to DEQ for MPDES, for coverage under the general permit for construction activity; and
- preparation and implementation of a SWPPP that identifies and documents sources of potential pollutants at the construction activity site and BMPs to be used to help ensure pollutants do not impact receiving surface waters through storm water runoff.

For work located entirely or partially within an urban area, Maintenance coordinates with the DEES to determine if the area is covered by NPDES or MPDES permit requirements for MS4s. If so, Maintenance coordinates with the DEES to ensure compliance with applicable effluent limitations and conformance with control measures described in the SWMP for the area(s) subject to the NPDES or MPDES requirements.

54.2.7 Slope Repair

Maintenance notifies the DEES before conducting slope repair work. In response to the notification from Maintenance, the DEES evaluates the location and extent of the proposed work and its anticipated effects on environmental resources to determine applicable permit requirements. The DEES coordinates with the DB and PDE for slope repair work under the following circumstances:

- when the work would involve placement of fill in wetlands or below the Ordinary High Water Mark (OHWM) of waters of the United States would alter the natural existing shape and form of any stream or its banks or tributaries, or when the proposed work may adversely affect other environmental resources;
- when activities for repair and cleanup of erosion problems cause changes in the topography or vegetation within riparian areas; and

- when expedited maintenance action is required, but the situation is not defined as an “emergency” (e.g., under the *Endangered Species Act* or other Federal or State statutes).

If slope repair work will disturb one acre (0.4 ha) or more of land area, Maintenance coordinates with the DEES to accomplish the actions necessary for compliance with NPDES or MPDES permit requirements for storm water discharges associated with construction activity. The requirements may include:

- preparation and submittal of a NOI to EPA for NPDES or to DEQ for MPDES coverage under the general permit for construction activity; and
- preparation and implementation of a SWPPP that identifies and documents sources of potential pollutants at the construction activity site and BMPs to be used to help ensure pollutants do not impact receiving surface waters through storm water runoff.

For slope repair projects located within an urban area, Maintenance coordinates with the DEES to determine if the area is covered by NPDES or MPDES permit requirements for MS4s. If so, Maintenance coordinates with the DEES to ensure compliance with applicable ordinances, or effluent limitations and conformance with control measures described in the SWMP for the area(s) subject to the NPDES or MPDES requirements.

54.2.8 Brush and Tree Removal

Maintenance notifies the DEES before conducting brush and tree removal. In response to the notification from Maintenance, the DEES evaluates the location and extent of the proposed work and its anticipated effects on environmental resources to determine applicable environmental permitting or mitigation requirements. The DEES coordinates with the DB and Botanist for the following issues associated with brush and tree removal:

- identification of danger trees; trees that are structurally unstable as a result of location, defects, insect damage, disease, etc., and that pose a danger (e.g., to persons, structures) if they fall;
- removal of danger trees; and
- determination of the appropriateness of replanting two seedlings/cuttings for every mature tree (over 12 in (300 mm) diameter at breast height) in riparian areas and the species and location of trees to be replanted within the same watershed.

54.2.9 Work in Previously Undisturbed Areas

When Maintenance determines proposed work may affect previously undisturbed ground, they notify the DEES. In response to the notification from Maintenance, the DEES evaluates the location and extent of the proposed work to determine if the work may need environmental permits or authorizations, or if it could potentially affect cultural or archaeological resources. The DEES coordinates with the ESB Historian and/or Archeologist to address applicable compliance requirements for cultural and/or archaeological resources that could be affected.

The Historian and/or Archeologist initiate actions to evaluate the potential for the proposed maintenance actions to disturb or adversely affect cultural or archaeological resources. If they determine there is no potential, they provide documentation of the basis for the determination to the DEES.

If they determine there is potential, they accomplish coordination (e.g., with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO)) and further actions (e.g., subsurface testing, data recovery) for evaluating and addressing affected resources in compliance with applicable State and Federal requirements. The Historian and/or Archeologist provide the DEES with documentation of compliance.

54.3 OPERATIONS

The HWS coordinates with the Facilities Bureau, Maintenance, Design, Construction and Materials to promote recycling of materials for MDT purposes and reduction of the amount of waste generated. The initial step is identification, by HWS or other MDT offices, of waste streams that can be reused or recycled (e.g., asphaltic concrete millings, Portland cement concrete, used motor oil, road oil, bridge timbers, batteries, tires, contaminated soil). Next, the waste products must be evaluated (e.g., through literature searches and/or product testing through Materials) to determine if they meet specifications for desired use. For waste products that meet specifications for the intended use, the final step is a cost/benefit analysis to assess the merits of proceeding with plans for reuse or recycling of the waste.

See [Section 54.4](#) for additional functions that ESB performs in relation to both MDT maintenance and overall MDT operations.

54.4 MAINTENANCE AND OPERATIONS

The following sections describe functions ESB performs in relation to both MDT maintenance and overall MDT operations.

54.4.1 Used Oil Management

The HWS is involved in the following aspects of the MDT program for management and use of used motor oil:

- promoting proper management and beneficial use (e.g., burning waste oil in used oil heaters for energy recovery); and
- ensuring compliance with applicable environmental regulations for storage of used oil (e.g., *Resource Conservation and Recovery Act (RCRA)* and Spill Prevention Countermeasure and Control) including:
 - + ensuring used oil containers are marked with the words “USED OIL”; and
 - + ensuring containers have secondary containment (e.g., berms, double-walled tanks, tank coffins, spill pallets) for locations where total quantities of petroleum products exceed 1,320 gallons (5000 L).

54.4.2 Used Oil Heater Repair, Maintenance and Replacement

The HWS coordinates with the District Maintenance personnel and the Facilities Bureau to provide services and financial assistance for repair, maintenance and replacement of used oil heaters. The HWS also arranges for procurement and installation of used oil heaters at new locations where coordination with District Maintenance and the Facilities Bureau indicate the generation of used oil is sufficient to warrant having a used oil heater.

District Maintenance personnel and the Facilities Bureau identify service and replacement needs for existing used oil heaters and coordinate the needs with the HWS. The HWS works with the Purchasing Bureau to procure the services of used oil heater repair companies for annual service checks and other repairs as needed. The HWS also prepares bid specifications for replacement burners or new burners (e.g., size of heater unit, location(s), installation needs) and coordinates with the Purchasing Bureau to solicit bids. The Purchasing Bureau selects contractors to perform the installation of the replacement burners or new burners.

54.4.3 HAZWOPER Refresher Training

The Occupational Safety and Health Administration (OSHA) requires Hazardous Waste Operator (HAZWOPER) training for any employees who are exposed, or potentially exposed, to hazardous substances including hazardous waste. The HWS maintains a list of MDT employees who have attended a 40-hour HAZWOPER training course and annual refresher courses. The HWS administers the process for providing annual refresher training to MDT staff that has previously taken the 40-hour HAZWOPER course.

The HWS procures the services of a training firm to provide an eight-hour refresher course and arranges for time, location and peripherals (e.g., overhead projectors, PowerPoint, training materials). The HWS works with the instructor(s) to tailor the course to MDT needs.

The HWS sends out a notice of the annual refresher training to MDT employees who have previously attended a 40-hour HAZWOPER course. The HWS tracks employee participation in the annual refresher sessions and updates its HAZWOPER training list accordingly.

54.4.4 Industrial Hygiene

For MDT employees who work around hazardous materials or hazardous waste, if a concern is identified regarding potential employee exposure (e.g., because of an employee complaint or observation of work area conditions), the HWS provides Industrial Hygiene consultation and coordination to address the concern.

The HWS assesses the work area conditions to determine if there are unsafe or hazardous material exposure issues and may conduct negative exposure analyses to determine if there may be personal exposure concerns. Based on the results of the assessment and analyses, the HWS determines the appropriate personal protective equipment (PPE) necessary to prevent exposure (e.g., respirators, gloves, Tyvek coveralls).

The HWS coordinates with the Purchasing Bureau to arrange for procurement of the PPE and, as necessary, for hiring a contractor to provide respirator fit tests.

The HWS coordinates with Human Resources to arrange for medical monitoring (e.g., pulmonary function tests) of affected employees.

The HWS also coordinates with District Safety and Health Specialists, as appropriate.

54.4.5 Solid Waste Management

The HWS provides assistance with the management and disposal of solid waste generated by MDT maintenance operations and construction projects. Solid waste may include a broad range of materials (e.g., tires, road oil, treated timbers, contaminated soil, paint, solvents).

Maintenance personnel and Engineering Project Managers (EPMs) notify the HWS when solid waste has accumulated and needs to be removed. In response to the notification, the HWS applies its knowledge or conducts analytical tests to determine if wastes are classified as solid waste or hazardous waste. For wastes determined to be hazardous, the HWS handles the waste as described in [Section 54.4.6](#). For wastes classified as solid waste, the HWS determines which landfill, land farm or recycling facility will accept the wastes.

The HWS provides financial or contractor assistance to ensure solid wastes are properly collected, transported and disposed of in accordance with solid waste regulations.

54.4.6 Hazardous Waste Management

The HWS provides assistance with the management and disposal of hazardous wastes generated by MDT maintenance operations and construction projects.

Maintenance personnel and EPMs notify the HWS when waste has accumulated and needs to be removed. In response to the notification, the HWS applies its knowledge to identify wastes that warrant laboratory analysis to determine if they are hazardous (e.g., ignitable, corrosive, reactive, toxic, listed as hazardous wastes). The HWS collects samples of those wastes determined to warrant testing and submits them for laboratory analysis.

The HWS coordinates with Maintenance and the EPM to ensure wastes classified as hazardous are placed in appropriate containers and that the containers are marked with accumulation start dates. The HWS arranges for a licensed waste disposal contractor to collect and transport the wastes to a permitted treatment, storage and disposal facility. The HWS coordinates with Maintenance and the EPMs to determine the appropriate waste generator category for each site handling hazardous waste. The waste generator classification determines the requirements that must be followed. The three categories include:

- conditionally exempt generators,
- small generators, and
- large generators.

The classification for a particular site is based on the total amount of hazardous waste generated in any calendar month or how much hazardous waste has been accumulated on site. The criteria and requirements for each of the three classification levels are available on the DEQ website.

The HWS coordinates with Maintenance and the EPMs to ensure compliance with applicable requirements for each hazardous waste operation, including submittal of annual reports to DEQ for sites classified as Small Generators or Large Generators.

54.5 FACILITIES MANAGEMENT

54.5.1 Maintenance Facilities

54.5.1.1 Salt/Sand Storage – Best Management Practices

The HWS is involved in ensuring MDT compliance with the *Clean Water Act* Section 402, National Pollutant Discharge Elimination System (NPDES) requirements applicable to the storage of salt/sand piles, liquid deicers and brine solutions. The NPDES requirements intend to prevent storm water discharges from transporting pollutants (e.g., salt-laden runoff) into surface or groundwater resources.

The HWS coordinates with Maintenance to inventory all facilities where MDT stores salt/sand mixtures, liquid deicers and brine solutions. The HWS creates a list of the facilities and prioritizes the list to focus on sites where salt-laden runoff may impact neighboring property, surface water and/or groundwater. The HWS coordinates with Maintenance to determine best management practices (BMPs) for storage of these materials in a manner that will prevent impacts to adjacent property and/or water resources (e.g., use of berms, impermeable surfaces, indoor storage). The HWS prepares a written plan for employing BMPs for the proper storage of salt/sand piles, liquid deicer and brine solutions, and works with Maintenance to implement the selected BMPs. The HWS provides training on the BMPs and follow-up reviews to inspect/monitor the effectiveness of the BMPs in controlling runoff. The HWS coordinates with Maintenance to implement modifications to the BMPs if necessary to improve their effectiveness.

54.5.1.2 Spill Prevention Control and Countermeasure (SPCC)

The HWS works with Maintenance to ensure compliance with Spill Prevention Control and Countermeasure (SPCC) regulations in 40 CFR 112 “Oil Pollution Prevention” for MDT facilities that store petroleum products (e.g., gasoline, diesel fuel, motor oil, used motor oil, road oil).

The HWS coordinates with Maintenance to inventory MDT facilities that store petroleum products in aboveground storage containers, with total volume in excess of 1,320 gallons (5000 L). The HWS then works with maintenance and facility personnel to determine if the amount of petroleum product storage can be reduced at those facilities. Where the storage amounts can be reduced, the HWS coordinates with Maintenance in arranging removal and disposal of unneeded storage tanks.

The HWS inspects each facility that stores petroleum products in excess of 1,320 gallons (5000 L) in above-ground containers to determine if there is potential for navigable waters (e.g., waters of the US), as defined in 40 CFR 112.2 “Definitions,” to be impacted by a petroleum release from the facility. For each facility that the HWS determines has potential for a petroleum release to affect navigable waters, the HWS or a consultant tasked by the HWS, prepares a SPCC plan in conformance with the requirements in 40 CFR 112. The plan includes checklists for ensuring spill control and secondary containment for all storage containers and for trucks delivering or picking up materials. The HWS coordinates with Maintenance to provide or construct secondary containment measures.

The HWS also coordinates with Maintenance to provide training to all personnel who fill out the SPCC checklists and/or maintain the facilities where the petroleum products are stored.

The HWS conducts random inspections of the petroleum product storage facilities to determine if forms are being properly filled out and to ensure that a copy of each facility's SPCC plan is available at the site.

If changes occur at the facilities, the HWS coordinates with Maintenance to revise the SPCCs for the affected sites, as necessary.

54.5.1.3 Underground Injection Control

The HWS is involved in ensuring MDT compliance with the regulations in 40 CFR 144 and 146 for the US Environmental Protection Agency (EPA) Underground Injection Control (UIC) Program.

The HWS coordinates with Maintenance to inventory sites or facilities where MDT discharges wastewater (e.g., spent or used water with dissolved or suspended solids) into dry wells or leach fields and provides notification to EPA regarding these sites. The HWS explores alternative options for managing the wastewater (e.g., disposal through septic haulers, surface application, connection to municipal wastewater treatment facilities, discharge to a lined catch basin) and coordinates with other offices in MDT (e.g., Maintenance, Design, Construction) as necessary to implement practical alternatives.

The HWS collects wastewater samples from facilities that discharge into dry wells or leach fields and arranges for laboratory analysis of the samples to determine compliance with EPA wastewater discharge standards. The HWS prepares reports of the laboratory analysis results and submits the reports to EPA. Where sampling and testing indicates wastewater is not meeting EPA standards, the HWS notifies Maintenance to shut down the affected system until the standards can be achieved. The HWS works with Maintenance to implement appropriate corrective action to meet the standards (e.g., cleaning sediment and oils from the facility's oil/sand interceptor, restarting the discharge operation, retesting). The HWS also coordinates with Maintenance to provide MDT facilities absorbent pads to remove oil and grease from wastewater.

54.5.1.4 Underground Storage Tank (UST) Compliance

The HWS coordinates actions for compliance with the DEQ UST Leak Prevention Program (75-11-501, MCA; 75-11-201, MCA; *Administrative Rules of Montana* (ARM) 17.56.101, et seq.) regarding USTs used to store and dispense gasoline and diesel fuel at MDT maintenance facilities.

The HWS maintains records on the compliance inspection dates for the USTs at MDT facilities and coordinates the scheduling and hiring of DEQ-licensed inspectors to conduct compliance inspections for each UST every three years. The HWS follows up with Maintenance to address any identified compliance deficiencies (e.g., recordkeeping issues, need for replacement of cathodic protection) and submits compliance inspection forms to DEQ.

The HWS arranges training for MDT staff involved in the daily operation of USTs, including training on site-specific automatic tank gauging systems.

The HWS also coordinates with Maintenance for payment to DEQ of annual UST registration fees, for upgrades to UST systems, when needed, and for abandonment of leak detection wells if they are no longer needed.

54.5.1.5 Petroleum Release Investigation

If Maintenance or the HWS determines a release of petroleum has occurred from an UST at a MDT facility, the HWS makes a preliminary evaluation of the extent and magnitude of the release and notifies DEQ within 24 hours of detection of the release. After the release is reported, DEQ sends the HWS a Release Report Form to complete and return to DEQ within 30 days.

Upon receipt and evaluation of the completed 30-Day Release Report Form, DEQ determines whether further action is warranted. If DEQ advises that further work is not needed, the release is closed. If DEQ determines further work is needed, it sends the HWS a letter stating the DEQ requirements for a remedial investigation at the release site.

The HWS reviews the release area and determines what information is available for the site (e.g., UST closure samples, past monitoring data, soil types, anticipated direction of groundwater flow). The HWS, or a consultant tasked by the HWS, prepares a work plan and cost estimate for performing the remedial investigation of the site, using the format developed by DEQ. The HWS then submits the work plan and cost estimate to the DEQ Petroleum Release Section and the Petro Board for review and approval.

After DEQ approves the work plan, the HWS, or a consultant tasked by the HWS, conducts the remedial investigation in accordance with the work plan. The following are examples of tasks that are typically involved:

- schedule MDT core drill staff or hire a drilling company to install borings and monitoring wells;
- obtain well construction supplies;
- call to have utility locations determined/marked;
- conduct subsurface investigation (e.g., drilling, well construction);
- screen and collect soil samples;
- collect water samples from monitoring wells;
- survey monitoring wells for location and elevation;
- submit soil and groundwater samples for laboratory analysis;
- review analytical data and compare the results to applicable standards; and
- prepare a report of the results of the remedial investigation and recommendations for further work (e.g., remedial actions) for submittal to DEQ.

DEQ reviews the remedial investigation report and determines whether corrective action is required. If DEQ determines corrective action is not necessary, the release is closed. If DEQ determines cleanup of the site is necessary, it issues a letter to the HWS requiring corrective action. See [Section 54.5.1.6](#) for information on Petroleum Release Remediation.

54.5.1.6 Petroleum Release Remediation

When DEQ advises that corrective action is required for a petroleum release, the HWS arranges to hire a contractor or consultant to perform remedial activities to clean up the site. The HWS provides oversight of the remediation work by the contractor or consultant, which may include one or more of the following alternatives:

- over excavate and properly dispose of contaminated soils;
- pump and treat contaminated groundwater;
- perform in-situ bioremediation; and
- assess for natural attenuation (e.g., monitor groundwater to determine if there is a decreasing trend in contamination over time).

Upon completion of the remediation work, the HWS submits a report to DEQ describing the work.

The HWS, or a consultant tasked by the HWS, continues groundwater monitoring to evaluate the effectiveness of the remediation and reports the monitoring results to DEQ. Where monitoring indicates groundwater contaminants are decreasing and are below DEQ standards, the HWS requests closure of the petroleum release remediation site.

54.5.1.7 UST Removal

When USTs at MDT maintenance facilities require removal, the HWS is involved in the tank removal and disposal process. The HWS completes a DEQ "Closure Permit Application for Underground Storage Tanks" available on the DEQ website. This application requires information on the UST, where liquids or sludge will be disposed, where tanks and piping will be stored or disposed, and which approved laboratory will perform soil analysis. The HWS submits the completed application to the DEQ Waste and Underground Tank Management Bureau at least 30 days before the tank removal occurs.

After DEQ reviews and approves the application, it issues a permit for the UST removal. Part of the tank removal process includes conducting a site assessment to determine whether a release has occurred. This requires collecting and sending soil and/or water samples to a laboratory. DEQ includes specific requirements in the permit.

After receiving the UST Closure Permit from DEQ, HWS initiates action to hire a consultant or licensed tank removal contractor to remove the UST. HWS coordinates with Maintenance and provides oversight of the UST removal work performed by the selected consultant or tank removal contractor. The work includes the following activities, as applicable:

- pumping out all liquids before tank removal and properly disposing of the liquids;
- excavating and removing the tank and properly disposing of the tank and any associated piping;
- collecting soil and/or water samples for tank closure and having them analyzed by an approved laboratory, in accordance with the provisions of the UST Closure Permit;

- notifying the Waste and Underground Tank Management Bureau within 24 hours if there is evidence of a tank or piping leak, which may be determined before or after receipt of the results of closure sample analyses;
- removing and properly disposing of soil contaminated by the tank or piping leak, if applicable; and
- backfilling and compacting the UST removal site.

54.5.2 MDT Buildings

54.5.2.1 Asbestos Inspection

The MDT Facilities Bureau contacts the HWS to request inspection for the presence of asbestos containing material (ACM) in MDT-owned buildings that are to be renovated or demolished.

HWS personnel having DEQ accreditation for asbestos inspection, or a term consultant (TC) with DEQ accreditation for asbestos inspection tasked by the HWS, conduct an inspection of the building(s) identified by the Facilities Bureau. The inspection is conducted in accordance with the procedures in the "Inspection" section of the *Montana Asbestos Work Practices and Procedures Manual*, issued by the DEQ Asbestos Control Program. The inspection includes visual identification of the locations of all suspect ACM, touching of all suspect ACM to determine whether it is friable, and collection of bulk samples of materials as described in the *Manual*. The personnel conducting the inspection apply appropriate personal protective equipment when collecting inspection samples.

The HWS personnel or TC that conducted the asbestos inspection provide the bulk samples to a laboratory for analysis. The HWS personnel or TC ensure the selected laboratory has proficiency as required by the "Analysis" section of the *Manual*.

The HWS personnel or TC that performed the asbestos inspection prepares a report on the findings, which includes the following information:

- site of inspection;
- scope and purpose of inspection and how it corresponds to the extent of the renovation or demolition activity;
- date of inspection;
- signature of the accredited inspector making the inspection;
- inspector's accreditation number and expiration date;
- inventory of all suspect ACM sampled, including all assumed ACM and sampled materials;
- sample locations;
- where ACM is located by type;

- areas where friable suspected ACM is assumed to be ACM and areas where non-friable suspected ACM is suspected to be ACM;
- copy of the sample analytical report with the name and address of each laboratory performing an analysis, the date of the analysis and the name and signature of the person performing the analysis; and
- information as to whether the ACM needs to be abated in concurrence with the intended renovation or demolition activities, including landfill, salvage or recycling activities, outlined in the scope and purpose of the asbestos inspection.

The HWS provides the report to the Facilities Bureau and makes it available to the DEQ upon request.

54.5.2.2 Asbestos Abatement

When asbestos inspection determines MDT-owned buildings that are to be renovated or demolished contain ACM requiring abatement, the HWS or a consultant tasked through the MDT Consultant Design procedures, prepares a bid package for the asbestos abatement work. The bid package describes the work necessary for abatement of the ACM, including conformance with the “Asbestos Abatement Work Practices and Procedures” described in the *Montana Asbestos Work Practices and Procedures Manual* (e.g., work area preparation, decontamination unit, work practices, cleaning). The HWS ensures the bid package describes the expected work in sufficient detail to allow contractors to submit competitive bids.

The HWS prepares a requisition form for the asbestos abatement work and submits it to the MDT Purchasing Bureau along with the bid specification information. The Purchasing Bureau solicits bids and provides ESB a tabulation of the bids received. If the bids are acceptable, the Purchasing Bureau issues a purchase order for the asbestos abatement work. If bids are expected to be below \$5000, MDT can hire a qualified contractor without soliciting bids.

Before initiation of the asbestos abatement work, the HWS coordinates with appropriate offices within MDT to procure, through direct hire or applicable consultant contracts, the services of a qualified firm to perform “Final Air Clearance Sampling and Testing” in accordance with the *Montana Asbestos Work Practices and Procedures Manual*. On larger projects, the HWS also may recommend hiring a firm or consultant to provide oversight of the asbestos abatement work.

The selected contractor performs the asbestos abatement work in accordance with the work specifications. The HWS, or outside firm or consultant, if applicable, provides oversight of the asbestos abatement and conducts a final visual inspection upon completion of the work. The visual inspection complies with the requirements in the *Montana Asbestos Work Practices and Procedures Manual*. The firm hired to perform final air clearance sampling and testing accomplishes those tasks and prepares documentation in accordance with the requirements of the *Manual*. The firm provides a copy of the documentation to the HWS and Facilities Bureau and makes it available to DEQ within five working days of a request.

54.5.3 Highway Facilities

54.5.3.1 Drinking Water Compliance at Rest Areas and Waysides

If required water quality sampling and testing of public drinking water supplies at MDT rest areas and waysides indicates problems with the water quality (e.g., samples with levels of coliform bacteria or nitrates exceeding applicable standards), Maintenance contacts the HWS for assistance in identifying and addressing the cause(s) of the problem.

The HWS, or a consultant tasked by the HWS, reviews the water quality testing data and examines conditions at the affected rest area or wayside to determine the likely reason(s) for not meeting the standards (e.g., problems with coliform levels may be caused by surface water impacts or poorly constructed wells, high nitrate levels may be caused by impacts from septic drain fields or agricultural runoff). After identifying the likely cause of the problem(s), the HWS or consultant identifies measures to correct the problem(s) (e.g., repair or replace well or spring box).

The HWS, or a consultant tasked by the HWS, prepares design plans for the corrective measures. If necessary, the HWS coordinates the plans with DEQ for review and approval in accordance with the *Montana Public Water Supply Act* (75-6-101 et seq., MCA). After approval by DEQ, if required, the HWS coordinates with the Purchasing Bureau to solicit bids and select a contractor to construct the corrective measures. The HWS also completes necessary applications for permits to install a new monitoring well for the water supply.

The HWS provides oversight during construction of the corrective measures and installation of the new monitoring well. The HWS then arranges for sampling and testing of the water supply to ensure it meets applicable standards before Maintenance puts it into operation.

54.5.3.2 Drinking Water – Source Water Delineation and Assessment

The HWS, or consultant tasked by the HWS, coordinates with Maintenance to conduct source water protection analyses for all existing and new public water supplies for MDT rest areas and waysides. Source water is untreated water from streams, rivers, lakes or underground aquifers used to provide public drinking water. These source water protection analyses are required by the DEQ-administered Montana Source Water Protection Program, authorized under Section 1453 of the *Federal Safe Drinking Water Act* (Title 42, *United States Code*, Section 300j-13).

For existing MDT public water supply systems, the HWS or consultant conducts a source water protection analysis every five years (beginning in 2002) or as requested by DEQ. For new MDT public water supply systems, the HWS or consultant conducts the source water protection analysis at the time the new system is installed.

The HWS or consultant accomplishes the following steps for a source water protection analysis:

1. Identify Source(s) of Water Used by the MDT Public Water Supply System. The HWS or consultant analyze the characteristics of the aquifer or watershed and the public water supply system intake to identify the land area that contributes recharge to the hydrologic system above or up-gradient from the public water system well or intake structure. The

- HWS or consultant delineates this area on a map as a source water protection area for groundwater and surface water sources for the MDT public water supply.
2. Identify and Inventory Potential Contaminant Sources. The HWS or consultant identifies and documents the location and type of potential contamination sources (e.g., locations or regions where contaminants may be generated, stored or transported) within the delineated source water protection area. Regulated contaminants of concern in Montana include nitrate, microbial contaminants and certain fuels, solvents, herbicides, pesticides and metals. Potential contaminant sources include septic systems, animal feeding operations, USTs, floor drains, sumps and certain land use activities.
 3. Assess the Susceptibility of the MDT Public Water Supply System to Potential Contamination Sources. The HWS or consultant evaluates the setting of the well or intake and the relative hazard posed by potential contamination sources. The HWS or consultant then documents the determination of relative susceptibility for each significant potential contaminant source identified within the source water protection area.
 4. Make the Results of the Delineation and Assessment Available to the Public. The HWS or consultant prepares a technical report of the results of the delineation and assessment process for submission to DEQ. DEQ uses various resources to make the report available to the public (e.g., the DEQ Source Water Assessment Program website, the State library).

54.5.3.3 Waste Water Management – Septic Drain Fields

After construction of an MDT rest area and associated septic drain field and transfer to Maintenance/Facilities for operation, the HWS provides assistance to Maintenance in the monitoring of septic discharge to the drain field and renewal of the associated DEQ discharge permit.

The HWS becomes involved if MDT receives a complaint or correspondence from DEQ regarding compliance with drain field permit requirements.

The HWS reviews conditions in the drain field discharge permit and identifies effluent limitations and testing requirements. The HWS determines appropriate methodology to collect effluent samples and assists/trains maintenance personnel on the collection methodology and frequency of sampling.

The HWS coordinates with the Purchasing Bureau to hire a consultant to determine the cause of the exceedance of the effluent limitations and prepares a work order request for a consultant to prepare the necessary application for renewal of the effluent discharge permit.

The HWS works with the consultant in determining the cause of the exceedance and, if necessary, coordinates with Maintenance to arrange for upgrades to the system (e.g., flow measurement devices, continuous sampling ports, protective cover/building over-dosing tank).

54.5.3.4 MPDES MS4 Permit Compliance

MDT highway facilities located within areas that are subject to the MPDES MS4 permit requirements (e.g., all or parts of Billings and Yellowstone County, Missoula and Missoula County, Great Falls and Cascade County, Butte, Helena, Bozeman and Kalispell) must comply with applicable provisions of the SWMP that affect highway facilities management. These include Illicit Discharge Detection and Elimination (e.g., from spills on MDT highways), Construction Site Storm Water Runoff Control (e.g., associated with MDT highway construction work), Post-Construction Storm Water Management in New Development/Redevelopment (e.g., regarding revegetation of areas disturbed by MDT construction projects to provide permanent erosion and sediment control), and Pollution Prevention/Good Housekeeping in Municipal Operations (e.g., affecting winter road management and street sweeping operations).

MDT Maintenance responds to spills on MDT facilities in MS4 areas to ensure proper containment and cleanup to prevent illicit discharge to the MS4. Maintenance also monitors and updates winter road management practices and conducts street sweeping operations in MS4 areas to reduce pollution in storm water discharges from MDT facilities.

The DEES monitors MDT construction sites in MS4 areas to ensure compliance with requirements for storm water runoff control and to ensure that measures for post-construction storm water management are properly implemented.