

Contaminated Materials

Contaminated Materials Management Team (CMMT) Contacts

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Office of Environmental Stewardship
Environmental Investigation Unit
Contaminated Materials Management Team (CMMT)
Minnesota Department of Transportation
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Purpose

To ensure early identification and documentation of known or suspected contamination (including contaminated soil, groundwater, soil vapor and buried solid waste, etc.) in existing and proposed right of way and adjacent properties. Guidance for managing regulated materials (such as PCB-and mercury-containing materials, treated wood, solvents, asbestos, and hazardous wastes, etc.) on right of way is located in the HPDP Regulated Materials/Waste Section (https://edocs.edocs_employee/DMResultSet/download?docId=614362).

Early identification of contaminated properties allows MnDOT time to determine if the contamination presents a limited liability and cost risk (the property can be acquired and the project can move forward), or an unacceptable liability and cost risk (the project must be halted and redesigned to avoid the property). Early identification allows time to develop strategic design changes that protect MnDOT's long term liability. Because of the legal complexity and

potentially high costs associated with acquiring any ownership interest and undertaking construction in a contaminated property, it is advisable to reduce to the extent possible the disturbance of such properties.

Early identification of contaminated properties also allows time to determine the extent and magnitude of the contaminated materials so that liability protection (if available) and permits/approvals (if applicable) can be obtained, and language (Special Provisions) can be included in the project construction contract for proper management of the materials.

Early identification of contaminated properties is essential for protection of construction workers, and for preventing construction delays and increased costs resulting from the discovery of unexpected contaminated materials during a project.

Threshold Criteria

A project with any of the following four threshold criteria may require a detailed Phase I and possibly a Phase II Environmental Site Assessment (ESA) (described below) to investigate for the possible presence of contaminated materials:

1. Project includes **acquisition** of new right of way, temporary or permanent easement, and/or Commissioner's or temporary orders, for property that will become part of the state trunk highway system.

An owner of a property that is the source of contaminant releases (such as petroleum, solvents, metals, polynuclear aromatics, solid or hazardous waste) can be named the Responsible Party for the site, and held liable for cleanup by State and Federal law, even if the owner didn't cause the contamination. Under certain conditions, MnDOT is protected by State law from being held liable for cleanup up of a petroleum release from an underground tank (Minn. Stat. ch. 115C.021 subd. 3a) on acquired right of way, but has no other protection unless it applies for, and is granted, limited liability protection under Minnesota's Environmental Response and Liability Act (Minn. Stat. § 115B) Voluntary Investigation and Cleanup (VIC) program for non-petroleum contaminated sites. These liability protections are limited, so even when they apply, becoming legally designated as the Responsible Party for a contaminated property through acquisition is always a risk because of the complicated regulatory process and the cost to obtain and to maintain liability protection in perpetuity. This is even more difficult to manage when the property is being substantially altered by development/construction—as is the case for most right of way acquired by MnDOT. The cost of partial cleanup during construction can be high even for a non-Responsible Party. Another complexity is that the owner/Responsible Party can be required to clean up not just the property where contamination originated, but other surrounding impacted properties as well. In another complex twist, acquisition of property adjacent to a known or potential Superfund site is a risk because inadvertent disturbance and incorrect management of contamination originating from such a site can place you at risk of being legally designated as a Responsible Party for the site, even though you have no ownership interest.

2. Project includes **grading and/or excavation** either at a large scale, (such as for new roadway), or at a smaller scale, (such as for utility work, building footings, culvert replacement, ponds, turn lanes and ditch/shoulder work).

MnDOT has encountered contaminated soil and groundwater during both large- and small-scale project excavations. Any size excavation may encounter contaminated soil. For example, abandoned underground tanks have been encountered during sidewalk replacement. Solid waste and demolition debris has been encountered during excavation of new storm water ponds. Contaminated groundwater has been encountered during signalization projects. Utility work is especially vulnerable to encountering contamination because utilities are more likely to be located in urban areas with a greater concentration of contaminated sites, and contaminants migrating through right of way from off-site sources (such as leaking underground tanks) can preferentially collect in more permeable utility trench backfill.

3. Project is located in a **commercial/industrial area**.

Because historic land uses in commercial/industrial areas are more likely to have involved the use of potentially hazardous liquid and solid raw materials, actions such as on-site burial/disposal of waste materials, and periodic demolition and reconstruction of infrastructure, chances are greater for encountering contaminated soil or groundwater and buried wastes in these areas.

4. Project requires work in areas with shallow groundwater, and may require either temporary or permanent **groundwater dewatering**.

Because groundwater can pick up dissolved chemicals from contaminated sites and carry them a long distance, all shallow groundwater (particularly in developed areas) has the potential to be contaminated. Early identification of contaminated groundwater allows time to develop a dewatering/management plan and to obtain necessary discharge permits for proper handling of the contaminated groundwater during construction.

Contacting the Contaminated Materials Management Team

Finding and documenting contaminated properties is a detailed process, and the complexity increases depending on how many Threshold Criteria are met by the project, and how large the project is. The Contaminated Materials Management Team (CMMT) should be contacted by the project manager approximately 12-18 months prior to project letting.

Early Notification Memo (ENM) and Environmental Due Diligence (EDD) Processes

All projects that include any of the Threshold Criteria require CMMT review and assistance in completing thorough early identification and documentation of known or suspected contamination. All projects that include the addition of new property into the state trunk highway system also require an EDD review. The CMMT EDD process is designed to provide MnDOT with informed right of way acquisition decisions. MnDOT will not approve property acquisitions until the EDD process has been completed. Technical Memorandum 13-12-ENV-02,

“Property Acquisition: Environmental Due Diligence Process” describes the EDD process (https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=1339688).

The Early Notification Memorandum (ENM) process and the EDD process work in parallel. The ENM is completed by District staff (typically the project manager or District environmental coordinator) and submitted to the CMMT. The EDD forms are completed by District staff and submitted (entered) into the MnDOT REALMS Database (<http://realmsp.dot.state.mn.us/default.aspx?ReturnUrl=%2f>).

There are three EDD forms:

- EDD-1: project proposer provides general project area information.
- EDD-2: project proposer provides specific parcel information as soon as it is known.
- EDD-3: project proposer provides this form only for parcels with contamination issues that present a high environmental risk to the department (e.g. Superfund and major Brownfield sites, all dump sites, coal gasification sites, wood treatment sites, sites with ongoing regulatory obligations, engineering controls, or institutional controls or equivalent, or historic sites closed when regulatory standards were non-existent, or less stringent than current standards). EDD-3 requires MnDOT deputy commissioner signature.

In order to expedite completion of a CMMT ENM review, the district should provide the following:

- Good project scope of work (need as soon as scoping document is complete).
- Likely project excavation needs and preliminary locations (such as grade corrections, utilities, drainage (also includes ponds)).
- Right of way needs (if right of way is to be acquired, the EDD-1 document must also be completed).
- History in Project Area (based on District knowledge) such as land use in the project area, likelihood of environmentally unacceptable historic fill, presence of known contaminated sites (dumps, superfund sites, spills, service stations).

In order to expedite completion of a CMMT EDD review, the district should provide the following:

- **EDD-1**
 - Project endpoints.
 - Location map (entered in REALMS).
 - History in Project Area (based on District knowledge) such as land use in the project area, likelihood of environmentally unacceptable historic fill, presence of known contaminated sites (dumps, superfund sites, spills, service station).
- **EDD-2**
 - Type of acquisition(s) – fee, TO, CO, etc.
 - Location map of acquisition(s), including identification of partial acquisitions (entered in REALMS and indicated as TO, CO etc.).

- Identify priority of acquisitions and the timing of offers (such as any early acquisitions, or acquisitions timed to coincide with determination of preliminary or final construction limits).
- Identify any environmental covenant(s) placed on properties (based on title searches).
- CMMT clears parcels as information is available (typically not recommended to wait to clear all parcels late in the process).
- **EDD-3**
 - High risk parcel has been identified (estimated greater than \$500,000 cleanup cost, etc.).
 - Start working on EDD-3 as soon as possible after a high risk parcel has been identified, because design modifications, cost estimates, justifications, dedicated funding, signatures, etc. – can affect the project schedule and letting.

Evaluation Process

After review of the ENM and/or the EDD document, CMMT staff in consultation with the Project Manager will determine the need for further investigation.

Phase I Environmental Site Assessment (ESA)

If a project is determined to have a potential for encountering contaminated materials, a Phase I Environmental Site Assessment (ESA) may be required. A Phase I ESA includes detailed review of historic land use records, regulatory history, and current land use. The purpose of the review is to determine if historic human activities on or near the property could have caused the property to be contaminated. Depending on the complexity of the project, a Phase I ESA can take from four to eight months to complete. A Phase I ESA is considered by the MPCA to be obsolete and unacceptable one year after the date it is completed. The MPCA requires completion of a Phase I ESA in order to be eligible for liability protection through the VIC program. CMMT staff will retain a consultant to complete a Phase I ESA (funded from the district consultant budget). CMMT staff will summarize results of the Phase I ESA as requested by the district, and will assist in drafting/reviewing the "Contaminated Properties" section of the project environmental document as needed.

In order to expedite completion of a Phase I ESA, the district should provide the following:

- Contact information for project manager, area manager, design, construction, right of way, hydraulics, and materials.
- Project limits.
- Acquisition needs.
- History in Project Area (based on District knowledge) such as land use in the project area, likelihood of environmentally unacceptable historic fill, presence of known contaminated sites (dumps, superfund sites, spills, service stations).
- Project changes and milestone dates (plan updates, right of way changes, scoping changes and letting date changes).

Phase II Environmental Site Assessment (ESA)

If the Phase I ESA finds known or suspected contamination in or near proposed or existing right of way, a Phase II Investigation will likely be required. A Phase II ESA includes collection (usually by drilling or test pits) and laboratory analysis of soil, groundwater, vapor and/or waste samples for the presence of regulated chemicals. Depending on the complexity of the project, a Phase II ESA can take from three to six months to complete. A Phase II ESA is considered by the MPCA to be obsolete and unacceptable two years after the date it is completed. The MPCA requires completion of a Phase II ESA in order to be eligible for liability protection through the VIC program. The purpose of the investigation is to document the extent and magnitude of contamination. This information can be used to determine the liability associated with acquisition of the property, and the difficulties the site may present for construction. CMMT staff will retain a consultant to complete a Phase II ESA (funded from the district consultant budget). CMMT staff will summarize the results of Phase II Investigation as requested by the district, and will assist in obtaining liability protections, developing cleanup plans, and drafting/reviewing construction contract provisions as needed.

In order to expedite completion of a Phase II ESA, the district should provide the following:

- Right of entries to access proposed right of way as needed.
- Location of excavation areas on the project including estimated depths.
- Type of excavations (such as pond, utility, culvert, sub-surface drains, ditches, sub-cut).
- Likely excavation method.

Many projects will have little potential for impacts, although they can trigger one or more of the threshold criteria. For these projects, a quick evaluation by the CMMT may establish that the contamination potential is low (e.g. sites with recorded chemical use/storage, including petroleum products, but no reported releases). MnDOT Standard Provision (1717) Air, Land and Water Pollution, provides for management of unexpected contaminated materials discovered during construction.

Prepared Statements for Environmental Documents

Projects with little potential for impacts as determined by the CMMT, can use the following statement in the "Contaminated Properties" section of the environmental document:

"Potential for impacts to the project from contaminated properties has been considered, but because of the project location and nature of the planned work, there is little potential for encountering contaminated materials. Any potentially contaminated materials encountered during construction will be handled and treated in accordance with applicable state and federal regulations."

Projects with potential for impacts as determined by the CMMT, will need a project-specific statement summarizing the results of the EDD/ ENM review, and/or the Phase I/Phase II ESA, whichever are applicable, for inclusion in the project environmental document. CMMT staff will assist the District in drafting the statement as needed.

Relationship to the HPDP

Class I Actions (Environmental Impact Statement)

Scoping Documents (SD) & Scoping Decision Document (SDD)

Evaluate the project using the Threshold Criteria. If the CMMT determines there are possible impacts from known or potentially contaminated properties that could substantially affect the project, it is advisable to initiate a Phase I ESA to identify potential high risk contaminated properties.

Environmental Impact Statement (DEIS/FEIS)

If the scoping process has identified the presence of potential high risk contaminated properties that could substantially affect the project (by eliminating certain alternatives from being considered, adding new alternatives, or substantially affecting design), it is advisable to initiate a Phase II ESA early enough in the process so the results can be included in the Draft and Final EIS. The CMMT can provide/review a project-specific statement for the document as requested by the District.

Class II Actions (Categorical Exclusion Determination / CATEX (Short and long forms))

Evaluate the project using the Threshold Criteria. If the CMMT determines that there is little potential for possible impacts from known or potentially contaminated properties that could substantially affect the project, the above "Prepared Statement" can be used in the document. If there is a potential for contamination problems for the project, the CMMT can provide/review a project-specific statement for the document as requested by the District.

Class III Actions (Environmental Assessment)

Complete as in Class II above.

Agencies Involved

Agency(s)	When they are involved and why
Minnesota Pollution Control Agency (MPCA)	Determines all state contaminated materials investigation, management, and cleanup standards and oversees all state and most federal cleanup projects. Issues all permits and approvals for contamination-related projects (except for those under the jurisdiction of the Minnesota Department of Agriculture). Can grant limited liability protection for acquisition of and work in some types of contaminated properties.

Minnesota Department of Health (MDH)	Regulates and permits well installation and sealing, including monitoring wells. Regulates asbestos abatement. (see HPDP Regulated Materials/Waste Section https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=614362).
Metropolitan Council Environmental Services (MCES)	Issues permits for discharge of contaminated water to the sanitary sewer in the Minneapolis/St. Paul metropolitan area.
Minnesota Department of Agriculture (MDA)	Oversees all state and most federal cleanup projects involving pesticide and fertilizer contamination (all other types of contaminated sites are under the jurisdiction of the Minnesota Pollution Control Agency). Issues all permits and approvals related to this work. Can grant limited liability protection for acquisition of and work in some types of contaminated properties.