Land Information Ontario
Data Class User Guide

For

Waste Management Site (WASTEMST)

Waste Management Attenuation Zone (WASTEMAZ)

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Additional Information

For more information about this document, please contact Land Information Ontario at (705) 755-1878 or *lio@ontario.ca*

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1- Preface

This guide was prepared on behalf of the Land Information Ontario (LIO) data class information owner, Ontario Ministry of Natural Resources (OMNR), Regional Operation Division, Integration Branch, Land and Services Section.

The document is intended for OMNR staff tasked with the responsibility of maintaining the Waste Management Site (WASTEMST) and Waste Management Attenuation Zone (WASTEMAZ) LIO data classes. It is also intended for users of the data.

2 - Introduction and Background

The Waste Management Site (WASTEMST) and Waste Management Attenuation Zone (WASTEMAZ) LIO data classes were first implemented in 2010. The Waste Management Site (WASTEMST) replaced an existing data class, Waste Disposal Site (WASTEDIS), which was retired in 2013.

Both data classes are maintained by OMNR staff at the district level using the LIO editor tool. The edit extent for both data classes is province wide and edit/check-in rights are assigned to a number of OMNR staff.

Waste Management Site (WASTEMST)

The intended purpose of the Waste Management Site (WASTEMST) data class is to store the location and essential attributes related to *waste management (see glossary)* sites (also known as waste disposal sites).. These are primarily on Crown land and for which the OMNR has an ongoing responsibility for proper management in both the short and long term. The data class was designed to allow the inclusion of any waste management site even if the site is not the responsibility of the OMNR.

The Waste Management Site (WASTEMST) data class is spatial of polygon type. More specifically, the abstract class is *Spatial Multi-Non-Tessellating-Polygon (see glossary)*.

Link to metadata record:
https://www.appliometadata.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=630bb67d-ae0c-4093-b1fd-dc8d27035b01

Link to data distribution access form:
http://mnronline.mnr.gov.on.ca/Document/View.asp?Document_ID=21190&Attachment_ID=44668

Waste Management Attenuation Zone (WASTEMAZ)

The attenuation zone is the area around a waste management site where leachate produced by the site is naturally reduced to levels compatible with the reasonable use of adjacent property (as per Ministry of Environment (MOE) Guidelines B-7).

An object in the Waste Management Attenuation Zone (WASTEMAZ) data class cannot exist without an existing corresponding object in this Waste Management Site (WASTEMST) data class.

The Waste Management Attenuation Zone (WASTEMAZ) data class is spatial of polygon region type where polygons can overlap (i.e. the attenuation zone polygon associated with a given waste management site can overlap with the attenuation zone polygon associated with a different waste management site). More specifically, the abstract class is *Spatial Multi-Non-Tessellating-Unconstrained Region (see glossary).*

Link to metadata record:
https://www.appliometadata.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=6ee6ee4e-b3f0-4943-8f94-6d1df94ed975

Link to data distribution and access form:
http://mnronline.mnr.gov.on.ca/Document/View.asp?Document_ID=21191&Attachment_ID=44669

Entity-Relationship Diagram

Data Model: Waste Management

Data Class Name: Waste Management Site
Data Class Shortname: WASTEMST

Data Class Name: Waste Management Attenuation Zone
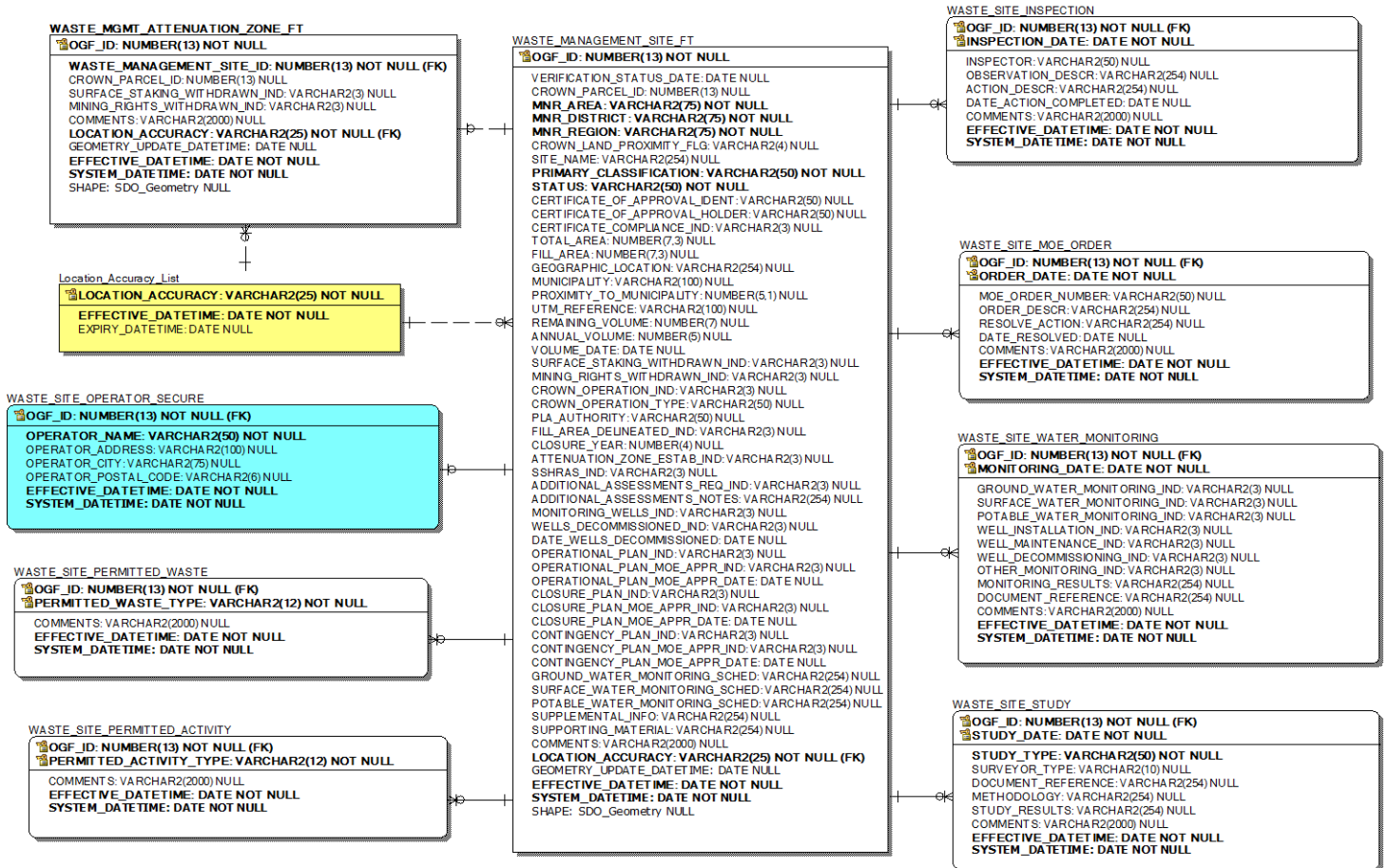Data Class Shortname: WASTEMAZ

Data Class Version #: 1
Model Revision Date: 4-July-2013

Note:

Bolded text seen in tables represent mandatory attributes.

Yellow shaded entities represent lookup tables.

Blue shaded entities represent secure tables.

WASTE_MGMT_ATTENUATION_ZONE_FT
- **OGF_ID: NUMBER(13) NOT NULL**
- **WASTE_MANAGEMENT_SITE_ID: NUMBER(13) NOT NULL (FK)**
- CROWN_PARCEL_ID: NUMBER(13) NULL
- SURFACE_STAKING_WITHDRAWN_IND: VARCHAR2(3) NULL
- MINING_RIGHTS_WITHDRAWN_IND: VARCHAR2(3) NULL
- COMMENTS: VARCHAR2(2000) NULL
- **LOCATION_ACCURACY: VARCHAR2(25) NOT NULL (FK)**
- GEOMETRY_UPDATE_DATETIME: DATE NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**
- SHAPE: SDO_Geometry NULL

Location_Accuracy_List
LOCATION_ACCURACY: VARCHAR2(25) NOT NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- EXPIRY_DATETIME: DATE NULL

WASTE_SITE_OPERATOR_SECURE
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **OPERATOR_NAME: VARCHAR2(50) NOT NULL**
- OPERATOR_ADDRESS: VARCHAR2(100) NULL
- OPERATOR_CITY: VARCHAR2(75) NULL
- OPERATOR_POSTAL_CODE: VARCHAR2(6) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_SITE_PERMITTED_WASTE
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **PERMITTED_WASTE_TYPE: VARCHAR2(12) NOT NULL**
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_SITE_PERMITTED_ACTIVITY
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **PERMITTED_ACTIVITY_TYPE: VARCHAR2(12) NOT NULL**
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_MANAGEMENT_SITE_FT
- **OGF_ID: NUMBER(13) NOT NULL**
- VERIFICATION_STATUS_DATE: DATE NULL
- CROWN_PARCEL_ID: NUMBER(13) NULL
- **MNR_AREA: VARCHAR2(75) NOT NULL**
- **MNR_DISTRICT: VARCHAR2(75) NOT NULL**
- **MNR_REGION: VARCHAR2(75) NOT NULL**
- CROWN_LAND_PROXIMITY_FLG: VARCHAR2(4) NULL
- SITE_NAME: VARCHAR2(254) NULL
- **PRIMARY_CLASSIFICATION: VARCHAR2(50) NOT NULL**
- **STATUS: VARCHAR2(50) NOT NULL**
- CERTIFICATE_OF_APPROVAL_IDENT: VARCHAR2(50) NULL
- CERTIFICATE_OF_APPROVAL_HOLDER: VARCHAR2(50) NULL
- CERTIFICATE_COMPLIANCE_IND: VARCHAR2(3) NULL
- TOTAL_AREA: NUMBER(7,3) NULL
- FILL_AREA: NUMBER(7,3) NULL
- GEOGRAPHIC_LOCATION: VARCHAR2(254) NULL
- MUNICIPALITY: VARCHAR2(100) NULL
- PROXIMITY_TO_MUNICIPALITY: NUMBER(5,1) NULL
- UTM_REFERENCE: VARCHAR2(100) NULL
- REMAINING_VOLUME: NUMBER(7) NULL
- ANNUAL_VOLUME: NUMBER(5) NULL
- VOLUME_DATE: DATE NULL
- SURFACE_STAKING_WITHDRAWN_IND: VARCHAR2(3) NULL
- MINING_RIGHTS_WITHDRAWN_IND: VARCHAR2(3) NULL
- CROWN_OPERATION_IND: VARCHAR2(3) NULL
- CROWN_OPERATION_TYPE: VARCHAR2(50) NULL
- PLA_AUTHORITY: VARCHAR2(50) NULL
- FILL_AREA_DELINEATED_IND: VARCHAR2(3) NULL
- CLOSURE_YEAR: NUMBER(4) NULL
- ATTENUATION_ZONE_ESTAB_IND: VARCHAR2(3) NULL
- SSHRAS_IND: VARCHAR2(3) NULL
- ADDITIONAL_ASSESSMENTS_REQ_IND: VARCHAR2(3) NULL
- ADDITIONAL_ASSESSMENTS_NOTES: VARCHAR2(254) NULL
- MONITORING_WELLS_IND: VARCHAR2(3) NULL
- WELLS_DECOMMISSIONED_IND: VARCHAR2(3) NULL
- DATE_WELLS_DECOMMISSIONED: DATE NULL
- OPERATIONAL_PLAN_IND: VARCHAR2(3) NULL
- OPERATIONAL_PLAN_MOE_APPR_IND: VARCHAR2(3) NULL
- OPERATIONAL_PLAN_MOE_APPR_DATE: DATE NULL
- CLOSURE_PLAN_IND: VARCHAR2(3) NULL
- CLOSURE_PLAN_MOE_APPR_IND: VARCHAR2(3) NULL
- CLOSURE_PLAN_MOE_APPR_DATE: DATE NULL
- CONTINGENCY_PLAN_IND: VARCHAR2(3) NULL
- CONTINGENCY_PLAN_MOE_APPR_IND: VARCHAR2(3) NULL
- CONTINGENCY_PLAN_MOE_APPR_DATE: DATE NULL
- GROUND_WATER_MONITORING_SCHED: VARCHAR2(254) NULL
- SURFACE_WATER_MONITORING_SCHED: VARCHAR2(254) NULL
- POTABLE_WATER_MONITORING_SCHED: VARCHAR2(254) NULL
- SUPPLEMENTAL_INFO: VARCHAR2(254) NULL
- SUPPORTING_MATERIAL: VARCHAR2(254) NULL
- COMMENTS: VARCHAR2(2000) NULL
- **LOCATION_ACCURACY: VARCHAR2(25) NOT NULL (FK)**
- GEOMETRY_UPDATE_DATETIME: DATE NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**
- SHAPE: SDO_Geometry NULL

WASTE_SITE_INSPECTION
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **INSPECTION_DATE: DATE NOT NULL**
- INSPECTOR: VARCHAR2(50) NULL
- OBSERVATION_DESCR: VARCHAR2(254) NULL
- ACTION_DESCR: VARCHAR2(254) NULL
- DATE_ACTION_COMPLETED: DATE NULL
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_SITE_MOE_ORDER
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **ORDER_DATE: DATE NOT NULL**
- MOE_ORDER_NUMBER: VARCHAR2(50) NULL
- ORDER_DESCR: VARCHAR2(254) NULL
- RESOLVE_ACTION: VARCHAR2(254) NULL
- DATE_RESOLVED: DATE NULL
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_SITE_WATER_MONITORING
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **MONITORING_DATE: DATE NOT NULL**
- GROUND_WATER_MONITORING_IND: VARCHAR2(3) NULL
- SURFACE_WATER_MONITORING_IND: VARCHAR2(3) NULL
- POTABLE_WATER_MONITORING_IND: VARCHAR2(3) NULL
- WELL_INSTALLATION_IND: VARCHAR2(3) NULL
- WELL_MAINTENANCE_IND: VARCHAR2(3) NULL
- WELL_DECOMMISSIONING_IND: VARCHAR2(3) NULL
- OTHER_MONITORING_IND: VARCHAR2(3) NULL
- MONITORING_RESULTS: VARCHAR2(254) NULL
- DOCUMENT_REFERENCE: VARCHAR2(254) NULL
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

WASTE_SITE_STUDY
- **OGF_ID: NUMBER(13) NOT NULL (FK)**
- **STUDY_DATE: DATE NOT NULL**
- **STUDY_TYPE: VARCHAR2(50) NOT NULL**
- SURVEYOR_TYPE: VARCHAR2(10) NULL
- DOCUMENT_REFERENCE: VARCHAR2(254) NULL
- METHODOLOGY: VARCHAR2(254) NULL
- STUDY_RESULTS: VARCHAR2(254) NULL
- COMMENTS: VARCHAR2(2000) NULL
- **EFFECTIVE_DATETIME: DATE NOT NULL**
- **SYSTEM_DATETIME: DATE NOT NULL**

3 - Information Collected
A plain English breakdown of the types of information collected for this data class with examples/graphics to better explain the context.

Waste Management Site (WASTEMST)

While most sites have an associated with a Certificate of Approval (CofA) issued by the Ontario Ministry of the Environment (MOE), there are some polygon objects in the WASTEMST layer that, mainly for historical reasons, do not have an associated Cof A.

If a waste management site has an associated CofA then the polygon boundary should be based on the approved fill area boundary as per the certificate. If a CofA was not issued for a site, then the polygon boundary should be delineated as the area known to have had waste deposited based on available information preferably verified through a site visit by someone experienced in land and waste management.

Where a waste management site polygon boundary is coincident with linear or polygon features that exist in other LIO data classes (e.g. Crown Parcel, MNR Road Segment, etc.) consideration should be given to align the waste management site polygon with the existing feature(s).

A waste management site object will always have a single related record in the class feature table (WASTE_MANAGEMENT_SITE_FT).

A waste management site object may also have one or more related records in a number of related tables:

- WASTE_SITE_PERMITTED_ACTIVITY
- WASTE_SITE_PERMITTED_WASTE
- WASTE_SITE_INSPECTION
- WASTE_SITE_MOE_ORDER
- WASTE_SITE_WATER_MONITORING
- WASTE_SITE_STUDY

WASTE_MANAGEMENT_SITE_FT (Feature Table) Attributes

The FT contains core attributes for each waste management site object and there is one record for every polygon object.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

OGF_ID [NUMBER(13,0)]**:** A unique numeric provincial identifier assigned to each object. The LIO Editor application will automatically populate this field with the correct value.

VERIFICATION_STATUS_DATE [DATE]: Date that the other attributes in the record were updated or reviewed for currency.

CROWN_PARCEL_ID [NUMBER(13,0)]: this is the business identifier linking a waste management site with an existing polygon in the Crown Land - MNR Non-Freehold Dispositions data class. Its existence does not imply that there is any coincidence of polygon boundaries between the two data classes.

MNR_AREA, MNR_DISTRICT, MNR_REGION [VARCHAR(75)]: the MNR administrative hierarchy associated with the administration and management of the site. The site object may sometimes in fact be geographically located inside a different MNR Area polygon.

CROWN_LAND_PROXIMITY_FLG [VARCHAR(4)]:
- If the site polygon is located in whole or in part on Crown Land then the value is 'On'
- If the site polygon is not located at all on Crown Land but the associated attenuation zone may involve adjacent Crown Land, then the value is 'Near'

SITE_NAME [VARCHAR(254)]: the name of the site.

PRIMARY_CLASSIFICATION [VARCHAR(50)]: The primary use or activity at the site. This is an OMNR legacy attribute. Its value should be consistent with any CofA and any related records in the WASTE_SITE_PERMITTED_ACTIVITY table. The permitted waste site classifications are: 1 – Dump, 2 – Landfill, 3 - Transfer Station, 4 - Waste Processing or Sorting, 5 – Composting, 6 - Thermal Treatment, 7 - Special Waste (i.e. Hazardous), 8 - Other or Mixed, 9 - Unauthorized, Illegal, Ad Hoc or Historical.

STATUS [VARCHAR(5)]: whether the site is Operating, Not-Operating or Closed (generally in accordance with the terms of any COA). An operating site should have a CofA and may have an approved operational plan. A closed site will usually have an approved closure plan in place.

CERTIFICATE_OF_APPROVAL_IDENT [VARCHAR(50)]:   Certificate of Approval (CofA) or Environmental Compliance Approvals (post October, 2011) identifier issued by the Ministry of Environment. A COA regulates activities that may have an impact on the environment including: landfills; incinerators; waste collection, hauling and processing facilities; operations and equipment that emit contaminants into the air; and sewage works that collect, treat or discharge wastewater. A COA specifies the terms and conditions that must be followed for the activity to take place.

While most waste management site objects will have an associated CofA, there may be some objects (e.g. historical waste sites, unauthorized landfills on Crown land) that do not.

CERTIFICATE_OF_APPROVAL_HOLDER [VARCHAR(50)]: Name of the holder of the CofA.

CERTIFICATE_COMPLIANCE_IND [VARCHAR(3)]: Indicator of whether the site is in compliance with the terms and conditions of the CofA (Yes or No).

TOTAL_AREA [NUMBER(7,3)]: Total area (hectares) authorized by Cof A.

FILL_AREA [NUMBER(7,3)]: Approved fill area (hectares) authorized by CofA.

GEOGRAPHIC_LOCATION [VARCHAR(254)]: Notes related to the location of the site.

MUNICIPALITY [VARCHAR(100)]: The name of the municipality in close proximity to the waste site.

PROXIMITY_TO_MUNICIPALITY [NUMBER(5,1)]: the distance (kilometers) between the waste site and the municipality.

UTM_REFERENCE [VARCHAR(100)]: A UTM reference for the site. Suggested standard is to have numeric characters for the Zone, Easting and Northing separated by hyphens e.g. 17-573350-5249400

REMAINING_VOLUME [NUMBER(7,0)]: Volume remaining (of total volume approved by CofA) in cubic meters

ANNUAL_VOLUME [NUMBER(5,0)]: Estimated volume of waste being deposited annually (in cubic meters)

VOLUME_DATE [DATE]: Date relative to values stored in Remaining Volume and Annual Volume

SURFACE_STAKING_WITHDRAWN_IND [VARCHAR(3)]: An indicator of whether surface rights for mineral exploration been withdrawn under the Mining Act. Valid values: Yes, No.

MINING_RIGHTS_WITHDRAWN_IND [VARCHAR(3)]: An indicator of whether sub-surface mineral and mining rights been withdrawn under the Mining Act. Valid values: Yes, No.

CROWN_OPERATION_IND [VARCHAR(3)]: An indicator of whether the Crown is responsible for the operation of the site. Valid values: Yes, No. 'Yes' usually means that the Crown holds the CofA for the site.

CROWN_OPERATION_TYPE [VARCHAR(50)]: If the Crown is responsible for site operation (Crown Operation Ind=Yes) then the mechanism of how this is carried out. Valid Values: MNR, Contactor, Licence Agreement, Volunteer Agreement, Site Closed, Other

PLA_AUTHORITY [VARCHAR(50)]: Authority for the site under the Public Lands Act (e.g. Land Use Permit) This only applies to sites located on Crown Land where the CofA is not held by the Crown.

FILL_AREA_DELINEATED_IND [VARCHAR(3)]: An indicator of whether the fill area been delineated on the ground. Valid values: Yes, No.

CLOSURE_YEAR [NUMBER(4,0)]: Year the site closed or is expected to close.

ATTENUATION_ZONE_ESTAB_IND [VARCHAR(3)]: An indicator of whether the attenuation zone for the site been established. Valid values: Yes, No.

SSHRAS_IND [VARCHAR(3)]: An indicator of whether a Site Survey and Hydrogeological Risk Assessment Study (SSHRAS) has been completed. Valid values: Yes, No.

ADDITIONAL_ASSESSMENTS_REQ_IND [VARCHAR(3)]: An indicator of whether additional assessments are required at the site.   Valid values: Yes, No.

ADDITIONAL_ASSESSMENTS_NOTES [VARCHAR(254)]: Notes pertaining to required additional assessments.

MONITORING_WELLS_IND [VARCHAR(3)]: An indicator of whether monitoring wells are in place. Valid values: Yes, No.

WELLS_DECOMMISSIONED_IND [VARCHAR(3)]: An indicator of whether monitoring wells, that were in place, have been decommissioned. Valid values: Yes, No.

DATE_WELLS_DECOMMISSIONED [DATE]: Date that the monitoring wells were decommissioned.

OPERATIONAL_PLAN_IND [VARCHAR(3)]: An indicator of whether a site operational plan is in place. Valid values: Yes, No.

OPERATIONAL_PLAN_MOE_APPR_IND [VARCHAR(3)]: An indicator of whether the operational plan been approved by MOE. Valid values: Yes, No.

OPERATIONAL_PLAN_MOE_APPR_DATE [DATE]: Date that MOE approved of the operational plan.

CLOSURE_PLAN_IND [VARCHAR(3)]: An indicator of whether a site closure plan is in place. Valid values: Yes, No.

CLOSURE_PLAN_MOE_APPR_IND [VARCHAR(3)]: An indicator of whether the closure plan been approved by MOE. Valid values: Yes, No.

CLOSURE_PLAN_MOE_APPR_DATE [DATE]: Date that MOE approved of the closure plan.

CONTINGENCY_PLAN_IND [VARCHAR(3)]: An indicator of whether a contingency plan is in place. Valid values: Yes, No.

CONTINGENCY_PLAN_MOE_APPR_IND [VARCHAR(3)]: Indicator of whether the contingency plan been approved by MOE. Valid values: Yes, No.

CONTINGENCY_PLAN_MOE_APPR_DATE [DATE]: Date that MOE approved of the contingency plan.

GROUND_WATER_MONITORING_SCHED [VARCHAR(254)]: Notes about the method and schedule for ground water sampling.

POTABLE_WATER_MONITORING_SCHED [VARCHAR(254)]: Notes about the method and schedule for potable water sampling.

SUPPLEMENTAL_INFO [VARCHAR(254)]: Notes about where additional information pertaining to the site can be found.

SUPPORTING_MATERIAL [VARCHAR(254)]: Description of supporting material possibly including a link (URL) to web document.

COMMENTS [VARCHAR(2000)]: General comments pertaining to the waste management site.

LOCATION_ACCURACY [VARCHAR(25)]: The degree of conformity or closeness of the polygon's spatial location to its true value on the earth surface. (See LOCATION_ACCURACY_LIST table)

GEOMETRY_UPDATE_DATETIME [DATE]: Date/time the geometry was created or last modified in the source database. The LIO Editor application will automatically populate this field with the correct value.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_PERMITTED_ACTIVITY Attributes

This table stores which waste management activities are permitted at the site by the Certificate of Approval (CofA). As the CofA may permit more than one type of waste management activity at the site, each activity will be listed in a separate record of the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

PERMITTED_ACTIVITY_TYPE [VARCHAR(12)]: The waste management activity indicated is permitted at the site by the CofA. Valid Values: Landfill, Transfer, Processing, Composting, Thermal, Biosoild, Other.

COMMENTS [VARCHAR(2000)]: Brief comments related to this permitted waste management activity. Particularly useful when 'Other' is selected as the permitted activity.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_PERMITTED_WASTE Attributes

This table stores which types of waste are permitted at the site by the Certificate of Approval (CofA). As the CofA may permit more than one type of waste at the site, each waste type will be listed in a separate record of the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

PERMITTED_WASTE_TYPE [VARCHAR(12)]: The type of waste indicated is permitted at the site. Valid Values: Household, Commercial, Hazardous, Septic, Biosolids, Compost, Soil, Tires, Wood, Blue-box, Bio-medical, PCBs, Other.

COMMENTS [VARCHAR(2000)]: Brief comments related to this permitted waste type. Particularly useful when 'Other' is selected as the permitted waste type.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_INSPECTION Attributes

This table stores information pertaining to inspections of the waste management site.

Over time more than one inspection is likely to occur at the site, so each inspection will be listed, by date, as a separate record in the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

INSPECTION_DATE [DATE]: Date of the inspection

INSPECTOR [VARCHAR(50)]: Agency or body that did the inspection. Valid Values: MNR, MOE, Other.

OBSERVATION_DESCR [VARCHAR(254)]: Brief description of what was observed during the inspection.

ACTION_DESCR [VARCHAR(254)]: Brief description of any recommended remedial or corrective action.

DATE_ACTION_COMPLETED [DATE]: Date the recommended action was completed.

COMMENTS [VARCHAR(2000)]: Brief comments related to this inspection record

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_MOE_ORDER Attributes

This table stores information pertaining to any Ministry of Environment (MOE) orders involving the waste management site.

Over time more than MOE order may possibly occur for the site, so each order will be listed, by date, as a separate record in the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

ORDER_DATE [DATE]: Date of the MOE Order.

MOE_ORDER_NUMBER [VARCHAR(50)]: Official MOE order number.

ORDER_DESCR [VARCHAR(254)]: Brief description of what the order contains.

RESOLVE_ACTION [VARCHAR(254)]: Action taken to comply with order.

DATE_RESOLVED [DATE]: Date the action was taken.

COMMENTS [VARCHAR(2000)]: Brief comments related to this MOE Order record.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_WATER_MONITORING Attributes

This table stores information pertaining to the monitoring of water (surface water, ground water, potable water) and the installation, maintenance and decommissioning of monitoring wells at the waste management site.

Over time, more than one action related to water monitoring may occur at a site, so each action will be listed, by date, as a separate record in the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

MONITORING_DATE [DATE]: Date of the monitoring visit.

GROUND_WATER_MONITORING_IND [VARCHAR(3)]: Ground water was monitored. Valid values: Yes, No.

SURFACE_WATER_MONITORING_IND [VARCHAR(3)]: Surface water was monitored. Valid values: Yes, No.

POTABLE_WATER_MONITORING_IND [VARCHAR(3)]: Potable water was monitored. Valid values: Yes, No.

WELL_INSTALLATION_IND [VARCHAR(3)]: Monitoring well installation took place. Valid values: Yes, No.

WELL_MAINTENANCE_IND [VARCHAR(3)]: Monitoring well maintenance took place. Valid values: Yes, No.

WELL_DECOMMISSIONING_IND [VARCHAR(3)]: Monitoring well decommissioning took place. Valid values: Yes, No.

OTHER_MONITORING_IND [VARCHAR(3)]: Some other type of monitoring activity took place. Valid values: Yes, No. A brief description of the activity should be entered in the record Comments field.

MONITORING_RESULTS [VARCHAR(254)]: Brief summary of the results of the monitoring activity.

DOCUMENT_REFERENCE [VARCHAR(254)]: Link (URL) to the monitoring report on-line.

COMMENTS [VARCHAR(2000)]: Brief comments related to this water monitoring record.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

WASTE_SITE_STUDY Attributes

This table stores information pertaining visits to the waste management site related to conducting studies, surveys or assessments (usually related to hydrogeology).

Over time, more than one study, survey or assessment may occur at a site, so each action will be listed, by date, as a separate record in the table.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

STUDY_DATE [DATE]: Date of the study.

STUDY_TYPE [VARCHAR(50)]: Type of study or survey Valid values include: Hydrogeological Risk Assessment, Hydrogeological, Other.

SURVEYOR_TYPE [VARCHAR(10)]: Agency, group or bidy that carried out the study. Valid values: MNR, Consultant, Other. When Other is indicated, an explanation in the Comments field is recommended.

DOCUMENT_REFERENCE [VARCHAR(254)]: Link (URL) to the monitoring report online.

METHODOLOGY [VARCHAR(254)]: Brief description of the study methodology.

STUDY_RESULTS [VARCHAR(254)]: Brief description of the study results.

COMMENTS [VARCHAR(2000)]: Brief comments related to this water monitoring record.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

Waste Management Attenuation Zone (WASTEMAZ)

An object in the Waste Management Attenuation Zone (WASTEMAZ) data class must be related to an existing object in the Waste Management Site (WASTEMST) data class.

Waste management attenuation zone polygons are determined through an accepted scientific methodology. Waste management attenuation zone polygon boundaries do not normally align with other existing base feature boundaries.

A waste management attenuation zone object will always have a single related record in the class feature table (WASTE_MGMT_ATTENUATION_ZONE_FT).

WASTE_MGMT_ATTENUATION_ZONE_FT (Feature Table) Attributes

The FT contains core attributes for each waste management attenuation zone object and there is one record for every polygon object.

The individual attributes are listed and described below. Note: Mandatory attributes have the name **bolded**. This will be enforced by the LIO Editor application.

OGF_ID [NUMBER(13,0)]: A unique numeric provincial identifier assigned to each object. The LIO Editor application will automatically populate this field with the correct value.

WASTE_MANAGEMENT_SITE_ID [NUMBER(13,0)]: Unique identifier (OGF-ID) for the related object record in the Waste Management Site feature table (WASTE_MANAGEMENT_SITE_FT). The LIO Editor application will automatically populate this field with the correct value.

CROWN_PARCEL_ID [NUMBER(13,0)]: Business identifier for a related object in the Crown Land - MNR Non-Freehold Dispositions data class. The waste attenuation zone geometry does not need to be aligned with the crown parcel geometry. This allows linkage to the Crown Land tenure group of data layers.

SURFACE_STAKING_WITHDRAWN_IND [VARCHAR(3)]: Indicator of whether surface rights for mineral exploration have been withdrawn under the Mining Act. Valid values: Yes, No.

MINING_RIGHTS_WITHDRAWN_IND [VARCHAR(3)]: Indicator of whether sub-surface mineral and mining rights have been withdrawn under the Mining Act. Valid values: Yes, No.

COMMENTS [VARCHAR(2000)]: Any comment pertaining to the object.

LOCATION_ACCURACY [VARCHAR(25)]: The degree of conformity or closeness of the polygon's spatial location to its true value on the earth surface. (See LOCATION_ACCURACY_LIST table)

GEOMETRY_UPDATE_DATETIME [DATE]: Date/time the geometry was created or last modified in the source database. The LIO Editor application will automatically populate this field with the correct value.

EFFECTIVE_DATETIME [DATE]: Date/time the record was created or last modified in the source database.

4 – Glossary

Waste Management: the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and the process is generally undertaken to reduce their effect on health, the environment or aesthetics.

Spatial Multi-Non-Tessellating-Polygon (SPMNTPOLY): An object is represented by ONE or MORE polygons. Polygons may NOT overlap. HOLES within and GAPS between polygons ARE allowed. Example: the St. Lawrence Islands National Park, where the Park itself is made up of many islands.

Spatial Multi-Non-Tessellating-Unconstrained Region (SPMNTUREGION): An object is represented by ONE or MORE polygons. Polygons MAY overlap WITHOUT any restrictions. HOLES within and GAPS between polygons ARE allowed. Example: Forest "Insect Damage Area". Mapped "Spruce Budworm" defoliated areas may overlap "Forest Tent Caterpillar" damaged areas. Likewise, mapped "Gypsy Moth" tree mortality areas may overlap mapped other "Gypsy Moth" defoliated areas from current and previous years.