

# Land Information Ontario Data Description

## OHN – Hydrographic Line

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# LIO Class Catalogue

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## OHN - Hydrographic Line

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**Class Short Name:** OHNHLIN

**Version Number:** 1

**Class Description:**

The natural and constructed features which occur on waterbodies and/or watercourses and may pose hazards or impediments to water flow and/or navigation.

**Abstract Class Name:** SPSLINE

**Abstract Class**

**Description:**

Spatial Single-Line: An object is represented by ONE and ONLY ONE line segment. Line segments MUST be continuous. Examples: geological fault lines, roads at a 1: 600,000 scale.

**Tables in LIO Class:**  
**OHN - Hydrographic Line**

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**OHN\_HYDROGRAPHIC\_LINE\_FT**

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Natural and constructed features which occur on waterbodies and/or watercourses and may pose hazards or impediments to water flow and/or navigation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
<b>OGF_ID</b>	NUMBER(13,0)	Yes	OGF ID	
A unique numeric provincial identifier assigned to each object.				
<b>HYDROGRAPHIC_LINE_TYPE</b>	VARCHAR2(20)	Yes	LINE_TYPE	Dam, Falls, Hydro Wall, Lock-Gate, Rapids, Sea Lamprey Barrier, ... (See OHN_LINE_TYPE_LIST table)
The type of constructed or natural features that occur on waterbodies or watercourses which may pose hazards or impediments to waterflow and/or navigation.				
<b>LOCATION_ACCURACY</b>	VARCHAR2(25)	Yes	ACCURACY	Not Applicable, Over 10,000 metres, Within 1 metre, Within 10 metres, Within 10,000 metres, Within 100 metres, ... (See LOCATION_ACCURACY_LIST table)
The degree of conformity or closeness of a measurement within the database to its true value in the world.				
<b>VERIFICATION_STATUS_FLG</b>	VARCHAR2(10)	No	VERISTT_FL	Verified, Unverified
An indication as to whether a qualified employee has verified the existence of the geographic unit.				
<b>VERIFICATION_STATUS_DATE</b>	DATE	No	VERISTT_DT	
Date that the geographic unit was verified/validated.				
<b>GENERAL_COMMENTS</b>	VARCHAR2(2000)	No	COMMENTS	
General comments.				
<b>GEOMETRY_UPDATE_DATETIME</b>	DATE	No	GEO_UPD_DT	
Date/time the geometry was created or last modified in the source database.				
<b>EFFECTIVE_DATETIME</b>	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				
<b>SHAPE</b>	SDO_GEOMETRY	No	SHAPE	
Geometry attribute.				

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**CLASS\_JUSTIFICATION**

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The justification for the addition of or changes to a geographic feature.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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<b>OGF_ID</b>	NUMBER (13,0)	Yes	OGF_ID
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A unique numeric provincial identifier assigned to each object.

<b>JUSTIFICATION_REASON</b>	VARCHAR2 (2000)	Yes	REASON
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Reason for justification of the existence of a geographic feature.

<b>CLASS_SHORT_NAME</b>	VARCHAR2 (8)	Yes	CLASS_NAME
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System-generated column denoting the data class which this record is part of.

<b>JUSTIFICATION_DATE</b>	DATE	Yes	JUSTIF_DT
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Date that the geographic feature was justified.

<b>EFFECTIVE_DATETIME</b>	DATE	Yes	EFF_DATE
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Date/time the record was created or last modified in the source database.

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### **CLASS\_SOURCE**

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Intersection table between the data class and Source List table.

<b>Column Name</b>	<b>Column Type</b>	<b>Mandatory</b>	<b>Short Name</b>	<b>Valid Values</b>
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<b>OGF_ID</b>	NUMBER (13,0)	Yes	OGF_ID	
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A unique numeric provincial identifier assigned to each object.

<b>SOURCE_NAME</b>	VARCHAR2 (100)	Yes	SOURCE_NAM	AFFM Provincial Administrative Maps, Aerial Photography, Aerial Survey, Book/Publication, CIR Photograpy, City of Ottawa Borehole Database, ... (See SOURCE_LIST table)
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The name of the source.

<b>SOURCE_DETAIL</b>	VARCHAR2 (254)	Yes	SOURCE_DET
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What part of the source pertains to the feature. Examples: Summary data from a data base, pages in a book or atlas, figure number and page from a publication, a section of a map, record in a database.

<b>CLASS_SHORT_NAME</b>	VARCHAR2 (8)	Yes	CLASS_NAME
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Unique abbreviation of the concrete class name (primary key)

<b>SOURCE_DESCR</b>	VARCHAR2 (2000)	No	SOURCE_DES
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Text providing details about the source.

<b>METHOD_DESCR</b>	VARCHAR2 (2000)	No	METHOD
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The type of method, tools, and techniques used in observing/collecting/recording the Source. It may also include a URL where users could get further information on the method used.

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**SOURCE\_APPLICABILITY** VARCHAR2 No APPLICABIL  
(20)

How the source contributes to the feature's definition.

**EFFECTIVE\_DATETIME** DATE Yes EFF\_DATE

Date/time the record was created or last modified in the source database.

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### LOCATION\_ACCURACY\_LIST

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List of valid LOCATION\_ACCURACYs.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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<b>LOCATION_ACCURACY</b>	VARCHAR2 (25)	Yes	ACCURACY	
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The accuracy of the location of the feature at an OBM scale. The degree of conformity or closeness of a measurement to the true value.

**EFFECTIVE\_DATETIME** DATE Yes EFF\_DATE

Date/time the record was created or last modified in the source database.

**EXPIRY\_DATETIME** DATE No EXP\_DATE

Date/time that the record was expired from use.

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### OHN\_LINE\_TYPE\_LIST

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List of valid OHN HYDROGRAPHIC\_LINE\_TYPES.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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<b>HYDROGRAPHIC_LINE_TYPE</b>	VARCHAR2 (20)	Yes	LINE_TYPE	
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The type of constructed or natural features that may occur on waterbodies or watercourses which may pose hazards or impediments to waterflow and/or navigation.

**DESCRIPTION** VARCHAR2 No TYPE\_DESCR  
(400)

Describes the Hydrographic Line Type.

**EFFECTIVE\_DATETIME** DATE Yes EFF\_DATE

Date/time the record was created or last modified in the source database.

**EXPIRY\_DATETIME** DATE No EXP\_DATE

Date/time that the record was expired from use.

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### SOURCE\_LIST

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A description of the source information that is the basis for creating or changing information about a geographic feature. It may be an observation, possibly resulting from a field survey or an adhoc report or a reference to a published or unpublished document.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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<b>SOURCE_NAME</b>	VARCHAR2 (100)	Yes	NAME	
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The name of the source.

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<b>SOURCE_DATE</b>	VARCHAR2 (50)	No	SRC_DATE
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The date of the source.

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<b>SOURCE_ORIGINATOR</b>	VARCHAR2 (75)	No	ORIGINATOR
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The originator or author of the source. Includes the author(s) of a book; the originator(s) of a survey or project, etc. Examples: Smith, J. Smith, J. and Jones, K. Smith, J., Jones, K. and White, T. Anon. (where no author identified) OMNR (where authorship is corporate) Northwest District (lead and delivered the data collection project)

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<b>SOURCE_SCALE</b>	VARCHAR2 (15)	No	SCALE
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The scale of the vector base or aerial photography, the cell resolution of a grid, or the pixel resolution of an image used to record the location of the feature. Examples: For a vector source or aerial photography: 1:10,000 1:20,000 1:250,000. For a grid or imagery source: 1 km, 10 m, 15 seconds.

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<b>HORIZONTAL_DATUM</b>	VARCHAR2 (10)	No	H_DATUM
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Identifies the reference system used for defining the coordinates of points. There are three common horizontal datum systems used in Ontario: NAD83, NAD27, NAD27 with 1974 adjustment. The datum models the shape of the earth.

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<b>VERTICAL_DATUM</b>	VARCHAR2 (30)	No	V_DATUM
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The zero surface to which elevations or heights are referred is called a vertical datum. Traditionally, surveyors and mapmakers have tried to simplify the task by using the average (or mean) sea level as the definition of zero elevation, because the sea surface is available worldwide. MSL is a close approximation to another surface, defined by gravity, called the geoid, which is the true zero surface for measuring elevations. Example: WGS-84 EGM96 Geoid.

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<b>SOURCE_PROJECTION</b>	VARCHAR2 (40)	No	PROJECTION
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The name of a systematic representation of all or part of the surface of the Earth on a plane or developable surface.

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<b>EFFECTIVE_DATETIME</b>	DATE	Yes	EFF_DATE
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Date/time the record was created or last modified in the source database.

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<b>EXPIRY_DATETIME</b>	DATE	No	EXP_DATE
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Date/time that the record was expired from use.

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**LIO Lookup Table Values:**  
**LOCATION\_ACCURACY\_LIST**

<b>LOCATION ACCURACY</b>	<b>EXPIRY DATETIME</b>
Not Applicable	
Over 10,000 metres	
Within 1 metre	
Within 10 metres	
Within 10,000 metres	
Within 100 metres	
Within 1000 metres	
Within 2 metres	
Within 20 metres	
Within 200 metres	
Within 2000 metres	
Within 5 metres	
Within 50 metres	
Within 500 metres	
Within 5000 metres	
AC Accurate (to 10m)	2007-01-12
AP Approximate (to 500m)	2007-01-12
GE General (to 10,000m)	2007-01-12
MO Moderate (to 1000m)	2007-01-12
RE Reliable (to 100m)	2007-01-12
VA Very Accurate (to 2m)	2007-01-12
VG Vague (to 100,000m)	2007-01-12
^ Data Load	2007-01-12

LIO Lookup Table Values:

**OHN\_LINE\_TYPE\_LIST**

<b>HYDROGRAPHIC LINE TYPE</b>	<b>DESCRIPTION</b>	<b>EXPIRY DATETIME</b>
Dam	A feature representing an obstacle that disturbs or impedes the flow of surface water, excluding beaver dams, water-crossings and culverts.	
Falls	A perpendicular or steep drop in a body of water over which water flows.	
Hydro Wall	A constructed structure built in a waterbody and possibly extending onshore, or built along a waterbody forming the shoreline, that does not allow water to pass under it, but allows water to pass around it. Hydro walls may extend along and/or may be contained within a waterbody, and may include wharfs, docks, piers, jetties, headwalls, groynes, locks, berms or embankments.	
Lock-Gate	A gate on a navigable canal used to raise or lower the water level so that boats may pass from one level to another.	
Rapids	A fast-flowing, often turbulent, section of a body of water, generally containing exposed rocks or boulders.	
Sea Lamprey Barrier	A feature on a watercourse or waterbody that forms a barrier (either electrical or physical) to the migration of Sea Lamprey.	
Wreck	The remains of a grounded ship that is partially above the water surface.	



LIO Lookup Table Values:

**SOURCE\_LIST**

SOURCE NAME	SOURCE DATE	SOURCE ORIGINATOR	SOURCE SCALE	HORIZONTAL DATUM	VERTICAL DATUM	SOURCE PROJECTION	EXPIRY DATETIME
AFFM Provincial Administrative Maps		Ministry of Natural Resources	600000				
Aerial Photography		Ministry of Natural Resources	15840				
Aerial Survey							
Book/Publication							
CIR Photograpy		Ministry of Natural Resources					
City of Ottawa Borehole Database	1883 - 2006	City of Ottawa	Varies		Mean Average Sea Level	Geodetic and UTM	
Digital File							
Digital Map							
Field Survey\Site Visit							
File System/Filing Cabinet Information							
Forest Resources Inventory		Ministry of Natural Resources		NAD27		UTM	
GPS Data Collection							
Hard Copy/Paper Map							
IKONOS Multispectral		Ministry of Natural Resources					
IKONOS Panchromatic		Ministry of Natural Resources					
IRS Multispectral		Ministry of Natural Resources					
IRS Panchromatic		Ministry of Natural Resources					
IRS Pansharpened		Ministry of Natural Resources					

Landsat-1,2,3 MSS		Ministry of Natural Resources					
Landsat-4,5 MSS		Ministry of Natural Resources					
Landsat-7 ETM		Ministry of Natural Resources					
Local Borehole Drilling Program Results	2006	Ministry of Northern Development and Mines			Mean Average Sea Level		
Local Knowledge							
MNDM Assesment File							
MNDM Client/Company Information							
MNR Based Observation							
MTO Engineering Reports	Varies	Ministry of Transportation	Varies		Mean Average Sea Level		
NRCan - CanVec	2008	Natural Resources Canada	50000	NAD83			
NRCan - National Hydro Network	2008	Natural Resources Canada	50000	NAD83			
NTS Map 1:250000	1970 to 2003	Department of Natural Reosurces	250000	NAD27			
NTS Map 1:50000	1970 to 2003	Department of Natural Resources	50000	NAD27			
Ontario Base Map 1:10000	1978 to 1995	Ministry of Natural Resources	10000	NAD27		UTM	
Ontario Base Map 1:20000	1978 to 1995	Ministry of Natural Resources	20000	NAD27		UTM	
Ontario Geological Survey Fieldwork Mapping	Varies to 2004	Ontario Geological Survey	1:50,000	NAD83	Mean Average Sea Level	Universal Transvers Mercator	
Ontario Parcel				NAD83			
OrthoImagery		Ministry of Natural Resources					
Public Observation							

Quaternary Geology Study	Varies	Ministry of Northern Development and Mines			Mean Average Sea Level		
Unknown	11-12-02						
Urban Geology Automated Information System (UGAIS)	1956-1972	Geological Survey of Canada	Varies	NAD27	Mean Average Sea Level	Universal Transverse Mercator	
Water Well Data Improvement Project	2006	Ministry of Natural Resources, Water Resources Information Program	Varies	NAD83	Mean Average Sea Level	Geodetic	
Water Well Information System (WWIS)	1899 - 2003	Ministry of the Environment, Environmental Monitoring and Reporting Branch	Varies	NAD27	Mean Average Sea Level	Universal Transverse Mercator	
Waterloo Area Geology Automated Information System (WAGAIS)	1900 - 1977	Geological Survey of Canada	Varies	NAD27	Mean Average Sea Level	Universal Traverse Mercator	
External Source from NRVIS 2							2007-01-12
Internal Source from NRVIS 2							2007-01-12
Material Source from NRVIS 2							2007-01-12
Ontario Base Map	1978 to 1995	Ministry of Natural Resources		NAD27		UTM	2007-01-12
Source Observation from NRVIS 2							2007-01-12
Unknown Imagery							2007-01-12