

Land Information Ontario Data Description

Fish Culture Operation, MNR

Disclaimer

This technical documentation has been prepared by the Ministry of Natural Resources (the “Ministry”), representing Her Majesty the Queen in right of Ontario. Although every effort has been made to verify the information, this document is presented as is, and the Ministry makes no guarantees, representations or warranties with respect to the information contained within this document, either express or implied, arising by law or otherwise, including but not limited to, effectiveness, completeness, accuracy, or fitness for purpose. The Ministry is not liable or responsible for any loss or harm of any kind arising from use of this information.

For an accessible version of this document, please contact Land Information Ontario at (705) 755 1878 or ljo@ontario.ca

LIO Class Catalogue

Fish Culture Operation, MNR

Class Short Name: FISHCULT

Version Number: 3

Class Description:

A location where fish are cultured through breeding and husbandry for various purposes such as fish stocking etc. The aquaculture operations are run by the Ontario Ministry of Natural Resources.

Abstract Class Name: SPMNTPOLY

Abstract Class

Description:

Spatial Multi-Non-Tessellating-Polygon: 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.

Tables in LIO Class:

Fish Culture Operation, MNR

AQUA_OP_MNR_FISH_CULTURE_FT

A location where fish are cultured for breeding, husbandry and/or stocking and may be sold for purposes such as human consumption, stocking, use as bait and fee-for-fishing operations. The operation, other than a MNR Fish Culture station, is regulated and licenced by the Ministry of Natural Resources under the Fish and Wildlife Conservation Act.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
A unique numeric provincial identifier assigned to each object.				
AQUACULTURE_LICENCE_NUMBER	VARCHAR2 (7)	No	LIC_NUM	
Identifier given to an aquaculture licence that controls the operation of the aquaculture facilities listed on the licence.				
OPERATION_NAME	VARCHAR2 (50)	No	NAME	
The name of the operation.				
OPERATING_STATUS	VARCHAR2 (3)	Yes	OP_STATUS	Yes,No,N/A
An indication of the operating status of the geographic unit.				
FIRST_YEAR_OF_OPERATION	NUMBER (4,0)	No	FRST_YR_OP	
The year that the aquaculture operation opened.				
SECURITY_PLAN_IND	VARCHAR2 (3)	Yes	SECUR_PLAN	Yes,No
Indicates if an action plan is in place to monitor and prevent the species being cultured from escaping to the receiving ecosystem.				
CAGE_OPERATION_IND	VARCHAR2 (3)	Yes	CAGE_OP	Yes,No
Indicates the aquaculture operation has cages.				
FLOW_THROUGH_IND	VARCHAR2 (3)	No	FLOW_THRU	Yes,No
Indicates the aquaculture operation has flow-through ponds.				
POND_OPERATION_IND	VARCHAR2 (3)	No	POND_OP	Yes,No
Indicates the aquaculture operation has ponds.				
RECIRCULATION_OPERATION_IND	VARCHAR2 (3)	No	RECIRC_OP	Yes,No
Indicates the aquaculture operation has recirculation tanks.				

OPERATION_WATER_SOURCE	VARCHAR2 (250)	No	WATER_SRC
-------------------------------	-------------------	----	-----------

Describes in general terms where the water is coming from to operate the aquaculture operation. An aquaculture operation may use different sources of water for an operation. For example White Lake uses both the lake and a spring for their water source.

POINT_SOURCE_DISCHARGE	VARCHAR2 (100)	No	PT_SRC_DIS
-------------------------------	-------------------	----	------------

Identifies where the outflow from the aquaculture operation is going. For example: it could go into a stream, pond, river etc.

NUMBER_OF_CAGES	NUMBER (2,0)	No	CAGES
------------------------	-----------------	----	-------

The number of aquaculture cages being used for fish cultivation.

NUMBER_OF_CONTAINERS	NUMBER (2,0)	No	CONTAINERS
-----------------------------	-----------------	----	------------

The number of aquaculture containers being used for fish cultivation.

NUMBER_OF_PONDS	NUMBER (2,0)	No	PONDS
------------------------	-----------------	----	-------

The number of aquaculture ponds being used for fish cultivation.

NUMBER_OF_RACEWAYS	NUMBER (3,0)	No	RACEWAYS
---------------------------	-----------------	----	----------

The number of aquaculture raceways being used for fish cultivation.

OPERATION_COMMENT	VARCHAR2 (2000)	No	OP_COMM
--------------------------	--------------------	----	---------

Comments regarding the operation of a facility (such as an aquaculture or fish culture operation).

SYSTEM_CALCULATED_AREA	NUMBER (16,3)	No	SYS_AREA
-------------------------------	------------------	----	----------

The area of a polygon measured in square metres by the system.

SYSTEM_CALCULATED_LENGTH	NUMBER (16,3)	No	SYS_LENGTH
---------------------------------	------------------	----	------------

The perimeter of a polygon or length of a line measured in metres.

USER_CALCULATED_METRIC	NUMBER (16,3)	No	USER_CALC
-------------------------------	------------------	----	-----------

The length, perimeter or area of an object in metres or square metres as measured or provided by the user.

GEOMETRY_UPDATE_DATETIME	DATE	No	GEO_UPD_DT
---------------------------------	------	----	------------

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

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

AQUACULTURE_LICENCE

Legal agreement, possibly with conditions of operation, for the operation of one or more aquaculture facilities used to raise fish for commercial purposes. It is issued under the authority of the Fish and Wildlife Conservation Act and is required to culture fish in Ontario. The licence is used

to mitigate potential environmental impacts and provides for the culture and sale of eligible fish species. Under the authority of this licence, fish are cultured for breeding or husbandry and sold for purposes such as human consumption, stocking, use as bait and fee-for-fishing operations. The licence is only valid for the location(s) and species named.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
A unique numeric provincial identifier assigned to each object.				
AQUACULTURE_LICENCE_NUMBER	VARCHAR2 (7)	Yes	LIC_NUM	
Identifier given to an aquaculture licence that controls the operation of the aquaculture facilities listed on the licence.				
LICENCE_EXPIRY_DATE	DATE	Yes	LIC_EXP_DT	
The date on which the aquaculture licence expires.				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

AQUACULTURE_SPECIES_LIST

A list of species that are raised at the aquaculture operations.

Column Name	Column Type	Mandatory	Short Name	Valid Values
SPECIES_NAME	VARCHAR2 (100)	Yes	SPECIES_NA	
Common name of the species cultured.				
SCIENTIFIC_NAME	VARCHAR2 (100)	Yes	SCIENTIFIC	
Scientific (taxonomic) name.				
WILD_LIFE_ID	NUMBER (13,0)	No	WILDLIFEID	
An ID pointing to a corporate list of taxa.				
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.				

AQUA_LICENCE_CONDITION

Stipulations listed on the legal agreement granting the right to operate aquaculture facilities under an aquaculture licence.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER	Yes	OGF_ID	

(13,0)

A unique numeric provincial identifier assigned to each object.

AQUACULTURE_LICENCE_NUMBER	VARCHAR2	Yes	LIC_NUM
	(7)		

Identifier given to an aquaculture licence that controls the operation of the aquaculture facilities listed on the licence.

LICENCE_CONDITION_TYPE	VARCHAR2	Yes	LIC_COND_T
	(50)		

Conditions that may be attached to the aquaculture licence for one or more facilities for fish escaping, security of the facility, water quality, type of allowable food etc.

LICENCE_CONDITION	VARCHAR2	No	LIC_COND
	(4000)		

Describes any condition listed on the aquaculture licence.

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

AQUA_OP_AND_SPECIES

The species of fish that are being raised at the aquaculture operation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

AQUACULTURE_OPERATION_ID	NUMBER	Yes	AQUA_OP_ID
	(13,0)		

Foreign key to AQUACULTURE_OPERATION.

CLASS_SHORT_NAME	VARCHAR2	Yes	CLASS_NAME
	(8)		

SPECIES_NAME	VARCHAR2	Yes	SPC_NAME	American eel, Arctic char, Atlantic salmon, Aurora trout, Black crappie, Bluegill, ... (See AQUACULTURE_SPECIES_LIST table)
	(100)			

Common name of the species cultured

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

AQUA_OP_CONDITION

Stipulations placed upon an aquaculture operation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

OGF_ID	NUMBER	Yes	OGF_ID
	(13,0)		

A unique numeric provincial identifier assigned to each object.

AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID
---------------------------------	------------------	-----	------------

Foreign key to AQUACULTURE_OPERATION.

OPERATION_CONDITION_TYPE	VARCHAR2 (50)	Yes	OP_COND_T
---------------------------------	------------------	-----	-----------

Conditions that may be attached to one or more facilities for fish escaping, security of the facility, water quality, type of allowable food etc.

OPERATION_CONDITION	VARCHAR2 (4000)	No	OP_COND
----------------------------	--------------------	----	---------

Describes any conditions that have been placed on the aquaculture operation.

CONDITION_YEAR	NUMBER (4,0)	No	COND_YEAR
-----------------------	-----------------	----	-----------

The year that the condition applies.

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

AQUA_OP_CONTAINER

There are four types of containers or mechanisms used to contain the fish. (1) "Flow-Through" which describes culture operations where there is a regular flow of fresh (i.e. not recirculated) water through the rearing unit. Flow through operations are typically raceways but can also be circular tanks and in-line ponds. (2) "Recirculation System" or "Recycling System" is typically used to describe a type of culture unit in which the outflow of the rearing tanks or raceways is partially or completely recirculated to them, often in high control enclosed systems. Some other terms like "reconditioning system" and "reuse system" are also used to describe the same system. (3) "Cage" which are floating open mesh containment areas for rearing fish. These structures can be flexible to rigid. The cages allow for ambient water to freely move into and out of the rearing area. The shape can be square, rectangular, circular, octagonal or hexagonal. Cages vary in size, but typically cover 10-15 square meters and 10-35 meters in depth. The cages can be moored independently or in an array. (4) "Pond" which are small natural or artificial bodies of water used for rearing fish. Artificial ponds range from earthen to artificial substrates such as concrete or vinyl liners.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

OGF_ID	NUMBER (13,0)	Yes	OGF_ID
---------------	------------------	-----	--------

A unique numeric provincial identifier assigned to each object.

AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID
---------------------------------	------------------	-----	------------

Foreign key to AQUACULTURE_OPERATION.

CONTAINER_IDENT	VARCHAR2 (20)	Yes	CONT_IDENT
------------------------	------------------	-----	------------

The identifier of the container in a aquaculture operation.

CONTAINER_TYPE	VARCHAR2 (25)	Yes	CONT_TYPE	Flow-Through, Recirculation System, Cage, Pond
-----------------------	------------------	-----	-----------	--

There are four types of containers or mechanisms used to contain the fish. They are: Flow-Through, Recirculation System, Cage, Pond

LOCATION_DESCR	VARCHAR2 (2000)	Yes	LOCATION_D
Description of the container location.			
CONTAINER_DATE	DATE	No	CONT_DATE
Date			
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
Date/time the record was created or last modified in the source database.			

AQUA_OP_CONTAINER_AND_SPECIES

Species in each container.

Column Name	Column Type	Mandatory	Short Name	Valid Values
AQUA_OP_CONTAINER_ID	NUMBER (13,0)	Yes	CONT_OBJID	
Foreign key to AQUA_OP_CONTAINER				
SPECIES_NAME	VARCHAR2 (100)	Yes	SPC_NAME	American eel, Arctic char, Atlantic salmon, Aurora trout, Black crappie, Bluegill, ... (See AQUACULTURE_SPECIES_LIST table)
Common name of the species cultured				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

AQUA_OP_ESCAPE_OR_MORTALITY

Describes the escape or fish deaths from an aquaculture operation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID	
Foreign key to AQUACULTURE_OPERATION.				
ESCAPE_OR_MORTALITY_FLG	VARCHAR2 (10)	Yes	ESC_MT_FLG	Escape, Mortality
Indicates if the occurrence being reported is an escape or mortality.				
ESCAPE_OR_MORTALITY_DATE	DATE	Yes	ESC_MT_DT	
The date of the occurrence.				
SPECIES_NAME	VARCHAR2 (100)	Yes	SPC_NAME	American eel, Arctic char, Atlantic salmon, Aurora trout, Black crappie, Bluegill, ... (See

Common name of the species cultured

NUMBER_OF_FISH	NUMBER (6,0)	Yes	NUM_FISH
-----------------------	-----------------	-----	----------

Number of fish that escaped or died at the aquaculture operation.

OCCURRENCE_DESCR	VARCHAR2 (2000)	No	OCC_DESCR
-------------------------	--------------------	----	-----------

Provides details of the fish escape or mortality in the aquaculture operation.

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

AQUA_OP_FEED

Describes the type and amount of feed used in an aquaculture operation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
---------------	------------------	-----	--------	--

A unique numeric provincial identifier assigned to each object.

AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID	
---------------------------------	------------------	-----	------------	--

Foreign key to AQUACULTURE_OPERATION.

FEED_TYPE_DESCR	VARCHAR2 (2000)	Yes	FEED_TYPE	
------------------------	--------------------	-----	-----------	--

Describes the type of feed mixture used at the aquaculture operation for the raising of fish for commercial purposes.

FEED_AMOUNT_REPORTED	NUMBER (10,0)	Yes	AMOUNT_RPT	
-----------------------------	------------------	-----	------------	--

The amount of feed reported used at the aquaculture operation. It is recorded in kilograms.

FEED_YEAR	NUMBER (4,0)	No	FEED_YEAR	
------------------	-----------------	----	-----------	--

The year of reporting

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
---------------------------	------	-----	----------	--

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

AQUA_OP_INSPECTION

An inspection carried out on an aquaculture facility to ensure compliance with legislation such as the Fish and Wildlife Conservation Act.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID	
---------------------------------	------------------	-----	------------	--

Foreign key to AQUACULTURE_OPERATION.

INSPECTION_DATE	DATE	Yes	INSP_DT
The date of the inspection.			
INSPECTION_RESULTS	VARCHAR2 (2000)	Yes	INSP_RES
Details regarding the inspection.			
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
Date/time the record was created or last modified in the source database.			

AQUA_OP_PURPOSE

The reason for fish production at the aquaculture operation.

Column Name	Column Type	Mandatory	Short Name	Valid Values
AQUACULTURE_OPERATION_ID	NUMBER (13,0)	Yes	AQUA_OP_ID	
Foreign key to AQUACULTURE_OPERATION.				
OPERATION_PURPOSE	VARCHAR2 (50)	Yes	PURPOSE	Fish Production, Stocking, Fee For Fishing
The purpose of the aquaculture operation (Fish Production, Stocking, Fee For Fishing).				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

CLASS_DATABASE_REFERENCE

A link to an external database or an internal object in the same database.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
A unique numeric provincial identifier assigned to each object.				
INTERNAL_EXTERNAL_FLG	VARCHAR2 (10)	Yes	INT_EXT	Internal, External
A flag indicating if the database being referenced is internal (NRVIS/LIO) or external.				
DATABASE_REFERENCE_IDENT	VARCHAR2 (50)	Yes	IDENT	
Identifier of a reference that is linked e.g. Land Use Permit Number, LIS Number, the FMF Object ID of a Concrete Class.				
CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME	
Static short name that will be used by for the concrete class.				
DATABASE_REFERENCE_DETAIL	VARCHAR2 (2000)	No	DETAIL	

Details on the rationale, use, dependency, or comments on the database reference. If a dependence on other data class geometry exists, this can be identified in this field.

RELATED_CLASS_SHORT_NAME	VARCHAR2 (8)	No	CLASS_NAME
The static short name that is used by the related concrete class.			
EXT_REF_TYPE_CODE	VARCHAR2 (8)	No	EXT_TYPE
The type of external database that the identifier pertains to e.g. LUPS, LIS, etc.			
TYPE_OTHER_DESCR	VARCHAR2 (60)	No	OTH_DESCR
A full description of the type when set to "other".			
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
Date/time the record was created or last modified in the source database.			

CLASS_JUSTIFICATION

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

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
A unique numeric provincial identifier assigned to each object.				
JUSTIFICATION_REASON	VARCHAR2 (2000)	Yes	REASON	
Reason for justification of the existence of a geographic feature.				
CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME	
System-generated column denoting the data class which this record is part of.				
JUSTIFICATION_DATE	DATE	Yes	JUSTIF_DT	
Date that the geographic feature was justified.				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

CLASS_OTHER_INFORMATION

This table allows the NRVIS/LIO users to enter local-needs type of information, currently not captured in the NRVIS or LIO database. The table content will be analysed periodically to determine if the field(s) should be incorporated into the regular data class structure.

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

FIELD_NAME	VARCHAR2 (30)	Yes	FIELD_NAME	
The attribute name for the information.				
CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME	
System-generated column denoting the concrete class which this record is part of.				
FIELD_TYPE	VARCHAR2 (8)	Yes	FIELD_TYPE	String, Integer, Double
The type of field.				
FIELD_VALUE_STRING	VARCHAR2 (50)	No	VALUE_S	
A field used to store character strings.				
FIELD_VALUE_INTEGER	NUMBER (5,0)	No	VALUE_I	
A field used to store integer values (small numbers).				
FIELD_VALUE_DOUBLE	NUMBER (10,3)	No	VALUE_D	
A field used to store decimal data with up to two decimals.				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

CLASS_PARTY_ROLE

A link to an external contact database.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
A unique numeric provincial identifier assigned to each object.				
PARTY_IDENT	VARCHAR2 (25)	Yes	PARTY_ID	
An identifier for a party (group or individual). It should reference an identifier in an external database which would contain further information. The identifier should not contain personal information (i.e. Social Insurance Number, Outdoors Card Number, phone number, name etc.).				
PARTY_DATABASE	VARCHAR2 (100)	Yes	PARTY_DB	
The database that contains the party information.				
ROLE_TYPE	VARCHAR2 (50)	Yes	ROLE_TYPE	Affiliated With, Approver, Authority Holder, Claim Holder, Contact, Contractor, ... (See ROLE_TYPE_LIST table)
The role that an organization or an individual plays.				

CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME
-------------------------	-----------------	-----	------------

System-generated column denoting the concrete class which this record is part of.

ROLE_DETAIL	VARCHAR2 (200)	No	DETAIL
--------------------	-------------------	----	--------

Additional details about the role.

START_DATE	DATE	No	START_DATE
-------------------	------	----	------------

The date when a Party starts to play a Role.

END_DATE	DATE	No	END_DATE
-----------------	------	----	----------

The date when a Party ceases to play a Role.

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
---------------------------	------	-----	----------

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

CLASS_SOURCE

Intersection table between the data class and Source List table.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
---------------	------------------	-----	--------	--

A unique numeric provincial identifier assigned to each object.

SOURCE_NAME	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)
--------------------	-------------------	-----	------------	--

The name of the source.

SOURCE_DETAIL	VARCHAR2 (254)	Yes	SOURCE_DET
----------------------	-------------------	-----	------------

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.

CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME
-------------------------	-----------------	-----	------------

Unique abbreviation of the concrete class name (primary key)

SOURCE_DESCR	VARCHAR2 (2000)	No	SOURCE_DES
---------------------	--------------------	----	------------

Text providing details about the source.

METHOD_DESCR	VARCHAR2 (2000)	No	METHOD
---------------------	--------------------	----	--------

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.

SOURCE_APPLICABILITY	VARCHAR2 (20)	No	APPLICABIL
-----------------------------	------------------	----	------------

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.

CLASS_SUPPORTING_MATERIAL

Material (document/file/picture) that provides more information on a geographic feature.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
---------------	------------------	-----	--------	--

A unique numeric provincial identifier assigned to each object.

MATERIAL_NAME	VARCHAR2 (200)	Yes	NAME	
----------------------	-------------------	-----	------	--

A name or brief description of the material.

MATERIAL_LOCATION	VARCHAR2 (200)	Yes	LOCATION	
--------------------------	-------------------	-----	----------	--

The location where the supporting material is stored. This may be a physical location or a link to a storage location.

CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME	
-------------------------	-----------------	-----	------------	--

System-generated column denoting the concrete class which this record is part of.

URL_ENG	VARCHAR2 (500)	No	URL_ENG	
----------------	-------------------	----	---------	--

The address of a computer or a document in English on the Internet that consists of a communications protocol followed by a colon and two slashes (as http://), the identifier of a computer (as www.m-w.com) and usually a path through a directory to a file -- called also universal resource locator.

URL_FRE	VARCHAR2 (500)	No	URL_FRE	
----------------	-------------------	----	---------	--

The address of a computer or a document in French on the Internet that consists of a communications protocol followed by a colon and two slashes (as http://), the identifier of a computer (as www.m-w.com) and usually a path through a directory to a file -- called also universal resource locator.

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
---------------------------	------	-----	----------	--

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

EXTERNAL_REF_TYPE_LIST

List of valid EXTERNAL_REFERENCE_TYPE codes.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

EXT_REF_TYPE_CODE	VARCHAR2 (8)	Yes	EXT_REF_TY
--------------------------	-----------------	-----	------------

The type of external database that the identifier pertains to e.g. LUPS, LIS, Other.

EXT_REF_TYPE_DESCR	VARCHAR2 (60)	Yes	EXT_REF_TY
---------------------------	------------------	-----	------------

Description of the type of external reference.

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.

ROLE_TYPE_LIST

List of valid party role types.

Column Name	Column Type	Mandatory	Short Name	Valid Values
-------------	-------------	-----------	------------	--------------

ROLE_TYPE	VARCHAR2 (50)	Yes	ROLE_TYPE	
------------------	------------------	-----	-----------	--

The role that an organization or an individual plays.

ROLE_TYPE_DESCR	VARCHAR2 (2000)	Yes	DESCR
------------------------	--------------------	-----	-------

Description of Role 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.

SOURCE_LIST

A description of the source information that is the basis for creating or changing information about a geographic feature. In 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
-------------	-------------	-----------	------------	--------------

SOURCE_NAME	VARCHAR2 (100)	Yes	NAME
--------------------	-------------------	-----	------

The name of the source.

SOURCE_DATE	VARCHAR2 (50)	No	SRC_DATE
--------------------	------------------	----	----------

The date of the source.

SOURCE_ORIGINATOR	VARCHAR2 (75)	No	ORIGINATOR
--------------------------	------------------	----	------------

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)

SOURCE_SCALE	VARCHAR2 (15)	No	SCALE
---------------------	------------------	----	-------

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.

HORIZONTAL_DATUM	VARCHAR2 (10)	No	H_DATUM
-------------------------	------------------	----	---------

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.

VERTICAL_DATUM	VARCHAR2 (30)	No	V_DATUM
-----------------------	------------------	----	---------

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.

SOURCE_PROJECTION	VARCHAR2 (40)	No	PROJECTION
--------------------------	------------------	----	------------

The name of a systematic representation of all or part of the surface of the Earth on a plane or developable surface.

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.

LIO Lookup Table Values:

AQUACULTURE_SPECIES_LIST

SPECIES NAME	SCIENTIFIC NAME	WILD LIFE ID	EXPIRY DATETIME
American eel	Anguilla rostrata		
Arctic char	Salvelinus alpinus		
Atlantic salmon	Salmo salar		
Aurora trout	Salvelinus fontinalis timagamiensis		
Black crappie	Pomoxis nigromaculatus		
Bluegill	Lepomis macrochirus		
Bluntnose minnow	Pimephales notatus		
Brook trout	Salvelinus fontinalis		
Brown bullhead	Ameiurus nebulosus		
Brown trout	Salmo trutta		
Channel catfish	Ictalurus punctatus		
Chinook salmon	Oncorhynchus tshawytscha		
Cisco (lake herring)	Coregonus artedii		
Coho salmon	Oncorhynchus kisutch		
Common carp (includes koi)	Cyprinus carpio		
Common shiner	Luxilus cornutus		
Crayfish, A	Cambarus robustus		
Crayfish, Appalachian brook	Cambarus bartonii		
Crayfish, calico	Orconectes immunis		
Crayfish, northern clearwater	Orconectes propinquus		
Crayfish, virile	Orconectes virilis		
Creek chub	Semotilus atromaculatus		
Emerald shiner	Notropis atherinoides		
Fathead minnow	Pimephales promelas		
Finescale dace	Phoxinus neogaeus		
Golden shiner	Notemigonus crysoleucas		

Goldfish	Carassius auratus		
Lake sturgeon	Acipenser fulvescens		
Lake trout	Salvelinus namaycush		
Lake whitefish	Coregonus clupeaformis		
Largemouth bass	Micropterus salmoides		
Muskellunge	Esox masquinongy		
Northern pike	Esox lucius		
Northern redbelly dace	Phoxinus eos		
Pink salmon	Oncorhynchus gorbuscha		
Pumpkinseed	Lepomis gibbosus		
Rainbow trout	Oncorhynchus mykiss		
Sauger	Sander canadensis		
Smallmouth bass	Micropterus dolomieu		
Splake	Salvelinus fontinalis x S. namaycush		
Tilapia	Oreochromis sp., Sarotheradon sp., Tilapia sp.		
Walleye	Sander vitreus		
White sucker	Catostomus commersoni		
Yellow perch	Perca flavescens		

LIO Lookup Table Values:
EXTERNAL_REF_TYPE_LIST

EXT REF TYPE CODE	EXT REF TYPE DESCR	EXPIRY DATETIME
ALPS	Aggregate Licence Permit Database	
AMIS	Abandoned Mines Database	
ARFIS	Algonquin Region Forest Database	
BCD	Biological and Conservation Database	
DTDB	Digital Topographic Database	
FISHARC	Fisheries Data Archive	
FISHLIB	Fisheries Information Library	
FRI	Forest Resources Inventory Database	
IF	Internal Filing	
LIS	Land Index System	
LUP	Land Use Permit	
NADB	Natural Areas Database	
NTDB	National Topographic Database	
NWEIMS	Wetland Evaluation Information Management Database (North)	
OBM	Ontario Base Map Database	
OFIS	Ontario Fisheries Information Database	
OLI	Ontario Land Inventory	
OPDS	Ontario Petroleum Database	
OTHER	Other External Reference	
PER	Permit	
RBT	Resource Based Tourism Licence	
SFMM	Sustainable Forest Management Model	
WEIMS	Wetland Evaluation Information Management Database (South)	
^	NRVIS 2.0 Data Conversion	1999-11-05

LIO Lookup Table Values:

ROLE_TYPE_LIST

ROLE TYPE	ROLE TYPE DESCR	EXPIRY DATETIME
Affiliated With	This role type indicates that the related "from" Party (Individual or Group) has a relationship with the related "to" Party that is not more explicitly covered by another role type.	
Approver	This role type indicates that the related Party (Individual or Group) is one that has approved action associated with the related item. For example, if the related item is an Authority (License, permit, etc.) this would indicate the Party that approved the issuance of the Authority; if the related item is a Recommended Action this would indicate the Party that approved the initiation of the action; etc.	
Authority Holder	This role type indicates that the related Party (Individual or Group) is the one to which the Ministry has issued the related Authority (license, permit, etc.).	
Claim Holder	This role type indicates that the related Party (Individual or Group) is the one that is the registered owner of the related Mining Claim (area).	
Contact	This role type indicates that the related "from" Party (Individual or Group) is the designated point of contact for communication with the related "to" Party.	
Contractor	N/A	
Custodian	This role type indicates that the related Party (Individual or Group) is responsible for the care of the related Geographic Unit.	
Data Provider	This role type indicates that the related Party (Individual or Group) is the provider of a data source about the related Geographic Unit.	
Employee	This role type indicates that the related "from" Party (an Individual) is employed by the related "to" Party (a Group).	
Evaluator	This role type indicates that the related Party (Individual or Group) is the one who has evaluated the related Geographic Unit.	
Group Member	This role type indicates that the related "from" Party (Individual or Group) is a member of the related "to" Party (a Group). This could include membership in a Local Citizens Committee or a designated interest group.	
Information Holding Custodian	This role type indicates that the related Party (Individual or Group) is responsible for the storage and protection of the related Information Holding.	
Interested Party	This role type indicates that the related Party (Individual or Group) has a stated interest in a related Issue; or has a stated interest in plans and activities involving the related Geographic Unit.	
Issuer	This role type indicates that the related Party (Individual or Group)	

	is one that has issued the related Authority (license, permit, etc.).	
Lease Holder	This role type indicates that the related Party (Individual or Group) has occupancy rights to the related Geographic Unit for the period and according to the terms of a lease agreement.	
Manager	This role type indicates that the related "from" Party (Individual or Group) manages or directs the activities of the related "to" Party (the "to" Party reports to or is accountable to the "from" Party); or manages the operation of the related Geographic Unit (e.g., a Tourism Establishment).	
Metadata Custodian	This role type indicates that the related Party (Individual or Group) is responsible for the storage and protection of the information ABOUT the related Information Holding. Note: There is a separate role type for the custodian of the information holding itself.	
Observer	This role type indicates that the related Party (Individual or Group) is the one who made the observations in the related Information Source.	
Operator	This role type indicates that the related Party (Individual or Group) operates the related Geographic Unit facility (e.g., Tourism Establishment, Mill).	
Owner	This role type indicates that the related Party (Individual or Group) owns the related Geographic Unit (e.g., Tourism Establishment).	
Partner	This role type indicates that the related "from" Party (Individual or Group) has a partnership arrangement with the related "to" Party.	
Steward	This role type indicates that the related "from" Party (Individual or Group) is responsible for assisting the Ministry with respect to the management of resources within the related Geographic Unit.	
Supervisor	This role type indicates that the related "from" Party (Individual or Group) supervises the activities of the related "to" Party.	
Verifier	N/A	

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