Ontario

Unclassified

Land Information Ontario Data Description

Wetland

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 lio@ontario.ca

LIO Class Description

Wetland

Class Short Name: WETLAND

Version Number: 7

Class Description:

Wetlands are lands that are seasonally or permanently flooded by shallow water as well as lands where the water table is close to the surface. In either case, the presence of abundant water causes the formation of moist soils and favours the dominance of water tolerant plants. An individual spatial polygon represents a discrete wetland type. Values for wetland types are marsh, fen, swamp, bog, treed peatland, open water or unknown. Evaluated Wetlands are those identified and assessed using the technical criteria in the Ontario Wetland Evaluation System (OWES) manuals. An evaluation may be for either an Evaluated Wetland or an Evaluated Wetland Complex. Not all wetlands in Ontario have been evaluated. An Evaluated Wetland consists of one or more adjacent (contiguous) wetland polygons. An Evaluated Wetland Complex is a group of separated wetland polygons that have similar or complementary biological, social and/or hydrological functions, are located in close proximity, and are functionally linked (ecologically or hydrologically). An Evaluated Wetland Complex may contain adjacent wetland polygons but must comprise at least one separated wetland polygon. Wetlands that meet certain criteria through OWES are designated as Provincially Significant Wetlands (PSW).

Abstract Class Name: SPSNTPOLY

Abstract Class Description:

Abstract Spatial Single-Non-Tessellating-Polygon User Object. One and only one polygon forms a single object. Polygons may NOT overlap. However, holes, gaps and islands are allowed. Examples of this are sub classes that may fall under this class are lakes wetlands, ANSIs, etc.

Metadata URL:

Tables in LIO Class:

Wetland

WETLAND_FT

Wetlands are lands that are seasonally or permanently flooded by shallow water as well as lands where the water table is close to the surface. In either case, the presence of abundant water causes the formation of moist soils and favours the dominance of water tolerant plants. An individual spatial polygon represents a discrete wetland type. Values for wetland types are Marsh, Fen, Swamp, Bog, Open Water, Treed Peatland or Unknown.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER(13,0)	Yes	OGF_ID	
Ontario Geospatial Feature (OGF) system generated identifier, unique at the application level.				
WETLAND_TYPE	VARCHAR2(14)	Yes	WETL_TYPE	'Bog', 'Fen', 'Marsh', 'Swamp', 'Open Water', 'Unknown
Wetland types are described in section 1.1.2 of the OWES manual.				
EVALUATED_WETLAND_IND	VARCHAR2(3)	Yes	EVAL_IND	'Yes', 'No
Indicates if a wetland has been evaluated with the Ontario Wetland Evaluation System (OWES).				
EVALUATED_WETLAND_ID	NUMBER(13,0)	No	EVAL_ID	
Foreign Key (FK) OGF_ID reference to parent EVALUATED_WETLAND table record.				
COASTAL_IND	VARCHAR2(3)	Yes	COASTAL	'Yes', 'No
A Yes/No indicator for any wetland that is located on one of the Great Lakes or their connecting channels (Lake St. Clair, St. Marys, St. Clair, Detroit, Niagara and St. Lawrence Rivers); or any other wetland that is on a tributary to any of the above-specified water bodies, and lies either wholly or in part, downstream of a line located 2 kilometres upstream of the 1:100 year floodline (plus wave run-up) of the large water body to which the tributary is connected. DEFAULT = No.				
WETLAND_UNIT_NUMBER	NUMBER(3,0)	No	UNIT_NUM	
Wetland Unit number from the OWES wetland size and boundaries sheet. Many polygons may share the same Wetland Unit number.				
VEG_COMMUNITY_CODE	VARCHAR2(20)	No	VEG_COMMUN	
Vegetation Community Code. OWES manual section 1.2.2. Examples: S3, M5, B2-A, F14, W11-B.				
SITE_TYPE	VARCHAR2(12)	No	SITE_TYPE	'Isolated', 'Lacustrine1', 'Lacustrine2', 'Lacustrine3', 'Palustrine', 'Riverine1', 'Riverine2
Site type. OWES manual section 1.1.3. Character values include [1] Isolated. [2] Palustrine. [3] Riverine1 (riverine on a river). [4] Riverine2 (riverine at rivermouth). [5] Lacustrine1 (lacustrine at rivermouth). [6] Lacustrine2 (lacustrine on enclosed bay or barrier beach). [7] Lacustrine3 (lacustrine exposed to lake).				
SOIL_TYPE	VARCHAR2(11)	No	SOIL_TYPE	'clay/loam', 'fibric', 'granite', 'humic/mesic', 'limestone', 'sand', 'silt/marl
Soil type. OWES manual section 1.1.1.				
DOMINANT_VEG_FORM	VARCHAR2(2)	No	DOM_FORM	'be', 'c', 'dc', 'dh', 'ds', 'f', 'ff', 'gc', 'h', 'ls', 'm', 'ne', 're', 'su', 'ts', 'u
Dominant vegetation form abbreviation. OWES manual section 1.2.2.				

DOMINANT_VEG_SPECIES	VARCHAR2(254)	No	DOM_SP	
Scientific name of the dominant vegetation species. OWES manual section 1.2.2.				
VEG_FORM_LIST	VARCHAR2(60)	No	VEG_FORM_L	
List of vegetation form abbreviations. OWES manual section 1.2.2. Possible values include h, c, dh, dc, ts, ls, ds, gc, m, ne, be, re, ff, f, su, u.				
PERCENT_OPEN_WATER	NUMBER(3,0)	No	PCT_OPEN	
Percent of the wetland that is open water. OWES manual section 1.0.				
PLAN_PROTECTION	VARCHAR2(3)	No	PLAN_PROT	'GB', 'LS', 'NE', 'ORM
Plan area that the wetland falls within. Pick the priority plan. Current plans include Oak Ridges Moraine (ORM) plan, Green Belt (GB) plan, Niagara Escarpment (NE) plan, Lake Simcoe (LS) plan.				
IMPACT	NUMBER(1,0)	No	IMPACT	-1, 0, 1, 2, 3,
Type of impact on the wetland as a result of modification by people. Types include: -1 (Unknown), 0 (No Value), 1 (Partly Drained), 2 (Farmed), 3 (Constructed), 4 (Partly Filled).				
MAP_CODE	VARCHAR2(20)	No	MAP_CODE	
Unique identifier defined by the wetland surveyor at the time of wetland survey to relate database records with corresponding field notes. This identifier will be used to relate field maps and notes to corresponding digital wetland records.				
GENERAL_COMMENTS	VARCHAR2(500)	No	COMMENTS	
General comments.				
LOCATION_DESCR	VARCHAR2(254)	No	LOCATION	
Description of the area or directions on how to get to the site.				
LOCATION_ACCURACY	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)
Location accuracy. See table LOCATION_ACCURACY_LIST in Appendix for list of valid values.				
VERIFICATION_STATUS_FLG	VARCHAR2(10)	No	VERISTT_FL	'Verified', 'Unverified
An indication as to whether a qualified employee has verified the existence of the geographic unit.				
VERIFICATION_STATUS_DATE	DATE	No	VERIF_DATE	
Date that the geographic unit was verified/validated.				
SYSTEM_CALCULATED_AREA	NUMBER(16,3)	No	SYS_AREA	
The area of a polygon measured in square metres by the system.				
SYSTEM_CALCULATED_PERIMETER	NUMBER(16,3)	No	SYS_PERIM	
The length of the polygon perimeter measured in metres by the system.				
SOURCE_NAME	VARCHAR2(100)	No	SRC_NAME	'AFFM Provincial Administrative Maps', 'Aerial Photography', 'Aerial Survey', 'Book/Publication', 'CIR Photography', 'City of

			Ottawa Borehole Database', ... (See SOURCE_LIST table)
Foreign Key (FK) SOURCE_NAME reference to parent SOURCE_LIST lookup table record.			
SOURCE_DETAIL	VARCHAR2(254)	No	SRC_DETAIL
Details of the source of the data. Examples: OBM, SOLRIS, 2010 SWOOP, 2002 Ortho, GPS.			
GEOMETRY_UPDATE_DATETIME	DATE	No	GEO_UPT_DT
Date/time the geometry was created or last modified in the source database.			
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
LIO Attribute: Date/time the record was created or last modified in the source database.			
SHAPE	SDO_GEOMETRY	No	SHAPE
Spatial Data Option (SDO) Geometry object.			

CLASS_ALIAS_NAME

Location name for the geographic feature. Only one primary local name is allowed per area. Other local names are alias names.

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.				
LOCAL_NAME	VARCHAR2 (75)	Yes	LOCAL_NAME	
Local name of geographic unit.				
CLASS_SHORT_NAME	VARCHAR2 (8)	Yes	CLASS_NAME	
System-generated column denoting the concrete class which this record is part of.				
PRIMARY_NAME_IND	VARCHAR2 (3)	Yes	PRIM_IND	'Yes', 'No
Indication of whether this is the primary local or common name.				
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	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.			

EVALUATED_WETLAND

Evaluated Wetlands are those identified and assessed using the technical criteria in the Ontario Wetland Evaluation System (OWES) manuals. An evaluation may be for either an Evaluated Wetland or an Evaluated Wetland Complex. Not all wetlands in Ontario have been evaluated. An Evaluated Wetland consists of one or more adjacent (contiguous) wetland polygons. An Evaluated Wetland Complex is a group of physically separate wetland polygons that have similar or complementary biological, social and/or hydrological functions, are located in close proximity, and are functionally linked (ecologically or hydrologically). An Evaluated Wetland Complex may contain adjacent wetland polygons but must comprise at least one separate wetland polygon.

Column Name	Column Type	Mandatory	Short Name	Valid Values
OGF_ID	NUMBER (13,0)	Yes	OGF_ID	
Ontario Geospatial Feature (OGF) system generated identifier, unique at the application level.				
EVALUATED_WETLAND_NAME	VARCHAR2 (100)	Yes	WETL_NAME	
Name of the evaluated wetland.				
EVALUATED_WETLAND_SIZE	NUMBER (6,2)	No	WETL_SIZE	
Total wetland size in hectares at the time of evaluation. This is the sum of the area of all wetland polygons in the evaluation including adjacent and separated polygons.				
EVALUATED_WETLAND_TYPE	VARCHAR2 (25)	Yes	WETL_TYPE	'Evaluated Wetland Complex', 'Evaluated Wetland
An evaluated wetland complex is a group of separated wetland polygons where as an evaluated wetland is a single wetland polygon or a group of contiguous wetland polygons.				
BIOLOGICAL_COMPONENT_SCORE	NUMBER (3,0)	No	BIOLOGICAL	
Total score for the Biological Component of the OWES manual section 1.0. Sum of Productivity + Biodiversity + Size to a maximum of 250.				
SOCIAL_COMPONENT_SCORE	NUMBER (3,0)	No	SOCIAL	
Total score of the Social Component of the OWES manual section 2.0. Sum of Economic Products + Recreational Activities + Landscape Aesthetics + Education Awareness + Settlement Proximity + Ownership + Size + Aboriginal Cultural Values to a maximum of 250.				
HYDROLOGICAL_COMPONENT_SCORE	NUMBER (3,0)	No	HYDROLOGIC	
Total score for the Hydrological Component of the OWES manual section 3.0. Sum of Flood Attenuation + Ground Water Recharge + Water Quality Improvement + Carbon Sink + Shoreline Erosion Control + Ground Water Discharge (north only)to a maximum of 250.				
SPECIAL_FEATURES_SCORE	NUMBER	No	SPECIAL_FE	

	(3,0)			

Total score of the Special Features Component of the OWES manual section 4.0. Sum of Rarity + Significant Features and Habitat + Ecosystem Age + GL Coastal Wetland to a maximum of 250.

OVERALL_WETLAND_SCORE	NUMBER (4,0)	No	SCORE	

Total sum of points from OWES evaluation. Sum of Biological Component Score + Social Component Score + Hydrological Component Score + Special Features Score to a maximum of 1000.

LAST_UPDATED_DATE	DATE	No	LAST_UPD	

Date that the wetland data were last updated.

LAST_EVALUATED_DATE	DATE	No	LAST_EVAL	

Date that the wetland was last evaluated.

WETLAND_SIGNIFICANCE	VARCHAR2 (20)	Yes	SIGNIF	'Evaluated-Provincial','Evaluated-Other'

Level of significance designated by an OWES evaluation. Provincially Significant Wetlands (PSW) are protected under the Provincial Policy Statement 2005, policy 2.1

EVALUATION_SYSTEM_TYPE	VARCHAR2 (1)	No	EVAL_SYS_T	'N','S'

An Indication of which wetland OWES evaluation system was used to assess the wetland. eg. N= Northern Ontario, S = Southern Ontario

EVALUATION_SYSTEM_EDITION	VARCHAR2 (1)	No	EVAL_SYS_E	'1','2','3'

An indication of which edition of the OWES evaluation system was used to evaluate the wetland. NOTE: Only Northern 1st edition and Southern 3rd edition will have scoring details entered.

SCORING_SUMMARY_PRESENT_IND	VARCHAR2 (3)	Yes	SUMM_PRES	'Yes','No'

An indicator that a scoring summary has been entered for the evaluated wetland. NOTE: the scoring summary is set up to reflect the standards in the most current versions of the OWES manuals: version 1 for the North and version 3 for the South. Users should not attempt to enter scoring summaries compiled according to other versions, as fields will not match.

SPECIAL_PLANNING_CONSIDERATION	VARCHAR2 (2000)	No	SPECIAL_PL	

Comments on any considerations that should be referred to when planning for the wetland.

ADDITIONAL_EVALUATION_COMMENTS	VARCHAR2 (2000)	No	COMMENTS	

Comments in addition to the evaluation scoring.

DISTRICT_WETLAND_CODE	VARCHAR2 (18)	No	CODE	

Unique code for the wetland evaluation file that is created and managed by individual MNR districts to use in their file management. Example: PB-PET-OR-003. (The old format was W + UTM zone + UTM Easting + UTM Northing, which districts may or may not use.)

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	

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

EVAL_WETLAND_BIOLOGICAL

Values and scores relevant to the Biological Component Score 1.0 in the OWES Manual (Northern 1st edition; Southern 3rd edition).

Column Name	Column Type	Mandatory	Short Name	Valid Values
EVALUATED_WETLAND_ID	NUMBER (13,0)	Yes	EVAL_ID	
Foreign Key (FK) OGF_ID reference to parent EVALUATED_WETLAND table record.				
GROWING_DEGREE_DAYS	VARCHAR2 (11)	Yes	DEG_DAYS	'N lt 1600', 'N 1600-2000', 'N 2001-2400', 'N 2401-2800', 'N 2801-3000', 'N gt 3000', 'S lt 2800', 'S 2800-3200', 'S 3200-3600', 'S 3600-4000', 'S gt 4000
Growing degree days. OWES manual section 1.1.1.				
SOILS_FA_CLAY_LOAM	NUMBER (3,2)	No	FA_CLAY	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of clay/loam. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_SILT_MARL	NUMBER (3,2)	No	FA_SILT	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of silt/marl. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_LIMESTONE	NUMBER (3,2)	No	FA_LIMEST	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of limestone. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_SAND	NUMBER (3,2)	No	FA_SAND	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of sand. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_HUMIC_MESIC	NUMBER (3,2)	No	FA_HUMIC	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of humic or mesic. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_FIBRIC	NUMBER (3,2)	No	FA_FIBRIC	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of fibric. OWES manual section 1.1.1. (1 maximum)				
SOILS_FA_GRANITE	NUMBER (3,2)	No	FA_GRANITE	BETWEEN 0 AND 1
Estimated fractional area of the wetland or wetland complex with the soil type of granite. OWES manual section 1.1.1. (1 maximum)				
GDD_SOILS_SCORE	NUMBER (2,0)	Yes	GDD_SOILS	BETWEEN 4 AND 30
The score for wetland productivity based upon growing degree-days (GDD) and soil type. OWES				

manual section 1.1.1. (Range 4-30)

WETLAND_TYPE_FA_BOG	NUMBER (3,2)	No	TYPE_BOG	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the wetland type of bog. OWES manual section 1.1.2. (1 maximum)

WETLAND_TYPE_FA_FEN	NUMBER (3,2)	No	TYPE_FEN	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the wetland type of fen. OWES manual section 1.1.2. (1 maximum)

WETLAND_TYPE_FA_SWAMP	NUMBER (3,2)	No	TYPE_SWAMP	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the wetland type of swamp. OWES manual section 1.1.2. (1 maximum)

WETLAND_TYPE_FA_MARSH	NUMBER (3,2)	No	TYPE_MARSH	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the wetland type of marsh. OWES manual section 1.1.2. (1 maximum)

WETLAND_TYPE_SCORE	NUMBER (2,0)	Yes	TYPE_SCORE	BETWEEN 0 AND 15

Score for wetland productivity based upon wetland type (swamp, marsh, fen, bog). OWES manual section 1.1.2. (Range 3-15).

SITE_TYPE_FA_ISOLATED	NUMBER (3,2)	No	FA_ISOLAT	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of isolated. OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_FA_PALUSTRINE	NUMBER (3,2)	No	FA_PAL	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of palustrine. OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_FA_RIVERINE	NUMBER (3,2)	No	FA_RIV	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of riverine. OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_FA_RIVERINE_RM	NUMBER (3,2)	No	FA_RIV_RM	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of riverine (at river mouth). This category only applies to wetlands formed where a river or stream enters one of Ontario?s six large rivers (Ottawa, St. Lawrence, St. Clair, Detroit, Niagara and St. Marys). OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_FA_LACUSTRINE_RM	NUMBER (3,2)	No	FA_LAC_RM	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of lacustrine (at river mouth). This category applies where a river or stream enters a lake and forms a rivermouth wetland. OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_FA_LACUSTRINE_EB	NUMBER (3,2)	No	FA_LAC_EB	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of lacustrine (on enclosed bay). This category applies where a wetland is separated from a lake by a barrier beach in which lake waters may from time to time be sealed off. OWES manual section 1.1.3. (1

maximum)

SITE_TYPE_FA_LACUSTRINE_EL	NUMBER (3,2)	No	FA_LAC_EL	BETWEEN 0 AND 1

Estimated fractional area of the wetland or wetland complex with the site type of laustrine (exposed to lake), where a barrier beach is not present. OWES manual section 1.1.3. (1 maximum)

SITE_TYPE_SCORE	NUMBER (1,0)	Yes	SITE_TYPE	BETWEEN 1 AND 5

Score for wetland productivity based upon site type (isolated, palustrine, riverine, lacustrine). OWES manual section 1.1.3. (Range 1-5)

PRODUCTIVITY_TOTAL	NUMBER (2,0)	Yes	PROD_TOTAL	BETWEEN 8 AND 50

Total score of the Productivity sub-component of the Biological component. It is the sum of scores from sections 1.1.1, 1.1.2 and 1.1.3 of the OWES manual. Productivity Total = GDD Soils Score + Wetland Type Score + Site Type Score (Range 8-50)

WETLAND_TYPE_COUNT_SCORE	NUMBER (2,0)	Yes	TYPE_COUNT	BETWEEN 9 AND 30

Score for the number of wetland types (swamp, marsh, fen, bog) in the wetland. OWES manual section 1.2.1. (Range 9-30)

VEGETATION_COMM_SCORE	NUMBER (2,0)	Yes	VEGETATION	BETWEEN 1 AND 45

Score for the number of vegetation communities mapped in a wetland. OWES manual section 1.2.2. (Range 1-45)

SURROUNDING_CROP_IND	VARCHAR2 (3)	Yes	CROP	'Yes', 'No

Presence of crops at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_PASTURE_IND	VARCHAR2 (3)	Yes	PASTURE	'Yes', 'No

Presence of pasture habitat at least 0.5ha in size within 1.5km of the wetland. Section 1.2.3 of OWES. Default=No

SURROUNDING_ABAN_AGRI_IND	VARCHAR2 (3)	Yes	ABAN_AGRI	'Yes', 'No

Presence of abandoned agricultural habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_DECIDUOUS_IND	VARCHAR2 (3)	Yes	DECIDUOUS	'Yes', 'No

Presence of deciduous forest habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_CONIFEROUS_IND	VARCHAR2 (3)	Yes	CONIFEROUS	'Yes', 'No

Presence of coniferous forest habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_MIXED_FOREST_IND	VARCHAR2 (3)	Yes	MIXED_FOR	'Yes', 'No

Presence of mixed forest habitat at least 0.5ha in size within 1.5km of the wetland. Mixed forest is defined as either 25% coniferous trees distributed singly or in clumps in deciduous forest, or 25% deciduous trees distributed singly or in clumps in coniferous forest. OWES manual section 1.2.3. Default=No

SURROUNDING_ABAN_PITS_IND	VARCHAR2 (3)	Yes	ABAN_PITS	'Yes', 'No

Presence of abandoned pits or quarries at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_OPEN_LAKE_IND	VARCHAR2 (3)	Yes	OPEN_LAKE	'Yes', 'No

Presence of open lake or deep river habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_FENCE_ROWS_IND	VARCHAR2 (3)	Yes	FENCE_ROWS	'Yes', 'No

Presence of fence row habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_RAVINE_IND	VARCHAR2 (3)	Yes	RAVINE	'Yes', 'No

Presence of ravine habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_FLOODPLAIN_IND	VARCHAR2 (3)	Yes	FLOODPLAIN	'Yes', 'No

Presence of a creek floodplain at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_ROCK_OUTCROP_IND	VARCHAR2 (3)	Yes	ROCK_OUTCR	'Yes', 'No

Presence of rock outcrop habitat at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_RECENT_BURN_IND	VARCHAR2 (3)	Yes	RECENT_BUR	'Yes', 'No

Presence of a recent burn (<5 years) at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_RECENT_CUT_IND	VARCHAR2 (3)	Yes	RECENT_CUT	'Yes', 'No

Presence of a recent cutover or clearcut (<5 years) at least 0.5ha in size within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_UTILITY_IND	VARCHAR2 (3)	Yes	UTILITY	'Yes', 'No

Presence of a utility corridor within 1.5km of the wetland. OWES manual section 1.2.3. Default=No

SURROUNDING_SCORE	NUMBER (1,0)	Yes	SURROUND	BETWEEN 0 AND 7

Score for the presence or absence of different habitat types of at least 0.5 ha in size in the landscape and found within 1.5 km of the wetland boundary. OWES manual section 1.2.3. (7 maximum)

WETLAND_PROXIMITY_CATEGORY	NUMBER (1,0)	No	PROX_CAT	1, 2, 3, 4, 5, 6, 7

First appropriate (numeric) category of proximity to other wetland as listed in section 1.2.4 of the OWES manual.[1] Hydrologically connected by surface water to other wetlands (different dominant wetland type), or open lake or river within 5km. [2] Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5km. [3] Hydrologically connected by surface water to other wetlands (different dominant wetland type), or open lake or river from 1.5 to 4km away.[4] Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5km away. [5] Within 0.75km of other wetlands

(different dominant wetland type) or open lake or river, but not hydrologically connected by surface water. [6] Within 1km of other wetlands, but not hydrologically connected by surface water. [7] No wetland within 1 km.

PROXIMITY_SCORE	NUMBER (1,0)	Yes	PROXIMITY	BETWEEN 0 AND 8
Score for the proximity of other wetlands to the evaluated wetland. OWES manual section 1.2.4. (8 maximum)				
INTERSPERSION_SCORE	NUMBER (2,0)	Yes	INTERSPERS	BETWEEN 3 AND 30
Score for wetland spatial heterogeneity, as measured using the interspersion method described in section 1.2.5 of the OWES manual. (Range 3-30)				
OPEN_WATER_TYPE	VARCHAR2 (6)	Yes	OPEN_TYPE	'Type 1', 'Type 2', 'Type 3', 'Type 4', 'Type 5', 'Type 6', 'Type 7', 'Type 8', 'None
Open water types as described and illustrated in section 1.2.6 of the OWES.				
OPEN_WATER_TYPE_SCORE	NUMBER (2,0)	Yes	OPEN_SCORE	BETWEEN 0 AND 30
Score for open water type, which assesses the proportion of open water in a wetland, and its interspersion with vegetation. OWES manual section 1.2.6. (30 maximum)				
BIODIVERSITY_TOTAL_SCORE	NUMBER (3,0)	Yes	BIODIVERS	BETWEEN 13 AND 150
Total score of the Biodiversity sub-component of the Biological component. It is the sum of scores from sections 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5 and 1.2.6 of the OWES manual. CALCULATION: Biodiversity Total Score = Wetland Type Count Score + Vegetation Comm Score + Surrounding Score + Proximity Score + Interspersion Score + Open Water Types Score. (Range 13-150)				
SIZE_BIOLOGICAL_SCORE	NUMBER (2,0)	Yes	SIZE_BIOL	BETWEEN 1 AND 50
Score for the total area of the wetland, in terms of its biodiversity. It is read from the table in sub-component 1.3, by cross-referencing the total wetland area with the sub-total of the scores from section 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5 and 1.2.6 of the OWES manual. (Range 1-50)				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
LIO Attribute: Date/time the record was created or last modified in the source database.				

EVAL_WETLAND_HYDROLOGICAL

Values and scores relevant to the Hydrological Component Score 3.0 in the OWES (Northern: 1st edition; Southern: 3rd edition).

Column Name	Column Type	Mandatory	Short Name	Valid Values
EVALUATED_WETLAND_ID	NUMBER (13,0)	Yes	EVAL_ID	
Foreign Key (FK) OGF_ID reference to parent EVALUATED_WETLAND table record.				
FLOOD_ATTENUATION_SCORE	NUMBER (3,0)	Yes	FLOOD_ATTE	BETWEEN 0 AND 100

Score for flood attenuation based upon information regarding the wetland and the surrounding watershed. OWES manual section 3.1. Flood attenuation includes an assessment of upstream detention and wetland attenuation in the southern OWES manual and an assessment of upstream detention, peak flow attenuation and wetland surface form in the northern OWES manual. (100 maximum)

WETLAND_ON_MAJOR_WATERBODY_IND	VARCHAR2 (3)	Yes	MAJOR_WBY	'Yes', 'No

Whether the wetland is on one of the 5 defined large lakes or 5 major rivers. OWES southern manual 3.2.1 and northern manual section 3.3.2. Default=No

WIF_FA_ISOLATED	NUMBER (3,2)	No	WIF_ISO	BETWEEN 0 AND 1

Estimated fractional area that is isolated. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WIF_FA_RIVERINE	NUMBER (3,2)	No	WIF_RIV	BETWEEN 0 AND 1

Estimated fractional area that is riverine. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WIF_FA_PALUSTRINE_NO_INFLOW	NUMBER (3,2)	No	WIF_PAL_NO	BETWEEN 0 AND 1

Estimated fractional area that is palustrine with no inflow. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WIF_FA_PALUSTRINE_WITH_INFLOW	NUMBER (3,2)	No	WIF_PAL_IN	BETWEEN 0 AND 1

Estimated fractional area that is palustrine with inflow. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WIF_FA_LACUSTRINE_SHORELINE	NUMBER (3,2)	No	WIF_LAC_SL	BETWEEN 0 AND 1

Estimated fractional area that is lacustrine on lake shoreline. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WIF_FA_LACUSTRINE_FLOW	NUMBER (3,2)	No	WIF_LAC_FL	BETWEEN 0 AND 1

Estimated fractional area that is lacustrine at lake inflow or outflow. OWES southern manual 3.2.1 and northern manual section 3.3.1. (1 maximum)

WATERSHED_IMPROVEMENT_NORTH	NUMBER (2,0)	No	WATERSHED	BETWEEN 0 AND 30

Score for the water quality improvement functions. OWES northern manual 3.3.1.

CATCHMENT_LAND_USE	NUMBER (1,0)	No	CATCHMENT	BETWEEN 0 AND 1

Catchment land use factor. OWES southern manual 3.2.1. (1 maximum)

PUF_FA_TREES	NUMBER (3,2)	No	PUF_FA_TRE	BETWEEN 0 AND 1

Estimated fractional area with live trees, shrubs, herbs or mosses. OWES southern manual 3.2.1. (1 maximum)

PUF_FA_EMERGENT	NUMBER (3,2)	No	PUF_FA_EME	BETWEEN 0 AND 1

Estimated fractional area with emergent, submergent or floating vegetation. OWES southern manual 3.2.1. (1 maximum)

PUF_FA_NO_VEGETATION	NUMBER	No	PUF_FA_NO	BETWEEN

	(3,2)			0 AND 1

Estimated fractional area with little or no vegetation. OWES southern manual 3.2.1. (1 maximum)

SHORT_TERM_IMPROVE_SOUTH	NUMBER (2,0)	No	SHORT_TERM	BETWEEN 0 AND 60

Score for the short-term water quality improvement functions. OWES southern manual 3.2.1. The short-term water quality improvement score includes a determination of the watershed improvement factor (WIF), the catchment land use factor (LUF) and the pollutant uptake factor (PUF). (60 maximum)

LONG_TERM_NUTRIENT_DESC	NUMBER (1,0)	No	NUTRIENT	1, 2, 3, 4, 5

Long term nutrient trap. OWES southern manual 3.2.2. Numeric values are described as: [1] Wetland located in a river mouth. [2] Wetland is a bog, fen, or swamp with more than 50% of the wetland being covered with organic soil. [3] Wetland is a bog, fen, or swamp with less than 50% or the wetland being covered with organic soil. [4] Wetland is a marsh with more than 50% of the wetland covered with organic soil. [5] None of the above.

LONG_TERM_NUTRIENT_SOUTH	NUMBER (2,0)	No	NUTRIENT_S	BETWEEN 0 AND 10

Score for the long-term functions of the wetland as a nutrient trap based on the wetland type, site type and soils. OWES southern manual 3.2.2. (10 maximum)

GW_DISCHARGE_SCORE	NUMBER (2,0)	Yes	GW_DISCHAR	BETWEEN 0 AND 30

Score for the groundwater discharge function of the wetland based on the wetland features, type, soils, catchment and topography. OWES southern manual section 3.2.3 and northern manual section 3.6. (30 maximum)

BROAD_UPSLOPE_LANDUSE	NUMBER (2,0)	No	BROAD_UPS	BETWEEN 0 AND 20

Broad upslope land use. OWES northern manual 3.3.2. (14 maximum)

LINEAR_UPSLOPE_LANDUSE	NUMBER (2,0)	No	LINEAR_UPS	BETWEEN 0 AND 15

Linear upslope land use. OWES northern manual 3.3.2. (15 maximum)

POINT_SOURCE_LANDUSE	NUMBER (2,0)	No	POINT_SOUR	BETWEEN 0 AND 15

Point source land uses present. OWES northern manual 3.3.2. (15 maximum)

ADJACENT_LAND_USE_NORTH	NUMBER (2,0)	No	ADJACENT_N	BETWEEN 0 AND 50

Score for adjacent and watershed land use. OWES northern manual section 3.3.2. Sum of Broad Upslope Land Use (BLU) + Linear Upslope Land Use (LUU) + Point-Source Land Use (PS). (44 maximum)

VEGETATION_FORM_NORTH	NUMBER (2,0)	No	VEGETATION	BETWEEN 0 AND 10

Score for the water quality improvement functions of the wetland based on dominant vegetation types. OWES northern manual section 3.3.3. (10 maximum)

DOWNSTREAM_QUALITY_NORTH	NUMBER	No	DOWNSTR_N	BETWEEN

	(2,0)			0 AND 84

Total score for downstream water quality improvement. OWES northern manual section 3.3. Downstream Quality North = Watershed Improvement North + Adjacent Land Use Score + Vegetation Form North. (84 maximum)

WATER_QUALITY_IMPROVE_SOUTH	NUMBER (3,0)	No	WATER_QUAL	BETWEEN 0 AND 100

Total score for water quality improvement. OWES southern manual 3.2. Water Quality Improve South = Short Term Improve South + Long Term Nutrient South + GW Discharge Score. (100 maximum)

CARBON_SINK_SCORE	NUMBER (2,0)	No	C_SINK	BETWEEN 0 AND 15

Score for the potential to sequester carbon over the long-term. OWES southern manual section 3.3 and northern manual section 3.4. (5 maximum south, 15 maximum north)

SHORELINE_EROSION_CONTROL	NUMBER (2,0)	Yes	SHORELINE	BETWEEN 0 AND 15

Score for the potential of vegetation to reduce or prevent shoreline erosion. OWES southern manual section 3.4 and northern manual section 3.5. (15 maximum)

RECHARGE_MAJOR_RIVERS_IND	VARCHAR2 (3)	Yes	R_RIVERS	'Yes', 'No

Ground water recharge located on one of the five major rivers. OWES southern manual section 3.5.1 and northern manual section 3.2.1. Default=No

RECHARGE_FA_ISO_PAL	NUMBER (3,2)	No	R_FA_ISO	BETWEEN 0 AND 1

Estimated fractional area that is isolated or palustrine. OWES southern manual section 3.5.1 and northern manual section 3.2.1. (1 maximum)

RECHARGE_FA_RIVERINE	NUMBER (3,2)	No	R_FA_RIV	BETWEEN 0 AND 1

Estimated fractional area that is riverine. OWES southern manual section 3.5.1 and northern manual section 3.2.1. (1 maximum)

RECHARGE_FA_LACUSTRINE	NUMBER (3,2)	No	R_FA_LAC	BETWEEN 0 AND 1

Estimated fractional area that is lacustrine (wetland <50% lacustrine). OWES southern manual section 3.5.1 and northern manual section 3.2.1. (1 maximum)

WETLAND_SITE_TYPE_SCORE	NUMBER (2,0)	Yes	TYPE_SCORE	BETWEEN 0 AND 50

Score for the potential of the wetland to recharge ground water based on wetland site type. OWES southern manual section 3.5.1 and northern manual section 3.2.1. (50 maximum south, 20 maximum north)

RECHARGE_SOIL_SCORE	NUMBER (2,0)	Yes	R_SOIL	BETWEEN 0 AND 10

Score for the potential of ground water recharge based on wetland site type and soils. OWES southern manual section 3.5.2 and northern manual section 3.2.2. (10 maximum)

RECHARGE_SCORE	NUMBER (2,0)	Yes	R_SCORE	BETWEEN 0 AND 60

Total score for Ground Water Recharge potential. OWES southern manual section 3.5 and northern manual section 3.2. Recharge Score = Wetland Site Type Score + Recharge Soil Score. (60 maximum south, 30 maximum north)

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE

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

EVAL_WETLAND_SOCIAL

Values and scores relevant to the Social Component Score 2.0 in the OWES (Northern: 1st edition; Southern: 3rd edition).

Column Name	Column Type	Mandatory	Short Name	Valid Values
EVALUATED_WETLAND_ID	NUMBER (13,0)	Yes	EVAL_ID	
Foreign Key (FK) OGF_ID reference to parent EVALUATED_WETLAND table record.				
WOOD_PRODUCTS_SCORE	NUMBER (2,0)	Yes	WOOD_PROD	BETWEEN 0 AND 18
Score for the area of forested wetland. OWES manual section 2.1.1. (18 maximum south, 14 maximum north)				
WILD_RICE_SCORE	NUMBER (1,0)	Yes	WILD_RICE	BETWEEN 0 AND 10
Score for presence or absence of wild rice. OWES manual section 2.1.2. (6 maximum south, 10 maximum north)				
COMMERCIAL_FISH_SCORE	NUMBER (2,0)	Yes	COMMERCIAL	BETWEEN 0 AND 12
Score for presence or absence of native bait fish and/or coarse fish. OWES southern manual section 2.1.3 and northern manual section 2.1.4. (12 maximum)				
BULLFROGS_SCORE	NUMBER (1,0)	No	BULLFROGS	BETWEEN 0 AND 1
Score for the presence or absence of Bullfrogs. OWES southern manual section 2.1.4b. (1 maximum)				
SNAPPING_TURTLES_SCORE	NUMBER (1,0)	No	SNAPPING	BETWEEN 0 AND 1
Score for the presence or absence of Snapping Turtles. OWES southern manual section 2.1.4b. (1 maximum)				
CRANBERRY_SCORE	NUMBER (1,0)	No	CRANBERRY	BETWEEN 0 AND 2
Score for the presence or absence of Lowbush cranberry. OWES northern manual section 2.1.2. (2 maximum)				
FURBEARERS_SCORE	NUMBER (2,0)	Yes	FURBEARERS	BETWEEN 0 AND 12
Score for the number of qualified furbearers recorded in the wetland. OWES manual 2.1.5. (12 maximum)				
ECONOMIC_PRODUCTS_TOTAL	NUMBER (2,0)	Yes	ECONOMIC	BETWEEN 0 AND 50
Total score of the Economically Valuable Products sub-component of the Social component. OWES manual section 2.1. Economic Products Total = Wood Products Score + Wild Rice Score + Commercial Fish Score + Furbearers Score + Bullfrogs Score (south) + Snapping Turtles Score (south) + Cranberry Score (north). (50 maximum)				

REC_HUNTING_SCORE	NUMBER (2,0)	Yes	REC_HUNT	0, 8, 20, 40
Score for the intensity of hunting. OWES manual section 2.2.				
REC_NATURE_SCORE	NUMBER (2,0)	Yes	REC_NATURE	0, 8, 20, 40
Score for intensity of Recreational Nature Enjoyment/Ecosystem Study score. OWES manual section 2.2.				
REC_FISHING_SCORE	NUMBER (2,0)	Yes	REC_FISH	0, 8, 20, 40
Score for the intensity of fishing. OWES manual section 2.2.				
RECREATIONAL_SCORE	NUMBER (2,0)	Yes	RECREATION	BETWEEN 0 AND 80
Score for Recreational Activity. OWES manual section 2.2. The sum of Rec Hunting Score + Rec Nature Score + Rec Fishing Score. (80 maximum)				
DISTINCTNESS_SCORE	NUMBER (1,0)	Yes	DISTINCT	0, 3
Score for distinctness within the landscape. OWES manual 2.3.1.				
HUMAN_DISTURBANCE_SCORE	NUMBER (1,0)	Yes	HUMAN_DIST	0, 1, 2, 4, 7
Score for the absence of human disturbance. OWES manual section 2.3.2.				
LANDSCAPE_AESTHETICS_TOTAL	NUMBER (2,0)	Yes	LANDSCAPE	BETWEEN 0 AND 10
Landscape Aesthetics score. OWES manual section 2.3. Landscape Aesthetics Total = Distinctness Score + Human Disturbance Score. (10 maximum)				
EDUCATIONAL_USES_SCORE	NUMBER (2,0)	Yes	ED_USES	0, 12, 20
Educational Uses score. OWES manual section 2.4.1.				
FACILITIES_SCORE	NUMBER (1,0)	Yes	FACILITIES	0, 2, 4, 8
Facilities and Program score. OWES manual 2.4.2.				
RESEARCH_SCORE	NUMBER (2,0)	Yes	RESEARCH	0, 5, 10, 12
Research and Studies score. OWES manual section 2.4.3.				
EDUCATION_AWARENESS_TOTAL	NUMBER (2,0)	Yes	ED_AWARE	BETWEEN 0 AND 40
Educational and Public Awareness total. OWES manual 2.4. Education Awareness Total = Education Uses Score + Facilities Score + Research Score. (40 maximum)				
SETTLEMENT_NAME	VARCHAR2 (40)	Yes	SETTLEMENT	
The name of the urban area, subdivision, small town, or cottage development that the wetland is in or nearest to. Owes manual section 2.5.				
SETTLEMENT_SCORE	NUMBER (2,0)	Yes	SETT_SCORE	BETWEEN 0 AND 40
Score based on the population and distance to areas of human settlement. OWES manual section 2.5. (40 maximum)				
OWNERSHIP_FA_TRUST	NUMBER (3,2)	No	FA_TRUST	BETWEEN 0 AND 1

Fractional area in public or private ownership held under contract or in trust for wetland protection. OWES manual section 2.6. (1 maximum)

OWNERSHIP_FA_PUBLIC	NUMBER (3,2)	No	FA_PUBLIC	BETWEEN 0 AND 1

Fractional area in public ownership not held under contract or in trust for wetland protection. OWES manual section 2.6. (1 maximum)

OWNERSHIP_FA_PRIVATE	NUMBER (3,2)	No	FA_PRIVATE	BETWEEN 0 AND 1

Fractional area in private ownership not held under contract or in trust for wetland protection. OWES manual section 2.6. (1 maximum)

OWNERSHIP_SCORE	NUMBER (2,0)	Yes	OWNERSHIP	BETWEEN 4 AND 10

Score for the type of land ownership and protection. OWES manual section 2.6. (10 maximum)

SIZE_SOCIAL_SCORE	NUMBER (2,0)	Yes	SIZE_SOC	BETWEEN 1 AND 20

Score for the total area of the wetland in terms of its social values. OWES manual section 2.7. (Range 1-20)

ABORIGINAL_SCORE	NUMBER (2,0)	Yes	ABORIGINAL	0, 30

Significance of aboriginal values. OWES manual section 2.8.1.

CULTURAL_SCORE	NUMBER (2,0)	Yes	CULTURAL	0, 30

Cultural values stemming from historical events. OWES manual section 2.8.2. There must be a physical structure of historic or cultural value within the wetland boundaries.

ABORIGINAL_CULTURAL_SCORE	NUMBER (2,0)	Yes	ABORIG_C	BETWEEN 0 AND 30

Total score of the Aboriginal Values and Cultural Heritage. OWES manual section 2.8. (30 maximum)

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE

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

EVAL_WETLAND_SPECIAL

Values and scores relevant to the Special Feature Component Score 4.0 in the OWES (Northern: 1st edition; Southern: 3rd edition).

Column Name	Column Type	Mandatory	Short Name	Valid Values
EVALUATED_WETLAND_ID	NUMBER (13,0)	Yes	EVAL_ID	

Foreign Key (FK) OGF_ID reference to parent EVALUATED_WETLAND table record.

RARITY_WITHIN_LANDSCAPE	NUMBER (2,0)	No	RARITY_WIT	BETWEEN 0 AND 80

Score for the rarity of wetlands within site districts. OWES Southern manual section 4.1.1.1. (80 maximum)

RARITY_OF_WETLAND_TYPE	NUMBER (2,0)	Yes	RARITY_TYP	BETWEEN 0 AND 80

Score for the rarity of wetland type (marsh, swamp, bog, fen) within site districts. OWES manual section 4.1.1.2. (80 maximum south, 70 maximum north)

RARITY_WETLAND_SCORE	NUMBER (3,0)	Yes	RARITY_WET	BETWEEN 0 AND 160

Score for the rarity of wetlands within the landscape and the rarity of wetland type. OWES manual section 4.1.1. Sum of Rarity Within Landscape + Rarity of Wetland Type. (160 maximum)

SPECIES_BREEDING_SCORE	NUMBER (4,0)	Yes	SP_BREED	

Score for reproductive habitat for an endangered or threatened species. OWES manual section 4.1.2.1. (no maximum)

SPECIES_TRADITIONAL_SCORE	NUMBER (4,0)	Yes	SP_TRAD	

Score for traditional migration or feeding habitat for an endangered or threatened species. OWES manual section 4.1.2.2. (no maximum)

SPECIES_PROV_ANIMAL_SCORE	NUMBER (3,0)	Yes	SP_PROV_AN	

Score for the occurrence of provincially significant animal species. OWES manual section 4.1.2.3. (no maximum)

SPECIES_PROV_PLANT_SCORE	NUMBER (3,0)	Yes	SP_PROV_PL	

Score for the occurrence of provincially significant plant species. OWES manual section 4.1.2.4. (no maximum)

SPECIES_REGIONAL_SIG_SCORE	NUMBER (3,0)	Yes	SP_REG_SIG	

Score for the occurrence of regionally significant species in the site region. OWES manual section 4.1.2.5. (no maximum)

SPECIES_LOCAL_SIG_SCORE	NUMBER (3,0)	Yes	SP_LOCAL	

Score for the occurrence of locally significant species in the site district. OWES manual section 4.1.2.6. (no maximum)

SPECIES_SPECIAL_SCORE	NUMBER (2,0)	No	SP_SPECIAL	BETWEEN 0 AND 25

Score for the presence of breeding habitat for Black Duck. OWES Northern manual section 4.1.2.7. (25 maximum)

SPECIES_RARITY_TOTAL	NUMBER (5,0)	Yes	SP_RARITY	

Total score for species rarity in the wetland. OWES manual section 4.1.2. Species Rarity Total = Species Breeding Score + Species Traditional Score + Species Prov Animal Score + Species Prov Plant Score + Species Regional Sig Score + Species Local Sig Score + (Species Special Score in northern evaluation only). (no maximum) There is a cap on final component score.

RARITY_TOTAL	NUMBER (5,0)	Yes	RARITY_TOT	

Total score for the rarity of the wetland. OWES manual section 4.1. Rarity Total = Wetland Rarity Total + Species Rarity Total. Note: There is no maximum value, but there is a cap on the final component score.

COLONIAL_WATERBIRDS_SCORE	NUMBER (2,0)	Yes	WATERBIRDS	BETWEEN 0 AND 50

Score for nesting or feeding of colonial waterbirds in the wetland. OWES manual section 4.2.1. (50 maximum)

WINTER_WILDLIFE_COVER_SCORE	NUMBER (3,0)	Yes	WINTER_COV	BETWEEN 0 AND 100

Score for winter cover for wildlife in the wetland. OWES manual section 4.2.2. (100 maximum)				
WATERFOWL_STAGE_SCORE	NUMBER (3,0)	No	FOWL_STAGE	0, 5, 10, 50, 100, 150
Level of waterfowl staging area significance. Description for values are 150 = Nationally Significant, 100 = Provincially Significant, 50 = Regionally Significant, 10 = Locally Significant, 5 = Known to occur, and 0 = Not possible/Unknown. OWES manual section 4.2.3. (150 maximum)				
WATERFOWL_MOULT_SCORE	NUMBER (3,0)	No	FOWL_MOULT	0, 5, 10, 50, 100, 150
Level of waterfowl moulting area significance. Description for values are 150 = Nationally Significant, 100 = Provincially Significant, 50 = Regionally Significant, 10 = Locally Significant, 5 = Known to occur, and 0 = Not possible/Unknown. OWES manual section 4.2.3. (150 maximum)				
WATERFOWL_STAGE_MOULT_SCORE	NUMBER (3,0)	Yes	FOWL_S_MLT	BETWEEN 0 AND 150
Score for the staging and/or moulting of waterfowl. OWES manual section 4.2.3. (150 maximum)				
WATERFOWL_BREEDING_SCORE	NUMBER (3,0)	Yes	FOWL_BREED	BETWEEN 0 AND 150
Score for the breeding of waterfowl. OWES manual section 4.2.4. (100 maximum south, 150 maximum north)				
MIGRATORY_STOPOVER_SCORE	NUMBER (3,0)	Yes	MIGRATORY	BETWEEN 0 AND 150
Score for the use of migratory stop-over areas by passerine, shorebird or raptor species. OWES manual section 4.2.5. (100 maximum south, 150 maximum north)				
UNGULATE_SUMMER_COVER_IND	VARCHAR2 (3)	No	SUMMER_COV	'Yes', 'No
Ungulate summer cover refers to black spruce stands in which the canopy is thick enough to provide thermal cover (shade) for ungulates during the heat of summer. OWES northern manual section 4.2.6. (Default=No)				
UNGULATE_MINERAL_LICK_IND	VARCHAR2 (3)	No	MINERAL	'Yes', 'No
Evidence of mineral licks for sodium. OWES northern manual section 4.2.6. (Default=No)				
UNGULATE_MOOSE_FEEDING	NUMBER (2,0)	No	MOOSE	0, 10, 20, 35
Score for moose aquatic feeding area class. MNR District and Area offices must be contacted to obtain information about moose aquatic feeding areas. OWES northern manual section 4.2.6. (35 maximum)				
UNGULATE_SCORE	NUMBER (3,0)	No	UNGULATE	BETWEEN 0 AND 100
Score for the quality of moose habitat. OWES northern manual section 4.2.6. (100 maximum)				
FISH_SPAWNING_PRESENT_IND	VARCHAR2 (3)	Yes	SPAWN_PRES	'Yes', 'No
Presence or absence of fish spawning and nursery habitat. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (Default=No)				
FISH_SPAWNING_SIG_KNOWN_IND	VARCHAR2 (3)	Yes	SPAWN_KNOW	'Yes', 'No
Fish Spawning Habitat significance is known. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (Default=No)				
FISH_SPAWNING_SIGNIFICANCE	VARCHAR2 (15)	Yes	SPAWN_SIG	'Site Region', 'Site District',

				'Locally (5+ha)', 'Locally (<5ha)
Significance of the fish spawning and nursery habitat. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1.				
FISH_SPAWNING_LOW_MARSH_IND	VARCHAR2 (3)	Yes	SPAWN_LOW	'Yes', 'No
Presence or absence of low marsh. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (Default=No)				
FISH_SPAWNING_HIGH_MARSH_IND	VARCHAR2 (3)	Yes	SPAWN_HIGH	'Yes', 'No
Presence or absence of high marsh. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (Default=No)				
FISH_SPAWNING_SWAMP_IND	VARCHAR2 (3)	Yes	SPAWN_SWAM	'Yes', 'No
Presence or absence of seasonally or permanently flooded swamp. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (Default=No)				
FISH_SPAWNING_SCORE	NUMBER (3,0)	Yes	SPAWNING	BETWEEN 0 AND 100
Score for the presence and significance of fish spawning and nursery habitat. OWES southern manual section 4.2.6.1 and northern manual section 4.2.7.1. (100 maximum)				
FISH_MIGRATION_PRESENT_IND	VARCHAR2 (3)	Yes	MIG_PRES	'Yes', 'No
Presence or absence of fish migration and staging habitat. OWES southern manual section 4.2.6.2 and northern manual section 4.2.7.2. (Default=No)				
FISH_MIGRATION_SIG_KNOWN_IND	VARCHAR2 (3)	Yes	MIG_KNOWN	'Yes', 'No
Fish Migration and Staging Habitat significance known. OWES southern manual section 4.2.6.2 and northern manual section 4.2.7.2. (Default=No)				
FISH_MIGRATION_SIGNIFICANCE	VARCHAR2 (20)	Yes	MIG_SIGNIF	'Site Region', 'Site District', 'Locally', 'None of Above
Significance of the fish spawning and nursery habitat. OWES southern manual section 4.2.6.2 and northern manual section 4.2.7.2.				
FISH_MIGRATION_SITE_TYPE	VARCHAR2 (1)	Yes	MIG_TYPE	1, 2, 3, 4
Site type of fish migration and staging habitat. OWES southern manual section 4.2.6.2 and northern manual section 4.2.7.2. Numeric code values are described as: [1] Wetland is riverine at rivermouth or lacustrine at rivermouth. [2] Wetland is riverine, within 0.75 km of rivermouth. [3] Wetland is lacustrine, within 0.75 km of rivermouth. [4] Fish staging and/or migration habitat is present, but not as above.				
FISH_MIGRATION_SCORE	NUMBER (2,0)	Yes	MIG_SCORE	BETWEEN 0 AND 25
Score for the presence and significance of fish migration and staging habitat. OWES southern manual section 4.2.6.2 and northern manual section 4.2.7.2. (25 maximum)				
FISH_HABITAT_TOTAL	NUMBER (3,0)	Yes	FISH_HABIT	BETWEEN 0 AND 125

Total score for the presence and quality of fish habitat in the wetland. The sum of the scores from the Spawning and Nursery Habitat, and Migration and Staging Habitat. OWES southern manual section 4.2.6 and northern manual section 4.2.7. (125 maximum)

SIG_FEATURES_AND_HAB_TOTAL	NUMBER (3,0)	Yes	SIG_FEATUR	BETWEEN 0 AND 825

Total score for significant features or habitat in the wetland. Sig Features And Habitat Total = Colonial Waterbirds Score + Winter Wildlife Cover Score + Waterfowl Stage Moult Score + Waterfowl Breeding Score + Migratory Stopover Score + Fish Habitat Total + (Ungulate Score in northern evaluation). OWES manual section 4.2 (825 maximum)

ECOSYSTEM_FA_BOG	NUMBER (3,2)	Yes	FA_BOG	BETWEEN 0 AND 1

Fractional area of the wetland that is bog. OWES manual section 4.3. (1 maximum)

ECOSYSTEM_FA_FEN_MAT	NUMBER (3,2)	Yes	FA_FEN_MAT	BETWEEN 0 AND 1

The fractional area of the wetland that is fen on deeper soil, floating mats or marl. OWES manual section 4.3. (1 maximum)

ECOSYSTEM_FA_FEN_LIMESTONE	NUMBER (3,2)	Yes	FA_FEN_LIM	BETWEEN 0 AND 1

Fractional area of the wetland that is fen on limestone rock. OWES manual section 4.3. (1 maximum)

ECOSYSTEM_FA_SWAMP	NUMBER (3,2)	Yes	FA_SWAMP	BETWEEN 0 AND 1

Fractional area of the wetland that is swamp. OWES manual section 4.3. (1 maximum)

ECOSYSTEM_FA_MARSH	NUMBER (3,2)	Yes	FA_MARSH	BETWEEN 0 AND 1

The fractional area of the wetland that is marsh. OWES manual section 4.3. (1 maximum)

ECOSYSTEM_SCORE	NUMBER (2,0)	Yes	ECOSYSTEM	BETWEEN 0 AND 25

Score for the age of the ecosystem. OWES manual section 4.3. (25 maximum)

GREAT_LAKES_COASTAL_SCORE	NUMBER (2,0)	Yes	GREAT_LAKE	BETWEEN 0 AND 75

Score for the size of Great Lakes coastal wetlands. OWES manual section 4.4. (75 maximum)

EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE

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

LOCATION_ACCURACY_LIST

List of valid location accuracies associated to a mapped feature.

Column Name	Column Type	Mandatory	Short Name	Valid Values

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:

LOCATION_ACCURACY_LIST

LOCATION ACCURACY	EXPIRY DATETIME
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:

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 Photography		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							
Google Street View		Google Inc.					
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 Assessment 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 Resources	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

LIO Table Relationships for Class:

Wetland

WETLAND_FT	----------→ CLASS_JUSTIFICATION.OGF_ID = WETLAND_FT.OGF_ID	CLASS_JUSTIFICATION		
	----------→	EVALUATED_WETLAND	----------→ EVAL_WETLAND_BIOLOGICAL.EVALUATED_WETLAND_ID = EVALUATED_WETLAND.OGF_ID	EVAL_WETLAND_BIOLOGICAL
			----------→ EVAL_WETLAND_HYDROLOGICAL.EVALUATED_WETLAND_ID = EVALUATED_WETLAND.OGF_ID	EVAL_WETLAND_HYDROLOGICAL
			----------→ EVAL_WETLAND_SOCIAL.EVALUATED_WETLAND_ID = EVALUATED_WETLAND.OGF_ID	EVAL_WETLAND_SOCIAL
			----------→ EVAL_WETLAND_SPECIAL.EVALUATED_WETLAND_ID = EVALUATED_WETLAND.OGF_ID	EVAL_WETLAND_SPECIAL
	←---------- WETLAND_FT.LOCATION_ACCURACY = LOCATION_ACCURACY_LIST.LOCATION_ACCURACY	LOCATION_ACCURACY_LIST		
	←---------- WETLAND_FT.SOURCE_NAME = SOURCE_LIST.SOURCE_NAME	SOURCE_LIST		