

Land Information Ontario Data Description

Aquatic Resource Area Summary

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LIO Class Description

Aquatic Resource Area Summary

Class Short Name: ARASUMRY

Version Number: 1

Class Description:

Description of the physical characteristics and fish species of lakes rivers or streams and links to more detailed external fish survey information for that waterbody. This attribute information for ARA Summary is contained in a consolidation class that does not have its own geographic representation. Instead ARA Summary is represented spatially by existing classes, the Water Segment (Poly and Line) data classes, via a unique ID. Since spatial information does not exist for this ARA class, edits can only be made to attribute information. The information in ARA Summary is based on a combination of many sources, including ARA Survey Point information. A body of water should have one record containing ARA summary information and may have zero to many ARA Survey Point data locations, the data of which may have been rolled up into the ARA Summary Information.

Abstract Class Name: AGGREGATE

Abstract Class

Description:

One or more spatial objects are collectively associated to a single record stored in a separate, but related table. In return, the tabular record must be associated at a minimum to one spatial object. Example: A number of recreational trail line segments may be known collectively as the "Voyageur Trail" in the Trail table.

Metadata URL:

Tables in LIO Class:

Aquatic Resource Area Summary

ARA_SUMMARY

Description of the physical characteristics and fish species of lakes rivers or streams and links to more detailed external fish survey information for that waterbody. This attribute information for ARA is contained in a non spatial class that does not have its own geographic representation. Instead it is represented geographically by an existing class, the Water Polygon Segment data class, via a unique ID. Since spatial information does not exist for this ARA class, edits can only be made to attribute information. The information in ARA Summary Polygon is based on a combination of many sources, including ARA Survey Point information. A body of water should have one record containing ARA summary information and may have zero to many ARA Survey Point data locations, the data of which may have been rolled up into the ARA Summary Polygon data

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.				
ARA_IDENT	VARCHAR2 (11)	Yes	ARA_IDENT	
A unique identifier for an aquatic resource area, composed of a user-defined combination of letters and numbers. The letters can represent the name of a waterbody, township, county, location or some other identifier which will help users identify waterbody segments that belong to one aquatic resource area (e.g. PTBO-001). It is suggested that district staff create ARA Identifiers in a manner similar to the way they were created in the original ARA layer.				
WATERBODY_TYPE	VARCHAR2 (30)	No	WBY_TYPE	'Combination', 'Drain', 'Lake or Pond', 'Stream or River', 'Wetland' (See ARA_WATERBODY_TYPE_LIST table)
The type of waterbody. Possible entries include: Lake/Pond, Stream/River, Drain, Wetland or Combination.				
WATERBODY_TYPE_COMBINATION	VARCHAR2 (200)	No	WBY_TYPE_C	
More information about the combination waterbody type, if the "Combination" option is chosen for the "Waterbody Type" attribute in the ARA Summary Table.				
WATERBODY_LID	VARCHAR2 (13)	No	WBY_LID	
A location code that uniquely identifies a waterbody, based on the visual centroid of the waterbody or the mouth of a river as represented in the Corporate Waterbody Table. The Waterbody LID is a manually derived identifier based on the UTM coordinates (datum NAD27), stored in the following format: NNNNNN(N)NNNNN(N) e.g. 17290052000 whereas ? UTM Zone: 2 digits (e.g. 17) UTM Easting: Rounded to the first 4 digits (e.g. 2900) UTM Northing: Rounded to the first 5 digits (e.g. 52000) --- Adding an additional digit to the UTM Easting and Northing (N) is optional, and is used to maintain identifier uniqueness. --- The Waterbody LID should not be confused with actual coordinates. This attribute is required for linking ARA data to other external databases such as FISHNETv3 and the Fish Stocking Information System (FSIS).				
CORPORATE_WATERBODY_NAME	VARCHAR2 (100)	No	WBY_NAME	

Corporate Waterbody Table name for a waterbody. This name may either be the same as the official name or local name(s) as assigned by MNR District staff. This name along with the Waterbody LID uniquely identifies a waterbody in Ontario for MNR Fisheries applications. Common descriptors (e.g. Lake, River, Creek, etc) are abbreviated and always placed at the end of the name. If the official name begins with a descriptor, the descriptor is still placed at

the end but with a comma after the root name (ie. Lake Ontario is written as Ontario, L.). The custodian for this field lies with Inventory, Monitoring and Assessment Section (SIB).

OFFICIAL_WATERBODY_NAME	VARCHAR2 No (100)	OFF_NAME
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The official name for the waterbody if it exists which is the name formally laid down, sanctioned, or imposed by a governing body.

WATERBODY_ALIAS_NAME1	VARCHAR2 No (100)	WBY_ALIAS1
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First alternate name for a waterbody or river/stream (e.g. local name, name of main river, name of tributary). Helpful for identifying aquatic resource areas that may not have Official names, or if waterbodies are officially known as "Not Listed". Also useful for identifying stream segments that belong to a larger stream/river system.

WATERBODY_ALIAS_NAME2	VARCHAR2 No (100)	WBY_ALIAS2
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Second alternate name for a waterbody or river/stream (e.g. local name, name of main river, name of tributary). Helpful for identifying aquatic resource areas that may not have Official names, or if waterbodies are officially known as "Not Listed". Also useful for identifying stream segments that belong to a larger stream/river system.

FISHERIES_MANAGEMENT_ZONE_ID	NUMBER Yes (2,0)	FMZ_ID
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A number that identifies a Fish Management Zone. A zone can consist of one area or multiple geographically separated areas.

THERMAL_REGIME	VARCHAR2 No (10)	REGIME	'Cold', 'Cool', 'Warm', 'Unknown'
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Thermal regime describes the typical summer water temperature of a waterbody. Waterbodies may be classified as cold, cool or warm. Thermal regime is determined using measures of water temperature and/or inferred from knowledge of the existing fish or invertebrate community present. Where thermal regime classification indicators overlap, the local District biologist will have to use their professional judgment. Typically, the most thermally sensitive regime will apply. For example, in a deep oligotrophic lake where the fish community composition is lake whitefish, walleye and northern pike, the thermal regime would be classified as cold water. However, for a shallow mesotrophic or eutrophic lake where stream resident brook trout may be found in the lake near stream mouths in certain seasons of the year, the lake should be classified as either coolwater or warmwater dependent on summer water temperature and/or resident fish community. An aquatic resource area is classified as "unknown" if there is no temperature information or data is not sufficient to classify as either cold, cool, or warm. Lentic (lakes, reservoirs, ponds, etc.) thermal regime can be classified based on fish community (adapted from Ryder and Edwards 1985): · Coldwater - an assemblage of fishes in north-temperate oligotrophic lakes, dominated by taxon swarms of salmonines and coregonines. Lake trout, brook trout and lake whitefish are species typically found in cold water lakes. · Coolwater - an assemblage of fishes-of north-temperate mesotrophic lakes dominated by percids and esocids. Walleye and northern pike are species typically found in cool water communities. · Warmwater - an assemblage of fishes in north-temperate eutrophic lakes dominated by centrarchids (largemouth bass), cyprinids (carp) and ictalurids (bullheads) Lotic (rivers, streams, creeks, etc.) thermal regime can be classified based on water temperature, fish community or invertebrate community: 1. Mean summer surface water temperature (Coker et al. 2001): · Coldwater - <19 °C · Coolwater - 19 °C -25 °C · Warmwater - > 25 °C 2. Fish community (adapted from Coker et al. 2001): · Cold water - an assemblage of fishes characterized by the presence of salmon, trout and sculpin species. Slimy sculpin, brook trout and American brook lamprey are the best indicator species of a cold water environment. · Coolwater - an assemblage of fishes often characterized by percids (e.g. walleye, Iowa darter), esocids (northern pike). · Warmwater - an assemblage of fishes often characterized by largemouth bass, bluegill, carp, bullheads, or bowfin 3. Invertebrate community (adapted from Kilgour and Barton 1999): · Characteristic cold water benthic invertebrates include mayflies (Ephemeroptera - eg. Siphonuridae), stoneflies (Plecoptera - eg. Leuctridae, Perlidae) and caddisflies (Trichoptera - eg. Psychomyidae, Phryganeidae). · Warm water communities are typically dominated by snails (eg. Planorbidae, Valvatidae), glossiphoniids (leeches) and planariids (flatworms)

THERMAL_REGIME_REASON	VARCHAR2 No (30)	REGIME_R	'Water Temperature', 'Invertebrate Species Present', 'Fish Species Present', 'Interpolation', 'Combination'
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The rationale for the ARA Thermal Regime. It may be determined by: water temperation, invertebrate species present, fish species present, interpolation or a combination of factors.

FISH_SPECIES_SUMMARY	VARCHAR2 (2000)	No	SPECIES	
A concatenation of all fish species common names found in the aquatic resource area, derived through the ARA Survey or Summary Species tables. This attribute would be queried to select aquatic resource areas by species. The ARA Survey or Summary Species tables could then be used for further information pertaining to each species. An example of how information in this field may look is: "American brook lamprey, American shad, Aurora trout, Brown trout, Lake sturgeon, Longnose gar, Rainbow trout"				
SURFACE_AREA	NUMBER (12,4)	No	SURF_AREA	
A measure of the bounded region of the surface of a lake, excluding islands of a lake/reservoir or pond. Measure may be defined from an existing survey or derived using GIS. Measured in hectares.				
MAXIMUM_DEPTH	NUMBER (6,2)	No	MAX_DEPTH	
An observed value that identifies the maximum vertical distance between the lake surface at a period of high-water and the lake bed. The maximum depth is recorded only for lake environments. Measured in units of meters.				
MEAN_DEPTH	NUMBER (6,2)	No	MEAN_DEPTH	
The average vertical distance between the lake surface and the lake bed. It is calculated by dividing the volume of the lake by the area of the lake. Recorded only for lake environments. Measured in units of meters.				
SECCHI_DEPTH	NUMBER (5,1)	No	SECCHI_DEP	
The mean depth at which a weighted 20 cm disk with alternate black and white quadrants disappears from view when lowered into the water of a lake on the shaded side of a boat and the depth where it reappears when being raised, measured in meters (m). This information is recorded for lakes only.				
CONDUCTIVITY	NUMBER (6,1)	No	CONDUCTIV	
Conductivity is the ability of an aqueous solution to carry an electric current. The value entered should be the most recent point in time single reading, or if more than one sample a mean of all samples collected 2 m below the surface. If more than one sample has been taken within a segment, the mean should be calculated based on samples taken at a pproximately the same time (i.e. calculate the mean conductivity readings taken at approximately the same time from three basins of a lake) during one year. Measured in units of mhos/sec at 25 C.				
MORPHOEDAPHIC_INDEX	NUMBER (10,2)	No	MORPH_INDX	
Measurement of the trophic state of a lake based on the square root of the ratio of total dissolved solids (or conductivity) and mean depth. Morphoedaphic Index is also used to estimate fish production. This information should be recorded for lakes only. This information is used to calculate potential yield. The index can be used to estimat e relative yield to provide a good first order indicator of over-exploitation.				
AT_DEVELOPMENT_CAPACITY_IND	VARCHAR2 (3)	No	AT_CAP	'Yes', 'No
Lakes or basins of lakes that cannot support any more shoreline development based on either the MOEE Provincial Water Quality Objectives (PWQO) for phosphorous, the OMNR dissolved oxygen criterion for the protection of lake trout habitat, or other criteria (e.g. shoreline capability, recreational boating, etc.) set by the local planning authority. A lake (or basin of a lake) is at capacity if: - It is a designated lake trout lake where the current measured Mean Volume Weighted Hypolimnetic Dissolved Oxygen (MVWHDO) level is below the OMNR criterion of 7mg/L - Modeling/analysis indicates that any additional proposed development will degrade the water quality of the lake below the OMNR criterion of 7mg/L - Phosphorous levels are above the MOEE PWQO - The planning authority has designated the lake at capacity for planning purposes. Rationale: Useful for identifying lakes which are at Development Capacity. For lakes at development capacity, OMNR needs to ensure that all crown land dispositions, and any development applications received for these waterbodies will not result in the degradation of water quality.				
AT_DEVELOPMENT_CAPACITY_REASON	VARCHAR2 (30)	No	AT_CAP_R	'MVWHDO Less Than 7mg per L', 'MVWHDO Low', 'Phosphorous High', 'Planning

The reason a lakes or basins of lakes is declared at development capacity from the following options: A lake (or

basin of a lake) is defined as being at capacity using the following measures: "MVWHDO less than 7mg/L" It is a designated lake trout lake where the current measured Mean Volume Weighted Hypolimnetic Dissolved Oxygen (MVWHDO) level is below the MNR criterion of 7mg/L "MVWHDO Low" Estimate derived by modeling or analysis which indicates that any additional proposed development will degrade the water quality of the lake below the MNR criterion of 7mg/L "Phosphorous High" Phosphorous levels are above the MOE Provincial Water Quality Objectives. "Planning" The planning authority has designated the lake at capacity for planning purposes.

COLDWATER_REHAB_POTENTIAL_IND	VARCHAR2 No (3)	COLD_REHAB 'Yes','No'
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Indication of whether an aquatic resource area has a reasonable potential of being rehabilitated to a coldwater system. Segments which historically contained coldwater fish species, but due to a deterioration in habitat quality, the stream temperature has increased and the stream no longer contains coldwater species.

COMMENTS	VARCHAR2 No (2000)	COMMENTS
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Unstructured description, additional notes, or further explanation.

SPLIT_FEATURE_IND	VARCHAR2 No (3)	SPLIT_FEAT 'Yes', 'No'
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Indicates whether a feature has additional, more detailed, geometry associated with it that is not stored or edited in NRVIS, but within individual MNR Districts. Users interested in a feature indicated to have more detailed geometry should contact the GSO of the district they are working with. This attribute was created for instances when the geometry of a large lake or river needs to be split to accurately represent aquatic values. Ex. when a lake has more than one basin and each basin has a different thermal regime.

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

ARA_FISHERY_SEGMENT_USE_LIST

Look up table for possible uses of aquatic resource areas.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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USE_DESCR	VARCHAR2 (35)	Yes	USE_DESCR	
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Uses of the aquatic resource area.

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

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

ARA_MANAGEMENT_OBJECTIVE_LIST

Look up table for information on fisheries management objectives.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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MANAGEMENT_OBJECTIVE	VARCHAR2 (100)	Yes	MGMT_OBJ	
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The fisheries management objective defines how a species is managed in a lake. This provides a designation for how MNR is managing a species in a waterbody. This field should be viewed along with reproduction status (in the Reproduction table) and stocking objective (in the Stocking Objective table). N1 Native population, self sustaining N2 Native population augmented with stocking N3 Native population, put-grow -take fishery N4 Native population, ongoing rehabilitation N5 Native population, deferred restoration N6 Native population remnant or extinct, alternate species management I1 Introduced population, self sustaining I2 Introduced population, augmented with stocking I3 Introduced population, put-grow-take fishery I4 Introduced population, ongoing rehabilitation I5 Introduced population, deferred restoration I6 Introduced

population remnant or extinct, alternate species management 17 Introduced population, current management objective undefined U1Unknown population, current management objective undefined

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

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

ARA_MASTER_FISH_LIST

Look up table for list of fish species in Ontario.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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COMMON_NAME	VARCHAR2 (75)	Yes	COMMON_NAM
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The common name of a fish species according to the MNR Master Fish Species Code Numbers and Names List.

COMMON_NAME_FR	VARCHAR2 (75)	No	COM_NAME_F
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The French equivalent of the (English) Common Name e.g. "truite brune" for "Brown Trout".

COMMON_NAME_FR_DEF	VARCHAR2 (75)	No	COM_NM_FRD
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French common names prefixed by its definite article (le, la etc.) e.g. "carpe noire" (Black Carp) becomes "la carpe noire".

SCIENTIFIC_NAME	VARCHAR2 (100)	Yes	SCIENTIFIC
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The scientific name of a fish species according to the MNR Master Fish Species Code Numbers and Names List.

TAXON_GROUP_LOWER	VARCHAR2 (75)	Yes	TX_GRP_LWR
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The lower taxonomic grouping of a species to differentiate crustaceans, bivalves, gastropods, ray-finned fishes, lampreys etc. Values are used for survey data filtering purposes.

MNR_FISH_CODE	NUMBER (4,0)	No	FISH_CODE
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The code number of a fish species according to the OMNR Master Fish Species Code Numbers and Names List.

SPECIES_ELEMENT_ID	NUMBER (13,0)	No	ELEMENT_ID
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A business value that uniquely identifies a specific species, or an assemblage of species such as vegetation communities and wildlife concentration areas according to a recognized standard within Natural Heritage Information Centre (NHIC) databases.

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

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

ARA_SPECIES_MGMT_OBJECTIVE

Information about the management objectives for fish species in the aquatic resource area.

Column Name	Column Type	Mandatory	Short Name	Valid Values
ARA_SUMMARY_SPECIES_ID	NUMBER (13,0)	Yes	SUMMARY_ID	
A unique number for each aquatic resource area. System Generated.				
MANAGEMENT_OBJECTIVE	VARCHAR2 (100)	Yes	MGMT_OBJ	'I1 Introduced population, self sustaining', 'I2 Introduced population, augmented with stocking', 'I3 Introduced population, put-grow-take fishery', 'I4 Introduced population, ongoing rehabilitation', 'I5 Introduced population, deferred restoration', 'I6 Introduced population remnant or extinct, alternate species management', ... (See ARA_MANAGEMENT_OBJECTIVE_LIST table)
The fisheries management objective defines how a species is managed in a lake. This provides a designation for how MNR is managing a species in a waterbody. This field should be viewed along with reproduction status (in the Reproduction table) and stocking objective (in the Stocking Objective table). N1 Native population, self sustaining N2 Native population augmented with stocking N3 Native population, put-grow -take fishery N4 Native population, ongoing rehabilitation N5 Native population, deferred restoration N6 Native population remnant or extinct, alternate species management I1 Introduced population, self sustaining I2 Introduced population, augmented with stocking I3 Introduced population, put-grow-take fishery I4 Introduced population, ongoing rehabilitation I5 Introduced population, deferred restoration I6 Introduced population remnant or extinct, alternate species management I7 Introduced population, current management objective undefined U1Unknown population, current management objective undefined				
MANAGEMENT_OBJECTIVE_YEAR	NUMBER (4,0)	Yes	MGMT_YEAR	
Indicates year that the present fisheries management objective of the waterbody was established.				
COMMENTS	VARCHAR2 (250)	No	COMMENTS	
General comment about the management objective of a fish population.				
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	
Date/time the record was created or last modified in the source database.				

ARA_SPECIES_REPRODUCTION

Information about the reproduction status of fish species in the aquatic resource area.

Column Name	Column Type	Mandatory	Short Name	Valid Values
ARA_SUMMARY_SPECIES_ID	NUMBER (13,0)	Yes	SUMMARY_ID	
A unique number for each aquatic resource area. System Generated.				
REPRODUCTION_STATUS	VARCHAR2 (40)	Yes	REP_STATUS	'Self-sustaining', 'Partly self-sustaining', 'Minimal', 'No Reproduction - Remnant or Extinct', 'Unknown'

The reproductive status of a fish population in a lake defined by self-sustaining, partly self-sustaining, minimal, no Reproduction - Remnant/Extinct or Unknown. This attribute useful for identifying the status of a fish population in a lake and for tracking changes in population

distribution.

REPRODUCTION_YEAR	NUMBER (4,0)	Yes	REP_YEAR
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The first year the reproduction status of a species in a waterbody applies. Where populations have always been self sustaining users should enter "0000".

COMMENTS	VARCHAR2 (250)	No	COMMENTS
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General comment about the reproduction status of a fish population.

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

ARA_SPECIES_STOCKING_OBJECTIVE

Information about the stocking objectives for fish species in the aquatic resource area.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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ARA_SUMMARY_SPECIES_ID	NUMBER (13,0)	Yes	SUMMARY_ID	
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A unique number for each aquatic resource area. System Generated.

STOCKING_OBJECTIVE	VARCHAR2 (25)	Yes	STOCK_OBJ	'None', 'Rehabilitation', 'Put-grow-take', 'Supplemental', 'Species Introduction'
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A descriptor of the type of stocking that is occurring reflecting the current management of a species in a lake. This attribute is used to assist with fisheries management planning and with making management decisions.

STOCKING_OBJECTIVE_YEAR	NUMBER (4,0)	Yes	STOCK_YEAR
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The first year the stocking objective for a species in a waterbody applies. This will allow tracking of objectives through time.

COMMENTS	VARCHAR2 (250)	No	COMMENTS
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General comments about the stocking objective for a fish population.

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

ARA_SUMMARY_RELATED_FEATURE

Column Name	Column Type	Mandatory	Short Name	Valid Values
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ARA_SUMMARY_ID	NUMBER (13,0)	Yes	ARA_ID	
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A unique number for each aquatic resource area. System Generated.

RELATED_FEATURE_ID	NUMBER (13,0)	Yes	SEGMENT_ID	
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The number that uniquely identifies the related segment that corresponds to the location where an aquatic resource area survey or summary point is located. Primary key for related layer. Provides the necessary means to join ARA data to the FMF Object ID a related layer. Currently an object in the Water Polygon Segment or Water Line Segment, if required. This potential join is not mandatory and is not permanent.

RELATED_CLASS_SHORT_NAME	VARCHAR2	Yes	CLASS_NAME
	(8)		

Identifies the class for a record in the ARA SUMMARY WATER INTERSECTION table as being from Water Polygon Segment or Water Line Segment.

SPATIAL_VERIFICATION_FLG	VARCHAR2	Yes	VERIF_FLG	'History', 'Verified', 'Unverified', 'Questionable', 'Removed'
	(15)			

An indication as to whether the spatial information associated with an ARA has been verified as accurate. When a water feature that is associated with an ARA is updated to the point that its FMF object id is changed, the link between ARA and Water will be lost. The spatial information will automatically be rejoined to a feature in the closest proximity to the previous feature and this field for that newly assigned feature will be set to *unverified*.

SPATIAL_EXTENT	VARCHAR2	No	SP_EXTENT
	(200)		

Coordinates for the spatial extent of the related features that have been flagged as removed.

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

ARA_SUMMARY_SPECIES

Information related to each fish species associated with each ARA summary. It is also used to generate the "Fish Species Summary" attribute in the ARA Summary table.

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

A unique numeric provincial identifier assigned to each object.

ARA_SUMMARY_ID	NUMBER	Yes	ARA_ID
	(13,0)		

A unique number for each aquatic resource area. System Generated.

COMMON_NAME	VARCHAR2	Yes	COM_NAME	'Abbreviate Pondsnail', 'Alewife', 'Alosa sp.', 'Alpine Peaclam', 'Amazon Sailfin Catfish', 'Ameiurus sp.', ... (See ARA_MASTER_FISH_LIST table)
	(75)			

The common name of a fish species according to the MNR Master Fish Species Code Numbers and Names List.

SPECIES_PRESENCE_IND	VARCHAR2	Yes	SP_PRE	'Yes', 'No', 'Unknown'
	(10)			

Indicator that identifies whether or not a species occurs in the ARA. The default is "Yes" indicating that based on our existing knowledge the species is present in the ARA (including remnant populations). "No" means the species was present historically but is no longer present (i.e. extirpated or no longer stocked) in the ARA. Default: Yes

FIRST_OBSERVATION_DATE	DATE	No	FIRST_OBS
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The date when a species was first observed, entered as yyyy/mm/dd. (ex. 2007/05/31)

FIRST_OBSERVATION_DATE_FLG	VARCHAR2	No	F_OBS_FLG	'Actual', 'Estimated'
	(10)			

Indicator of whether the date in the Species First Observation Date Field is the actual observation date or estimated observation date. Options include: "Actual" or "Estimated".

FIRST_OBS_ORIG_DATA_SRC	VARCHAR2 No (75)	F_OBS_SRC	'Scientific Collectors Permit Database', 'FISHNET2', 'FISHNET3', 'Aquatic Habitat Inventory', 'HABPROGS - FWIS', 'Department of Fisheries and Oceans Research DB', 'Department of Fisheries and Oceans Drains DB', 'Canadian Museum of Nature', 'Recreational Fishing Survey of Canada Database', 'Provincial Lake Trout Lakes at Development Capacity Database', 'Provincial Walleye Database', 'Provincial Brook Trout Database', 'Other', 'None
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The name of the original source dataset that contains the first species record for a waterbody. Examples include: Scientific Collectors Permit Database, FISHNET2, Aquatic Habitat Inventory etc.

FIRST_OBSERVATION_DESCR	VARCHAR2 No (250)	F_OBS_DESC
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This attribute should be filled in if the option "Other" or "None" was selected from the "Species First Observation Original Data Source" attribute. Where "Other" is selected the description should name the database and organization that owns the database that contains the first species record for a waterbody. Where "None" is selected this field may be used to describe why the ARA is not included in an alternate source database. For example, the record may be a result of an informal non-standard sampling event or an observation (i.e. by a conservation officer), where the ARA is the only repository for this data.

LAST_OBSERVATION_DATE	DATE No	L_OBS_DATE
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The date when a species was last observed, entered as yyyy/mm/dd. (ex. 2007/05/31)

LAST_OBSERVATION_DATE_FLG	VARCHAR2 No (10)	L_OBS_FLG	'Actual', 'Estimated
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Indicator of whether the date in the Last Observation Date Field is the actual observation date or estimated observation date. Options include: "Actual" or "Estimated".

LAST_OBSERVATION_DESCR	VARCHAR2 No (250)	L_OBS_DESC
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This attribute should be filled in if the option "Other" or "None" was selected from the "Species Last Observation Original Data Source" attribute. Where "Other" is selected the description should name the database and organization that owns the database that contains the first species record for a waterbody. Where "None" is selected this field may be used to describe why the ARA is not included in an alternate source database. For example, the record may be a result of an informal non-standard sampling event or an observation (i.e. by a conservation officer), where the ARA is the only repository for this data.

LAST_OBS_ORIG_DATA_SRC	VARCHAR2 No (75)	L_OBS_SRC	'Scientific Collectors Permit Database', 'FISHNET2', 'FISHNET3', 'Aquatic Habitat Inventory', 'HABPROGS - FWIS', 'Department of Fisheries and Oceans Research DB', 'Department of Fisheries and Oceans Drains DB', 'Canadian Museum of Nature', 'Recreational
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The name of the original source dataset that contains the last species record for a waterbody. Examples include: Scientific Collectors Permit Database, FISHNET2, Aquatic Habitat Inventory etc.

STOCK_ORIGIN	VARCHAR2 No (10)	STOCK_ORIG	'Native', 'Introduced', 'Unknown'
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The origin of a fish population in a lake defined as native, introduced or unknown. This attribute is useful for setting fisheries management objectives and making management decisions.

STOCK_ORIGIN_COMMENT	VARCHAR2 No (100)	STOCK_COMM
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Additional comments about the stock origin of a given species.

COMMENTS	VARCHAR2 No (2000)	COMMENTS
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Unstructured description, additional notes, or further explanation.

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

ARA_USE

Column Name	Column Type	Mandatory	Short Name	Valid Values
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ARA_SUMMARY_ID	NUMBER (13,0)	Yes	ARA_ID
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A unique number for each aquatic resource area. System Generated.

USE_DESCR	VARCHAR2 (35)	Yes	USE_DESCR	'Aquaculture', 'Baitfish', 'Canoe Route', 'Closed For Research', 'Commercial Fishery', 'Fish Viewing', ... (See ARA_FISHERY_SEGMENT_USE_LIST table)
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Uses of the aquatic resource area.

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

ARA_WATERBODY_TYPE_LIST

Look up table of possible waterbody types.

Column Name	Column Type	Mandatory	Short Name	Valid Values
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WATERBODY_TYPE	VARCHAR2 (30)	Yes	WBV_TYPE
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The type of waterbody. Possible entries include: Lake or Pond, Stream or River, Drain, Wetland, Combination.

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

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

LIO Lookup Table Values:

ARA_FISHERY_SEGMENT_USE_LIST

USE DESCR	EXPIRY DATETIME
Aquaculture	
Baitfish	
Canoe Route	
Closed For Research	
Commercial Fishery	
Fish Viewing	
Hydro Power	
Mining	
Native Subsistence Fishery	
Recreation	
Recreational Fishery	
Remote Tourism	
Snowmobile Trail	
Tourism Based Fishery	
Tourism Lake	
Water Taking	
Winter Road	

LIO Lookup Table Values:

ARA_MANAGEMENT_OBJECTIVE_LIST

MANAGEMENT OBJECTIVE	EXPIRY DATETIME
I1 Introduced population, self sustaining	
I2 Introduced population, augmented with stocking	
I3 Introduced population, put-grow-take fishery	
I4 Introduced population, ongoing rehabilitation	
I5 Introduced population, deferred restoration	
I6 Introduced population remnant or extinct, alternate species management	
I7 Introduced population, current management objective undefined	
N1 Native population, self sustaining	
N2 Native population augmented with stocking	
N3 Native population, put-grow-take fishery	
N4 Native population, ongoing rehabilitation	
N5 Native population, deferred restoration	
N6 Native population remnant or extinct, alternate species management	
U1 Unknown population origin, self-sustaining	
U2 Unknown population origin, augmented with stocking	
U3 Unknown population origin, put-grow-take fishery	
U4 Unknown population origin, ongoing rehabilitation	
U5 Unknown population origin, deferred restoration	
U6 Unknown population origin, remnant or extinct, alternate species management	
U7 Unknown population origin, current management objective undefined	

LIO Lookup Table Values:
ARA_MASTER_FISH_LIST

COMMON NAME	COMMON NAME FR	COMMON NAME FR DEF	SCIENTIFIC NAME	TAXON GROUP LOWER	MNR FISH CODE	SPECIES ELEMENT ID	EXPIRY DATETIME
Abbreviate Pondsnaill			Stagnicola apicina	gastropods		188533	
Alewife	gaspureau	le gaspureau	Alosa pseudoharengus	ray-finned fishes	61	180517	
Alosa sp.	Alosa espèce		Alosa sp.	ray-finned fishes	64		
Alpine Peaclam			Pisidium conventus	bivalves		181439	
Amazon Sailfin Catfish	plecostoma del Amazonas	le plecostoma del Amazonas	Pterygoplichthys pardalis	ray-finned fishes	472		
Ameiurus sp.	Ameiurus espèce		Ameiurus sp.	ray-finned fishes	243		
American Brook Lamprey	lamproie de l'est	le lamproie de l'est	Lethenteron appendix	lampreys	11	180501	
American Eel	anguille d'Amérique	l'anguille d'Amérique	Anguilla rostrata	ray-finned fishes	251	180516	
American Shad	alose savoureuse	l'alose savoureuse	Alosa sapidissima	ray-finned fishes	62	180518	
Appalachian Brook crayfish			Cambarus bartonii	crustaceans		180789	
Arctic Char	omble chevalier	l'omble chevalier	Salvelinus alpinus	ray-finned fishes	79	180540	
Arctic Fingernailclam			Sphaerium nitidum	bivalves		181460	
Arctic Grayling	ombre arctique	l'ombre arctique	Thymallus arcticus	ray-finned fishes	111	180543	
Arctic Pondsnaill			Stagnicola arctica	gastropods		181611	
Ash Gyro			Gyraulus parvus	gastropods		181622	
Asian Clam			Corbicula fluminea	bivalves		1010792	
Atlantic Salmon x Brown Trout	truite brune x saumon Atlantique		Salmo trutta x Salmo salar	ray-finned fishes	421		
Atlantic Salmon	saumon Atlantique	le saumon Atlantique	Salmo salar	ray-finned fishes	77	17083	
Aurora Trout	omble de fontaine aurora	l'omble de fontaine aurora	Salvelinus fontinalis timagamiensis	ray-finned fishes	83	182557	
Baitfish	poisson appât	les poisson appât	Baitfish	ray-finned fishes	997		
Banded Killifish	fondule barré	le fondule barré	Fundulus diaphanus	ray-finned fishes	261	180616	
Banded			Viviparus	gastropods		181590	

Mysterysnail			georgianus				
Banded Physa			Physella vinosa	gastropods		188550	
Big-eared Radix			Radix auricularia	gastropods		16780	
Bighead Carp	carpe à grosse tête	la carpe à grosse tête	Hypophthalmichthys nobilis	ray-finned fishes	632		
Bigmouth Buffalo	buffalo à grande bouche	le buffalo à grande bouche	Ictiobus cyprinellus	ray-finned fishes	166	180595	
Black Buffalo	buffalo noir	le buffalo noir	Ictiobus niger	ray-finned fishes	174	180596	
Black Bullhead x Brown Bullhead	barbotte noire x barbotte brune		Ameiurus melas x Ameiurus nebulosus	ray-finned fishes	651		
Black Bullhead	barbotte noire	la barbotte noire	Ameiurus melas	ray-finned fishes	231	180611	
Black Carp	carpe noire	la carpe noire	Mylopharyngodon piceus	ray-finned fishes	633		
Black Crappie	marigane noire	la marigane noire	Pomoxis nigromaculatus	ray-finned fishes	319	180637	
Black Redhorse	chevalier noir	le chevalier noir	Moxostoma duquesnei	ray-finned fishes	169	180600	
Black Sandshell			Ligumia recta	bivalves		181415	
Blackchin Shiner	menton noir	le menton noir	Notropis heterodon	ray-finned fishes	199	180566	
Blackfin Cisco	cisco à nageoires noires	le cisco à nageoires noires	Coregonus nigripinnis	ray-finned fishes	97	180527	
Blacknose Dace x Creek Chub	naseux noir x mulet à cornes		Rhinichthys atratulus x Semotilus atromaculatus	ray-finned fishes	621		
Blacknose Dace	naseux noir	le naseux noir	Rhinichthys atratulus	ray-finned fishes	210	180577	
Blacknose Shiner	museau noir	le museau noir	Notropis heterolepis	ray-finned fishes	200	180567	
Blackside Darter	dard noir	le dard noir	Percina maculata	ray-finned fishes	344	180649	
Blackstripe Topminnow	fondule rayé noir	le fondule rayé noir	Fundulus notatus	ray-finned fishes	262	180617	
Bloater	cisco de fumage	le cisco de fumage	Coregonus hoyi	ray-finned fishes	94	180524	
Blueback Herring	alose d'été	l'alose d'été	Alosa aestivalis	ray-finned fishes	65		
Bluegill	crapet arlequin	le crapet arlequin	Lepomis macrochirus	ray-finned fishes	314	180632	
Bluntnose Minnow	ventre-pourri	le ventre-pourri	Pimephales notatus	ray-finned fishes	208	180575	
Boreal Fossaria			Galba galbana	gastropods		181606	
Boreal Marstonia			Marstonia lustrica	gastropods		181596	

Bowfin	poisson-castor	le poisson-castor	Amia calva	ray-finned fishes	51	180515	
Bowfins	poissons-castors	les poissons-castors	AMIIDAE	ray-finned fishes	50		
Brassy Minnow	méné laiton	le méné laiton	Hybognathus hankinsoni	ray-finned fishes	189	180557	
Bridle Shiner	méné d'herbe	le méné d'herbe	Notropis bifrenatus	ray-finned fishes	197	180564	
Brindled Madtom	chat-fou tacheté	le chat-fou tacheté	Noturus miurus	ray-finned fishes	237	180608	
Brook Silverside	crayon d'argent	le crayon d'argent	Labidesthes sicculus	ray-finned fishes	361	180620	
Brook Stickleback	épinoche à cinq épines	l'épinoche à cinq épines	Culaea inconstans	ray-finned fishes	281	180622	
Brook Trout	omble de fontaine	l'omble de fontaine	Salvelinus fontinalis	ray-finned fishes	80	180541	
Brown Bullhead	barbotte brune	la barbotte brune	Ameiurus nebulosus	ray-finned fishes	233	180613	
Brown Trout	truite brune	la truite brune	Salmo trutta	ray-finned fishes	78	180539	
Buffalo Pebblesnail			Gillia altilis	gastropods		1007348	
Bugle Sprite			Micromenetus dilatatus	gastropods		1004391	
Burbot	lotte	la lotte	Lota lota	ray-finned fishes	271	180615	
CATOSTOMIDAE hybrids	catostome hybrides		CATOSTOMIDAE hybrids	ray-finned fishes	550		
CENTRARCHIDAE hybrids	crapet hybrides		CENTRARCHIDAE hybrids	ray-finned fishes	700		
COREGONINAE hybrids	corégone hybrides		COREGONINAE hybrids	ray-finned fishes	450		
COTTIDAE hybrids	chabot hybrides		COTTIDAE hybrids	ray-finned fishes	800		
CYPRINIDAE hybrids	cyprins hybrides		CYPRINIDAE hybrids	ray-finned fishes	600		
Calabash Pondsnaill			Stagnicola walkariana	gastropods		188540	
Canadian Dusksnail			Lyogyrus walkeri	gastropods		181593	
Capacious Manitoba Ramshorn			Planorbella corpulenta corpulenta	gastropods		181629	
Carps and Minnows	carpes et cyprins	les carpes et cyprins	CYPRINIDAE	ray-finned fishes	180		
Catostomus sp.	Catostomus espèce		Catostomus sp.	ray-finned fishes	176		
Central Mudminnow	ombre de vase	l'ombre de vase	Umbra limi	ray-finned fishes	141	180546	

Central Stoneroller	roule-caillou	le roule-caillou	Campostoma anomalum	ray-finned fishes	216	180550	
Chain Pickerel	brochet maillé	le brochet maillé	Esox niger	ray-finned fishes	135	1004422	
Channel Catfish	barbue de rivière	la barbue de rivière	Ictalurus punctatus	ray-finned fishes	234	180604	
Channel Darter	fouille-roche gris	Fouille-roche gris	Percina copelandi	ray-finned fishes	343	180648	
Characins	characidés	les characidés	CHARACIDAE	ray-finned fishes	460		
Chestnut Lamprey	lamproie brune	le lamproie brune	Ichthyomyzon castaneus	lampreys	16	201323	
Chinese Mysterysnail			Cipangopaludina chinensis	gastropods		181589	
Chinook Salmon	saumon chinook	le saumon chinook	Oncorhynchus tshawytscha	ray-finned fishes	75	180534	
Chrosomus hybrids	Chrosomus hybrides		Chrosomus hybrids	ray-finned fishes	602		
Chrosomus sp.	Chrosomus espèce		Chrosomus sp.	ray-finned fishes	221		
Chub	chevaine	le chevaine	Coregonus sp. (Cisco species other than C. artedi)	ray-finned fishes	103		
Chum Salmon	saumon kéta	le saumon kéta	Oncorhynchus keta	ray-finned fishes	72	180531	
Cichlids	les cichlidés	les cichlidés	CICHLIDAE	ray-finned fishes	480		
Cisco	cisco de lac	le cisco de lac	Coregonus artedi	ray-finned fishes	93	180522	
Cods	morues	les morues	GADIDAE	ray-finned fishes	270		
Coho Salmon x Chinook Salmon	saumon coho x saumon chinook		Oncorhynchus kisutch x Oncorhynchus tshawytscha	ray-finned fishes	423		
Coho Salmon	saumon coho	le saumon coho	Oncorhynchus kisutch	ray-finned fishes	73	180532	
Coldwater Pondsnaill			Stagnicola woodruffi	gastropods		188541	
Common Carp	carpe	la carpe	Cyprinus carpio	ray-finned fishes	186	180555	
Common Shiner x Brassy Minnow	méné à nageoires rouges x méné laiton		Luxilus cornutus x Hybognathus hankinsoni	ray-finned fishes	615		
Common Shiner x Creek Chub	méné à nageoires rouges x mulet à cornes		Luxilus cornutus x Semotilus atromaculatus	ray-finned fishes	612		
Common Shiner x Longnose Dace	méné à nageoires rouges x naseux des		Luxilus cornutus x Rhinichthys cataractae	ray-finned fishes	613		

	rapides						
Common Shiner x River Chub	méné à nageoires rouges x méné baton		Luxilus cornutus x Nocomis micropogon	ray-finned fishes	614		
Common Shiner x Rosyface Shiner	méné à nageoires rouges x tête rose		Luxilus cornutus x Notropis rubellus	ray-finned fishes	611		
Common Shiner	méné à nageoires rouges	le méné à nageoires rouges	Luxilus cornutus	ray-finned fishes	198	180585	
Coregonus sp.	Coregonus espèce		Coregonus sp.	ray-finned fishes	106		
Corpulent Rams- horn			Planorbella corpulenta	gastropods		181628	
Cottus sp.	Cottus espèce		Cottus sp.	ray-finned fishes	385		
Creek Chub x Redside Dace	mulet à cornes x méné long		Semotilus atromaculatus x Clinostomus elongatus	ray-finned fishes	624		
Creek Chub	mulet à cornes	le mulet à cornes	Semotilus atromaculatus	ray-finned fishes	212	180580	
Creek Heelsplitter			Lasmigona compressa	bivalves		181411	
Creeper			Strophitus undulatus	bivalves		181425	
Creeping Ancyliid			Ferrissia rivularis	gastropods		181634	
Cutlip Minnow	bec-de-lièvre	le bec-de- lièvre	Exoglossum maxillingua	ray-finned fishes	188	180556	
Cylindrical Papershell			Anodontoides ferussacianus	bivalves		181396	
Deepwater Sculpin	chabot de profondeur	le chabot de profondeur	Myoxocephalus thompsonii	ray-finned fishes	384	180507	
Deertoe			Truncilla truncata	bivalves		181428	
Delta Hydrobe			Probythinella emarginata	gastropods		181597	
Devil crayfish			Cambarus diogenes	crustaceans		180788	
Digger crayfish			Fallicambarus fodiens	crustaceans		180795	
Disc Gyro			Gyraulus circumstriatus	gastropods		181619	
Drums	tambours	les tambours	SCIAENIDAE	ray-finned fishes	370		
Dusky Ancyliid			Laevapex fuscus	gastropods		181635	
Dusky Fossaria			Galba dalli	gastropods		181604	
ESOCIDAE hybrids	brochet hybrides		ESOCIDAE hybrids	ray-finned fishes	500		

Eastern Elliptio			Elliptio complanata	bivalves		181398	
Eastern Floater			Pyganodon cataracta	bivalves		181464	
Eastern Lampmussel			Lampsilis radiata radiata	bivalves		181407	
Eastern Pondmussel			Ligumia nasuta	bivalves		181414	
Eastern Sand Darter	dard de sable	le dard de sable	Ammocrypta pellucida	ray-finned fishes	335	180645	
Eastern Silvery Minnow	méné d'argent	le méné d'argent	Hybognathus regius	ray-finned fishes	190	180558	
Elephantear			Elliptio crassidens	bivalves		220543	
Elktoe			Alasmidonta marginata	bivalves		181391	
Emerald Shiner	méné émeraude	le méné émeraude	Notropis atherinoides	ray-finned fishes	196	180563	
Esox sp.	Esox espèce	Esox espèce	Esox sp.	ray-finned fishes	134		
Etheostoma sp.	Etheostoma espèce		Etheostoma sp.	ray-finned fishes	348		
European Fingernailclam			Sphaerium corneum	bivalves		181458	
European Flounder	plie d'Europe	le plie d'Europe	Platichthys flesus	ray-finned fishes	396	185398	
European Stream Valvata			Valvata piscinalis	gastropods		181584	
Fallfish	ouitouche	l'ouitouche	Semotilus corporalis	ray-finned fishes	213	180581	
Fantail Darter	dard barré	le dard barré	Etheostoma flabellare	ray-finned fishes	339	180641	
Fat Peaclam			Pisidium rotundatum	bivalves		181452	
Fathead Minnow x Bluntnose Minnow	tête-de-boule x ventre-pourri		Pimephales promelas x Pimephales notatus	ray-finned fishes	620		
Fathead Minnow	tête-de-boule	le tête-de-boule	Pimephales promelas	ray-finned fishes	209	180576	
Fatmucket			Lampsilis siliquoidea	bivalves		181409	
Fawnsfoot			Truncilla donaciformis	bivalves		181427	
File Rams-horn			Planorbella pilsbryi	gastropods		188558	
Finescale Dace x Northern Pearl Dace	ventre citron x mulet perlé du nord		Chrosomus neogaeus x Margariscus nachtriebi	ray-finned fishes	605		
Finescale Dace	ventre citron	le ventre citron	Chrosomus neogaeus	ray-finned fishes	183	180574	
Flathead Catfish	barbue à tête plate	la barbue à tête plate	Pylodictis olivaris	ray-finned fishes	239	180610	

Flexed Gyro			Gyraulus deflectus	gastropods		181621	
Florida Gar	lépisosté de Floride	le lépisosté de Floride	Lepisosteus platyrhinchus	ray-finned fishes	44	180514	
Flutedshell			Lasmigona costata	bivalves		181412	
Fossaria rustica			Galba rustica	gastropods		188528	
Fourhorn Sculpin	chaboisseau à quatre cornes	le chaboisseau à quatre cornes	Myoxocephalus quadricornis	ray-finned fishes	387	180506	
Fourspine Stickleback	épinoche à quatre épines	l'épinoche à quatre épines	Apeltes quadracus	ray-finned fishes	284	180621	
Fragile Ancyloid			Ferrissia fragilis	gastropods		181632	
Fragile Papershell			Leptodea fragilis	bivalves		181413	
Freshwater Drum	malachigan	le malachigan	Aplodinotus grunniens	ray-finned fishes	371	180655	
Freshwater Eels	anguilles	les anguilles	ANGUILLIDAE	ray-finned fishes	250		
Freshwater Tubenose Goby	gobie à nez tubulaire	la gobie à nez tubulaire	Proterorhinus marmoratus	ray-finned fishes	367	185397	
Fringed Valvata			Valvata lewisi	gastropods		188575	
Gars	lépisostés	les lépisostés	LEPISOSTEIDAE	ray-finned fishes	40		
Gatineau Tadpole Snail			Physa gyrina latchfordi	gastropods		200204	
Ghost Shiner	méné fantôme	le méné fantôme	Notropis buchanani	ray-finned fishes	218	180565	
Giant Floater			Pyganodon grandis	bivalves		181465	
Giant Northern Peaclam			Pisidium idahoense	bivalves		181446	
Gizzard Shad	alose à gésier	l'alose à gésier	Dorosoma cepedianum	ray-finned fishes	63	180519	
Glass Physa			Physa skinneri	gastropods		188543	
Globe Siltsnail			Birgella subglobosus	gastropods		181594	
Globular Peaclam			Pisidium ventricosum	bivalves		181456	
Gobies	gobies	les gobies	GOBIIDAE	ray-finned fishes	365		
Golden Redhorse	suceur doré	le suceur doré	Moxostoma erythrurum	ray-finned fishes	170	180601	
Golden Shiner	méné jaune	le méné jaune	Notemigonus crysoleucas	ray-finned fishes	194	180561	
Goldeye	laquaiche aux yeux d'or	la laquaiche aux yeux d'or	Hiodon alosoides	ray-finned fishes	151	180520	
Goldfish x Carp	carassin x carpe		Carassius auratus x Cyprinus carpio	ray-finned fishes	601		

Goldfish	carassin	le carassin	Carassius auratus	ray-finned fishes	181	180551	
Graceful Fossaria			Galba exigua	gastropods		181605	
Grass Carp	carpe de roseau	la carpe de roseau	Ctenopharyngodon idella	ray-finned fishes	219	180554	
Grass Pickerel	brochet vermiculé	le brochet vermiculé	Esox americanus vermiculatus	ray-finned fishes	133	17293	
Gravel Pyrg			Marstonia letsoni	gastropods		194235	
Grayling subfamily	sous-famille des ombres	sous-famille des ombres	THYALLINAE	ray-finned fishes	110		
Greater Redhorse	chevalier jaune	le chevalier jaune	Moxostoma valenciennesi	ray-finned fishes	172	180603	
Green Sunfish x Bluegill	crapet vert x crapet arlequin		Lepomis cyanellus x Lepomis macrochirus	ray-finned fishes	705		
Green Sunfish x Northern Sunfish	crapet vert x crapet à longues oreilles		Lepomis cyanellus x Lepomis peltastes	ray-finned fishes	704		
Green Sunfish x Pumpkinseed	crapet vert x crapet-soleil		Lepomis cyanellus x Lepomis gibbosus	ray-finned fishes	703		
Green Sunfish	crapet vert	le crapet vert	Lepomis cyanellus	ray-finned fishes	312	180628	
Greenside Darter	dard vert	le dard vert	Etheostoma blennioides	ray-finned fishes	336	180638	
Grooved Fingernailclam			Sphaerium simile	bivalves		181462	
Henslow Peaclam			Pisidium henslowanum	bivalves		181445	
Herrings	harengs	les harengs	CLUPEIDAE	ray-finned fishes	60		
Herrington Fingernailclam			Sphaerium occidentale	bivalves		181461	
Hickorynut			Obovaria olivaria	bivalves		181417	
Hornyhead Chub	tête à taches rouges	le tête à taches rouges	Nocomis biguttatus	ray-finned fishes	192	180559	
Humpbacked Peaclam			Pisidium supinum	bivalves		181454	
Hybognathus sp.	Hybognathus espèce		Hybognathus sp.	ray-finned fishes	222		
Ichthyomyzon sp.	Ichthyomyzon espèce		Ichthyomyzon sp.	ray-finned fishes	15	1005285	
Ictiobus hybrids	Ictiobus hybrides		Ictiobus hybrids	ray-finned fishes	551		
Ictiobus sp.	Ictiobus espèce		Ictiobus sp.	ray-finned fishes	178		
Iowa Darter	dard à ventre jaune	le dard à ventre jaune	Etheostoma exile	ray-finned fishes	338	180640	

Jaguar Guapote			Cichlasoma managuense	ray-finned fishes	482	180657	
Johnny Darter x Tesselated Darter	raseux-de-terre noir 'x raseux-de-terre gris		Etheostoma nigrum/Etheostoma olmsted	ray-finned fishes	351		
Johnny Darter	raseux-de-terre noir	le raseux-de-terre noir	Etheostoma nigrum	ray-finned fishes	341	180643	
Kidneyshell			Ptychobranchus fasciolaris	bivalves		181421	
Kiyi	cisco kiyi	le cisco kiyi	Coregonus kiyi	ray-finned fishes	96	180526	
Lake Chub	méné de lac	le méné de lac	Couesius plumbeus	ray-finned fishes	185	180553	
Lake Chubsucker	sucet de lac	le sucet de lac	Erimyzon sucetta	ray-finned fishes	164	180593	
Lake Fingernailclam			Musculium lacustre	bivalves		181431	
Lake Sturgeon	esturgeon jaune	l'esturgeon jaune	Acipenser fulvescens	ray-finned fishes	31	180510	
Lake Superior Ramshorn			Helisoma anceps royalense	gastropods		181624	
Lake Trout	touladi	le touladi	Salvelinus namaycush	ray-finned fishes	81	180542	
Lake Whitefish x Cisco	grand corégone x cisco de lac		Coregonus clupeaformis x Coregonus artedi	ray-finned fishes	451		
Lake Whitefish	grand corégone	le grand corégone	Coregonus clupeaformis	ray-finned fishes	91	180523	
Lampreys	lamproies	les lamproies	PETROMYZONTIDAE	lampreys	10		
Lance Aplexa			Aplexa elongata	gastropods		181615	
Largemouth Bass	achigan à grande bouche	l'achigan à grande bouche	Micropterus salmoides	ray-finned fishes	317	180635	
Least Darter	petit dard	le petit dard	Etheostoma microperca	ray-finned fishes	340	180642	
Lepisosteus sp.	Lepisosteus espèce		Lepisosteus sp.	ray-finned fishes	43		
Lepomis hybrids	Lepomis hybrides		Lepomis hybrids	ray-finned fishes	701		
Lepomis sp.	Lepomis espèce		Lepomis sp.	ray-finned fishes	320		
Lilliput			Toxolasma parvum	bivalves		181426	
Liver Elimia			Elimia livescens	gastropods		181599	
Logperch x Blackside Darter	fouille-roche zébré x dard noir		Percina caprodes x Percina maculata	ray-finned fishes	753		
Logperch x Channel Darter	fouille-roche zébré x barbue		Percina caprodes x Percina copelandi	ray-finned fishes	752		

	de rivière						
Logperch	fouille-roche zébré	le fouille-roche zébré	Percina caprodes	ray-finned fishes	342	180647	
Long Fingernailclam			Musculium transversum	bivalves		181434	
Longnose Dace x Lake Chub	naseux des rapides x méné de lac		Rhinichthys cataractae x Couesius plumbeus	ray-finned fishes	623		
Longnose Dace x River Chub	naseux des rapides x méné baton		Rhinichthys cataractae x Nocomis micropogon	ray-finned fishes	622		
Longnose Dace	naseux des rapides	le naseux des rapides	Rhinichthys cataractae	ray-finned fishes	211	180578	
Longnose Gar	lépisosté osseux	le lépisosté osseux	Lepisosteus osseus	ray-finned fishes	41	180513	
Longnose Sucker	meunier rouge	le meunier rouge	Catostomus catostomus	ray-finned fishes	162	180591	
Loosely Coiled Valve-snail			Valvata sincera	gastropods		181585	
Low-spired Ramshorn			Planorbella campanulata collinsi	gastropods		181627	
Lumpfish	grosse poule de mer	le grosse poule de mer	Cyclopterus lumpus	ray-finned fishes	391	16905	
Lumpfishes and Snailfishes	poules de mer	les poules de mer	CYCLOPTERIDAE	ray-finned fishes	390		
Luxilus sp.	Luxilus espèce		Luxilus sp.	ray-finned fishes	229		
MORONIDAE hybrids	bars hybrides		MORONIDAE hybrids	ray-finned fishes	690		
Mammoth Lymnaea			Bulinnaea megasoma	gastropods		181603	
Mapleleaf			Quadrula quadrula	bivalves		181423	
Margined Madtom	chat-fou liséré	le chat-fou liséré	Noturus insignis	ray-finned fishes	238	180607	
Marsh Pondsnail			Stagnicola elodes	gastropods		181614	
Marsh Rams-horn			Planorbella trivolvis	gastropods		188559	
Meadow Rams-horn			Planorbula campestris	gastropods		194217	
Micropterus sp.	Micropterus espèce		Micropterus sp.	ray-finned fishes	321		
Midland Siltsnail			Cincinnatia integra	gastropods		181595	
Mimic Lymnaea			Pseudosuccinea columella	gastropods		181610	
Mimic Shiner	méné pâle	le méné pâle	Notropis volucellus	ray-finned fishes	206	180572	
Mooneye	laquaiche	la laquaiche	Hiodon tergisus	ray-finned	152	180521	

	argentée	argentée		fishes			
Mooneyes	laquaiches	les laquaiches	HIODONTIDAE	ray-finned fishes	150		
Morone hybrids	Morone hybrides		Morone hybrids	ray-finned fishes	691		
Morone sp.	Morone espèce		Morone sp.	ray-finned fishes	303		
Mottled Sculpin x Slimy Sculpin	chabot tacheté x chabot visqueux		Cottus bairdii x Cottus cognatus	ray-finned fishes	801		
Mottled Sculpin	chabot tacheté	le chabot tacheté	Cottus bairdii	ray-finned fishes	381	180503	
Moxostoma sp.	Moxostoma espèce		Moxostoma sp.	ray-finned fishes	177		
Mucket			Actinonaias ligamentina	bivalves		181390	
Mud Amnicola			Amnicola limosa	gastropods		181592	
Mud Bithynia			Bithynia tentaculata	gastropods		181591	
Muskellunge	maskinongé	le maskinongé	Esox masquinongy	ray-finned fishes	132	180549	
Myoxocephalus sp.	Myoxocephalus espèce		Myoxocephalus sp.	ray-finned fishes	386		
New World Silversides	poissons d'argent	les poissons d'argent	ATHERINOPSIDAE	ray-finned fishes	360		
New Zealand Mudsnaill			Potamopyrgus antipodarum	gastropods		200812	
Ninespine Stickleback	épinoche à neuf épines	l'épinoche à neuf épines	Pungitius pungitius	ray-finned fishes	283	180624	
Nipigon Cisco	cisco	le cisco	Coregonus nipigon	ray-finned fishes	98	17079	
Nocomis sp.	Nocomis espèce		Nocomis sp.	ray-finned fishes	223		
North American Catfish hybrids	barbottes et barbues hybrides		North American Catfish hybrids	ray-finned fishes	650		
North American Catfishes	barbottes et barbues	les barbottes et barbues	ICTALURIDAE	ray-finned fishes	230		

* Not a complete list.

LIO Lookup Table Values:

ARA_WATERBODY_TYPE_LIST

WATERBODY TYPE	EXPIRY DATETIME
Combination	
Drain	
Lake or Pond	
Stream or River	
Wetland	

L10 Table Relationships for Class:
Aquatic Resource Area Summary

ARA_SUMMARY	-----> ARA_SUMMARY_RELATED_FEATURE.ARA_SUMMARY_ID = = ARA_SUMMARY.OGF_ID	ARA_SUMMARY_RELATED_FEATURE				
	-----> ARA_SUMMARY_SPECIES.ARA_SUMMARY_ID = = ARA_SUMMARY.OGF_ID	ARA_SUMMARY_SPECIES	<----- ARA_SUMMARY_SPECIES.COMMON_NAME = = ARA_MASTER_FISH_LIST.COMMON_NAME	ARA_MASTER_FISH_LIST		
			-----> ARA_SPECIES_MGMT_OBJECTIVE.ARA_SUMMARY_SPECIES_ID = = ARA_SUMMARY_SPECIES.OGF_ID	ARA_SPECIES_MGMT_OBJECTIVE	<----- ARA_SPECIES_MGMT_OBJECTIVE.MANAGEMENT_OBJECTIVE = = ARA_MANAGEMENT_OBJECTIVE_LIST.MANAGEMENT_OBJECTIVE	ARA_MANAGEMENT_OBJECTIVE_LIST
			-----> ARA_SPECIES_REPRODUCTION.ARA_SUMMARY_SPECIES_ID = = ARA_SUMMARY_SPECIES.OGF_ID	ARA_SPECIES_REPRODUCTION		
			-----> ARA_SPECIES_STOCKING_OBJECTIVE.ARA_SUMMARY_SPECIES_ID = = ARA_SUMMARY_SPECIES.OGF_ID	ARA_SPECIES_STOCKING_OBJECTIVE		
	-----> ARA_USE.ARA_SUMMARY_ID = = ARA_SUMMARY.OGF_ID	ARA_USE	<----- ARA_USE.USE_DESCR = = ARA_FISHERY_SEGMENT_USE_LIST.USE_DESCR	ARA_FISHERY_SEGMENT_USE_LIST		
	<----- ARA_SUMMARY.WATERBODY_TYPE = = ARA_WATERBODY_TYPE_LIST.WATERBODY_TYPE	ARA_WATERBODY_TYPE_LIST				