



**Conservation Areas
Reporting and Tracking System
Procedures Manual and Database Schema**

Implementation version - 2010

Canadian Council on Ecological Areas
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Author:
R. Vanderkam
CARTS Technical Coordinator
Environment Canada
Gatineau, QC, K1A 0H3
819-953-1444

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* **NOTE on naming the CARTS project:** The acronym “CARTS” is a convenient name for a Canadian Council on Ecological Area’s project funded in part by NRCan’s GeoConnections mechanism. The CARTS Governance authority will likely give the CARTS project a new name that is consistent with its purpose and importance within the protected areas community.

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1.0 Overview

This document is a description and explanation of the *Conservation Areas Reporting and Tracking System* (CARTS) database schema and describes the procedures to integrate your data into the CARTS Internet portal.

The major change from the last draft of this document (i.e., CARTS Procedures Manual and Database Schema Draft Version 2 May 6, 2008) is the inclusion of a section on the delineation of marine protected areas from terrestrial areas (Section 3.4) as well as a thorough editing.

In this document, the various sites being protected for biodiversity conservation by government, indigenous communities and private authorities are collectively referred to as protected areas regardless of their type (e.g., park, conservation area, wildlife reserve, etc.). The definition of protected area used here follows the IUCN 2008 protected area definition in *Guidelines for Applying Protected Area Management Categories*, as follows:

“A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.”

The authorities that manage protected areas that are participating in this exercise at this time are restricted to federal, provincial, and territorial government agencies and departments and are referred to as jurisdictions. Work is also underway to include data from indigenous communities and private agencies, although some of them may already provide some of their data via various provincial or territorial government jurisdictions.

In order for jurisdictional data to appear in the CARTS portal in report and web map format, the following steps are taken:

1. Jurisdictions send their data to the CARTS technical team, including:
 - Geospatial boundary data
 - Attribute data (e.g., size, name, IUCN class, etc. as described in Appendix 1)
 - Metadata
2. The CARTS team stores and securely manages the jurisdictional submissions
3. The CARTS team runs standard queries to output national reports for posting on the Canadian Council on Ecological Areas (CCEA) website (<http://www.ccea.org>).
4. The CARTS team exports the boundaries or point locations to KML format, and make these available for viewing on Google Earth or similar “digital globes” via the CCEA website.

For other types of governance, protected areas will benefit from the recognition and legitimacy provided with the help of the existing national and international conservation community. The CCEA strives to provide inclusive and open fora for this community. Within this community, however, individual jurisdictions are best placed to coordinate the assessment and submission of sites to CARTS. As well, some may have their own reporting obligations, through listings on their provincial or territorial data bases, and advice from jurisdictions is important to ensure that sites meet protected area standards and are not duplicated in different venues.

2.0 Background

The CARTS project is being managed by the CCEA, a non-profit NGO with members from all federal, provincial, and territorial governments that manage legally protected biodiversity conservation areas (i.e., protected areas). The goal of CARTS is to provide a single web site allowing Canadian digital protected areas data to be viewed in map and report form. The CARTS web site will provide national and regional reports for download and a web map viewer where national and regional maps of Canadian protected areas can be viewed seamlessly. Information on the governance and funding history of CARTS is available from the CCEA Secretariat via their web site (<http://www.ccea.org>).

2.1 Jurisdictional Data Management Responsibilities

There are 16 government departments and agencies in Canada at the federal, provincial and territorial level (called “jurisdictions” here – see Appendix 2.1) that, in order to protect various elements of biodiversity, have legal mechanisms in place to control access and activities on areas of land, water, or sea under their jurisdiction. Each jurisdiction involved in CARTS (i.e., all 16 federal agencies, provinces, territories, as well as any Environmental Non-Government Organization (ENGOS) and private land stewards that engage in the process) has the authority for reporting on the protected areas under their administrative control.

Through individual arrangements, a jurisdiction may already be storing protected area data on behalf of agencies that operate within their geographic boundaries but that are not under their direct control. Examples include regional government data in British Columbia, and Land Trusts or other private property organisations in several provinces. These protected areas can also be included in the jurisdictional CARTS dataset if there is an agreement in place that ensures that the province or territory will assume the responsibility to hold and make data available to the CARTS portal on behalf of the source agency or ENGO.

Although many provinces and territories track protected area types that are not under their explicit control, such as National Parks, Migratory Bird Sanctuaries, and etc., the information will be obtained from the source agency itself. This approach will ensure that each jurisdiction maintains the quality and control over its own data, and that there are no duplicate entries when national statistics are compiled.

In the province of Quebec, the Ministère du Développement durable, de l’Environnement et des Parcs has the responsibility by virtue of the Loi sur la conservation du patrimoine naturel to manage a registry of all protected areas in the province. This information is used to report on protected areas in Quebec and is also provided to CARTS in order to ensure that there are no discrepancies between the two reports.

3.0 Spatial Capabilities for CARTS

The spatial structure of the database is a key aspect of CARTS. It facilitates the use of automated database queries (i.e., programmable calculations) to summarise the number and amounts of protected areas by various attributes. The spatial character also provides a systematic means of measuring the overlap of sites and can therefore report on overlapping or duplicate protected areas.

The basic building block of the spatial database is the smallest portion of a protected area that has been delineated with its own unique set of attributes. This portion, or “zone”, and its relation to the protected area which it is a part of is described below.

3.1 Zones (ZONE ID)

The CARTS database is comprised of records, each of which holds the attributes of a zone, or portion, of a protected area. This means that a protected area can be represented in the database by multiple records if zones exist. In cases where there are no zones within a protected area, the entire protected area is equivalent to a single zone and is represented by a single record.

The 2008 CCEA publication, Canadian Guidebook for the Application of IUCN Protected Area Categories, describes zoning as follows:

It is desirable to have one IUCN category for each protected area for national and international reporting purposes. According to the IUCN Guidelines (2008), the category that applies to at least 75 percent of the area should be used. However, there are some instances in Canada where management plans for protected areas identify zones that take into consideration local conditions [such as marine areas (DFO), land use categories (MB), and nature reserve zones (ON)]... (p.29)

Figure 1: A single park divided into two physical zones based, in this case, on the province or territorial jurisdiction that the portions lie within. In CARTS, each zone is represented by a unique record.



Figure 1, for example, shows Wood Buffalo National Park of Canada which straddles two political jurisdictions. By dividing the park boundary into two zones/portions, based on which province or territory they are in, each zone is a separate record in the database and can be included or excluded separately in queries. The portion in Alberta, for example, will only be counted for queries that report on that province.

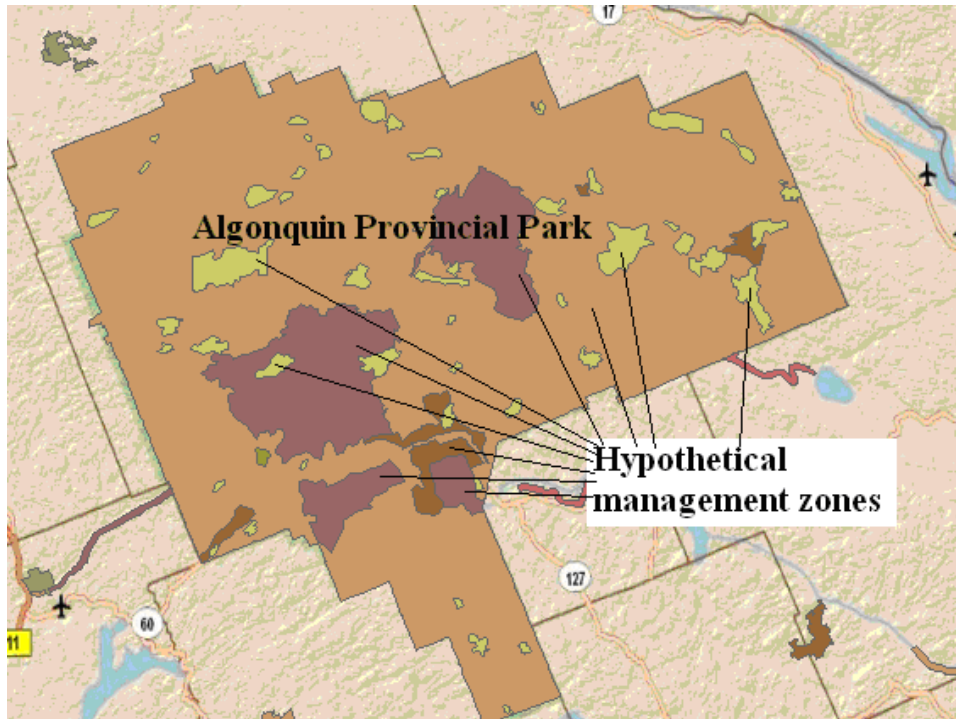
3.2 Parent Areas (PARENT_ID)

In the above example, Wood Buffalo National Park of Canada must still only be counted as a single protected area in national queries. To accomplish this, the CARTS database contains a PARENT_ID field which is used to group zone records together when they are part of a single protected area. The field contains the same value for every record that make up the zones in a single protected area. A query can correctly count a group of records as a single protected area by looking at the unique occurrences of the values in this field. Table 1 shows those two records, one for each zone, as they exist in CARTS for this park.

Table 1: The two records representing the two political jurisdiction (i.e., Location) zones that Wood Buffalo National Park occurs in.

PARENT_ID	ZONE_ID	NAME	LOCATION	SIZE (ha)
719700000	719700000	Wood Buffalo National Park	Alberta	3,583,200
719700000	719700001	Wood Buffalo National Park	Northwest Territories	896,000

Figure 2: Map of Algonquin Provincial Park with multiple, hypothetical management areas delineated as zones.



Another illustration of a zoning scenario is provided in Figure 2. In this hypothetical case, Algonquin Provincial Park contains zones that represent areas with different management regimes. Each zone would again be represented by a unique record with the appropriate management plan attribution.

It is of key importance that the PARENT_ID and ZONE_ID fields are filled properly. Details are provided in Appendix 1, and Table 2 below provides a final example of correct record attribution. In this case, a search of CARTS using the search term “Wildwood” in the NAME_E field has found records from three different protected areas with the name “Wildwood” in the name. The query can then count the number of unique protected areas as well as compile summaries on zone area.

Table 2: Zoning attribution example showing records from multiple protected areas, two with zones and one without. The JUR_ID field has unconstrained text that can be used to differentiate the zone from the parent area with descriptive text.

PARENT_ID	NAME_E	ZONE_ID	JUR_ID
120000001	Wildwood Provincial Park	120000001	Wildwood Provincial Park – Original portion
120000001	Wildwood Provincial Park	120000002	Wildwood Provincial Park Addition
040000005	Wildwood Wildlife Area	040000005	Wildwood Wildlife Area – Zone 1
040000005	Wildwood Wildlife Area	040000006	Wildwood Wildlife Area – Zone 2
100456789	Wildwood Ecological Reserve	100456789	Wildwood Ecological Reserve

Some types of queries that can be done through the appropriate splitting of parent areas into zones include:

- marine portion vs. terrestrial portion (details below)
- freshwater portion vs. terrestrial portion
- date of establishment or date of addition (i.e., areas that have been added to the protected area at different times)
- government jurisdiction
- IUCN class
- management planning area

3.3 Use of Zones is the Prerogative of Each Jurisdiction

It is up to each jurisdiction to decide whether or not to create zones to model their protected areas. However, if a zoning situation exists on the ground and the zone is not delineated in the CARTS database, those zones will not be reported by this database. Consideration must be given for local, national and international reporting obligations.

NEW: Providing consistency within CARTS and between CARTS and other regional, national, and international programs requires that all jurisdictions delineate their marine/terrestrial zones at this time.

3.4 Marine-Terrestrial Zone Delineation

Marine delineation involves splitting the marine portion of a protected area from the terrestrial portion with a digital shoreline boundary. This is required because many terrestrial protected areas in CARTS do not distinguish their marine portions from their terrestrial protected area targets. Canada has obligations to report on both terrestrial and marine protected area and the two must be separated in CARTS.

If a jurisdiction has an existing methodology in use to delineate and report on the size of marine protected areas internally, those data can and should be used in CARTS. If not, the methodology will consist of two main steps:

- the marine-terrestrial delineation should be carried out using a 1:50,000 scale or better shoreline base layer as the geographic overlay. Each jurisdiction will decide internally which shoreline layer they will use with appropriate guidance from their representative on the Marine Protected Areas Technical Experts Committee (TEC) under the Oceans Task Group of the Canadian Council of Fisheries and Aquaculture Ministers. The TEC will also provide guidance on the freshwater/marine definition and the inclusion / exclusion of offshore islands and/or inland waterbodies as part of each partition.
- the official size/area of the marine and terrestrial portions are stored in the CARTS O_AREA field. As with previous use of this field, the official area is the number used internally for planning and reporting and is not necessarily the size as calculated by the GIS since boundary lines can lack accuracy and precision and GIS boundaries are often skewed by projection parameters.

3.5 Official Size and the Parent-Zone Relationship

If zones are provided in your CARTS GIS layer, each zone must be provided with its own area value in hectares to be stored in the field O_AREA for that record (see O_AREA field, Item 10, in Appendix 1).

If you do not create zones in a protected area, there is only one record in the database for that protected area. In that case, all zone attributes, such as the size of the site as well as parent area attributes, are assumed to apply to the entire protected area.

4.0 Reports and Queries

Reports cannot contain information about zones if the zones are not delineated in the database. For example, Wood Buffalo National Park of Canada would not have the size of its portions from Alberta and the Northwest Territories shown correctly if it was a single record.

This section lists the type of reports that will be created from CARTS and what type of zones would provide information needed by those queries.

National Queries

- total number of protected areas in Canada
(requires parent ID (PARENT_ID) for every parent area)
- total amount of area protected in Canada, in hectares
(requires size in hectares (O_AREA) for every zone)
- total amount of area protected in Canada, in hectares, by province/territory
(requires size in hectares (O_AREA) and location (LOC_E) for every zone)
- total amount of area protected in Canada, in hectares, by IUCN
(requires size in hectares (O_AREA) and IUCN class (IUCN_CAT) for every zone)
- total amount of marine area protected in Canada
(requires parent ID (PARENT_ID) and marine/terrestrial designation (BIOME) for every zone)
- growth of total area protected in Canada over time
(requires zone ID (ZONE_ID) and year established (PROTDATE) and size in hectares (O_AREA) for every zone)
- growth of total area protected in Canada over time, by IUCN class
(requires zone ID (ZONE_ID) and year established (PROTDATE) and size in hectares (O_AREA) and IUCN class (IUCN_CAT) for every zone)

Regional Queries (i.e., jurisdiction)

To provide jurisdictional reports, the national data are filtered according to jurisdictional codes such as are found in MGMT_E, LOC_E, and other regional attributes.

5.0 Update Cycles and Data Currentness

Jurisdictions are asked to update their data on CARTS at least on six month cycle (January 1st and July 1st). These dates will be noted in the generalised metadata to describe how current (i.e., “currentness” is the name used for this attribute in metadata) the CARTS data are. Jurisdictions may wish to update their CARTS information at more frequent intervals. For example, they may submit updates immediately after the establishment of new protected areas or the expansion of existing ones.

5.1 Metadata

It is highly recommended that jurisdictions provide links to their own metadata via the URL field. Metadata can also be provided as part of the ESRI shapefile or geodatabase, which stores it according to the FGDC content standard (Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata (CSDGM) 1998 metadata standards). Generalised metadata for the compiled CARTS database will be created by the CCEA technical team and provided on the GeoConnections Discovery Portal. This portal allows

searches for databases from around the world and provides links to the appropriate product rather than to the data itself. In the case of CARTS, it will direct people to the CCEA web site.

APPENDIX 1: CARTS Database Schema

The CARTS schema describes the **25 fields** in the CARTS database that are required to discuss, compare, summarise, and report on Canada's protected areas. Each field is described in detail after the summary.

A1.1 Database Format

All jurisdictions must provide their protected areas data to the CARTS project using this schema so that standardized queries can analyse them and output a seamless set of national reports to the public. The database may be in a different tabular format, such as MS-Excel, .dbf, or comma separated values as long as the fields are similar and allow the records to be joined to the master CARTS database. Providing the data in a ESRI geodatabase format, however, is preferred.

A1.2 Protected Area Zones and Database Records

The use of zones within a protected area, as described in detail in the previous section, allows different portions of protected areas to hold different values for various attributes. Examples of these attributes include marine vs. terrestrial, IUCN class, the provinces or territories that the protected area is found in, date of establishment, or others.

Figure A1: An illustration of a sample protected area with two zones. The image shows a portion of the Pacific Rim National Park of Canada boundary in Google Earth with a sample marine-terrestrial delineation of the ocean portion from the terrestrial portion.



A1.3 Schema Summary

Table A1 is the summary of the schema. This is followed by detailed information on the design and use of each field in the summary. **Modifications to the schema in this version are in red text.**

Table A1: Summary table of the 22 CARTS schema fields

#	Field Description	Field Code Name	ESRI Data Type	Field Length	Req'd?	Constraints and Examples
1	Parent protected area identification number	PARENT_ID	Long Integer	Automatic (allows 9 digits)	Y	An identification code for each protected area that will be unique from other protected areas but identical for all zones within the parent protected area (see also ZONE_ID below). See text for details and template. Nine (9) digits required, including zeros. E.g., 730004502, 593442009, 126500000
2	Name of parent protected area – English	NAME_E	Text	250	Y	E.g., Banff National Park of Canada
3	Name of parent protected area – French	NOM_F	Text	250	Y	E.g., Parc national du Canada Banff
4	Nationally unique protected area zone identification number	ZONE_ID	Long Integer	Automatic (allows 9 digits)	Y	A unique identifier for each portion (i.e., "zone") of a protected area. See text for details and template. Nine (9) digits required, including zeros. E.g., 730004502; 593442009; 126500000
5	Zone description – English	ZONEDESC_E	Text	250	No	E.g., Marine portion; Wilderness zone
6	Zone descriptions – French	ZONEDESC_F	Text	250	No	E.g., Portion marine; Zone sauvage
7	Ecosystem type	BIOME	Text	2	No	M = Marine or T = Terrestrial E.g., M or T (May expand to other classes in future)
8	Jurisdictional internal protected area zone identification number/name	JUR_ID	Text	250	No	Characters and/or digits. E.g., Wood Buffalo National Park of Canada - NWT portion; NT-05268; MNR377.299OC00008; Johnson Provincial Park - Back Country zone; Algonquin Provincial Park - logging restricted zone.
9	IUCN Category for zone	IUCN_CAT	Text	3	Y	Only the following entries are allowed: Ia, Ib, II, III, IV, V, VI, YES, N/A - no digits allowed
10	Official size of zone in hectares	O_AREA	Double	Automatic (allows 9 digits and 2 decimals)	No	The authoritative size value from each jurisdiction for national reporting purposes. E.g., 1020.89; 37.00; 49283.10; 0.08
11	Location (province or territory) – English	LOC_E	Text	30	Y	Enter the province or territory in which this zone falls. E.g., Ontario, Quebec, New Brunswick

#	Field Description	Field Code Name	ESRI Data Type	Field Length	Req'd?	Constraints and Examples
12	Location (province or territory) – French	LOC_F	Text	30	Y	Enter the province or territory in which this zone falls in French. E.g., Ontario, Québec, Nouveau-Brunswick
13	Type of protected area zone – English	TYPE_E	Text	100	Y	E.g., Ecological Reserve; Provincial Park; National Wildlife Area
14	Type of protected area zone – French	TYPE_F	Text	100	Y	E.g., Réserve écologique, Parc provincial; Réserves nationales de faune
15	Managing jurisdiction of zone – English	MGMT_E	Text	250	Y	E.g., Environment Canada, Canadian Wildlife Service
16	Managing jurisdiction of zone – French	MGMT_F	Text	250	Y	E.g., Environnement Canada, Service canadien de la faune
17	Enabling legislation for zone – English	LEGISL_E	Text	250	No	E.g., Canada Wildlife Act
18	Enabling legislation for zone – French	LEGISL_F	Text	250	No	E.g., Loi sur les espèces sauvages du Canada
19	Legal status of zone – English	STATUS_E	Text	250	No	E.g., Interim, Permanent
20	Legal status of zone – French	STATUS_F	Text	250	No	E.g., Intérimaire, Permanent
21	Protection Date of zone	PROTDATE	Short Integer	Automatic (allows 4 digits)	No	Template: yyyy E.g., 1906; 2003; 2007
22	Property owner of zone – English	OWNER_E	Text	250	No	E.g., Environment Canada, Canadian Wildlife Service
23	Property owner of zone – Français	OWNER_F	Text	250	No	E.g., Environnement Canada, Service canadien de la faune
24	General Comments about zone	COMMENTS	Text	250	No	E.g., "Maintained by Friends of the Wilderness and your local Better Business Bureau."
25	Internet link for zone, Parent protected area, or any other URL.	URL	Text	250	No	E.g., http://www.pc.gc.ca/pn

A1.4 Detailed Field Descriptions

1

Parent Identification Number	
Field Description	Parent Identification Number
Field Name	PARENT_ID (was PARENTID)
Summary	This field contains a value that is unique for each protected area in Canada, but repeated and identical for every record/zone within each of those protected areas.
ESRI Data type	Long Integer
Field size	Automatic
Explanation	This field allows zoning of protected areas. For example, Wood Buffalo National Park is located in both Alberta and the Northwest Territories and zoning allows each portion to be reported together or separately as needed. PARENT_ID values are identical for all zones within a protected area.
Permissible values	<p>Must be a valid (currently existing) ZONE_ID (see below). For newly established protected areas, the ZONE_ID is created first (see below), and then the value in this field is based on the values of one of the zone records.</p> <p>If there is no zoning for a particular polygon, the PARENT_ID should be the same as the ZONE_ID.</p> <p>Null values not permitted.</p>
Examples	730004502; 593442009; 126500000
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area. Cross-boundary protected areas will be coded by the relevant jurisdiction (e.g. Parks Canada) and broken into its component parts by location.

2

Field Description	Protected Area Name - English
Field Name	NAME_E
Summary	This is the full legal name of the parent protected area in English (if an English form exists) or in French (if no English form exists).
ESRI Data type	Text
Field size	250
Explanation	The current full legal name of the protected area.
Permissible values	Any official English name given by the pertinent legislation or, if only a French name exists, then said French name should be used. Null values not permitted.
Examples	Twin Islands Provincial Nature Reserve
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

3

Field Description	Protected Area Name - French
Field Name	NOM_F
Summary	This is the full legal name of the parent protected area in French (if a French form exists) or in English (if no French form exists).
ESRI Data type	Text
Field size	250
Explanation	The current full legal name of the protected area.
Permissible values	Any official English name given by the pertinent legislation or, if only a French name exists, then the French name should be used. Null values not permitted.
Examples	Refuge d'oiseaux de l'île Kendall
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description		Nationally Unique Zone Identification Number
Field Name	ZONE_ID	
Summary	<p>This field provides a identification number for the zones or portions that make up protected areas that is unique across all Canadian protected areas and agencies. Organizations/agencies may wish to adopt this same numbering scheme for internal purposes, although those that do not can link to it using the Jurisdiction ID field (see JUR_ID below). The numbering system proposed here allows each jurisdiction to add protected areas under their administration without the risk of duplication by another jurisdiction.</p>	
ESRI Data type	Long Integer	
Field size	Automatic	
Explanation	<p>The first and second digits are a unique “code” for each jurisdiction based on Statistics Canada’s Standard Geographical Classification for Canada for the provinces and territories. This manual uses the values found there (http://www.statcan.ca/english/Subjects/Standard/sgc/2001/2001-sgc-index.htm) and adds values where the Standard does not provide them, such as for federal departments like Parks Canada Agency and for non-government organizations like Nature Conservancy Canada. All values are found in Appendix 2: CARTS Controlled Vocabularies.</p> <p>This 2-digit code applies to the organization/agency that is required by law to report on the protected area and not the province or territory where it is located. For example, a national park in Nova Scotia would be coded under 71 (Parks Canada), not 12 (Nova Scotia). Using these codes will ensure that sites can be correctly queried by either geographic location or managing agency.</p> <p>The remaining seven digits are selected by each jurisdiction to ensure no duplication will occur now or in the future within that jurisdiction. A strict numerical sequence is not required at this time but may be used to expedite grouping or sorting of certain sites.</p>	
Permissible values	<p>Appendix 2: CARTS Controlled Vocabularies contains the codes to be used for the first two digits.</p> <p>Null values are not permitted.</p>	
Examples	730004502; 593442009; 126500000	
Implementation	<p>This field will be filled in by the organization/agency that is required by law to report on the protected area. Cross-boundary protected areas will be coded by the relevant jurisdiction (e.g. Parks Canada) and broken into its component parts by location (see “zoning” in the schema summary table).</p>	

5

Field Description	Zone Description - English
Field Name	ZONEDESC_E
Summary	A text description in English of the attributes and factors that required the delineation of this zone within the protected area.
ESRI Data type	Text
Field size	250
Explanation	Every zone within a protected area has been delineated in order to allow a portion of the protected area to be measured separately in various queries. For example, a marine zone is created to allow a query to sum all the marine protected area in a collection of records. This field provides a description of the attributes that are being zones.
Permissible values	Free text. Null values are permitted.
Examples	Marine zone; Marine and IUCN V zone; Terrestrial and Back-country zone
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

6

Field Description	Zone Description - French
Field Name	ZONEDESC_F
Summary	A text description in French of the attributes and factors that required the delineation of this zone within the protected area.
ESRI Data type	Text
Field size	250
Explanation	Every zone within a protected area has been delineated in order to allow a portion of the protected area to be measured separately in various queries. For example, a marine zone is created to allow a query to sum all the marine protected area in a collection of records. This field provides a description of the attributes that are being zones.
Permissible values	Free text Null values are permitted.
Examples	Zone marine; Marin et zone V de l'UICN ; Terrestre et zone de l'arrière-pays
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

<i>Field Description</i>	Biome Type
<i>Field Name</i>	BIOME
<i>Summary</i>	A single text character to distinguish between Marine and Terrestrial ecosystem or biome types.
<i>ESRI Data type</i>	Text
<i>Field size</i>	2
<i>Explanation</i>	This flags those records that represent zones of marine area as opposed to terrestrial and will allow queries to compile statistics on marine vs. terrestrial protected area nationally.
<i>Permissible values</i>	Null values are permitted, but marine areas will be counted as terrestrial if they are not identified in this field as marine biome types.
<i>Examples</i>	M (for Marine); T (for Terrestrial) May expand to more classes in future.
<i>Implementation</i>	This field will be filled in by the organization/agency that is required by law to report on the protected area.

<i>Field Description</i>	Jurisdiction Internal Zone Identification Number
<i>Field Name</i>	JUR_ID
<i>Summary</i>	This field provides the ID used internally by the jurisdiction owning/managing the protected area if they choose to have it here as a look-up field. It can also be used as a zone descriptor (eg ABC Park – no camping zone).
<i>ESRI Data type</i>	Text
<i>Field size</i>	250
<i>Explanation</i>	This is a field that allows the organizations/agencies to retain their own unique, internal IDs so that this database can be linked to CARTS or can provide proprietary zone identification.
<i>Permissible values</i>	Free text - no restrictions except in data type and length. Null values are permitted.
<i>Examples</i>	4502; M33-CT87; Wood Buffalo National Park of Canada - NWT portion; NT-05268; MNR377.299OC00008; Johnson Provincial Park - Back Country zone; Algonquin Provincial Park - logging restricted zone.
<i>Implementation</i>	This field will be filled in by the organization/agency that is required by law to report on the protected area if they choose to use it.

Field Description	IUCN Category
Field Name	IUCN_CAT
Summary	This field describes the IUCN category of the protected area. It will be designated according to the Canadian IUCN Guidebook (2008 or later version when they are created) developed by the CCEA and affiliated organisations.
ESRI Data type	Text
Field size	3
Explanation	<p>This mandatory field provides an international standard for reporting on the level of protection for biodiversity on a site.</p> <p>Please see the Canadian IUCN Guidebook for guidance on assigning the various classes.</p>
Permissible values	<p>Ia, Ib, II, III, IV, V, VI, YES, N/A</p> <p>Please see Appendix 2: CARTS Controlled Vocabularies for definitions.</p> <p>Null values not permitted. All values are made of alphabet characters and not numerical digits such as "1".</p>
Examples	Ia; Ib; YES; N/A; VI
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description		Official Area in Hectares
Field Name	O_AREA	
Summary	The official size, in hectares, of the protected area zone represented by this record.	
ESRI Data type	Double	
Field size	Automatic	
Explanation	This is the protected area's "official" total area in hectares, which may differ from an area calculated by geospatial analysis.	
Permissible values	0.01 to 999,999,999.99 Null values are permitted, but if left blank the site area will not be reported.	
Examples	1020.89; 1,020.89; 0.08; 999.00; 1,234,567.03	
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.	

Field Description	Location – English
Field Name	LOC_E
Summary	The geographical location (province and/or territory) of the protected area in English.
ESRI Data type	Text
Field size	30
Explanation	<p>This field is required for reporting by province and/or territory.</p> <p>Note: Marine protected areas that are entirely offshore (including those in the Great Lakes where applicable), should be located under one of Offshore Atlantic Marine, Offshore Arctic Marine, Offshore Pacific Marine, or Offshore Great Lakes Marine values.</p> <p>If a marine protected area contains a terrestrial component, the name of the province within which that terrestrial component exists should be listed as well.</p>
Permissible values	<p>Please see Appendix 2: CARTS Controlled Vocabulary for permissible values.</p> <p>Null values are not permitted.</p>
Examples	Ontario; Offshore Pacific Marine
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description		Location – French
Field Name	LOC_F	
Summary	The geographical location (province and/or territory) of the protected area in French.	
ESRI Data type	Text	
Field size	30	
Explanation	<p>This field is required for reporting by province and/or territory.</p> <p>Note: Marine protected areas that are entirely offshore (including those in the Great Lakes where applicable), should be located under one of Offshore Atlantic Marine, Offshore Arctic Marine, Offshore Pacific Marine, or Offshore Great Lakes Marine values.</p> <p>If a marine protected area contains a terrestrial component, the name of the province within which that terrestrial component exists should be listed as well.</p>	
Permissible values	<p>Please see Appendix 2: CARTS Controlled Vocabulary for permissible values.</p> <p>Null values are not permitted.</p>	
Examples	Ontario; Nouveau-Brunswick; Marin en mer Pacifique	
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.	

Field Description	Type Designation – English
Field Name	TYPE_E
Summary	This field describes, in English, the type of protected area that a given area is designated as by the enabling legislation. These descriptions will often also be included in the NAME field (e.g., <u>ABC National Wildlife Area</u>).
ESRI Data type	Text
Field size	100
Explanation	Each jurisdiction will have its own permissible values. The types may include those with interim protection (i.e., where the provisions of an Act are enforced while the process of establishing permanent protection continues, such as with <i>Kluane National Park Reserve</i>) but will not include proposed protected areas.
Permissible values	It is suggested that each jurisdiction form its own controlled vocabulary. Nation-wide controlled vocabulary may be developed at a later date. Null values are not permitted.
Examples	Ecological Reserve; National Wildlife Area
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description Type Designation – French	
Field Name	TYPE_F
Summary	This field describes, in French, the type of protected area that a given area is designated as by the enabling legislation. These descriptions will often also be included in the NAME field (e.g., <u>ABC National Wildlife Area</u>).
ESRI Data type	Text
Field size	100
Explanation	Each jurisdiction will have its own permissible values. The types may include those with interim protection (i.e., where the provisions of an Act are enforced while the process of establishing permanent protection continues, such as with <i>Kluane National Park Reserve</i>) but will not include proposed protected areas.
Permissible values	It is suggested that each jurisdiction form its own controlled vocabulary. Nation-wide controlled vocabulary may be developed at a later date. Null values are not permitted.
Examples	Réserve écologique; Réserves nationales de faune
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description Management - English	
Field Name	MGMT_E
Summary	This field identifies, in English, the managing agency of the protected area.
ESRI Data type	Text
Field size	250
Explanation	<p>This field names the agencies, organizations, and/or individuals that are responsible for management of the protected area or zone. If the manager is a private individual, the term “private” is acceptable.</p> <p>Note: As there is no national master list for these data at this time, the individual jurisdictions will maintain correct data in this field independently. Therefore the data will not be used in queries for filtering, but may be used in reports for descriptive purposes.</p>
Permissible values	<p>List all government and non-government managers.</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are not permitted. If management is not known, enter “Unknown”.</p>
Examples	Environment Canada, Canadian Wildlife Service
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description Management - French	
Field Name	MGMT_F
Summary	This field identifies, in French, the managing agency of the protected area.
ESRI Data type	Text
Field size	250
Explanation	<p>This field names the agencies, organizations, and/or individuals that are responsible for management of the protected area or zone. If the manager is a private individual, the term “private” is acceptable.</p> <p>Note: As there is no national master list for these data at this time, the individual jurisdictions will maintain correct data in this field independently. Therefore the data will not be used in queries for filtering, but may be used in reports for descriptive purposes.</p>
Permissible values	<p>List all government and non-government managers.</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are not permitted. If management is not known, enter “Unknown”.</p>
Examples	Environnement Canada, Service canadien de la faune
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description		Legislation – English
<i>Field Name</i>	LEGISL_E	
<i>Summary</i>	The legislation field contains the official English name of the current legislation that provides protection for a given site.	
<i>ESRI Data type</i>	Text	
<i>Field size</i>	250	
<i>Explanation</i>	Any given protected area type should have an associated legislation.	
<i>Permissible values</i>	<p>It is suggested that each jurisdiction form its own controlled vocabulary.</p> <p>When entering data, please use title capitalization (as per legislation).</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are permitted.</p>	
<i>Examples</i>	Canada Wildlife Act 1994	
<i>Implementation</i>	This field will be filled in by the organization/agency that is required by law to report on the protected area.	

Field Description		Legislation – French
Field Name	LEGISL_F	
Summary	The legislation field contains the official French name of the current legislation that provides protection for a given site.	
ESRI Data type	Text	
Field size	250	
Explanation	Any given protected area type should have an associated legislation.	
Permissible values	<p>It is suggested that each jurisdiction form its own controlled vocabulary.</p> <p>When entering data, please use title capitalization (as per legislation).</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are permitted.</p>	
Examples	Loi sur les espèces sauvages du Canada	
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.	

Field Description		Legal Status – English
Field Name	STATUS_E	
Summary	The status field describes, in English, the current legal state of protection under law, including interim protection (where provisions of protected area Acts apply), fully protected, and gazetted sites as described in covering legislation (which is found in the LEGISL_E/F field in this document).	
ESRI Data type	Text	
Field size	250	
Explanation	Different stakeholders require this field for a variety of reasons.	
Permissible values	Please see Appendix 2: CARTS Controlled Vocabulary for permissible values. Development of the values in this field may occur in the future. Null values are permitted.	
Examples	Interim; Permanent	
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.	

Field Description Legal Status – French	
Field Name	STATUS_F
Summary	The status field describes, in French, the current legal state of protection under law, including interim protection (where provisions of protected area Acts apply), fully protected, and gazetted sites as described in covering legislation (which is found in the LEGISL_E/F field in this document).
ESRI Data type	Text
Field size	250
Explanation	Different stakeholders require this field for a variety of reasons.
Permissible values	Please see Appendix 2: CARTS Controlled Vocabulary for permissible values. Development of the values in this field may occur in the future. Null values are permitted.
Examples	Intérimaire; Permanent
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description	Protection Date
Field Name	PROTDATE
Summary	This field will indicate the year that protection was first legally established for a protected area or for a portion thereof if the area has been expanded or contracted over time.
ESRI Data type	Short Integer
Field size	Automatic
Explanation	The format is YYYY.
Permissible values	>1850 Null values are permitted, but if left blank, the site will not be reported when using date of establishment queries.
Examples	1906
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Ownership – English	
Field Name	OWNER_E
Summary	This field identifies the owner of the protected area in English.
ESRI Data type	Text
Field size	250
Explanation	<p>This field names the agencies, organizations, and/or individuals that own the protected area. If the owner is a private individual, the term “private” is acceptable.</p> <p>Note: As there is no national master list for these data at this time, the individual jurisdictions will maintain correct data in this field independently. Therefore the data will not be used in queries for filtering, but may be used in reports for descriptive purposes.</p>
Permissible values	<p>List all government and non-government owners.</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are permitted.</p>
Examples	Environment Canada, Canadian Wildlife Service
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Ownership – French	
Field Name	OWNER_F
Summary	This field identifies the owner of the protected area in French.
ESRI Data type	Text
Field size	250
Explanation	<p>This field names the agencies, organizations, and/or individuals that own the protected area. If the owner is a private individual, the term “private” is acceptable.</p> <p>Note: As there is no national master list for these data at this time, the individual jurisdictions will maintain correct data in this field independently. Therefore the data will not be used in queries for filtering, but may be used in reports for descriptive purposes.</p>
Permissible values	<p>List all government and non-government owners.</p> <p>Nation-wide controlled vocabulary may be developed at a later date.</p> <p>Null values are permitted.</p>
Examples	Environnement Canada, Service canadien de la faune
Implementation	This field will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description	General Comments
Field Name	COMMENTS
Summary	This is an open text field for a jurisdiction to record pertinent notes about a particular area.
ESRI Data type	Text
Field size	250
Explanation	Comments will be provided by the jurisdiction responsible for a given protected area. This field is especially useful for clarifying information provided in other fields or other related information.
Permissible values	Any comments pertinent to conservation and/or management of that particular protected area. Null values are permitted.
Examples	“Eleanor Island MBS is an exact duplicate of Eleanor Island NWA.”
Implementation	This will be filled in by the organization/agency that is required by law to report on the protected area.

Field Description	Internet Link - URL
Field Name	URL
Summary	This field provides one or more URL link(s) to additional information on the Internet. Individual URLs can be separated by a semi-colon.
ESRI Data type	Text
Field size	250
Explanation	This is a text field that holds the URL to additional online information. The jurisdictions may leave this blank, link it to their main protected areas or departmental webpage, or directly to the protected area.
Permissible values	Any valid URL. Null values are permitted.
Examples	http://www.cws-scf.ec.gc.ca/
Implementation	This will be filled in by the organization/agency that is required by law to report on the protected area.

APPENDIX 2: CARTS Controlled Vocabularies

A2.1 PARENT_ID and ZONE_ID Code Prefix

The Code column refers to the first 2 numbers used in the PARENT_ID and ZONE_ID fields. These values are unique for each Jurisdiction.

Code	Jurisdiction
10	Government of Newfoundland and Labrador
11	Government of Prince Edward Island
12	Government of Nova Scotia
13	Government of New Brunswick
24	Gouvernement de Québec
35	Government of Ontario
46	Government of Manitoba
47	Government of Saskatchewan
48	Government of Alberta
59	Government of British Columbia
60	Government of Yukon Territory
61	Government of Northwest Territories
62	Government of Nunavut
70	Government of Canada, Fisheries and Oceans Canada
71	Government of Canada, Parks Canada Agency
72	Government of Canada, Agriculture and Agri-Foods Canada
73	Government of Canada, Environment Canada
80	Nature Conservancy of Canada
98	Gwich'in Land Use Planning Board
99	Indian and Northern Affairs Canada

A2.2 Location

LOC_E	LOC_F
Newfoundland and Labrador	Terre-Neuve-et-Labrador
Prince Edward Island	Île-du-Prince-Édouard
Nova Scotia	Nouvelle-Écosse
New Brunswick	Nouveau-Brunswick
Quebec	Québec
Ontario	Ontario
Manitoba	Manitoba
Saskatchewan	Saskatchewan
Alberta	Alberta
British Columbia	Colombie-Britannique
Yukon	Yukon
Northwest Territories	Territoires du Nord-Ouest
Nunavut	Nunavut
Offshore Pacific Marine	Marin en mer Pacifique
Offshore Arctic Marine	Marin en mer Arctique
Offshore Atlantic Marine	Marin en mer Atlantique
Offshore Great Lakes Marine	Marin en mer Grands Lacs

A2.3 Legal Status

STATUS_E	STATUS_F	Definition
Legally Designated		Legally designated; IUCN classification should be complete.
Gazetted		Legally designated; IUCN classification should be complete.
Interim		Temporary legal protection (with an expiration date) have been enacted, and permanent protection is expected to be in force before that date
Designated by ENGO/Private		No legalized protection; no IUCN class should be in place.
Proposed Site		No legalized protection; no IUCN class should be in place.
Degazetted		No legalized protection; no IUCN class should be in place.

A2.4 IUCN Category

The following definitions are taken from IUCN literature, but are not the full description of classification guidelines. The IUCN has international guidelines, but Canadian jurisdictions should use the CCEA document, **Canadian Guidebook for the Application of IUCN Protected Areas Categories**, available from the CCEA.

IUCN_CAT	Definition
Ia	Protected area managed mainly for science of wilderness protection
Ib	Protected area managed mainly for wilderness protection
II	Protected area managed mainly for ecosystem protection and recreation
III	Protected area managed mainly for conservation of specific natural features
IV	Protected area managed mainly for conservation through management
V	Protected area managed mainly for landscape/seascape conservation or recreation
VI	Protected area managed mainly for the sustainable use of natural resources
YES	Site is a protected area according to the IUCN definition, but the category of protection has not been determined.
N/A (N/D en Français)	Not Applicable: Site is not a protected area according to the IUCN definition. A site may provide biodiversity conservation value without satisfying IUCN protected area definitions.