

Entity and Attribute Definitions Report

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Total Pages: 75
Total Entities: 63

Parameters

<i>Application:</i>	IAPP
<i>Entities:</i>	%
<i>ER Diagram:</i>	%
<i>Include Entity Notes?</i>	Y
<i>Include Attribute Descriptions?</i>	Y
<i>Include Attribute Notes?</i>	Y
<i>Include Attribute Values?</i>	Y
<i>Include Table of Contents?</i>	N
<i>Include Index of Entities?</i>	Y

Entity Name: AGENCY SPATIAL TABLE LOOKUP			Short Name:	ASTL
Plural:	AGENCY SPATIAL TABLE LOOKUP			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

Provides the ability to lookup references to external tables that contain spatial data for Agency organizational structures or administrative areas. Each Agency may have zero or more external tables that contain spatial data applicable to it. The references will be used by the web application to perform spatial queries to filter IAPP data by these areas.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* TABLE ID		N	NUMBER	10
Primary unique numeric identifier for an Agency Spatial Table reference.				
TABLE NAME		N	VARCHAR2	30
The Oracle table name for the Agency Spatial Table being referenced. Does NOT include the owner name.				
DESCRIPTION		N	VARCHAR2	40
A short description for the contents of the Agency Spatial Table being referenced. This description does not need to reference the Agency that the table is applicable to. It should identify the nature of the spatial data in the table.				
For example: The Ministry of Forests and Range will have at least two tables applicable to it; one table that contains District polygons and one that contains Region polygons. The description for each of these would be 'Forest Districts' and 'Forest Regions' respectively.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MUST BE spatial table list for one and only one INVASIVE PLANT AGENCY CODE
* = Relationships in primary unique identifier.

Unique Identifiers:

ASTL DESC	Primary	N
DESCRIPTION		
MUST BE spatial table list for one and only one INVASIVE PLANT AGENCY CODE		
ASTL TBL	Primary	N
TABLE NAME		
MUST BE spatial table list for one and only one INVASIVE PLANT AGENCY CODE		
ASTL	Primary	Y
TABLE ID		

Entity Name: AREA CLASSIFICATION CODE		Short Name:	ACC
Plural:	AREA CLASSIFICATION CODE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

The relevance that a particular Biological Control Record provides to the Invasive Alien Plant Program. Indicates if a Biological Control is classified as a Collection or Research area. Helps identify sensitive records that external users should not be able to see in detail.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* AREA CLASSIFICATION CODE		N	VARCHAR2	1
Unique code identifying the classification of the area. Possible values are Research and Collection				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE application of one or more BIOLOGICAL TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

ACC2	Primary	Y
AREA CLASSIFICATION CODE		

Entity Name:	BIOAGENT MATURITY STATUS CODE	Short Name:	BMSC
Plural:	BIOAGENT MATURITY STATUS CODE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

The status is either Primary, Secondary or Tertiary and is an indication of the maturity of the research conducted on a Biological Agent.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* BIOAGENT MATURITY STATUS CODE		N	VARCHAR2	1
Unique code identifying the status.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE status for one or more BIOLOGICAL AGENT MATURITY

* = Relationships in primary unique identifier.

Unique Identifiers:

BMSC	Primary	Y
BIOAGENT MATURITY STATUS CODE		

Entity Name: BIOGEOCLIMATIC CATALOGUE		<i>Short Name:</i>	BEC BC
<i>Plural:</i>	BIOGEOCLIMATIC CATALOGUE		
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>

Description:

The BIOGEOCLIMATIC CATALOGUE contains the complete set of unique valid combinations of biogeoclimatic Zone, Subzone, Variant and Phase. Any other combinations are not valid.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* BIOGEOCLIMATIC CATALOGUE ID		N	NUMBER	10
Assigned numeric identifier for a biogeoclimatic catalog entry unique within a biogeoclimatic unit.				
* = <i>Attributes in primary unique identifier.</i>				

Relationships:

Each Occurrence Of This Entity:

MAY BE regional climate for one or more INVASIVE PLANT SITE

* = *Relationships in primary unique identifier.*

Unique Identifiers:

BEC BC	<i>Primary</i>	<i>Y</i>
BIOGEOCLIMATIC CATALOGUE ID		

Notes:

Stub of BEC.BIOGEOCLIMATIC CATALOGUE.

Entity Name: BIOLOGICAL AGENT CODE		Short Name:	BAC
Plural:	BIOLOGICAL AGENT CODE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

Identifies an organism used to control an invasive alien plant. Examples: Aceria chondrillae, Longitarsus jacobaeae (Waterhouse), Trichosirocalus horridus (Panzer).

Attributes:			
<u>Name</u>	<u>Domain</u>	<u>Opt</u> <u>Format</u>	<u>Length</u>
* BIOLOGICAL AGENT CODE		N VARCHAR2	7
Unique code identifying the bioagent.			
Increased length from 12 to 20 to allow flexibility for future codes. [Jon Aquino 2004-09-01]			
DESCRIPTION		N VARCHAR2	120
Description of the code.			
EFFECTIVE DATE		N DATE	
Effective date/time			
EXPIRY DATE		N DATE	
Expiry date/time			
UPDATE TIMESTAMP		N DATE	
Update date/time			
* = Attributes in primary unique identifier.			

Relationships:

Each Occurrence Of This Entity:

MAY BE species of one or more BIOLOGICAL AGENT EXCEPTION

MAY BE ranked by one or more BIOLOGICAL AGENT MATURITY

MAY BE species of one or more BIOLOGICAL DISPERSAL

MAY BE species of one or more BIOLOGICAL TREATMENT

MAY BE prescribed by one or more PROPOSED IAPP ACTIVITY

* = Relationships in primary unique identifier.

Unique Identifiers:

BAC	Primary	Y
BIOLOGICAL AGENT CODE		

Entity Name: BIOLOGICAL AGENT EXCEPTION**Short Name:**

BAE

Plural: BIOLOGICAL AGENT EXCEPTION**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

A Biological Agent Exception will be generated if a user chooses to save a Biological Treatment, Biological Dispersal or an Invasive Plant Plan with an inappropriate biological agent/invasive plant combination. The appropriate combinations of biological agents and invasive plants is described in the BIOLOGICAL_AGENT_MATURITY table. If the combination that user chooses does not exist in this table then the user will be required to enter exception comments. These comments, along with other metadata will be sent to a 'Biological Agent Auditor' by email and stored in this entity.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* EXCEPTION ID		N	NUMBER	10
Primary unique identifier for a Biological Agent Exception				
EXCEPTION COMMENTS		N	VARCHAR2	2000
Exception comments entered by user at time of data entry and appropriate use of Biological Agent exception.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE justification for one and only one PROPOSED IAPP ACTIVITY
 or MAY BE justification for one and only one BIOLOGICAL DISPERSAL
 or MAY BE justification for one and only one BIOLOGICAL TREATMENT
 MUST BE selected one and only one BIOLOGICAL AGENT CODE
 MUST BE recorded by one and only one INVASIVE PLANT AGENCY CODE
 MUST BE selected one and only one INVASIVE PLANT SPECIES

* = Relationships in primary unique identifier.

Unique Identifiers:

BAE Primary Y

EXCEPTION ID

Entity Name: BIOLOGICAL AGENT MATURITY**Short Name:** IAPP BAM**Plural:** BIOLOGICAL AGENT MATURITY**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

Maps the ability of particular Biological Agents to control a particular Invasive Plant. The status is either PRI (Primary), SEC (Secondary) or TER (Tertiary) and indicates whether the biological agent acts directly on the plant or controls the plant by some secondary or tertiary process. "The agents of classical biological control may kill the weeds directly. However, usually they reduce weed population indirectly by decreasing reproductive and competitive abilities or plant vigour, which in turn encourages the re-establishment of native vegetation." [Source: Integrated Pest Management - Biocontrol, <http://www.for.gov.bc.ca/hfp/noxious/biocontr.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
COMMENTS		Y	VARCHAR2	2000
The COMMENTS contain notes or additional information on the status of the invasive plant species/biological agent combination provided by the biological agent maturity custodian.				
EXPIRY DATE		N	DATE	
The EXPIRY DATE is the date that the maturity record is no longer valid. Expired maturity records will be kept for historical purposes but will have no bearing on new records.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE has status one and only one BIOAGENT MATURITY STATUS CODE

* MUST BE maturity for one and only one BIOLOGICAL AGENT CODE

* MUST BE of species one and only one INVASIVE PLANT SPECIES

* = Relationships in primary unique identifier.

Unique Identifiers:

BAM Primary Y

MUST BE maturity for one and only one BIOLOGICAL AGENT CODE

MUST BE of species one and only one INVASIVE PLANT SPECIES

Entity Name: BIOLOGICAL AGENT SPREAD			<i>Short Name:</i>	BAS
<i>Plural:</i>	BIOLOGICAL AGENT SPREAD			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

A transect from the release point indicating the extent of the spread of the biocontrol.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* SPREAD ID		N	NUMBER	10
Primary unique numeric identifier for a biological spread.				
BEARING		N	NUMBER	3
The bearing of this transect, in degrees, measured clockwise from north.				
DISTANCE		N	NUMBER	10,1
Distance (metres) from the release point to the edge of the spread.				
<i>In the data, the most number of decimal places is 1 ("1.5"). And the largest value is 600. Hence my choices for length and decimal places. [Jon Aquino 2004-08-31]</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MUST BE plotting one and only one BIOLOGICAL MONITORING

* = Relationships in primary unique identifier.

Unique Identifiers:

BAS	Primary	Y
SPREAD ID		

Entity Name: BIOLOGICAL DISPERSAL

Short Name:

BD

Plural: BIOLOGICAL DISPERSAL

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

An observation of a biocontrol agent that had not been released at this site.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* BIOLOGICAL DISPERSAL ID		N	NUMBER	10
Primary unique numeric identifier for a biological dispersal.				
PAPER FILE ID		Y	VARCHAR2	20
The file identification number used to reference the corresponding paperwork for this record.				
INSPECTION DATE		N	DATE	
Date on which the inspection was made.				
PLANT COUNT		Y	NUMBER	4
The number of plants sampled to determine bioagent density.				
AGENT COUNT		Y	NUMBER	4
The number of bioagents found in the sample to determine bioagent density.				
COUNT DURATION		Y	NUMBER	4
Number of minutes required for collection and inspection.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the dispersal.				
FOLIAR FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to leaves.				
ROOT FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to roots.				
SEED FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to seeds.				
OVIPOSITION MARKS IND		N	VARCHAR2	1
Indicates the presence of oviposition marks -- slits that the insect makes in the vegetation for depositing its eggs.				
EGGS PRESENT IND		N	VARCHAR2	1
Indicates the presence of biological agent eggs.				
LARVAE PRESENT IND		N	VARCHAR2	1
Indicates the presence of larvae -- the immature, second life stage of an insect; a larva hatches from an egg. Most are wormlike, such as caterpillars, maggots and grubs. Many pest insects cause the most damage in the larval stage, particularly those that eat plants. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
PUPAE PRESENT IND		N	VARCHAR2	1
Indicates the presence of pupae -- the stage between the larva stage and the adult in insects that undergo complete metamorphosis; a nonfeeding and usually an inactive stage. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
ADULTS PRESENT IND		N	VARCHAR2	1
Indicates the presence of the adult stage of the bioagent.				
TUNNELS PRESENT IND		N	VARCHAR2	1
Indicates the presence of exit holes or tunnels.				
UTM EASTING		N	NUMBER	6
The Universal Transverse Mercator location reference. This is the Easting reference (metres east of the Central Meridian of the zone).				

Entity Name: BIOLOGICAL DISPERSAL (cont'd)		Short Name:	BD
UTM NORTHING	N NUMBER	7	
The Universal Transverse Mercator location reference. This is the Northing reference (metres north of the Equator).			
UTM ZONE	N NUMBER	2	
The Universal Transverse Mercator location reference known as the Zone reference. Ranges from 8 to 11 for British Columbia.			
ENTRY GUID	GUID N VARCHAR2	32	
The Globally Unique ID (GUID) of the user that initially entered (created) the record.			
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCeID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>			
ENTRY TIMESTAMP	N DATE		
Entered date/time			
ENTRY USERID	N VARCHAR2	30	
Entered by			
UPDATE TIMESTAMP	N DATE		
Updated date/time			
UPDATE USERID	N VARCHAR2	30	
Updated by			
REVISION COUNT	N NUMBER	10,0	
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.			

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

MUST BE of species one and only one BIOLOGICAL AGENT CODE

MAY BE justified by one or more BIOLOGICAL AGENT EXCEPTION

MAY BE detected by one or more DISPERSAL SURVEYOR

MAY BE spatially defined by one and only one IAPP DISPERSAL POLY

MUST BE found on one and only one INVASIVE PLANT

MUST BE overseen by one and only one INVASIVE PLANT AGENCY CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

BD Primary Y

BIOLOGICAL DISPERSAL ID

Entity Name: BIOLOGICAL MONITORING

Short Name:

BM

Plural: BIOLOGICAL MONITORING

Init. Volume: Avg. Volume:

Max. Volume:

Annual Growth Rate:

Subtype of: INVASIVE PLANT MONITORING

Description:

An inspection of a biocontrol treatment to determine presence at a given location, density per plant or area, amount and type of damage per plant or area, and direction, distance, and rate of movement from release point.

For most operational biological control programs, checking for presence will be the only monitoring function. If there is doubt as to whether a release has been made in an area before, or if it is possible that agents have naturally distributed themselves into an area, monitoring of the weed stand should be conducted before a new release is made. Biological control releases can fail at a given site during establishment for various reasons. New releases should therefore be monitored for establishment within 1-2 years to determine if a supplementary release is necessary.

[Source: Field Guide to the Biological Control of Weeds in British Columbia,
<http://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh27-3.pdf>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
PLANT COUNT		Y	NUMBER	4
The number of plants sampled to determine bioagent density.				
AGENT COUNT		Y	NUMBER	4
The number of bioagents found in the sample to determine bioagent density.				
COUNT DURATION		Y	NUMBER	4
Number of minutes required for collection and inspection.				
AGENT DESTROYED IND		N	VARCHAR2	1
Indicates that the agent was destroyed by some external influence.				
LEGACY PRESENCE IND		N	VARCHAR2	1
Indicates whether the bioagent was found.				
FOLIAR FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to leaves.				
ROOT FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to roots.				
SEED FEEDING DAMAGE IND		N	VARCHAR2	1
Indicates the presence of bioagent damage to seeds.				
OVIPOSITION MARKS IND		N	VARCHAR2	1
Indicates the presence of oviposition marks -- slits that the insect makes in the vegetation for depositing its eggs.				
EGGS PRESENT IND		N	VARCHAR2	1
Indicates the presence of biological agent eggs.				
LARVAE PRESENT IND		N	VARCHAR2	1
Indicates the presence of larvae -- the immature, second life stage of an insect; a larva hatches from an egg. Most are wormlike, such as caterpillars, maggots and grubs. Many pest insects cause the most damage in the larval stage, particularly those that eat plants. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
PUPAE PRESENT IND		N	VARCHAR2	1
Indicates the presence of pupae -- the stage between the larva stage and the adult in insects that undergo complete metamorphosis; a nonfeeding and usually an inactive stage. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
ADULTS PRESENT IND		N	VARCHAR2	1
Indicates the presence of the adult stage of the bioagent.				

Entity Name: BIOLOGICAL MONITORING (cont'd)			Short Name:	BM
TUNNELS PRESENT IND	N	VARCHAR2	1	
Indicates the presence of exit holes or tunnels.				
UTM EASTING	N	NUMBER	6	
The Universal Transverse Mercator location reference. This is the Easting reference (metres east of the Central Meridian of the zone).				
UTM NORTHING	N	NUMBER	7	
The Universal Transverse Mercator location reference. This is the Northing reference (metres north of the Equator).				
UTM ZONE	N	NUMBER	2	
The Universal Transverse Mercator location reference known as the Zone reference. Ranges from 8 to 11 for British Columbia.				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE plotted by one or more BIOLOGICAL AGENT SPREAD

* = Relationships in primary unique identifier.

Entity Name: BIOLOGICAL TREATMENT

Short Name:

BT

Plural: BIOLOGICAL TREATMENT

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Subtype of: INVASIVE PLANT TREATMENT

Description:

An application of a biological control. Biological control is the use of a weed's natural enemies (chiefly insects and pathogens) to reduce its population below a desired level. It can be divided into the following two approaches: inundative and classical. Inundative biological control uses mass application of an organism to attempt to eliminate a weed from an area. Like all such methods, it does not deal with the residual seed bank in the soil or prevent the weed from establishing from another source at a later date. Classical biological control uses the weed's natural enemies to establish a long-term balance between the biological control organism and the weed. [Source: Integrated Pest Management, <http://www.for.gov.bc.ca/hfp/noxious/integrat.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* BIOLOGICAL TREATMENT ID		N	NUMBER	10
Primary unique numeric identifier for a biological control.				
BIOAGENT SOURCE		Y	VARCHAR2	100
The provider of the Biological Agent. Can be an organization, individual or country.				
COLLECTION DATE		Y	DATE	
The date that the Biological Agent was collected or harvested.				
STAGE EGG IND		N	VARCHAR2	1
Indicates the release of eggs of the bioagent.				
STAGE LARVA IND		N	VARCHAR2	1
Indicates the release of larvae -- the immature, second life stage of an insect; a larva hatches from an egg. Most are wormlike, such as caterpillars, maggots and grubs. Many pest insects cause the most damage in the larval stage, particularly those that eat plants. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
STAGE PUPA IND		N	VARCHAR2	1
Indicates the release of pupae -- the stage between the larva stage and the adult in insects that undergo complete metamorphosis; a nonfeeding and usually an inactive stage. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf]				
STAGE ADULT IND		N	VARCHAR2	1
Indicates the release of the adult stage of the bioagent.				
STAGE OTHER IND		N	VARCHAR2	1
Indicates the release of a bioagent at a stage that is not listed.				
RELEASE TIME		N	DATE	
The time of day at which the bioagent was released.				
RELEASE QUANTITY		N	NUMBER	6
Number of insects released.				
<i>In the Access App, Validation Text is "<=9999". [Jon Aquino 2004-09-01]</i>				
UTM EASTING		N	NUMBER	6
The Universal Transverse Mercator location reference. This is the Easting reference (metres east of the Central Meridian of the zone).				
UTM NORTHING		N	NUMBER	7
The Universal Transverse Mercator location reference. This is the Northing reference (metres north of the Equator).				
UTM ZONE		N	NUMBER	2
The Universal Transverse Mercator location reference known as the Zone reference. Ranges from 8 to 11 for British Columbia.				

* = Attributes in primary unique identifier.

Relationships:

Entity Name:	BIOLOGICAL TREATMENT (cont'd)	<i>Short Name:</i>	BT
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Each Occurrence Of This Entity:

MAY BE applicable to one and only one AREA CLASSIFICATION CODE
MUST BE prescribing one and only one BIOLOGICAL AGENT CODE
MAY BE justified by one or more BIOLOGICAL AGENT EXCEPTION
* = Relationships in primary unique identifier.

Unique Identifiers:

BT2	Primary	Y
BIOLOGICAL TREATMENT ID		

Entity Name:	CHEMICAL METHOD CODE	Short Name:	CMCD
Plural:	CHEMICAL METHOD CODE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

Indicates the application method for the herbicide. Examples: Boomless Nozzle, Fixed Boom.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* CHEMICAL METHOD CODE		N	VARCHAR2	3
Unique code identifying the chemical control method.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE delivering one or more CHEMICAL TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

CMCD	Primary	Y
CHEMICAL METHOD CODE		

Entity Name: CHEMICAL MONITORING		Short Name:	CM
Plural:	CHEMICAL MONITORING		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:
Subtype of:	INVASIVE PLANT MONITORING		

Description:

An inspection of a chemical treatment to determine its effectiveness.

The effectiveness of each chemical treatment varies. Therefore, the monitoring of sites and the capture of monitoring information can be helpful to the long term successful treatment of a site. Chemical treatment monitoring information is recorded on the ?Chemical or Mechanical Monitoring Record? field form.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MUST BE level of one and only one EFFICACY RATING CODE

* = Relationships in primary unique identifier.

Entity Name: CHEMICAL TREATMENT

Short Name:

CT

Plural: CHEMICAL TREATMENT

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Subtype of: INVASIVE PLANT TREATMENT

Description:

An application of a herbicide. Various herbicides are used for spot treatments of weeds in British Columbia. The herbicide selected should depend on the target weed species and environmental factors. Application rate will be dictated by the size and accessibility of the infestation, its proximity to wells and other water, and the potential impacts of the application on non-target vegetation. Some herbicides have residual effects and persist in the soil in an active state for some time after application. Other herbicides become inactive once they contact soil. The residual activity of a herbicide varies with rate of application, soil properties, and climate, and its impact on non-target vegetation should be carefully considered. [Source: Integrated Pest Management, <http://www.for.gov.bc.ca/hfp/noxious/integrat.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* CHEMICAL TREATMENT ID		N	NUMBER	10
Primary unique numeric identifier for a chemical control.				
AREA TREATED		N	NUMBER	15,4
Area (hectares) treated with the chemical control.				
<i>Current values are 0.16, 0.1, 0.03, 0.02, 0.01, 0.006. [Jon Aquino 2004-08-31]</i>				
<i>Use same length and decimal places as Mechanical Control's. See its justification in the comments. [Jon Aquino 2004-09-01]</i>				
APPLICATION TIME		N	DATE	
Time of day, a factor affecting herbicide effectiveness. Generally carbohydrate levels in the leaves are lowest in the morning and highest in the late afternoon. Spraying early in the morning is more effective. [Source: Integrated Weed Management: An Introductory Manual, http://www.agf.gov.bc.ca/cropprot/weedman.htm]				
TEMPERATURE		N	NUMBER	2
Temperature (Celsius), a factor affecting herbicide effectiveness. Under dry or cool conditions, plants grow slowly and translocation of systemic herbicides is slow. [Source: Integrated Weed Management: An Introductory Manual, http://www.agf.gov.bc.ca/cropprot/weedman.htm]				
<i>In Access app, Validation Text is "Temperature must be <=40. Enter 0 if no information is available". [Jon Aquino 2004-08-31]</i>				
HUMIDITY		Y	NUMBER	3
Humidity (%), a factor affecting herbicide effectiveness. Warm temperatures and high humidity are generally favoured for best control with systemic herbicides. [Source: Integrated Weed Management: An Introductory Manual, http://www.agf.gov.bc.ca/cropprot/weedman.htm]				
<i>In Access app, Validation Text is "Value may not exceed 100%. Enter 0 if no information is available" [Jon Aquino 2004-08-31]</i>				
WIND VELOCITY		N	NUMBER	3
Wind velocity (km/h), a factor affecting herbicide effectiveness. Avoid spraying in wind as herbicide will be lost to drift. [Source: Integrated Weed Management: An Introductory Manual, http://www.agf.gov.bc.ca/cropprot/weedman.htm]				
<i>In Access app, Validation Text is "Value must be <= 100. Enter 0 if no information is available" [Jon Aquino 2004-08-30]</i>				
WIND DIRECTION		Y	NUMBER	3
Wind direction (bearing in degrees), a factor affecting herbicide effectiveness. Avoid spraying in wind as herbicide will be lost to drift. [Source: Integrated Weed Management: An Introductory Manual, http://www.agf.gov.bc.ca/cropprot/weedman.htm]				
<i>In Access app, Validation Text is "Value must be <=360. Enter 0 if no information is available" [Jon Aquino 2004-08-30]</i>				
APPLICATION RATE		Y	NUMBER	10,2

Entity Name: CHEMICAL TREATMENT (cont'd)

Short Name:

CT

The application rate, in litres of chemical per hectare.

Application Rate (L/ha) applies to spray treatment methods. For the "Stem Injection" method it doesn't make sense.

AMOUNT USED	N	NUMBER	10,5
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The amount of chemical used, in litres.

DILUTION RATE	Y	NUMBER	10,4
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The dilution rate, calculated by dividing the application rate by the delivery rate. [Source: Range Manual, <http://www.for.gov.bc.ca/hfp/range/manual/Ch11-app-19.htm>]

DELIVERY RATE	Y	NUMBER	10,0
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The sprayer delivery rate, in L/ha.

TANK MIX ID	Y	NUMBER	10,0
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A unique ID used to group chemical treatments that were done at one time using a mix of two or more herbicides.

Normally only one herbicide is applied, but increasingly two or more herbicides are mixed together in a tank and applied at one time. Using an ID rather than an indicator allows us to group the treatments together. Users need to know that a treatment was the results of a tank mix because the calculations to determine the amount of herbicide used differs with a tank mix.

*A special "batch" screen allows the user to specify N plants and M herbicides to create N*M chemical treatment records at once. Choosing more than one herbicide on this screen indicates a tank mix was used.*

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

MUST BE delivered by one and only one CHEMICAL METHOD CODE

MUST BE requisitioning one and only one HERBICIDE CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

CT	Primary	Y
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CHEMICAL TREATMENT ID

Entity Name: DISPERSAL SURVEYOR			<i>Short Name:</i>	DS
<i>Plural:</i>	DISPERSAL SURVEYOR			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

The IAPP participants that acted as surveyors for a particular Biological Dispersal.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				

* = *Attributes in primary unique identifier.*

Relationships:

Each Occurrence Of This Entity:

- * MUST BE detecting one and only one BIOLOGICAL DISPERSAL
- * MUST BE task for one and only one IAPP PARTICIPANT

* = *Relationships in primary unique identifier.*

Unique Identifiers:

DS	<i>Primary</i>	Y
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MUST BE task for one and only one IAPP PARTICIPANT

MUST BE detecting one and only one BIOLOGICAL DISPERSAL

Entity Name: EFFICACY RATING CODE		Short Name:	ERC
Plural:	EFFICACY RATING CODE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

The percent mortality achieved on a treated site according to the following scale:

- 10 - 100% efficacy
- 9 - 90% to 99% efficacy
- 8 - 80% to 89% efficacy
- 7 - 70% to 79% efficacy
- 6 - 60% to 69% efficacy
- 5 - 50% to 59% efficacy
- 4 - 40% to 49% efficacy
- 3 - 30% to 39% efficacy
- 2 - 20% to 29% efficacy
- 1 - 0% to 19% efficacy

* not to be confused with the ECW scale

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* EFFICACY RATING CODE		N	VARCHAR2	2
Unique numerical code identifying the percent mortality achieved on a treated site.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

- MAY BE level for one or more CHEMICAL MONITORING
- MAY BE level for one or more MECHANICAL MONITORING

* = Relationships in primary unique identifier.

Unique Identifiers:

CRC	Primary	Y
EFFICACY RATING CODE		

Entity Name: FOREST CLIENT		<i>Short Name:</i>	FC
<i>Plural:</i>	FOREST CLIENT		
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>

Description:

Any company or individual who is dealing, has dealt or plans to deal with the Ministry. This is effectively the name and address list for the Ministry.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* CLIENT NUMBER		N	VARCHAR2	8
Sequentially assigned number to identify a ministry client.				
* = <i>Attributes in primary unique identifier.</i>				

Relationships:

Each Occurrence Of This Entity:

MAY BE mapped to one and only one IAPP AGENCY FOREST CLIENT

* = *Relationships in primary unique identifier.*

Unique Identifiers:

FC	<i>Primary</i>	Y
CLIENT NUMBER		

Entity Name: HERBICIDE CODE

Short Name:

HC

Plural: HERBICIDE CODE

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Identifies a herbicide - a pesticide used to kill plants and control vegetation. Examples: Tordon 22K, Round-up. [Source: Integrated Pest Management Manual for Landscape Pests in British Columbia, <http://wlapwww.gov.bc.ca/epd/epdpa/eripm/landspdf/glosary.pdf>].

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* HERBICIDE CODE		N	VARCHAR2	1
Unique code identify the herbicide.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

MAY BE chemical for one or more CHEMICAL TREATMENT

MAY BE chemical for one or more PROPOSED IAPP ACTIVITY

* = Relationships in primary unique identifier.

Unique Identifiers:

HC2

Primary Y

HERBICIDE CODE

Entity Name: IAPP ACTIVITY CODE			<i>Short Name:</i>	AC
<i>Plural:</i>	IAPP ACTIVITY CODE			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

Identifies an activity conducted on invasive alien plants. Examples: Chemical Treatment, Biological Monitoring.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* IAPP ACTIVITY CODE		N	VARCHAR2	2
Unique code identifying the activity.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE recommendation for one or more PROPOSED IAPP ACTIVITY

* = Relationships in primary unique identifier.

Unique Identifiers:

AC2	Primary	Y
IAPP ACTIVITY CODE		

Entity Name: IAPP AGENCY FOREST CLIENT			Short Name:	IAFC
Plural:	IAPP AGENCY FOREST CLIENT			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

Maps each INVASIVE_PLANT_AGENCY_CODE to a single FOREST_CLIENT for the purposes of providing agency level security. The WebADE getUsersClientLocations call will return all Clients that a user is associated with. The application will use this mapping to determine which agencies the user can act upon based on the Clients he/she is associated with.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MUST BE mapping for one and only one FOREST_CLIENT

* MUST BE mapping for one and only one INVASIVE_PLANT_AGENCY_CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

IAFC	Primary	Y
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MUST BE mapping for one and only one INVASIVE_PLANT_AGENCY_CODE

Entity Name: IAPP CONTAINMENT POLY			Short Name:	ICP
Plural:	IAPP CONTAINMENT POLY			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

A closed polygon which delineates an invasive plant population within this established boundary where action is taken to prevent its spread beyond the polygon. Treatment within the polygon will occur for a specific invasive plant when critical thresholds are met or exceeded as defined by the treatment matrix. Containment lines are normally drawn at a provincial (broad) scale and are intended to mimic distinct geographic breaks such as height-of-land, a river or major highway.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* CONTAINMENT POLY ID		N	NUMBER	10
Primary unique numeric identifier for an Invasive Alien Plant Program containment polygon.				
GEOMETRY	GEOMETRIES	N	CHAR	
A closed polygon which delineates containment line for an invasive plant species. Containment lines are normally drawn at a provincial (broad) scale and are intended to mimic distinct geographic breaks such as height-of-land, a river or major highway. The polygon is captured through digitized geometry that is loaded from external sources.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
Entered date/time				
ENTRY_USERID		N	VARCHAR2	30
Entered by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MUST BE established boundary for one and only one INVASIVE PLANT SPECIES

* = Relationships in primary unique identifier.

Unique Identifiers:

ICP	Primary	Y
CONTAINMENT POLY ID		

Entity Name: IAPP DISPERSAL CLOUDED POLY

Short Name:

IDCP

Plural: IAPP DISPERSAL CLOUDED POLY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Abstracted polygon geometry for a biological dispersal. If the actual polygon has less than a predetermined area, an algorithm is applied to first randomize the location of the polygon if it represents a point and then apply a variable buffer to the polygon to produce the clouded polygon. The clouded polygon is larger than the actual polygon if the actual polygon is not larger than the predetermined area; otherwise the clouded polygon is a copy of the actual polygon. The actual polygon has two possible sources: it is generated by buffering the point described by the UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the approximate boundary of a biological dispersal. The polygon is generated by applying a 'clouding' algorithm to the actual IAPP DISPERSAL POLY GEOMETRY. The purpose of this is to inform people planning on performing weed control to avoid the area, but distort the polygon enough that the exact location of a biological agent cannot be determined.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
Entered date/time				
ENTRY_USERID		N	VARCHAR2	30
Entered by				
UPDATE_TIMESTAMP		N	DATE	
Updated date/time				
UPDATE_USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

* MUST BE abstraction for one and only one IAPP DISPERSAL POLY

* = Relationships in primary unique identifier.

Unique Identifiers:

IDCP

Primary Y

MUST BE abstraction for one and only one IAPP DISPERSAL POLY

Entity Name: IAPP DISPERSAL POLY

Short Name:

IDP

Plural: IAPP DISPERSAL POLY

Init. Volume: Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Polygon geometry for a biological dispersal. The polygon has two possible sources: it is generated by buffering the point described by the biological dispersal UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* DISPERSAL POLY ID		N	NUMBER	38
Primary unique numeric identifier for a biological dispersal polygon.				
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the boundary of a biological dispersal. The polygon has two possible sources: it is generated by buffering the point described by the biological dispersal UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
GEOMETRY GENERATED IND		N	VARCHAR2	1
Indicates that GEOMETRY was generated from the dispersal UTM coordinate. Non generated geometry will take precedence over generated geometry.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE spatial data for one and only one BIOLOGICAL DISPERSAL

MUST BE abstracted by one and only one IAPP DISPERSAL CLOUDED POLY

* = Relationships in primary unique identifier.

Unique Identifiers:

IDP Primary Y

DISPERSAL POLY ID

Entity Name: IAPP EMPLOYER			<i>Short Name:</i>	IE
<i>Plural:</i>	IAPP EMPLOYER			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

The employer for participants in Invasive Alien Plant Program activities. May also be an independent contractor.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* EMPLOYER ID		N	NUMBER	10
Primary unique numeric identifier for an employer.				
NAME		N	VARCHAR2	50
The name of the employer.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE employer for one or more INVASIVE PLANT SURVEY
MAY BE employer for one or more INVASIVE PLANT TREATMENT
* = Relationships in primary unique identifier.

Unique Identifiers:

IE_N	Primary	N
NAME		
IE	Primary	Y
EMPLOYER ID		

Entity Name: IAPP IMAGE

Short Name:

IIMG

Plural: IAPP IMAGE

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

A photograph, sketch, or other image from the site.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* IMAGE ID		N	NUMBER	10
Primary unique numeric identifier for an image.				
IMAGE DATE		N	DATE	
The date on which the photograph was taken or the image created.				
REFERENCE NO		N	VARCHAR2	20
An external source reference number.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the image.				
IMAGE		N	IMAGE	
The image stored as a BLOB.				
ENTRY GUID	GUID	N	VARCHAR2	32
The Globally Unique ID (GUID) of the user that initially entered (created) the record.				
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCeID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE depicting one and only one INVASIVE PLANT SITE

or MAY BE depicting one and only one INVASIVE PLANT TREATMENT

MUST BE provided by one and only one INVASIVE PLANT AGENCY CODE

MAY BE orientated by one and only one PERSPECTIVE CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

II Primary Y

IMAGE ID

Entity Name: IAPP MONITORING CLOUDED POLY**Short Name:**

IMCP

Plural: IAPP MONITORING CLOUDED POLY**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

Abstracted polygon geometry for a monitoring activity. If the actual polygon has less than a predetermined area, an algorithm is applied to first randomize the location of the polygon if it represents a point and then apply a variable buffer to the polygon to produce the clouded polygon. The clouded polygon is larger than the actual polygon if the actual polygon is not larger than the predetermined area; otherwise the clouded polygon is a copy of the actual polygon. The actual polygon has two possible sources: it is generated by buffering the point described by the UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the approximate boundary of a monitoring activity. The polygon is generated by applying a 'clouding' algorithm to the actual IAPP MONITORING POLY GEOMETRY. The purpose of this is to inform people planning on performing weed control to avoid the area, but distort the polygon enough that the exact location of a biological agent cannot be determined.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
Entered date/time				
ENTRY_USERID		N	VARCHAR2	30
Entered by				
UPDATE_TIMESTAMP		N	DATE	
Updated date/time				
UPDATE_USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

* MUST BE abstraction for one and only one IAPP MONITORING POLY

* = Relationships in primary unique identifier.

Unique Identifiers:

IMCP

Primary Y

MUST BE abstraction for one and only one IAPP MONITORING POLY

Entity Name: IAPP MONITORING POLY

Short Name:

IMP

Plural: IAPP MONITORING POLY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Polygon geometry for a monitoring activity. The polygon has two possible sources: it is generated by buffering the point described by the UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u> <u>Format</u>	<u>Length</u>
* MONITORING POLY ID		N NUMBER	38
Primary unique numeric identifier for a monitoring activity polygon.			
GEOMETRY	GEOMETRIES	N CHAR	
A polygon representing the boundary of a monitoring activity. The polygon has two possible sources: it is generated by buffering the point described by the biological monitoring UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.			
FEATURE_CODE		N VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.			
FEATURE AREA		N NUMBER	
The area of the polygon measured in square meters.			
FEATURE LENGTH		N NUMBER	
The length of the perimeter of the polygon measured in meters.			
GEOMETRY GENERATED IND		N VARCHAR2	1
Indicates that GEOMETRY was generated from the monitoring UTM coordinate. Non generated geometry will take precedence over generated geometry.			
ENTRY TIMESTAMP		N DATE	
Entered date/time			
ENTRY USERID		N VARCHAR2	30
Entered by			
UPDATE TIMESTAMP		N DATE	
Updated date/time			
UPDATE USERID		N VARCHAR2	30
Updated by			
REVISION COUNT		N NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.			

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE abstracted by one and only one IAPP MONITORING CLOUDED POLY

MUST BE spatial data for one and only one INVASIVE PLANT MONITORING

* = Relationships in primary unique identifier.

Unique Identifiers:

IMP

Primary Y

MONITORING POLY ID

IMTC	Primary	Y
IAPP MONITORING TYPE CODE		

Entity Name: IAPP PARTICIPANT			Short Name:	PART
Plural:	IAPP PARTICIPANT			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

A participant in the Invasive Alien Plant Program. Can be a surveyor of plants, dispersals and control monitorings or an applicator of a control.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* PARTICIPANT ID		N	NUMBER	10
Primary unique numeric identifier for an applicator.				
LAST NAME		N	VARCHAR2	50
Last name or surname of the participant.				
FIRST NAME		N	VARCHAR2	50
First or given name of the participant.				
MIDDLE INITIAL		Y	VARCHAR2	1
The middle initial of the participant.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE participating as one or more DISPERSAL SURVEYOR
MAY BE participating as one or more INVASIVE PLANT SURVEYOR
MAY BE participating as one or more MONITORING SURVEYOR
MAY BE participating as one or more TREATMENT APPLICATOR
* = Relationships in primary unique identifier.

Unique Identifiers:

PP_N	Primary	N
FIRST NAME		
LAST NAME		
MIDDLE INITIAL		
PART2	Primary	Y
PARTICIPANT ID		

Entity Name: IAPP SITE CLOUDED POLY**Short Name:**

ISCP

Plural: IAPP SITE CLOUDED POLY**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

Abstracted polygon geometry for an Invasive Alien Plant site. If the actual polygon has less than a predetermined area, an algorithm is applied to first randomize the location of the polygon if it represents a point small and then apply a variable buffer to the polygon to produce the clouded polygon. The clouded polygon is larger than the actual polygon if the actual polygon is not larger than the predetermined area; otherwise the clouded polygon is a copy of the actual polygon. The actual polygon has two possible sources: it is generated by buffering the point described by the Site UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the approximate boundary of an Invasive Alien Plant site. The polygon is generated by applying a 'clouding' algorithm to the actual IAPP SITE POLY GEOMETRY. The purpose of this is to inform people planning on performing weed control to avoid the area, but distort the polygon enough that the exact location of a biological agent cannot be determined.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
Entered date/time				
ENTRY_USERID		N	VARCHAR2	30
Entered by				
UPDATE_TIMESTAMP		N	DATE	
Updated date/time				
UPDATE_USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

* MUST BE abstraction for one and only one IAPP SITE POLY

* = Relationships in primary unique identifier.

Unique Identifiers:

ISCP

Primary Y

MUST BE abstraction for one and only one IAPP SITE POLY

Entity Name: IAPP SITE POLY

Short Name:

SPOL

Plural: IAPP SITE POLY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Polygon geometry for a site. A site may have many polygons, each representing the site at a point in time. Each time new spatial data is submitted for a site the previous version will be flagged as retired but will remain in the database for historical purposes. Only one (non-retired) polygon for each site will represent the current extent of the site. The polygons represent the boundary of an Invasive Alien Plant site. This is often defined by the extent of the invasive plant on the site, if only one exists, but not always. The polygon has two possible sources: it is generated by buffering the point described by the Site UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* SITE POLY ID		N	NUMBER	38
Primary unique numeric identifier for a site polygon.				
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the boundary of an Invasive Alien Plant site. The polygon has two possible sources: it is generated by buffering the point described by the Site UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
GEOMETRY GENERATED IND		N	VARCHAR2	1
Indicates that GEOMETRY was generated from the Site UTM coordinate. Non generated geometry will take precedence over generated geometry.				
RETIREMENT DATE		Y	DATE	
The date a version of the data representing the site was replaced by another feature. The current IAPP_SITE_POLY will have NULL Retirement Date.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE abstracted by one and only one IAPP SITE CLOUDED POLY

MUST BE spatial data for one and only one INVASIVE PLANT SITE

* = Relationships in primary unique identifier.

Unique Identifiers:

Entity Name:	IAPP SITE POLY (cont'd)	<i>Short Name:</i>	SPOL
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SPOL	<i>Primary</i>	Y
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SITE POLY ID

Entity Name: IAPP SITE PRIORITY CODE			<i>Short Name:</i>	SRC
<i>Plural:</i>	IAPP SITE PRIORITY CODE			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

A descripton of the site's priority level for treatment depending on the level of risk associated with the invasive plant on that site at the time. Range is 1 (High Priority/Risk) to 4 (Other)

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* IAPP SITE PRIORITY CODE		Y	VARCHAR2	1
Numerical code representing the priority level. 1 is High.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE priority for one or more INVASIVE PLANT PLAN

* = Relationships in primary unique identifier.

Unique Identifiers:

SRC2	Primary	Y
IAPP SITE PRIORITY CODE		

Entity Name: IAPP SUBMISSION STATUS CODE**Short Name:** IAPP SSC**Plural:** IAPP SUBMISSION STATUS CODE**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

The Submission Status notes the stage and final determination of the submission. For example, the submission may start with a status of Pending then move to Under Review until the MoFR reviewer has decided if the occurrence will be added to the IAPP inventory, at which time, the status may be Added to Inventory. The full list of status codes and their explanation is below:

PENDING

The submission has been submitted and is waiting to be "picked up" for review.

UNDER REVIEW

The submission has been "picked up" for review by a reviewer.

SITE VISIT REQUIRED

The reviewer has determined that an on-site investigation is required to determine the outcome of the submission.

ADDED TO NEW SITE

The reviewer has determined that the invasive plant occurrence does not already exist in the IAPP inventory and has created a new site and added the plant occurrence to it.

ADDED TO EXISTING SITE

The reviewer has determined that the invasive plant occurrence does not already exist in the IAPP inventory and has added it to an existing site.

DUPLICATE

The reviewer has determined that the invasive plant occurrence already exists in the IAPP inventory and has associated the submission with the existing occurrence.

REJECTED

The reviewer has determined that the invasive plant occurrence does not belong in the IAPP inventory and has rejected the submission.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* IAPP SUBMISSION STATUS CODE		N	VARCHAR2	3
The IAPP SUBMISSION STATUS CODE is the unique identifier for a type of survey. Examples: PND Pending; URV Under Review; SVR Site Visit Required; ADD Added to Inventory; AEI Already Exists in Inventory; REJ Rejected.				
DESCRIPTION		N	VARCHAR2	120
Description is the expanded text that describes the the code.				
EFFECTIVE DATE		N	DATE	
The Effective Date is the date that the code became active and available for use.				
EXPIRY DATE		N	DATE	
The Expiry Date is the date that the code will/did become inactive and no longer available for use.				
UPDATE TIMESTAMP		N	DATE	
The Update Timestamp is the date and time that the record was last updated.				

* = Attributes in primary unique identifier.

Relationships:**Each Occurrence Of This Entity:**

MAY BE status for one or more INVASIVE PLANT SUBMISSION

* = Relationships in primary unique identifier.

Unique Identifiers:

IAPP SUBMISSION STATUS CODE

Entity Name: IAPP SURVEY TYPE CODE**Short Name:** IAPP STC**Plural:** IAPP SURVEY TYPE CODE**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

The IAPP Survey Type Code is an indication of the standard to which survey data has been collected in the field. There are three standards to which surveys may be conducted, depending on the level of detail required and the purpose to which the data will be used in the future: Cursory, Operational and Precise. More detail on each type is below:

CURSORY

These are surveys conducted during an initial visit to a site where the surveyor may or may not be fully aware of the prescribed control activities in that area. The data collection standard is not as great as with operational or precise surveys. Only the minimum mandatory fields are required for a cursory survey. Data collected from cursory surveys may be used to orientate others to a given site, but cannot be used for analysis or research purposes.

OPERATIONAL

This survey standard provides a systematic process for acquiring accurate inventory data for the following activities:

- Containment and control activities;
- Compliance and Enforcement needs;
- Unit-based contract prescriptions; and,
- Pest Management Plan reporting requirements.

The required mandatory fields for an operational survey are the minimum mandatory fields required by the application, plus Site Location, Jurisdiction, Distribution Code and Density Code. Data that is collected to this standard can be used for analyses such as determining invasive plant spread rates or control program effectiveness.

PRECISE

This survey standard is designed for use in research and analysis where a high level of detail is required for analytical and statistical analyses. Some examples of use for this data in the future are in:

- determining rate of spread, risk determination and potential impacts of invasive plant populations; and,
- evaluating impacts of biological control agents on invasive plant populations.

The required mandatory fields are the same as those required by the application, plus Site Location, Distribution Code, Density Code, Biogeoclimatic characteristics and soil texture.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* IAPP SURVEY TYPE CODE		N	VARCHAR2	1
The IAPP SURVEY TYPE CODE is the unique identifier for a type of survey. Examples: C Cursory; O Operational; P Precise.				
DESCRIPTION		N	VARCHAR2	120
Description is the expanded text that describes the the code.				
EFFECTIVE DATE		N	DATE	
The Effective Date is the date that the code became active and available for use.				
EXPIRY DATE		N	DATE	
The Expiry Date is the date that the code will/did become inactive and no longer available for use.				
UPDATE TIMESTAMP		N	DATE	
The Update Timestamp is the date and time that the record was last updated.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE categorizes one or more INVASIVE PLANT SURVEY

* = Relationships in primary unique identifier.

Unique Identifiers:

Entity Name:	IAPP SURVEY TYPE CODE (cont'd)	<i>Short Name:</i>	IAPP STC
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IAPP STC	<i>Primary</i>	Y
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IAPP SURVEY TYPE CODE

Entity Name: IAPP TREATMENT CLOUDED POLY

Short Name:

ITCP

Plural: IAPP TREATMENT CLOUDED POLY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Abstracted polygon geometry for a Treatment. If the actual polygon has less than a predetermined area, an algorithm is applied to first randomize the location of the polygon if it represents a point and then apply a variable buffer to the polygon to produce the clouded polygon. The clouded polygon is larger than the actual polygon if the actual polygon is not larger than the predetermined area; otherwise the clouded polygon is a copy of the actual polygon. The actual polygon has two possible sources: it is generated by buffering the point described by the Biological Treatment UTM Coordinate; it is captured through digitized geometry that is loaded from external sources. Mechanical and Chemical Treatments will not have generated geometry, as they do not have UTM coordinates.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the approximate boundary of a treatment. The polygon is generated by applying a 'clouding' algorithm to the actual IAPP TREATMENT POLY. The purpose of this is to inform people planning on performing weed control to avoid the area, but distort the polygon enough that the exact location of a biological agent cannot be determined.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
Entered date/time				
ENTRY_USERID		N	VARCHAR2	30
Entered by				
UPDATE_TIMESTAMP		N	DATE	
Updated date/time				
UPDATE_USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

* MUST BE abstraction for one and only one IAPP TREATMENT POLY

* = Relationships in primary unique identifier.

Unique Identifiers:

ITCP

Primary Y

MUST BE abstraction for one and only one IAPP TREATMENT POLY

Entity Name: IAPP TREATMENT POLY

Short Name:

ITP

Plural: IAPP TREATMENT POLY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Polygon geometry for a treatment. The polygon has two possible sources: it is generated by buffering the point described by the Biological Treatment UTM Coordinate; it is captured through digitized geometry that is loaded from external sources. Mechanical and Chemical Treatments will not have generated geometry, as they do not have UTM coordinates.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* TREATMENT POLY ID		N	NUMBER	38
Primary unique numeric identifier for a treatment polygon.				
GEOMETRY	GEOMETRIES	N	CHAR	
A polygon representing the boundary of a treatment. The polygon has two possible sources: it is generated by buffering the point described by the treatment UTM Coordinate; it is captured through digitized geometry that is loaded from external sources.				
FEATURE_CODE		N	VARCHAR2	10
An alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The length of the perimeter of the polygon measured in meters.				
GEOMETRY GENERATED IND		N	VARCHAR2	1
Indicates that GEOMETRY was generated from the treatment UTM coordinate. (Only biological treatments have UTM coordinates) Non generated geometry will take precedence over generated geometry.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE abstracted by one and only one IAPP TREATMENT CLOUDED POLY

MUST BE spatial data for one and only one INVASIVE PLANT TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

ITP Primary Y

TREATMENT POLY ID

Entity Name: INVASIVE PLANT

Short Name: IP

Plural: INVASIVE PLANT

Init. Volume: Avg. Volume: Max. Volume: Annual Growth Rate:

Description:

Invasive plants (also commonly referred to as "weeds") are typically non-native plants that have found their way into British Columbia without the insect predators and/or plant pathogens that help keep them in check in their native habitats. Noxious weeds are weeds that have been designated as noxious by the Ministry of Agriculture and Food's Weed Act. Weeds often exhibit aggressive growth and typically out-compete native plant species in new habitats. As a result, weeds are difficult to control and can adversely affect BC's natural resources. [Source: Invasive Plant Program Home Page, <http://www.for.gov.bc.ca/hfp/noxious/index.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* INVASIVE PLANT ID		N	NUMBER	10
Primary unique numeric identifier for an invasive plant.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE targeted by one or more BIOLOGICAL DISPERSAL

MAY BE treated according to one or more INVASIVE PLANT PLAN BATCH

MUST BE infesting one and only one INVASIVE PLANT SITE

MUST BE of species one and only one INVASIVE PLANT SPECIES

MAY BE identified by one or more INVASIVE PLANT SUBMISSION

MUST BE inventoried by one or more INVASIVE PLANT SURVEY

MAY BE treated by one or more INVASIVE PLANT TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

IPSS	Primary	N
MUST BE infesting one and only one INVASIVE PLANT SITE		
MUST BE of species one and only one INVASIVE PLANT SPECIES		
IP2	Primary	Y
INVASIVE PLANT ID		

Entity Name: INVASIVE PLANT AGENCY CODE			Short Name:	IPAC
Plural:	INVASIVE PLANT AGENCY CODE			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

The Agency that oversees a particular activity concerning the Invasive Alien Plant Program. It is the originating agency that data belongs to or the agency that funded the activity.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* INVASIVE PLANT AGENCY CODE		N	VARCHAR2	4
Unique code identifying the agency.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

- MAY BE spatial tables listed one or more AGENCY SPATIAL TABLE LOOKUP
- MAY BE recording one or more BIOLOGICAL AGENT EXCEPTION
- MAY BE overseeing one or more BIOLOGICAL DISPERSAL
- MAY BE mapped to one and only one IAPP AGENCY FOREST CLIENT
- MAY BE providing one or more IAPP IMAGE
- MAY BE overseeing one or more INVASIVE PLANT MONITORING
- MAY BE approving one or more INVASIVE PLANT PLAN
- MAY BE overseeing one or more INVASIVE PLANT SURVEY
- MAY BE overseeing one or more INVASIVE PLANT TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

IPAC	Primary	Y
INVASIVE PLANT AGENCY CODE		

IPDN Primary Y

INVASIVE PLANT DENSITY CODE

Entity Name: INVASIVE PLANT DISCOUNT POLY**Short Name:** IAPP IPDP**Plural:** INVASIVE PLANT DISCOUNT POLY**Init. Volume:** **Avg. Volume:** **Max. Volume:** **Annual Growth Rate:****Description:**

An Invasive Plant Discount Poly is an area where a particular species of invasive plant is not considered a concern; or, where recording new occurrences of the species is not considered worthwhile due to pervasive infestation.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* DISCOUNT POLY ID		N	NUMBER	10
The Discount Poly ID is a unique, system generated primary key for Invasive Plant Discount Poly.				
GEOMETRY	GEOMETRIES	Y	CHAR	
The Geometry is a closed polygon which delineates a discount area for an invasive plant species. The polygon is captured through digitized geometry that is loaded from external sources.				
FEATURE_CODE		N	VARCHAR2	10
The Feature Code is an alphanumeric code used to identify a feature component. All CCSM feature codes are generated according to the Canadian Council on Survey and Mapping (CCSM) Draft Standard on feature code classification.				
FEATURE AREA		N	NUMBER	
The Feature Area is the calculated area of the polygon measured in square meters.				
FEATURE LENGTH		N	NUMBER	
The Feature Length is the calculated length of the perimeter of the polygon measured in meters.				
ENTRY_TIMESTAMP		N	DATE	
The Entry Timestamp is the date and time that the record was entered.				
ENTRY_USERID		N	VARCHAR2	30
The Entry UserID identifies the inserter of the record.				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

MUST BE area to disregard the presence of one and only one INVASIVE PLANT SPECIES

* = Relationships in primary unique identifier.

Unique Identifiers:

IAPP IPDP *Primary* Y

DISCOUNT POLY ID

Notes:

Being able to filter out Invasive Plant Submissions for invasive plant occurrences in the discounted polygons reduces time spent by the zone specialists? in dealing with submissions that have no concern to them.

Entity Name: INVASIVE PLANT DISTRIB CODE			Short Name:	IPDB
Plural:	INVASIVE PLANT DISTRIB CODE			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

Identifies the geographic distribution of individuals of each species. Example: several well-spaced patches or clumps. [Source: Vegetation Description Form, <http://srmwww.gov.bc.ca/risc/pubs/teecolo/habitat/chap-4-05.html>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* INVASIVE PLANT DISTRIB CODE		N	VARCHAR2	1
Unique code identifying the distribution of the plants.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE spatial pattern for one or more INVASIVE PLANT SURVEY

* = Relationships in primary unique identifier.

Unique Identifiers:

IPDB	Primary	Y
INVASIVE PLANT DISTRIB CODE		

Entity Name: INVASIVE PLANT LEGACY SITE			<i>Short Name:</i>	ILS
<i>Plural:</i>	INVASIVE PLANT LEGACY SITE			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

Site fields from the original Microsoft Access implementation of IAPP that are no longer used.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
GIS KEY		Y	VARCHAR2	20
The identifier used to relate to the site's legacy spatial data.				
SITE NO		N	NUMBER	10
Site Number is a subset of mapsheet and is incremented by 1 for each site within a mapsheet. Once the mapsheet is set, the system populates the Site Number field by looking at the maximum Site Number for the current mapsheet and increments this value by 1.				
SPATIAL DATA PRESENT IND		N	VARCHAR2	1
Indicates whether spatial data exists for this record. TODO: Clarify with client [KF 2004-09-02]				
DATASET		Y	VARCHAR2	300
A reference to the original system that housed this record. The legacy Access system was populated with data from several source systems.				
INCLUDE IN REPORTS IND		N	VARCHAR2	1
Indicates if record should be included on certain reports. TODO: Clarify with client [KF 2004-09-02]				
BIO FLAG IND		N	VARCHAR2	1
Indicates if record should be included on certain reports. TODO: Clarify with client [KF 2004-09-02]				
BIO CONTROL IND		N	VARCHAR2	1
Indicates if record should be included on certain reports. TODO: Clarify with client [KF 2004-09-02]				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

* MUST BE legacy data for one and only one INVASIVE PLANT SITE

* = Relationships in primary unique identifier.

Unique Identifiers:

ILS	Primary	Y
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MUST BE legacy data for one and only one INVASIVE PLANT SITE

Entity Name: INVASIVE PLANT MONITORING**Short Name:** IAPP MN**Plural:** INVASIVE PLANT MONITORING**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

An inspection of a treatment to determine its effectiveness and/or persistence.

The effectiveness of each treatment varies. Therefore, the monitoring of sites and the capture of monitoring information can be helpful to the long term successful treatment of a site.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* MONITORING ID		N	NUMBER	10
Primary unique numeric identifier for a monitoring.				
PAPER FILE ID		Y	VARCHAR2	20
The file identification number used to reference the corresponding paperwork for this record.				
INSPECTION DATE		N	DATE	
Date on which the inspection was made.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the monitoring.				
ENTRY GUID	GUID	N	VARCHAR2	32
The Globally Unique ID (GUID) of the user that initially entered (created) the record.				
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCeID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				
* = Attributes in primary unique identifier.				

Relationships:**Each Occurrence Of This Entity:**

MAY BE spatially defined by one and only one IAPP MONITORING POLY

MUST BE type of one and only one IAPP MONITORING TYPE CODE

MUST BE overseen by one and only one INVASIVE PLANT AGENCY CODE

MUST BE assessing one and only one INVASIVE PLANT TREATMENT

MAY BE inspected by one or more MONITORING SURVEYOR

* = Relationships in primary unique identifier.

Unique Identifiers:

BM

Primary Y

MONITORING ID

Subtypes:

Entity Name:	INVASIVE PLANT MONITORING (cont'd)	<i>Short Name:</i>	IAPP MN
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BIOLOGICAL MONITORING
CHEMICAL MONITORING
MECHANICAL MONITORING

Entity Name: INVASIVE PLANT PLAN

Short Name: IAPP IPP

Plural: INVASIVE PLANT PLAN

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

A plan for controlling invasive alien plants based on knowledge of potential damage, cost of control method and environmental impact of the weed and control decision. May include a combination of methods to reduce the weed population to an acceptable level. [Source: Integrated Weed Management: An Introductory Manual, <http://www.agf.gov.bc.ca/cropprot/weedman.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* PLAN ID		N	NUMBER	10
Primary unique numeric identifier for a treatment plan.				
PLAN DATE		N	DATE	
The date on which the plan was approved.				
PROPOSED ACTIVITY DATE		Y	DATE	
The proposed month and year for applying the controls.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the approved plan e.g. which herbicide or biocontrol.				
ENTRY GUID	GUID	N	VARCHAR2	32
The Globally Unique ID (GUID) of the user that initially entered (created) the record.				
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCellID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE ranked by one and only one IAPP SITE PRIORITY CODE

MUST BE approved by one and only one INVASIVE PLANT AGENCY CODE

MUST BE scheduled for one or more INVASIVE PLANT PLAN BATCH

MAY BE plans one or more PROPOSED IAPP ACTIVITY

* = Relationships in primary unique identifier.

Unique Identifiers:

IPP Primary Y

PLAN ID

Entity Name: INVASIVE PLANT PLAN BATCH		<i>Short Name:</i>	IPPB
<i>Plural:</i>	INVASIVE PLANT PLAN BATCH		
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>

Description:

Often a planner will want to plan the same activity or activities for multiple occurrences of a plant at once. This could be due to a large initiative being planned for a particular area and a particular plant.

The batch maps all the occurrences of a particular invasive plant to a particular plan. This means that each plan can apply to 1 or more invasive plant occurrences.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

- * MUST BE batch of one and only one INVASIVE PLANT
 - * MUST BE batch for one and only one INVASIVE PLANT PLAN
- * = Relationships in primary unique identifier.

Unique Identifiers:

IPPB	Primary	Y
MUST BE batch of one and only one INVASIVE PLANT		
MUST BE batch for one and only one INVASIVE PLANT PLAN		

Entity Name: INVASIVE PLANT SITE**Short Name:** IAPP ISIT**Plural:** INVASIVE PLANT SITE**Init. Volume:****Avg. Volume:****Max. Volume:****Annual Growth Rate:****Description:**

An area with confirmed ground sightings of invasive alien plants. Within this inventory area, all roads accessible by a four-wheel drive vehicle that cross potential habitat will be checked for occurrences of invasive plants. Plants on both sides of the road will be identified as far as can be seen from the road, or as defined for specific inventory projects. In addition, all major disturbances including but not limited to landings, log sort yards, burned areas, gravel pits, air strips, landfills, parking lots, construction or maintenance sites and recreational sites and trails within the potential habitat will be checked. [Source: IAPP Inventory Standards - Interim for 2004, <http://www.for.gov.bc.ca/hcp/fia/landbase/MoFIPPInventoryStandards.pdf>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u> <u>Format</u>	<u>Length</u>
* SITE ID		N NUMBER	10
Primary unique numeric identifier for a site.			
PAPER FILE ID		Y VARCHAR2	20
The file identification number used to reference the corresponding paperwork for this record.			
SITE CREATED DATE		N DATE	
Date on which this site was initially created.			
SLOPE		Y NUMBER	3
Steepness of the ground, in percent.			
<i>In Access app, Validation Text is "Value must not exceed 100%; record to nearest whole percent. Enter 999 if no data is available". [Jon Aquino 2004-08-31]</i>			
ASPECT		Y NUMBER	3
Compass bearing in degrees of the direction in which a slope faces.			
<i>In Access app, Validation Text is "Only values between 0 and 360 degrees accepted. If no data available enter 999" [Jon Aquino 2004-08-31]</i>			
ELEVATION		Y NUMBER	5
Distance above sea-level, in metres.			
<i>Elevation ranges from 0 to 9690 [Jon Aquino 2004-08-31]</i>			
BIOGEOCLIMATIC OVERRIDE IND		N VARCHAR2	1
BIOGEOCLIMATIC OVERRIDE IND indicates if the user has chosen to override the spatially derived BIOGEOCLIMATIC CATALOGUE related record.			
SITE SERIES		Y VARCHAR2	4
A number from 01 to 99 representing the soil moisture regime and soil nutrient regime of a site series, relative to other site series within a subzone or variant.			
UTM EASTING		N NUMBER	6
The Universal Transverse Mercator location reference. This is the Easting reference (metres east of the Central Meridian of the zone).			
<i>In the Access app, Validation Text is "UTM Eastings Require 6 Numbers" [Jon Aquino 2004-09-01]</i>			
UTM NORTHING		N NUMBER	7
The Universal Transverse Mercator location reference. This is the Northing reference (metres north of the Equator).			
<i>In the Access app, Validation Text is "UTM Northings Require 7 Numbers" [Jon Aquino 2004-09-01]</i>			
UTM ZONE		N NUMBER	2
The Universal Transverse Mercator location reference known as the Zone reference.			
Ranges from 8 to 11 for British Columbia.			
MAPSHEET		N VARCHAR2	7
The 1:20,000 BCGS (British Columbia Geographic System) Mapsheet Number.			
DISTRICT LOT NUMBER		Y VARCHAR2	6
The DISTRICT LOT NUMBER is the legal identifier for a surveyed parcel of land,			

Entity Name: INVASIVE PLANT SITE (cont'd)		Short Name:	IAPP ISIT
assigned during its initial survey.			
LOCATION	Y VARCHAR2	2000	
General description of the location of this site. Examples: "Wynndel 3.3km south", "TLANA BAY, LEFT HAND CORNER PAST CLIFFS", "Camp Busk".			
COMMENTS	Y VARCHAR2	2000	
A free-format, user-entered comment on the site.			
SENSITIVE DATA IND	N VARCHAR2	1	
Indicates the site contains sensitive data that may have to be protected from some users. Data is considered sensitive if a primary biological agent or an area classification code of Research or Collection is identified on any child record of that site.			
ENTRY GUID	GUID N VARCHAR2	32	
The Globally Unique ID (GUID) of the user that initially entered (created) the record.			
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCellID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>			
ENTRY TIMESTAMP	N DATE		
Entered date/time			
ENTRY USERID	N VARCHAR2	30	
Entered by			
UPDATE TIMESTAMP	N DATE		
Updated date/time			
UPDATE USERID	N VARCHAR2	30	
Updated by			
REVISION COUNT	N NUMBER	10,0	
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.			

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

MUST BE geographically identified within one and only one BIOGEOCLIMATIC CATALOGUE

MAY BE visually recorded by one or more IAPP IMAGE

MAY BE spatially defined by one or more IAPP SITE POLY

MUST BE infested by one or more INVASIVE PLANT

MAY BE supplemented by one and only one INVASIVE PLANT LEGACY SITE

MAY BE controlled by one or more INVASIVE PLANT SITE JURISDCTN

MAY BE within one and only one RANGE UNIT

* = Relationships in primary unique identifier.

Unique Identifiers:

IS Primary Y

SITE ID

Entity Name: INVASIVE PLANT SITE JURISDCTN*Short Name:*

IPSJ

Plural: INVASIVE PLANT SITE JURISDCTN*Init. Volume:**Avg. Volume:**Max. Volume:**Annual Growth Rate:***Description:**

The jurisdictions for an INVASIVE PLANT SITE. Sometimes more than one jurisdiction has an interest in a site, in which case they often split funding and want recognition of their contributions towards dealing with the invasive plants on the site.

An example might be a long swath of land beside a highway in which both MOT and BC Hydro have an interest.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* SITE JURISDICTION ID		N	NUMBER	10,0
Primary unique numeric identifier for an INVASIVE PLANT SITE JURISDCTN.				
JURISDICTION PERCENT		N	NUMBER	3,0
The percentage which the jurisdiction is responsible for the site.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

MUST BE authority for one and only one INVASIVE PLANT SITE

MUST BE identified by one and only one JURISDICTION CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

IPSJ PK *Primary* Y

SITE JURISDICTION ID

Entity Name: INVASIVE PLANT SPECIES			Short Name:	IPS
Plural:	INVASIVE PLANT SPECIES			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

Identifies the species of an invasive alien plant. Examples: Abutilon theophrasti (Velvet leaf), Madia glomerata (Cluster tarweed), Tribulus terrestris (Puncturevine).

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* GENUS CODE		N	VARCHAR2	4
The 4 character code for the Invasive Plant Species genus.				
* SPECIES CODE		N	VARCHAR2	3
The 3 character code for the Invasive Plant Species species.				
LATIN NAME		N	VARCHAR2	100
Latin name for the invasive plant species. Examples: Abutilon theophrasti, Carduus nutans, Chrysanthemum leucanthemum.				
COMMON NAME		N	VARCHAR2	100
Common name for the invasive plant species. Examples: Velvet leaf, Nodding thistle, Oxeye daisy.				
MAP SYMBOL		N	VARCHAR2	2
Used for labeling on maps.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE species of one or more BIOLOGICAL AGENT EXCEPTION

MAY BE species of one or more BIOLOGICAL AGENT MATURITY

MAY BE established in one or more IAPP CONTAINMENT POLY

MAY BE species of one or more INVASIVE PLANT

MAY BE disregarded within one or more INVASIVE PLANT DISCOUNT POLY

MAY BE species of one or more INVASIVE PLANT SUBMISSION

* = Relationships in primary unique identifier.

Unique Identifiers:

CN	Primary	N
COMMON NAME		
IPS	Primary	N
MAP SYMBOL		
IPGS	Primary	Y
GENUS CODE		
SPECIES CODE		

Entity Name: INVASIVE PLANT SUBMISSION

Short Name: IAPP IPSB

Plural: INVASIVE PLANT SUBMISSION

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

An Invasive Plant Submission is a report, by a member of the public, of a potential new occurrence of an invasive plant. It is used to stage the information until an invasive plant specialist can review the submission and determine if it is legitimate and should be added to the IAPP inventory.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u> <u>Format</u>	<u>Length</u>
* SUBMISSION ID		N NUMBER	10
The Submission ID is a unique, system generated primary key for Invasive Plant Submission.			
SURVEY DATE		N DATE	
The Survey Date is the date that the invasive plant occurrence was observed by the submitter.			
GEOMETRY	GEOMETRIES	N CHAR	
The Geometry is an object that describes the location, topology and spatial context of the Invasive Plant occurrence.			
UTM EASTING		N NUMBER	6
The UTM Easting is a component of a Universal Transverse Mercator coordinate that describes the location of the Invasive Plant occurrence. The Easting describes the ?x-axis? component of the coordinate as the number of meters east of the central meridian for the UTM Zone.			
UTM NORTHING		N NUMBER	7
The UTM Northing is a component of a Universal Transverse Mercator coordinate that describes the location of the Invasive Plant occurrence. The Northing describes the ?y-axis? component of the coordinate as the number of meters north of the Equator.			
UTM ZONE		N NUMBER	2
The UTM Zone is a component of a Universal Transverse Mercator coordinate that describes the location of the Invasive Plant occurrence. The Zone describes the particular longitudinal segment that is the context for the UTM coordinate. British Columbia spans UTM Zones 8 to 11.			
LOCATION DESCRIPTION		N VARCHAR2	2000
The Location Description provides details to assist in locating the Invasive Plant occurrence when in proximity and may also provide other descriptive details. For example: ?Located approximately 5 meters east of rock outcropping. A small stream is nearby.?			
ESTIMATED AREA		N NUMBER	15,4
The Estimated Area is the approximate area that the Invasive Plant was observed to occupy, measured in square metres.			
SUBMITTER LAST NAME		N VARCHAR2	50
The Submitter Last Name is the surname of the person making the Invasive Plant Submission.			
SUBMITTER FIRST NAME		N VARCHAR2	50
The Submitter First Name is the given name of the person making the Invasive Plant Submission.			
SUBMITTER MIDDLE INITIAL		Y VARCHAR2	1
The Submitter Middle Initial is the middle initial of the person making the Invasive Plant Submission.			
SUBMITTER PHONE NUMBER		Y NUMBER	10
The Submitter Phone Number is the telephone number (including area code) for the person making the Invasive Plant Submission. Either Submitter Phone Number or Submitter Email Address must be supplied.			
SUBMITTER EMAIL ADDRESS		Y VARCHAR2	128

The entity is required to ensure the data is captured in a reliable format and can be re-purposed as necessary. Simply emailing the contents of the reports and not storing them to the database is a far simpler approach; but, it relies solely on email to convey the data and this is known to be an unreliable conveyance.

Entity Name: INVASIVE PLANT SURVEY

Short Name:

SRVY

Plural: INVASIVE PLANT SURVEY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

An historical record of all surveys done regarding a particular species of invasive plant on the site. Provides a chronological recording of the change in distribution and density of invasive plants on the site.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* SURVEY ID		N	NUMBER	10
Primary unique numeric identifier for an Invasive Plant Survey.				
PAPER FILE ID		Y	VARCHAR2	20
The file identification number used to reference the corresponding paperwork for this record.				
ESTIMATED AREA		N	NUMBER	15,4
Estimated area (hectares) covered by the invasive alien plant.				
<i>In the data, the most number of decimal places is 4 (0.0125). And the largest value is 150284341. Hence my choices for length and decimal places. [Jon Aquino 2004-08-31]</i>				
SURVEY DATE		N	DATE	
Date on which the presence of this invasive alien plant was recorded.				
FOUND IND		N	VARCHAR2	1
Indicates that the Invasive Plant was found on this survey. If this indicator is false then estimated area must be zero and distribution and density codes must be null.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the invasive alien plant.				
ENTRY GUID	GUID	N	VARCHAR2	32
The Globally Unique ID (GUID) of the user that initially entered (created) the record.				
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCellID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE staffed by one and only one IAPP EMPLOYER

MUST BE categorized by one and only one IAPP SURVEY TYPE CODE

MUST BE inventorying one and only one INVASIVE PLANT

MUST BE overseen by one and only one INVASIVE PLANT AGENCY CODE

MAY BE having density of one and only one INVASIVE PLANT DENSITY CODE

MAY BE having distribution of one and only one INVASIVE PLANT DISTRIB CODE

Entity Name:	INVASIVE PLANT SURVEY (cont'd)	Short Name:	SRVY
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MAY BE surveyed by one or more INVASIVE PLANT SURVEYOR

MAY BE recommends one or more PROPOSED IAPP ACTIVITY

* = Relationships in primary unique identifier.

Unique Identifiers:

SRVY	Primary	Y
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SURVEY ID

Entity Name: INVASIVE PLANT SURVEYOR			<i>Short Name:</i>	IPSV
<i>Plural:</i>	INVASIVE PLANT SURVEYOR			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

The IAPP participants that acted as surveyors for a particular Invasive Plant Survey.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

- Relationships:**
- Each Occurrence Of This Entity:
- * MUST BE task for one and only one IAPP PARTICIPANT
 - * MUST BE surveying one and only one INVASIVE PLANT SURVEY
- * = Relationships in primary unique identifier.

Unique Identifiers:

IPSV	Primary	Y
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MUST BE surveying one and only one INVASIVE PLANT SURVEY

MUST BE task for one and only one IAPP PARTICIPANT

Entity Name: INVASIVE PLANT TREATMENT

Short Name: IAPP IPT

Plural: INVASIVE PLANT TREATMENT

Init. Volume: Avg. Volume: Max. Volume: Annual Growth Rate:

Description:

Application of a technique for eliminating or reducing the presence of invasive alien plants. Controls are categorized as being mechanical/cultural, chemical, or biological.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* TREATMENT ID		N	NUMBER	10
Primary unique numeric identifier for an invasive plant control.				
PAPER FILE ID		Y	VARCHAR2	20
The file identification number used to reference the corresponding paperwork for this record.				
TREATMENT DATE		N	DATE	
Date on which the control was applied.				
COMMENTS		Y	VARCHAR2	2000
A free-format, user-entered comment on the control.				
ENTRY GUID	GUID	N	VARCHAR2	32
The Globally Unique ID (GUID) of the user that initially entered (created) the record.				
<i>The GUID is the unique identifier assigned to a user account within the Active Directories that house BCeID and IDir. The GUID must be used as the identifier for security purposes because it is possible for a user account to change their account name but the GUID will always remain the same.</i>				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE staffed by one and only one IAPP EMPLOYER

MAY BE visually recorded by one or more IAPP IMAGE

MAY BE spatially defined by one and only one IAPP TREATMENT POLY

MUST BE applied to one and only one INVASIVE PLANT

MUST BE overseen by one and only one INVASIVE PLANT AGENCY CODE

MAY BE assessed by one or more INVASIVE PLANT MONITORING

MAY BE applied by one or more TREATMENT APPLICATOR

* = Relationships in primary unique identifier.

Unique Identifiers:

IPT Primary Y

TREATMENT ID

Subtypes:

Entity Name:	INVASIVE PLANT TREATMENT (cont'd)	<i>Short Name:</i>	IAPP IPT
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BIOLOGICAL TREATMENT
CHEMICAL TREATMENT
MECHANICAL TREATMENT

Entity Name: JURISDICTION CODE			Short Name:	JC
Plural:	JURISDICTION CODE			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

The authority or title owner for the parcel of land that a site resides on. Examples: Crown Land, Military, Indian Reserves.

Attributes:				
<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* JURISDICTION CODE		N	VARCHAR2	4
Unique code identifying the jurisdiction.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE responsible for one or more INVASIVE PLANT SITE JURISDCTN

* = Relationships in primary unique identifier.

Unique Identifiers:

JC	Primary	Y
JURISDICTION CODE		

Entity Name: MECHANICAL METHOD CODE		<i>Short Name:</i>	MMCD
<i>Plural:</i>	MECHANICAL METHOD CODE		
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>

Description:

Indicates the method of mechanical or cultural control. Examples: mulching, burning, mowing.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* MECHANICAL METHOD CODE		N	VARCHAR2	3
Unique code identifying the mechanical control method.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE implementation for one or more MECHANICAL TREATMENT

* = Relationships in primary unique identifier.

Unique Identifiers:

MMCD2	Primary	Y
MECHANICAL METHOD CODE		

Entity Name: MECHANICAL MONITORING

Short Name:

MM

Plural: MECHANICAL MONITORING

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Subtype of: INVASIVE PLANT MONITORING

Description:

An inspection of a mechanical treatment to determine its effectiveness.

The effectiveness of each mechanical treatment varies. Therefore, the monitoring of sites and the capture of monitoring information can be helpful to the long term successful treatment of a site. Mechanical treatment monitoring information is recorded on the ?Chemical or Mechanical Monitoring Record? field form.

Attributes:NameDomainOpt FormatLength

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MUST BE level of one and only one EFFICACY RATING CODE

* = Relationships in primary unique identifier.

Entity Name: MECHANICAL TREATMENT

Short Name:

MT

Plural: MECHANICAL TREATMENT

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Subtype of: INVASIVE PLANT TREATMENT

Description:

An application of a mechanical or cultural control. Mechanical weed control employs various implements and techniques to physically disturb weeds or to interrupt their reproduction by depleting root reserves through repeated defoliation of the plant. Mechanical control includes the mowing, ploughing, chopping, and crushing of weeds.

Cultural control includes selective grazing, irrigation and deliberate flooding, mulching, hand pulling, and burning. Strategies and timing should depend on the weed species and its location in the province.

[Source: Integrated Pest Management, <http://www.for.gov.bc.ca/hfp/noxious/integrat.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* MECHANICAL TREATMENT ID		N	NUMBER	10
Primary unique numeric identifier for a mechanical control.				
AREA TREATED		N	NUMBER	15,4
Area (hectares) over which the mechanical control was applied.				
<i>In the data, the most number of decimal places is 5 (0.00001). And the largest value is 10000. Hence my choices for length and decimal places. [Jon Aquino 2004-08-31]</i>				
* = Attributes in primary unique identifier.				

Relationships:Each Occurrence Of This Entity:

MUST BE implemented by one and only one MECHANICAL METHOD CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

MT2 Primary Y

MECHANICAL TREATMENT ID

Entity Name: MONITORING SURVEYOR			<i>Short Name:</i>	MS
<i>Plural:</i>	MONITORING SURVEYOR			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:
The IAPP participants that acted as surveyors for a particular Treatment Monitoring Record.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
* = Attributes in primary unique identifier.				

Relationships:
Each Occurrence Of This Entity:

- * MUST BE task for one and only one IAPP PARTICIPANT
- * MUST BE inspecting one and only one INVASIVE PLANT MONITORING

* = Relationships in primary unique identifier.

Unique Identifiers:

MS	Primary	Y
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MUST BE inspecting one and only one INVASIVE PLANT MONITORING

MUST BE task for one and only one IAPP PARTICIPANT

Entity Name: ORG UNIT

Short Name: OU

Plural: ORG UNIT

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

Records codes for ministry Organizational Units (offices), such as Branch, Region, or District office. Codes are currently defined to the office, section/program, and subsection level. [Source: Integrated Data Dictionary, http://www.for.gov.bc.ca/pScripts/isb/idd/IDD_srch.asp]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* ORG UNIT NO		N	NUMBER	10,0

The organizational unit number of the user who added this record or who last updated the information.

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE district for one or more INVASIVE PLANT SUBMISSION

* = Relationships in primary unique identifier.

Unique Identifiers:

ORG_UNIT_PK	Primary	Y
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ORG UNIT NO

Entity Name: PERSPECTIVE CODE			<i>Short Name:</i>	PC
<i>Plural:</i>	PERSPECTIVE CODE			
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>	

Description:

Identifies the perspective from which the image is represented: Overview, North, South, East, or West.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* PERSPECTIVE CODE		N	VARCHAR2	1
Unique code identifying the perspective from which the image is represented.				
DESCRIPTION		N	VARCHAR2	120
Description of the code.				
EFFECTIVE DATE		N	DATE	
Effective date/time				
EXPIRY DATE		N	DATE	
Expiry date/time				
UPDATE TIMESTAMP		N	DATE	
Update date/time				
* = Attributes in primary unique identifier.				

Relationships:

Each Occurrence Of This Entity:

MAY BE orientating one or more IAPP IMAGE

* = Relationships in primary unique identifier.

Unique Identifiers:

PC2	<i>Primary</i>	Y
PERSPECTIVE CODE		

Notes:

Changed name from "Image Type Code" to "Perspective Code" [Jon Aquino 2004-08-24]

Entity Name: PROPOSED IAPP ACTIVITY

Short Name:

PA

Plural: PROPOSED IAPP ACTIVITY

Init. Volume:

Avg. Volume:

Max. Volume:

Annual Growth Rate:

Description:

A recommended plan for controlling invasive alien plants based on knowledge of potential damage, cost of control method and environmental impact of the weed and control decision. May include a combination of methods to reduce the weed population to an acceptable level. [Source: Integrated Weed Management: An Introductory Manual, <http://www.agf.gov.bc.ca/cropprot/weedman.htm>]

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* PROPOSED ACTIVITY ID		N	NUMBER	10
Primary unique numeric identifier for a proposed IAPP activity record.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				
REVISION COUNT		N	NUMBER	10,0
Used to ensure data consistency during updates to entities. The revision count will be checked before performing the update to ensure the update is being applied to the version it started with.				

* = Attributes in primary unique identifier.

Relationships:Each Occurrence Of This Entity:

MAY BE proposal for one and only one INVASIVE PLANT PLAN
 or MAY BE proposal for one and only one INVASIVE PLANT SURVEY
 MAY BE prescribing one and only one BIOLOGICAL AGENT CODE
 or MAY BE prescribing one and only one HERBICIDE CODE
 MAY BE justified by one or more BIOLOGICAL AGENT EXCEPTION
 MUST BE recommended for one and only one IAPP ACTIVITY CODE

* = Relationships in primary unique identifier.

Unique Identifiers:

PA2

Primary Y

PROPOSED ACTIVITY ID

Entity Name: RANGE UNIT		Short Name: RU	
<i>Plural:</i>	RANGE UNIT		
<i>Init. Volume:</i>	<i>Avg. Volume:</i>	<i>Max. Volume:</i>	<i>Annual Growth Rate:</i>

Description:

A range management area used to prescribe the numbers and kinds of livestock that the land can support.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* RANGE UNIT ID		N	VARCHAR2	10
Primary unique numeric identifier for a Range Unit.				
* = <i>Attributes in primary unique identifier.</i>				

Relationships:

Each Occurrence Of This Entity:

MAY BE contains one or more INVASIVE PLANT SITE

* = *Relationships in primary unique identifier.*

Unique Identifiers:

RU	<i>Primary</i>	Y
RANGE UNIT ID		

Entity Name: SITE SERIES CATALOGUE		Short Name:	BEC SSC
Plural:	SITE SERIES CATALOGUE		
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:

Description:

Within the BEC system, all sites capable of producing the same mature or climax plant communities within a biogeoclimatic subzone or variant. BEC Site Series is defined within a Region, Zone, Subzone, Variant and Phase, and therefore all parts help define the Site Series. As well, if there are more than one phase per site series, there will be a separate row to represent each Site Series Phase.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
* SITE SERIES CATALOGUE ID		N	NUMBER	5
Assigned numeric identifier for a site series unique within a biogeoclimatic unit.				
SITE SERIES		N	VARCHAR2	4
A number from 01 to 99 representing the soil moisture regime and soil nutrient regime of a site series, relative to other site series within a subzone or variant.				
* = Attributes in primary unique identifier.				

Unique Identifiers:

BEC SSC	Primary	Y
SITE SERIES CATALOGUE ID		

Notes:

Stub of BEC.SITE SERIES CATALOGUE.

Entity Name: TREATMENT APPLICATOR			Short Name:	TA
Plural:	TREATMENT APPLICATOR			
Init. Volume:	Avg. Volume:	Max. Volume:	Annual Growth Rate:	

Description:

The IAPP participants that acted as applicators for a particular Invasive Plant Control.

Attributes:

<u>Name</u>	<u>Domain</u>	<u>Opt</u>	<u>Format</u>	<u>Length</u>
CERTIFICATE NO		Y	VARCHAR2	6
The applicator's certificate or license number that authorizes them to work with herbicides.				
ENTRY TIMESTAMP		N	DATE	
Entered date/time				
ENTRY USERID		N	VARCHAR2	30
Entered by				
UPDATE TIMESTAMP		N	DATE	
Updated date/time				
UPDATE USERID		N	VARCHAR2	30
Updated by				

* = Attributes in primary unique identifier.

Relationships:

Each Occurrence Of This Entity:

- * MUST BE task for one and only one IAPP PARTICIPANT
- * MUST BE applying one and only one INVASIVE PLANT TREATMENT
- * = Relationships in primary unique identifier.

Unique Identifiers:

TA2	Primary	Y
MUST BE task for one and only one IAPP PARTICIPANT		
MUST BE applying one and only one INVASIVE PLANT TREATMENT		

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