Ministry of Forests, Lands and Natural Resource Operations

BC Geographical Names Web Services
BCGNWS

User Manual

This web service is hosted by: DataBC
Ministry of Labour, Citizens' Services and Open Government

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Contents

1.0   Introduction

This document summarizes how to use the BCGNWS services to access BC Geographical names though the REST API and the web services.

1.1   Document Purpose

This document serves as a reference manual for developers using the BCGNWS services.

1.2   Audience

The intended audience for the document is technically proficient.

1.3   System Overview

The existing BC Geographical Names Information System (BCGNIS) is comprised of a master database for British Columbia's place names, as well as a publicly accessible web service and a web site which provide access to the place names.

1.4   Guiding Principles

Part of the BCGNWS design is guided by the principals of RESTful web service design. The BCGNWS REST-style services are consistent with the principals articulated by Leonard Richardson and Sam Ruby in the book <u>RESTful Web Services</u>, published by O'Reilly in 2007.

1.5   Documentation Conventions

The system adheres to the REST definition of a URI as a Uniform Resource Identifier to define the location of resources. Using URI as URL will allow fetching the corresponding resource though an HTTP GET request.

2.0   Developer Web Site

The BCGNWS system provides a developer web site from which good examples can be used and re-used as templates to access the system.

The main URL for the developer web site is:

http://apps.gov.bc.ca/pub/api/bcgnws/

Note that the examples available through the web site are meant to be developer-friendly, not necessarily user-friendly. The developer should feel free to explore the Source html/javascript code hiding on those pages.

The developer site provides:

- **Search Interface**: various HTML forms illustrating the search services and their parameters;

- **Javascript API**: links to download the API and its documentation;

- **Google Maps Tracker**: an interactive Google maps interface, displaying examples of names using the **inside** service and the **geojson** format;

- **Google Earth Tracker**: a KML file that illustrates using a KML **NetworkLink** and the **inside** service.

3.0 Resources

This section describes the system resources and their corresponding URIs.

The resources are grouped as individual resources and list resources in the following sections.

The default format for resource representations is XML. Resources that do not suit XML, such as images and audio files, are returned by default in other formats as appropriate. Some individual resource representations offer optional alternative output formats. These alternatives are noted, and their use described, where applicable in the subsections under this heading.

For all resources, the "content-type" HTTP header describes the format of the response.

3.1   Individual Resources Representation

An individual resource representation provides attribution for a single data item which is represented by an identifier.

3.1.1   Names

http://apps.gov.bc.ca/pub/bcgnws/names/{id}[.format][?parameters]

An individual name. Optional format extension and query string parameters are given in brackets [].

Default output format: XML

Optional alternative output formats: HTML, JSON

Select the output format by the optional file format extension, notated as [.format] above. Valid values are .xml, .json, .jsonx (for JSON wrapped in a javascript callback function), and .html.

Optional query string parameters:

Parameter Name	Description
outputSRS	The Spatial Reference System (SRS) code for the point geometry. Valid values are identical to those for query resources. Refer to section 3.3.1. Default: 3005 (BC Albers)
callback	The name of the javascript callback function. For use when the file format extension is .jsonx. Default: bcgnwsJSONX

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/written/**{idx}

> Depiction of an individual name as written. {idx} is a resource file name.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/spoken/**{idx}

> Audio representation of an individual name as spoken. {idx} is a resource file name.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/notes/**{idx}

> Indexed origin and history notes associated with the name. Can be disabled through the **common.properties** config file.

3.1.2 Features

http://apps.gov.bc.ca/pub/bcgnws/features/{id}

> An individual feature.

http://apps.gov.bc.ca/pub/bcgnws/features/{id}**/images/**{idx}

> Image of an individual feature. {idx} is a resource file name.

http://apps.gov.bc.ca/pub/bcgnws/features/{id}**/mapsheets/**{idx}

> Indexed mapsheet of an individual feature.

3.1.3 Metadata

http://apps.gov.bc.ca/pub/bcgnws[?parameters]

> BC Geographical Names Information Service. Includes information about the data provider/owner, sucn as province, country, and continent.
>
> Default output format: XML
>
> Optional alternative output format: JSON
>
> Optional query string parameters:

Parameter Name	Description
outputFormat	The output format. Valid values are .xml and .json. Default: .xml

http://apps.gov.bc.ca/pub/bcgnws/featureClasses/{class}

> An individual feature class.

http://apps.gov.bc.ca/pub/bcgnws/featureCategories/{category}

An individual feature category. Note that **categories** do not exist for some classes. For example, Glacier features are of class SNOW & ICE FEATURES but have no corresponding category.

http://apps.gov.bc.ca/pub/bcgnws/featureTypes/{type}

An individual feature type.

http://apps.gov.bc.ca/pub/bcgnws/featureCodes/{code}

An individual feature code.

http://apps.gov.bc.ca/pub/bcgnws/abbreviations/{abbreviation}

An individual abbreviation.

http://apps.gov.bc.ca/pub/bcgnws/nameAuthority/{id}

An individual name authority.

3.2   List Resources

By default, list resources are formatted as XML URIs. Each URI has a root (`<uris></uris>`) element and as many `<uri></uri>` child elements as needed. Each child element has a URI from the Individual Resource category.

3.2.1   Names

http://apps.gov.bc.ca/pub/bcgnws/names

All names. Note that this request can be disabled server side.

http://apps.gov.bc.ca/pub/bcgnws/names/official

All official names. Note this request can be disabled server side.

http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial

All notOfficial names. Note this request can be disabled server side.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/written**

All depictions of an individual name as written.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/spoken**

All audio representations of an individual name as spoken.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/official**

All official names associated with an individual name.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/notOfficial**

All notOfficial names associated with an individual name.

http://apps.gov.bc.ca/pub/bcgnws/names/{id}**/notes**

All origin and history notes associated with name.

3.2.2   Features

http://apps.gov.bc.ca/pub/bcgnws/features

All features. Note this request can be disabled server side.

http://apps.gov.bc.ca/pub/bcgnws/features/{id}**/names**

All names of an individual feature.

http://apps.gov.bc.ca/pub/bcgnws/features/{id}**/images**

All images of an individual feature.

http://apps.gov.bc.ca/pub/bcgnws/features/{id}**/mapsheets**

All mapsheets of an individual feature.

3.2.3   Metadata

http://apps.gov.bc.ca/pub/bcgnws/featureClasses

All feature classes.

http://apps.gov.bc.ca/pub/bcgnws/featureCategories

All feature categories.

http://apps.gov.bc.ca/pub/bcgnws/featureTypes

All feature types.

http://apps.gov.bc.ca/pub/bcgnws/featureCodes

All feature codes.

http://apps.gov.bc.ca/pub/bcgnws/abbreviations

All abbreviations.

http://apps.gov.bc.ca/pub/bcgnws/nameAuthorities

All name authorities.

3.3   Query Resources

Most queries share the same set of output control parameters, as well as some input parameters. Shared parameters are listed first, followed by the unique query criteria parameters.

Query Resources are name-centric and will return name records. To allow easier use of the data, the dependent feature records can be embedded using the **embed** parameter. For example, when using the search service to find some names, the feature record for every returned name can be embedded by setting **embed** to 1.

When not embedded, only the feature record URI is provided so it can be fetched separately.

3.3.1 Common Parameters

Output Format Parameters:

Parameter Name	Description
itemsPerPage	Maximum number of entries returned by the query
startIndex	First entry index to return
outputFormat	Possible values: **xml:** XML data **csv:** Comma Separated Values **rdf:** Resource Definition Framework **json:** JavaScript Object Notation (geojson) **kml:** OGC KML 2.2 subset that is compatible with Google Earth and Google Maps. **rss:** Really Simple Syndication (RSS) 2.0 with embedded "simple" GeoRSS giving feature points. Only available for "year" and "recent" query resources. **atom:** Atom 1.0 syndication feed format with embedded "simple" GeoRSS giving feature points. Only available for "year" and "recent" query resources. **uri:** URI lists
outputStyle	Possible values: **summary:** limited fields **detail:** all fields Note: This parameter is ignored when outputFormat is uri, rss or atom.
outputSRS	EPSG code of the projection used to state the coordinate location of a named feature. Possible values: **3005** or **102190:** BC Albers (default) **3857:** Web Mercator **4326:** WGS 84 **26907 – 26911:** NAD83/UTM Zones 7N through 11N

	32607 – 32611: WGS84/UTM Zones 7N through 11N
	26707 – 26711: NAD27/UTM Zones 7N through 11N
asAttachment	Possible values:
	1: (default) sets the content disposition field in the HTTP response header to **attachment**, which will trigger a Save As dialogue in a web browser
	0: sets the content disposition field to **inline**. This parameter is primarily for requests from web pages, not web services and only necessary for **csv** and **json** output formats.
sortBy	Possible values:
	name: sort results by name (ascending).
	featureType: sort results by featureType (ascending), name (ascending).
	decisionDate: sort results by by decision Date (ascending).
	Exceptions: This parameter is ignored when outputFormat is rss or atom. For these output formats results are always sorted by decision date. This parameter is also ignored for the soundlike resource. For soundlike, results are always sorted by the score assigned to each match.
embed	Possible values:
	1: the associated feature will be embedded in the name records returned (CSV default).
	0: (default) the associated feature will be not embedded in the name records returned, but a URI will be provided instead.
	Note: This parameter is ignored when outputFormat is uri, rss or atom. For these output formats results are always sorted by decision date.

3.3.2   Search

Service Name: names/[official/|notOfficial/]search

HTTP Request Type: GET

URI:

> **http://apps.gov.bc.ca/pub/bcgnws/names/search**
>
> **http://apps.gov.bc.ca/pub/bcgnws/names/official/search**
>
> **http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial/search**

Description:

Searches all names or all official names by name; wildcard characters "*" are allowed.

Query Criteria Parameters:

Parameter Name	Description
name	Feature Name (can include wildcards "*")
exactSpelling	possible values: **0:** (default) use partial smart matching **1:** edit and swap distance matching not performed
featureClass	BCGNIS Feature Class
featureCategory	BCGNIS Feature Category
nameAuthority	Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority.

3.3.3   Near

Service Name: names/[official/|notOfficial/]near

HTTP Request Type: GET

URI:

> **http://apps.gov.bc.ca/pub/bcgnws/names/near**
>
> **http://apps.gov.bc.ca/pub/bcgnws/names/official/near**
>
> **http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial/near**

Description:

Returns all names, all official names, or all notOfficial names within a given distance (in km) of a given point.

Query Criteria Parameters:

Parameter Name	Description
featurePoint	center latitude and longitude in decimal degrees. Format: **featurePoint=lon,lat**
distance	radius in KM (default 10.0 km)
featureClass	BCGNIS Feature Class
featureCategory	BCGNIS Feature Category

| nameAuthority | Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority. |

3.3.4   PopulatedPlaces

Service Name: names/[official/|notOfficial/]populatedPlaces/near

HTTP Request Type: GET

URI:

http://apps.gov.bc.ca/pub/bcgnws/names/populatedPlaces/near

http://apps.gov.bc.ca/pub/bcgnws/names/official/populatedPlaces/near

http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial/populatedPlaces/near

Description:

Returns all names, all official names, or all notOfficial names of populated places within a given distance of a given point. This is a shortcut to the **near** service with **featureClass="POPULATED PLACES"**.

Query Criteria Parameters:

Parameter Name	Description
featurePoint	center latitude and longitude in degrees. Format: **featurePoint=lon,lat**
distance	radius in KM (default 10.0 km)
featureCategory	BCGNIS Feature Category
nameAuthority	Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority.

3.3.5   Inside

Service Name: names/[official/|notOfficial/]inside

HTTP Request Type: GET

URI:

http://apps.gov.bc.ca/pub/bcgnws/names/inside

http://apps.gov.bc.ca/pub/bcgnws/names/official/inside

http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial/inside

Description:

Returns all names, all official names, or notOfficial names inside or intersected by a given bounding box.

Query Criteria Parameters:

Parameter Name	Description
bbox	bounding box in degrees (WGS 84). Format: **bbox=minLon,minLat,maxLon,maxLat**
featureClass	BCGNIS Feature Class
featureCategory	BCGNIS Feature Category
nameAuthority	Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority.

3.3.6   SoundLike

Service Name: names/[official/|notOfficial/]soundlike

HTTP Request Type: GET

URI:

http://apps.gov.bc.ca/pub/bcgnws/names/soundlike

http://apps.gov.bc.ca/pub/bcgnws/names/official/soundlike

http://apps.gov.bc.ca/pub/bcgnws/names/notOfficial/soundlike

Description:

Returns all names, all official names or notOfficial names that match phonetically. The matches are assigned scores between 0 and 1, and results are sorted by descending score. The **minScore** parameter can be used to limit the results;

Query Criteria Parameters:

Parameter Name	Description
name	Feature Name
minScore	Limit the results to only those that have score >= the given

	value (default 0).
featureClass	BCGNIS Feature Class
featureCategory	BCGNIS Feature Category
nameAuthority	Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority.

3.3.7   Recent Decisions

Service Name: names/decisions/recent

HTTP Request Type: GET

URI:

> **http://apps.gov.bc.ca/pub/bcgnws/names/decisions/recent**

Description:

> Returns all naming decisions made within the last x days.

Query Criteria Parameters:

Parameter Name	Description
days	maximum age of decision in days (default 30)
featureClass	BCGNIS Feature Class
featureCategory	BCGNIS Feature Category

3.3.8   Decisions in a Given Year

Service Name: names/decisions/year

HTTP Request Type: GET

URI:

> **http://apps.gov.bc.ca/pub/bcgnws/names/decisions/year**

Description:

> Returns all naming decisions made in a given year. Note, this resource only reports decisions by the BC Geographical Names Office, and therefore does not offer the 'nameAuthority' filter.

Query Criteria Parameters:

Parameter Name	Description
year	given year in yyyy form (defaults to current year)
featureClass	BCGNIS Feature Class

featureCategory	BCGNIS Feature Category

3.3.9 Changes in a Given Year

Service Name: names/changes

HTTP Request Type: GET

URI:

http://apps.gov.bc.ca/pub/bcgnws/names/changes

Description:

Returns all names that have changed within the specified date range.

Query Criteria Parameters:

Parameter Name	Description
days	Indicates that all name changes between the specified number of days ago and the present day should be returned
fromDate	The oldest change date for which to fetch names
toDate	The most recent change date for which to fetch names
nameAuthority	Limit results to names that are authorized by a given name authority. The value of this parameter should be the numeric ID of the name authority. Note: only official names are associated with a name authority.

One of 'days' or 'fromDate' is required. If 'fromDate' is specified, then 'toDate' is an option. If 'toDate' is not specified, it defaults to the present day.

3.4 Query Resource Representations

This section describes data output fields that are common to every Output Format. This includes some metadata fields not in the database, and some database fields which may be either modified or not modified. Formatting of fields may vary slightly per format. Some formats will offer more specific fields (for example: KML styles/icons).

The data are divided into three types. **Reports** is the metadata root for all the returned query records. Inside the root will be a list of one or more **name** records. If **embed** was set to 1, each **name** record will contain one **feature** record inside it.

In the following tables, the **S/D** column defines whether a field is in the summary (S) and/or detail (D) output (**outputStyle**).

3.4.1   Reports

Field Name	S/D	Description
service	S/D	URI of main service (bcgnis)
ouputSRS	D	SRS of all **featurePoint**
totalResults	S/D	number of search results available for the current search, limited by the page
startIndex	S/D	index of the first search result in the current set of search results
itemsPerPage	S/D	number of search results returned per page. Should match the input parameter value except on last page

3.4.2   Names

Field Name	S/D	Description
uri	S/D	Name URI
name	S/D	Feature Name
language	S/D	literals from BCGNIS
status	S/D	adopted, rescinded, etc. (latest event on name)
pronunciation	D	pronunciation (in folk-phonetic text)
isOfficial	S/D	true if this name is official (based on 'some' status codes)
decisionDate	S/D	decision date
score	S/D	A score (0 to 1) assigned to a name that appears in the result set of a soundlike search. A score of 1 indicates a perfect match
cgndbCode	D	A unique code identifying a status according to Federal CGNDB guidelines
cgndbKey	D	A 5 character value uniquely associated with each name
nameKey	D	A compressed form of the name
official	D	list of official name URIs or, for flat output formats (such as CSV), the URI of the list resource that includes all the Individual URIs
written	D	list of written depiction file URIs or, for flat output formats (such as CSV), the URI of the list resource that includes all the Individual URIs

spoken	D	list of spoken audio file URIs or, for flat output formats (such as CSV), the URI of the list resource that includes all the Individual URIs
notes	D	list of origin and historic notes, either as URIs or in string form (when **embed** is true). For flat output formats (such as CSV), this is the URI of the list resource that includes all the Individual URIs
feature	S/D	Feature URI or Feature record (when **embed** is true)

3.4.3　Features

Field Name	S/D	Description
uri	S/D	Feature URI
featureClass	D	BCGNIS Feature Class
featureClassURI	D	BCGNIS Feature Class URI
featureCategory	S/D	BCGNIS Feature Category
featureCategoryURI	S/D	BCGNIS Feature Category URI
featureCategoryDescription	S/D	BCGNIS Feature Category description
featureType	S/D	BCGNIS Feature Type
featureTypeURI	D	BCGNIS Feature Type URI
featureCode	D	BCGNIS Feature Code
featureCodeURI	D	BCGNIS Feature Code URI
featurePoint	S/D	compound ouput consisting of **ouputSRS**, **lat** and **lon** or **easting** and **northing** in meters (BC Albers, UTM Zones) show in detail mode only for XML and CSV formats
lonAsRecorded	S/D	formatted longitude ddd:mm:ss (verbatim)
latAsRecorded	S/D	formatted latitude dd:mm:ss (verbatim)
datumAsRecorded	S/D	verbatim
position	D	position indicator (e.g., mouth, center)
ntsMap	S/D	The name of the mapsheet that contains **position**.
relativeLocation	D	relative location description
landDistrict	D	The land district name

images	D	list of images file URIs or, for flat output formats (such as CSV), the URI to the list resource that includes all the Individual URIs
mapsheets	S/D	list of mapsheet URIs or, for flat output formats (such as CSV), the URI of the list resource that includes all the Individual URIs
names	S/D	list of name URIs

3.5   HTTP Return Codes

HTTP codes used by the BCGNWS service:

HTTP Code	**Meaning**
200: OK	Request executed successfully
400: Bad Request	REST error – URI pattern not defined
404: Not Found	The resource was not found or has been disabled
500: Internal Server Error	An unexpected exception occurred (see logs for details)

Other HTTP codes maybe served by OAS or the web browser, however, these are out of the BCGNWS service scope or control.

4.0 Query Resource **Formats**

The following sections illustrate the layout of the Query Resources Representation for each output format, using the name Vancouver (ID 24320), with embedded and detail mode turned on.

4.1.1   XML

```
<?xml version="1.0" encoding="UTF-8"?>

<results>

 <legal>

  <privacyURI>http://www.gov.bc.ca/com/privacy.html</privacyURI>

  <disclaimerURI>http://www.gov.bc.ca/com/disclaimer.html</disclaimerURI>

  <copyright>Copyright (c) 2010, Province of British Columbia</copyright>

 </legal>

<service>http://.../bcgnws/search</service>

<totalResults>1</totalResults>

<startIndex>1</startIndex>

<itemsPerPage>1</itemsPerPage>

<names>

<name>

 <uri>http://.../bcgnws/names/24320</uri>

 <name>Vancouver</name>

 <language>ENGLISH</language>

 <status>adopted</status>

 <isOfficial>1</isOfficial>

 <cgndbCode>A1</cgndbCode>

 <cgndbKey>JBRIK</cgndbKey>

 <nameKey>VANCOUVER</nameKey>

<official>

 <uri>http://.../bcgnws/names/24320</uri>

</official>

<notes>
```

```
 <uri>http://.../bcgnws/names/24320/notes/23775</uri>

 <uri>http://.../bcgnws/names/24320/notes/48183</uri>

 <uri>http://.../bcgnws/names/24320/notes/49235</uri>

 <uri>http://.../bcgnws/names/24320/notes/60893</uri>

 <uri>http://.../bcgnws/names/24320/notes/52072</uri>

 <uri>http://.../bcgnws/names/24320/notes/52073</uri>

 <uri>http://.../bcgnws/names/24320/notes/52592</uri>

</notes>

<feature>

 <uri>http://.../bcgnws/features/29623</uri>

 <relativeLocation>E side Strait of Georgia, S of Burrard Inlet</relativeLocation>

 <landDistrict>New Westminster Land District</landDistrict>

 <changeDate>1996-07-12</changeDate>

<mapsheets>

 <uri>http://.../bcgnws/features/29623/mapsheets/92G/3</uri>

 <uri>http://.../bcgnws/features/29623/mapsheets/92G/6</uri>

</mapsheets>

<names>

 <uri>http://.../bcgnws/names/24320</uri>

</names>

</feature>

 <decisionDate>1937-12-07</decisionDate>

 <featureCategory>1</featureCategory>

 <featureCategoryDescription>Incorporated</featureCategoryDescription>

 <featureCategoryURI>http://.../bcgnws/featureCategories/1</featureCategoryURI>

 <featureType>City</featureType>

 <featureTypeURI>http://.../bcgnws/featureTypes/City</featureTypeURI>

 <featureCode>1</featureCode>

 <featureCodeURI>http://.../bcgnws/featureCodes/1</featureCodeURI>

 <featureClass>1</featureClass>

 <featureClassURI>http://.../bcgnws/featureClasses/1</featureClassURI>

 <featurePoint>
```

```
  <outputSRS>3005</outputSRS>

  <easting>1209966.6240305314</easting>

  <northing>474663.43521396816</northing>

 </featurePoint>

 <lonAsRecorded>1230700</lonAsRecorded>

 <latAsRecorded>491500</latAsRecorded>

 <datumAsRecorded>NAD27</datumAsRecorded>

 <position>POPULATION CENTRE</position>

</name>

</names>

</results>
```

4.1.2   CSV

```
Disclaimer: http://www.gov.bc.ca/com/disclaimer.html

Privacy Statement: http://www.gov.bc.ca/com/privacy.html

"Copyright (c) 2010, Province of British Columbia"


uri,name,language,status,pronunciation,isOfficial,score,cgndbCode,cgndbKey,nameKey,officia
l,written,spoken,notes,feature,relativeLocation,landDistrict,changeDate,images,mapsheets,n
ames,decisionDate,featureType,featureTypeURI,featureCode,featureCodeURI,featureCategory,fe
atureCategoryDescription,featureCategoryURI,featureClass,featureClassURI,outputSRS,x,y,lon
AsRecorded,latAsRecorded,datumAsRecorded,position

http://.../bcgnws/names/24320,"Vancouver",ENGLISH,adopted,,1,,A1,JBRIK,VANCOUVER,http://..
./bcgnws/names/24320/official,http://.../bcgnws/names/24320/written,http://.../bcgnws/name
s/24320/spoken,http://.../bcgnws/names/24320/notes,http://.../bcgnws/features/29623,"E
side Strait of Georgia, S of Burrard Inlet","New Westminster Land District",1996-07-
12,http://.../bcgnws/features/29623/images,http://.../bcgnws/features/29623/mapsheets,http
://.../bcgnws/features/29623/names,1937-12-
07,"City",http://.../bcgnws/featureTypes/City,1,http://.../bcgnws/featureCodes/1,1,"Incorp
orated",http://.../bcgnws/featureCategories/1,1,http://.../bcgnws/featureClasses/1,3005,12
09966.6240305314,474663.43521396816,1230700,491500,NAD27,POPULATION CENTRE
```

4.1.3   RDF

```
<?xml version="1.0" encoding="UTF-8"?>

<rdf:RDF xmlns="http://www.geonames.org/ontology#"

xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"

xmlns:wgs84_pos="http://www.w3.org/2003/01/geo/wgs84_pos#">
```

```
<Description>

 <service rdf:resource="http://.../bcgnws/search" />

 <disclaimerURI rdf:resource="http://www.gov.bc.ca/com/disclaimer.html" />

 <privacyURI rdf:resource="http://www.gov.bc.ca/com/privacy.html" />

 <copyright>Copyright (c) 2010, Province of British Columbia</copyright>

 <outputSRS>4326</outputSRS>

 <totalResults>1</totalResults>

 <startIndex>1</startIndex>

 <itemsPerPage>1</itemsPerPage>

</Description>

<names>

<Name rdf:resource="http://.../bcgnws/names/24320">

 <name xml:lang="ENGLISH">Vancouver</name>

 <status>adopted</status>

 <isOfficial>1</isOfficial>

 <cgndbCode>A1</cgndbCode>

 <cgndbKey>JBRIK</cgndbKey>

 <nameKey>VANCOUVER</nameKey>

<official>

 <uri rdf:resource="http://.../bcgnws/names/24320" />

</official>

<notes>

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/23775" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/48183" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/49235" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/60893" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/52072" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/52073" />

 <uri rdf:resource="http://.../bcgnws/names/24320/notes/52592" />

</notes>

<feature rdf:resource="http://.../bcgnws/features/29623" >

 <relativeLocation>E side Strait of Georgia, S of Burrard Inlet</relativeLocation>
```

```
 <landDistrict>New Westminster Land District</landDistrict>

 <changeDate>1996-07-12</changeDate>

<mapsheets>

 <uri rdf:resource="http://.../bcgnws/features/29623/mapsheets/92G/3" />

 <uri rdf:resource="http://.../bcgnws/features/29623/mapsheets/92G/6" />

</mapsheets>

<names>

 <uri rdf:resource="http://.../bcgnws/names/24320" />

</names>

</feature>

 <decisionDate>1937-12-07</decisionDate>

 <featureCategory>1</featureCategory>

 <featureCategoryDescription>Incorporated</featureCategoryDescription>

 <featureCategoryURI rdf:resource="http://.../bcgnws/featureCategories/1" />

 <featureType>City</featureType>

 <featureTypeURI rdf:resource="http://.../bcgnws/featureTypes/City" />

 <featureCode>1</featureCode>

 <featureCodeURI rdf:resource="http://.../bcgnws/featureCodes/1" />

 <featureClass>1</featureClass>

 <featureClassURI rdf:resource="http://.../bcgnws/featureClasses/1" />

 <featurePoint>

  <outputSRS>3005</outputSRS>

  <easting>1209966.6240305314</easting>

  <northing>474663.43521396816</northing>

 </featurePoint>

 <lonAsRecorded>1230700</lonAsRecorded>

 <latAsRecorded>491500</latAsRecorded>

 <datumAsRecorded>NAD27</datumAsRecorded>

 <position>POPULATION CENTRE</position>

</Name>

</names>

</rdf:RDF>
```

4.1.4 GEOJSON

```
bcgnwsJSONX({

"type": "FeatureCollection",

"properties": {

 "service": "http://.../bcgnws/search",

 "totalResults": 1,

 "startIndex": 1,

 "itemsPerPage": 1},

"crs": {

 "type": "name",

 "properties": {

  "name": "EPSG:3005"}},

"features": [

 {

  "type": "Feature",

  "properties": {

   "uri": "http://.../bcgnws/names/24320",

   "name": "Vancouver",

   "language": "ENGLISH",

   "status": "adopted",

   "isOfficial": 1,

   "cgndbCode": "A1",

   "cgndbKey": "JBRIK",

   "nameKey": "VANCOUVER",

   "official": [

    "http://.../bcgnws/names/24320"],

   "notes": [

    "http://.../bcgnws/names/24320/notes/23775",

    "http://.../bcgnws/names/24320/notes/48183",

    "http://.../bcgnws/names/24320/notes/49235",

    "http://.../bcgnws/names/24320/notes/60893",

    "http://.../bcgnws/names/24320/notes/52072",
```

```
      "http://.../bcgnws/names/24320/notes/52073",

      "http://.../bcgnws/names/24320/notes/52592"],

    "feature": {

     "uri": "http://.../bcgnws/features/29623",

     "relativeLocation": "E side Strait of Georgia, S of Burrard Inlet",

     "landDistrict": "New Westminster Land District",

     "mapsheets": [

      "http://.../bcgnws/features/29623/mapsheets/92G/3",

      "http://.../bcgnws/features/29623/mapsheets/92G/6"],

     "names": [

      "http://.../bcgnws/names/24320"],

     "changeDate": "1996-07-12"},

    "decisionDate": "1937-12-07",

    "featureCategory": 1,

    "featureCategoryDescription": "Incorporated",

    "featureCategoryURI": "http://.../bcgnws/featureCategories/1",

    "featureType": "City",

    "featureTypeURI": "http://.../bcgnws/featureTypes/City",

    "featureCode": "1",

    "featureCodeURI": "http://.../bcgnws/featureCodes/1",

    "featureClass": "1",

    "featureClassURI": "http://.../bcgnws/featureClasses/1",

    "featurePoint": {

     "outputSRS": "3005",

     "easting": "1209966.6240305314",

     "northing": "474663.43521396816"},

    "lonAsRecorded": 1230700,

    "latAsRecorded": 491500,

    "datumAsRecorded": "NAD27",

    "position": "POPULATION CENTRE"},

   "geometry": {

    "type": "Point",
```

```
    "coordinates": [

     1209966.6240305314,

     474663.43521396816]}}],

 "legal": {

  "disclaimerURI": "http://www.gov.bc.ca/com/disclaimer.html",

  "privacyURI": "http://www.gov.bc.ca/com/privacy.html",

  "copyright": "Copyright (c) 2010, Province of British Columbia"}});
```

4.1.5   KML

```xml
<?xml version="1.0" encoding="UTF-8"?>

<kml xmlns="http://www.opengis.net/kml/2.2"

     xmlns:atom="http://www.w3.org/2005/Atom">

 <Document>

 <ExtendedData>

  <Data name="service">http://.../bcgnws/search</Data>

  <Data name="disclaimerURI">http://www.gov.bc.ca/com/disclaimer.html</Data>

  <Data name="privacyURI">http://www.gov.bc.ca/com/privacy.html</Data>

  <Data name="copyright">Copyright (c) 2010, Province of British Columbia</Data>

  <Data name="outputSRS">4326</Data>

  <Data name="totalResults">1</Data>

  <Data name="startIndex">1</Data>

  <Data name="itemsPerPage">1</Data>

 </ExtendedData>

<!-- description field - Place Panel and Balloon -->


        <Snippet maxLines="0"/>

        <Style id="sh_shaded_dot">

            <IconStyle>

                 <color>ffffaaff</color>

                 <scale>0.827273</scale>

                 <Icon>
```

```xml
            <href>http://maps.google.com/mapfiles/kml/shapes/shaded_dot.png</href>

                </Icon>

        </IconStyle>

        <LabelStyle>

                <scale>0.7</scale>

        </LabelStyle>

        <ListStyle>

        </ListStyle>

</Style>

<StyleMap id="msn_shaded_dot">

        <Pair>

                <key>normal</key>

                <styleUrl>#sn_shaded_dot</styleUrl>

        </Pair>

        <Pair>

                <key>highlight</key>

                <styleUrl>#sh_shaded_dot</styleUrl>

        </Pair>

</StyleMap>

<Style id="sn_shaded_dot">

        <IconStyle>

                <color>ffffaaff</color>

                <scale>0.7</scale>

                <Icon>

<href>http://maps.google.com/mapfiles/kml/shapes/shaded_dot.png</href>

                </Icon>

        </IconStyle>

        <LabelStyle>

                <scale>0.7</scale>

        </LabelStyle>

        <ListStyle>
```

```
                        </ListStyle>

                </Style>



<!-- BalloonStyle field - Balloon only -->

                <Style id="bcgnws-balloon-style">

                        <BalloonStyle>

                                <text>

                                        <![CDATA[

                                                <b>$[name]</b>

                                                <p>This is the approximate $[position] of the
feature</p>

                                        ]]>

                                </text>

                        </BalloonStyle>

                </Style>

 <Placemark>

  <name>Vancouver</name>

  <visibility>1</visibility>

<!-- description field - Place Panel and Balloon -->

                <Snippet/>

                <description>

                        <![CDATA[

                                <b>feature category: </b> $[featureCategoryDescription]<br/>

                                <b>feature type: </b> $[featureType]<br/>

                                <b>language: </b> $[language]<br/>

                                <b>status: </b> $[status]<br/>

                                <b>official: </b> $[isOfficial]<br/>

                                <b>decision date: </b> $[decisionDate]<br/>

                                <p>This is the approximate $[position] of the feature</p>

                        ]]>

                </description>
```

```
<!-- BalloonStyle field – Balloon only -->

        <styleUrl>#msn_shaded_dot</styleUrl>


  <styleUrl>http://.../sfile/bcgnws/styles.kml#1</styleUrl>

  <ExtendedData>

  <Data name="uri">http://.../bcgnws/names/24320</Data>

  <Data name="language">ENGLISH</Data>

  <Data name="status">adopted</Data>

  <Data name="isOfficial">yes</Data>

  <Data name="cgndbCode">A1</Data>

  <Data name="cgndbKey">JBRIK</Data>

  <Data name="nameKey">VANCOUVER</Data>

  <Data name="official">http://.../bcgnws/names/24320</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/23775</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/48183</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/49235</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/60893</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/52072</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/52073</Data>

  <Data name="note">http://.../bcgnws/names/24320/notes/52592</Data>

  <Data name="feature">http://.../bcgnws/features/29623</Data>

  <Data name="relativeLocation">E side Strait of Georgia, S of Burrard Inlet</Data>

  <Data name="landDistrict">New Westminster Land District</Data>

  <Data name="changeDate">1996-07-12</Data>

  <Data name="mapsheet">http://.../bcgnws/features/29623/mapsheets/92G/3</Data>

  <Data name="mapsheet">http://.../bcgnws/features/29623/mapsheets/92G/6</Data>

  <Data name="name">http://.../bcgnws/names/24320</Data>

  <Data name="decisionDate">1937-12-07</Data>

  <Data name="featureCategory">1</Data>

  <Data name="featureCategoryDescription">Incorporated</Data>

  <Data name="featureCategoryURI">http://.../bcgnws/featureCategories/1</Data>

  <Data name="featureType">City</Data>
```

```
  <Data name="featureTypeURI">http://.../bcgnws/featureTypes/City</Data>

  <Data name="featureCode">1</Data>

  <Data name="featureCodeURI">http://.../bcgnws/featureCodes/1</Data>

  <Data name="featureClass">1</Data>

  <Data name="featureClassURI">http://.../bcgnws/featureClasses/1</Data>

  <Data name="outputSRS">4978</Data>

  <Data name="lon">-123.12312</Data>

  <Data name="lat">49.32423</Data>

  <Data name="lonAsRecorded">1230700</Data>

  <Data name="latAsRecorded">491500</Data>

  <Data name="datumAsRecorded">NAD27</Data>

  <Data name="position">POPULATION CENTRE</Data>

  </ExtendedData>

  <Point>

   <extrude>0</extrude>

   <altitudeMode>clampToGround</altitudeMode>

   <coordinates>-123.11796733714245,49.24984496983037</coordinates>

  </Point>

 </Placemark>

 </Document>

</kml>
```

4.1.6 RSS

```
<?xml version="1.0" encoding="ISO-8859-1"?>

<rss version="2.0" xmlns:georss="http://www.georss.org/georss">

<channel>

 <title>BC Geographical Names Web Service: Naming Decisions in 1994</title>

 <link>http://.../bcgnws/year</link>

 <description>181 geographical naming decisions were made in 1994. This feed provides up
to 1 of the decisions, sorted with the most recent decisions first. Disclaimer:
http://www.gov.bc.ca/com/disclaimer.html. Privacy Statement:
http://www.gov.bc.ca/com/privacy.html. </description>

 <language>en-us</language>

 <copyright>Copyright (c) 2010, Province of British Columbia</copyright>

 <item>

  <title>Sawmill Glacier</title>

  <link>http://.../bcgnws/names/17199.html</link>
```

```
  <description>Feature type: Glacier; Name status: ADOPTED. </description>

  <pubDate>Fri, 23 Dec 1994 00:00:00 PST</pubDate>

  <georss:point>55.18038698374823 -127.59330393842</georss:point>

 </item>

</channel>

</rss>
```

4.1.7   Atom

```
<?xml version="1.0" encoding="UTF-8"?>

<feed xmlns="http://www.w3.org/2005/Atom" xmlns:georss="http://www.georss.org/georss">

 <id>tag:...,2009:/bcgnws/year</id>

 <title>BC Geographical Names Web Service: Naming Decisions in 1994</title>

 <updated>1994-12-23</updated>

 <rights>Copyright (c) 2010, Province of British Columbia</rights>

 <link rel="self" type="application/atom+xml">http://.../bcgnws/year</link>

 <link rel="related" title="Disclaimer" href="http://www.gov.bc.ca/com/disclaimer.html"/>

 <link rel="related" title="Privacy Statement"
href="http://www.gov.bc.ca/com/privacy.html"/>

 <entry>

  <title type="text">Sawmill Glacier</title>

  <link href="http://.../bcgnws/names/17199.html">name</link>

  <id>tag:...,1994-12-23:names/17199</id>

  <updated>1994-12-23T07:00:00-0700</updated>

  <content type="html"><![CDATA[<b>Feature Type</b>: Glacier<br/><b>Status</b>:
ADOPTED<br/><b>Language</b>: ENGLISH<br/><b>Official</b>: yes<br/><b>Position</b>:
CENTRE<br/>]]></content>

  <georss:point>55.18038698374823 -127.59330393842</georss:point>

 </entry>

</feed>
```
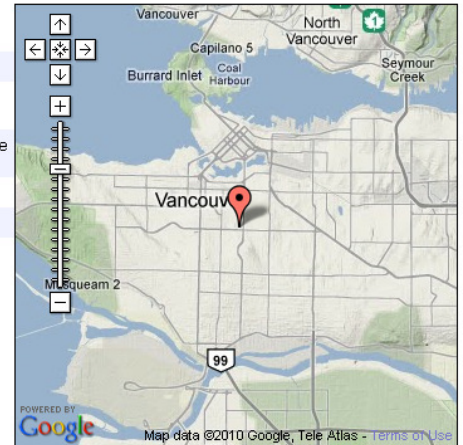
4.1.8   HTML

The HTML output format is offered only for the individual name resource, so this
example demonstrates the output of the following query (as rendered by Firefox
3):

http://apps.gov.bc.ca/pub/bcgnws/names/24320.html

The page layout for the HTML resource is subject to change.

Vancouver

Feature Type:	City - A populated place with legally defined boundaries, incorporated under the provincial Municipal Act
Status:	Official
Relative Location:	E side Strait of Georgia, S of Burrard Inlet, New Westminster Land District
Latitude-Longitude:	49°15'00" 123°07'00" at the approximate population centre of this feature.
Datum:	NAD27
NTS Map:	92G/3
Related Maps:	92G/3 92G/6

Origin Notes and History:

City of Vancouver incorporated 6 April 1886. Confirmed 11 February 1936 on 92G/3.

Source: BC place name cards, or correspondence to/from BC's Chief Geographer or BC Geographical Names Office

Granville Post Office opened 1 March 1874; name changed to Vancouver Post Office 1 May 1886 (17th Report of the Geographic Board of Canada, 1922).

Source: BC place name cards, or correspondence to/from BC's Chief Geographer or BC Geographical Names Office

"Vancouver, the growing and prosperous city on Burrard inlet, owes its existence to the building of the Canadian Pacific Railway... Before the railway was constructed a small collection of houses was named Granville, but when it was decided that the Canadian Pacific Railway would make this point the terminus the village sprang into prominence and in 1886 was incorporated under the name of "Vancouver" in honour of the man who ninety-four years before had explored and named Burrard Inlet....." [see Walbran for extensive additional biographical information, Captain George Vancouver's photograph, and a fascimile of his signature, taken from Vancouver's 1794 letter to Kamehameha, King of Owhyhee (Hawaii).]

Source: Walbran, John T; British Columbia Coast Names, 1592-1906: their origin and history; Ottawa, 1909 (republished for the Vancouver Public Library by J.J. Douglas Ltd, Vancouver, 1971)