

Report Date: 01-Dec-2000

Metadata Data Set Name:

BC Coastal Waterbird Survey, 1999/2000

1 Identification Information

1.1 Citation:

8 Citation Information:

8.1 Originator:

Stephanie Hazlitt, BC Coastal Waterbird Survey
Coordinator

8.2 Publication Date:

Unpublished Material

8.4 Title:

BC Coastal Waterbird Survey, 1999-2000

1.2 Description

1.2.1 Abstract:

The BC Coastal Waterbird Survey is a volunteer-based monitoring program for coastal waterbirds in the Georgia Basin and other coastal parts of British Columbia. The program began in September 1999. The monthly surveys are shore-line based for the period of September through May. The program is delivered by Bird Studies Canada with support from the Canadian Wildlife Service and is designed to provide data that contribute to the conservation of coastal waterbird populations and coastal waterbird habitats in British Columbia.

1.2.2 Purpose:

The three main objectives of the BC Coastal Waterbird Survey: 1) To assess the annual changes and long-term trends in population size and distribution of coastal waterbirds in British Columbia, 2) To collect data that contribute to population estimates of coastal waterbird species in British Columbia, and 3) To advance our understanding of the ecology and the effects of human activity on coastal waterbirds in British Columbia.

1.2.3 Supplemental Information:

This dataset has been summarized in: Hazlitt, S., BC Coastal Waterbird Survey Newsletter No. 1, Summer 2000, BC Coastal Waterbird Survey - BC Programs.

1.3 Time Period Of Content

9 Time Period Information

9.3 Range of Dates/Times

9.3.1 Beginning Date:

199909

9.3.3 Ending Date:

200005

1.4 Status

1.4.1 Progress:

In work

1.4.2 Maintenance and Update Frequency:

As needed

1.5 Spatial Domain

99.1.5.1 Description of Geographic Extent:

Coastal British Columbia - from Vancouver Island,
Lower Mainland British Columbia, Sunshine Coast,
and the Queen Charlotte Islands

1.5.1 Bounding Coordinates

1.5.1.1 West Bounding Coordinate:

-133.25

1.5.1.2 East Bounding Coordinate:

-122.5

1.5.1.3 North Bounding Coordinate:

54.25

1.5.1.4 South Bounding Coordinate:

47.83

1.6 Keywords

1.6.1 Theme

1.6.1.1 Theme Keyword Thesaurus:

None

1.6.1.2 Theme Keyword:

waterbird

1.6.1.2 Theme Keyword:

survey

1.6.1.2 Theme Keyword:

volunteer

1.6.1.2 Theme Keyword:

monitoring

1.6.1.2 Theme Keyword:

distribution

1.6.1.2 Theme Keyword:

population estimates

1.6.1.2 Theme Keyword:

ecology

1.6.1.2 Theme Keyword:

long-term trends

1.6.1.2 Theme Keyword:

habitat

1.6.2 Place

1.6.2.1 Place Keyword Thesaurus:

None

1.6.2.2 Place Keyword:

North Coast

1.6.2.2 Place Keyword:

Central Coast

1.6.2.2 Place Keyword:

British Columbia

1.6.2.2 Place Keyword:

Lower Mainland

1.6.2.2 Place Keyword:

Vancouver Island

1.6.2.2 Place Keyword:

Sunshine Coast

1.6.2.2 Place Keyword:

Queen Charlotte Islands

1.6.2.2 Place Keyword:

Gulf Islands

99.1.7 Taxonomy

99.1.7.1 Taxonomic Keywords:

Falco peregrinus

99.1.7.1 Taxonomic Keywords:

Peregrine Falcon

99.1.7.1 Taxonomic Keywords:

Falco rusticolus

99.1.7.1 Taxonomic Keywords:

Gyrfalcon

99.1.7.1 Taxonomic Keywords:

Rallus limicola

99.1.7.1 Taxonomic Keywords:

Virginia Rail

99.1.7.1 Taxonomic Keywords:

Porzana carolina

99.1.7.1 Taxonomic Keywords:

Sora

99.1.7.1 Taxonomic Keywords:

Fulica americana

99.1.7.1 Taxonomic Keywords:

American Coot

99.1.7.1 Taxonomic Keywords:

Pluvialis squatarola

99.1.7.1 Taxonomic Keywords:

Black-bellied Plover

99.1.7.1 Taxonomic Keywords:

Charadrius semipalmatus

99.1.7.1 Taxonomic Keywords:

Semipalmated Plover

99.1.7.1 Taxonomic Keywords:

Charadrius vociferus

99.1.7.1 Taxonomic Keywords:

Killdeer

99.1.7.1 Taxonomic Keywords:

Haematopus bachmani

99.1.7.1 Taxonomic Keywords:

Black Oystercatcher

99.1.7.1 Taxonomic Keywords:

Tringa melanoleuca

99.1.7.1 Taxonomic Keywords:

Greater Yellowlegs

99.1.7.1 Taxonomic Keywords:

Tringa flavipes

99.1.7.1 Taxonomic Keywords:

Lesser Yellowlegs

99.1.7.1 Taxonomic Keywords:

Tringa solitaria

99.1.7.1 Taxonomic Keywords:

Solitary Sandpiper

99.1.7.1 Taxonomic Keywords:

Actitis macularia

99.1.7.1 Taxonomic Keywords:

Spotted Sandpiper

99.1.7.1 Taxonomic Keywords:
Numenius phaeopus

99.1.7.1 Taxonomic Keywords:
Whimbrel

99.1.7.1 Taxonomic Keywords:
Numenius americanus

99.1.7.1 Taxonomic Keywords:
Long-billed Curlew

99.1.7.1 Taxonomic Keywords:
Limosa fedoa

99.1.7.1 Taxonomic Keywords:
Marbled Godwit

99.1.7.1 Taxonomic Keywords:
Arenaria melanocephala

99.1.7.1 Taxonomic Keywords:
Black Turnstone

99.1.7.1 Taxonomic Keywords:
Arenaria interpres

99.1.7.1 Taxonomic Keywords:
Ruddy Turnstone

99.1.7.1 Taxonomic Keywords:
Aphriza virgata

99.1.7.1 Taxonomic Keywords:
Surfbird

99.1.7.1 Taxonomic Keywords:
Calidris alba

99.1.7.1 Taxonomic Keywords:
Sanderling

99.1.7.1 Taxonomic Keywords:
Calidris mauri

99.1.7.1 Taxonomic Keywords:
Western Sandpiper

99.1.7.1 Taxonomic Keywords:
Calidris minutilla

99.1.7.1 Taxonomic Keywords:
Least Sandpiper

99.1.7.1 Taxonomic Keywords:
Calidris ptilocnemis

99.1.7.1 Taxonomic Keywords:
Rock Sandpiper

99.1.7.1 Taxonomic Keywords:
Calidris alpina

99.1.7.1 Taxonomic Keywords:
Dunlin

99.1.7.1 Taxonomic Keywords:
Limnodromus griseus

99.1.7.1 Taxonomic Keywords:
Short-billed Dowitcher

99.1.7.1 Taxonomic Keywords:
Limnodromus scolopaceus

99.1.7.1 Taxonomic Keywords:
Long-billed Dowitcher

99.1.7.1 Taxonomic Keywords:
Gallinago gallinago

99.1.7.1 Taxonomic Keywords:
Common Snipe

99.1.7.1 Taxonomic Keywords:
Phalaropus fulicaria

99.1.7.1 Taxonomic Keywords:
Red Phalarope

99.1.7.1 Taxonomic Keywords:
Larus pipixcan

99.1.7.1 Taxonomic Keywords:
Franklin's Gull

99.1.7.1 Taxonomic Keywords:
Larus philadelphia

99.1.7.1 Taxonomic Keywords:
Bonaparte's Gull

99.1.7.1 Taxonomic Keywords:
Larus heermanni

99.1.7.1 Taxonomic Keywords:
Heermann's Gull

99.1.7.1 Taxonomic Keywords:
Larus canus

99.1.7.1 Taxonomic Keywords:
Mew Gull

99.1.7.1 Taxonomic Keywords:
Larus delawarensis

99.1.7.1 Taxonomic Keywords:
Ring-billed Gull

99.1.7.1 Taxonomic Keywords:
Larus californicus

99.1.7.1 Taxonomic Keywords:
California Gull

99.1.7.1 Taxonomic Keywords:
Larus argentatus

99.1.7.1 Taxonomic Keywords:
Herring Gull

99.1.7.1 Taxonomic Keywords:
Larus thayeri

99.1.7.1 Taxonomic Keywords:
Thayer's Gull

99.1.7.1 Taxonomic Keywords:
Larus glaucoides

99.1.7.1 Taxonomic Keywords:
Iceland Gull

99.1.7.1 Taxonomic Keywords:
Larus occidentalis

99.1.7.1 Taxonomic Keywords:
Western Gull

99.1.7.1 Taxonomic Keywords:
Larus glaucescens

99.1.7.1 Taxonomic Keywords:
Glaucous-winged Gull

99.1.7.1 Taxonomic Keywords:
Larus hyperboreus

99.1.7.1 Taxonomic Keywords:
Glaucous Gull

99.1.7.1 Taxonomic Keywords:
Sterna caspia

99.1.7.1 Taxonomic Keywords:
Caspian Tern

99.1.7.1 Taxonomic Keywords:
Sterna hirundo

99.1.7.1 Taxonomic Keywords:
Common Tern

99.1.7.1 Taxonomic Keywords:
Uria aalge

99.1.7.1 Taxonomic Keywords:
Common Murre

99.1.7.1 Taxonomic Keywords:
Cepphus columba

99.1.7.1 Taxonomic Keywords:
Pigeon Guillemot

99.1.7.1 Taxonomic Keywords:
Brachyramphus marmoratus

99.1.7.1 Taxonomic Keywords:
Marbled Murrelet

99.1.7.1 Taxonomic Keywords:
Synthliboramphus antiquus

99.1.7.1 Taxonomic Keywords:
Ancient Murrelet

99.1.7.1 Taxonomic Keywords:
Ptychoramphus aleuticus

99.1.7.1 Taxonomic Keywords:
Cassin's Auklet

99.1.7.1 Taxonomic Keywords:
Cerorhinca monocerata

99.1.7.1 Taxonomic Keywords:
Rhinoceros Auklet

99.1.7.1 Taxonomic Keywords:
Asio flammeus

99.1.7.1 Taxonomic Keywords:
Short-eared Owl

99.1.7.1 Taxonomic Keywords:
Ceryle alcyon

99.1.7.1 Taxonomic Keywords:
Belted Kingfisher

99.1.7.1 Taxonomic Keywords:
Cinclus mexicanus

99.1.7.1 Taxonomic Keywords:
American Dipper

99.1.7.1 Taxonomic Keywords:
gaviiforms

99.1.7.1 Taxonomic Keywords:
podicipediforms

99.1.7.1 Taxonomic Keywords:
pelicaniforms

99.1.7.1 Taxonomic Keywords:
ciconiiforms

99.1.7.1 Taxonomic Keywords:
charadriiforms

99.1.7.1 Taxonomic Keywords:
anseriforms

99.1.7.1 Taxonomic Keywords:
falconiforms

99.1.7.1 Taxonomic Keywords:
loons

99.1.7.1 Taxonomic Keywords:
grebes

99.1.7.1 Taxonomic Keywords:
cormorants

99.1.7.1 Taxonomic Keywords:
herons

99.1.7.1 Taxonomic Keywords:
gulls

99.1.7.1 Taxonomic Keywords:
terns

99.1.7.1 Taxonomic Keywords:
shorebirds

99.1.7.1 Taxonomic Keywords:
swans

99.1.7.1 Taxonomic Keywords:
geese

99.1.7.1 Taxonomic Keywords:
ducks

99.1.7.1 Taxonomic Keywords:
waterfowl

99.1.7.1 Taxonomic Keywords:
seaducks

99.1.7.1 Taxonomic Keywords:
raptors

99.1.7.1 Taxonomic Keywords:
seabirds

99.1.7.1 Taxonomic Keywords:
murrelets

99.1.7.1 Taxonomic Keywords:
murre

99.1.7.1 Taxonomic Keywords:
guillemots

99.1.7.1 Taxonomic Keywords:
auklets

99.1.7.1 Taxonomic Keywords:
Anser albifrons

99.1.7.1 Taxonomic Keywords:
Greater White-fronted Goose

99.1.7.1 Taxonomic Keywords:
Phalaropus fulicaria

99.1.7.1 Taxonomic Keywords:
Red Phalarope

99.1.7.1 Taxonomic Keywords:
Gavia immer

99.1.7.1 Taxonomic Keywords:
Common Loon

99.1.7.1 Taxonomic Keywords:
Gavia stellata

99.1.7.1 Taxonomic Keywords:
Red-throated Loon

99.1.7.1 Taxonomic Keywords:
Gavia pacifica

99.1.7.1 Taxonomic Keywords:
Pacific Loon

99.1.7.1 Taxonomic Keywords:
Gavia adamsii

99.1.7.1 Taxonomic Keywords:
Yellow-billed Loon

99.1.7.1 Taxonomic Keywords:
Podiceps auritus

99.1.7.1 Taxonomic Keywords:
Horned Grebe

99.1.7.1 Taxonomic Keywords:
Podilymbus podiceps

99.1.7.1 Taxonomic Keywords:
Pied-billed Grebe

99.1.7.1 Taxonomic Keywords:
Podiceps grisegena

99.1.7.1 Taxonomic Keywords:
Red-necked Grebe

99.1.7.1 Taxonomic Keywords:
Podiceps nigricollis

99.1.7.1 Taxonomic Keywords:
Eared Grebe

99.1.7.1 Taxonomic Keywords:
Aechmophorus occidentalis

99.1.7.1 Taxonomic Keywords:
Western Grebe

99.1.7.1 Taxonomic Keywords:
Diomedea nigripes

99.1.7.1 Taxonomic Keywords:
Black-footed Albatross

99.1.7.1 Taxonomic Keywords:
Phalacrocorax auritus

99.1.7.1 Taxonomic Keywords:
Double-crested Cormorant

99.1.7.1 Taxonomic Keywords:
Phalacrocorax penicillatus

99.1.7.1 Taxonomic Keywords:
Brandt's Cormorant

99.1.7.1 Taxonomic Keywords:
Phalacrocorax pelagicus

99.1.7.1 Taxonomic Keywords:
Pelagic Cormorant

99.1.7.1 Taxonomic Keywords:
Botaurus lentiginosus

99.1.7.1 Taxonomic Keywords:
American Bittern

99.1.7.1 Taxonomic Keywords:
Ardea herodias

99.1.7.1 Taxonomic Keywords:
Great Blue Heron

99.1.7.1 Taxonomic Keywords:
Nycticorax nycticorax

99.1.7.1 Taxonomic Keywords:
Black-crowned Night Heron

99.1.7.1 Taxonomic Keywords:
Cygnus buccinator

99.1.7.1 Taxonomic Keywords:
Trumpeter Swan

99.1.7.1 Taxonomic Keywords:
Cygnus olor

99.1.7.1 Taxonomic Keywords:
Mute Swan

99.1.7.1 Taxonomic Keywords:
Chen caerulescens

99.1.7.1 Taxonomic Keywords:
Snow Goose

99.1.7.1 Taxonomic Keywords:
Branta bernicla

99.1.7.1 Taxonomic Keywords:
Brant

99.1.7.1 Taxonomic Keywords:
Branta canadensis

99.1.7.1 Taxonomic Keywords:
Canada Goose

99.1.7.1 Taxonomic Keywords:
Aix sponsa

99.1.7.1 Taxonomic Keywords:
Wood Duck

99.1.7.1 Taxonomic Keywords:
Anas crecca

99.1.7.1 Taxonomic Keywords:
Green-winged Teal

99.1.7.1 Taxonomic Keywords:
Anas platyrhynchos

99.1.7.1 Taxonomic Keywords:
Mallard

99.1.7.1 Taxonomic Keywords:
Anas acuta

99.1.7.1 Taxonomic Keywords:
Northern Pintail

99.1.7.1 Taxonomic Keywords:
Anas cyanoptera

99.1.7.1 Taxonomic Keywords:
Cinnamon Teal

99.1.7.1 Taxonomic Keywords:
Anas clypeata

99.1.7.1 Taxonomic Keywords:
Northern Shoveler

99.1.7.1 Taxonomic Keywords:
Anas strepera

99.1.7.1 Taxonomic Keywords:
Gadwall

99.1.7.1 Taxonomic Keywords:
Anas penelope

99.1.7.1 Taxonomic Keywords:
Eurasian Wigeon

99.1.7.1 Taxonomic Keywords:
Anas americana

99.1.7.1 Taxonomic Keywords:
American Wigeon

99.1.7.1 Taxonomic Keywords:
Aythya valisineria

99.1.7.1 Taxonomic Keywords:
Canvasback

99.1.7.1 Taxonomic Keywords:
Aythya americana

99.1.7.1 Taxonomic Keywords:
Redhead

99.1.7.1 Taxonomic Keywords:
Aythya collaris

99.1.7.1 Taxonomic Keywords:
Ring-necked Duck

99.1.7.1 Taxonomic Keywords:
Aythya marila

99.1.7.1 Taxonomic Keywords:
Greater Scaup

99.1.7.1 Taxonomic Keywords:
Aythya affinis

99.1.7.1 Taxonomic Keywords:
Lesser Scaup

99.1.7.1 Taxonomic Keywords:
Somateria spectabilis

99.1.7.1 Taxonomic Keywords:
King Eider

99.1.7.1 Taxonomic Keywords:
Histrionicus histrionicus

99.1.7.1 Taxonomic Keywords:
Harlequin Duck

99.1.7.1 Taxonomic Keywords:
Clangula hyemalis

99.1.7.1 Taxonomic Keywords:
Oldsquaw

99.1.7.1 Taxonomic Keywords:
Melanitta nigra

99.1.7.1 Taxonomic Keywords:
Black Scoter

99.1.7.1 Taxonomic Keywords:
Melanitta perspicillata

99.1.7.1 Taxonomic Keywords:
Surf Scoter

99.1.7.1 Taxonomic Keywords:
Melanitta fusca

99.1.7.1 Taxonomic Keywords:
White-winged Scoter

99.1.7.1 Taxonomic Keywords:
Bucephala clangula

99.1.7.1 Taxonomic Keywords:
Common Goldeneye

99.1.7.1 Taxonomic Keywords:
Bucephala islandica

99.1.7.1 Taxonomic Keywords:
Barrow's Goldeneye

99.1.7.1 Taxonomic Keywords:
Bucephala albeoli

99.1.7.1 Taxonomic Keywords:
Bufflehead

99.1.7.1 Taxonomic Keywords:
Lophodytes cucullatus

99.1.7.1 Taxonomic Keywords:
Hooded Merganser

99.1.7.1 Taxonomic Keywords:
Mergus merganser

99.1.7.1 Taxonomic Keywords:
Common Merganser

99.1.7.1 Taxonomic Keywords:
Mergus serrator

99.1.7.1 Taxonomic Keywords:
Red-breasted Merganser

99.1.7.1 Taxonomic Keywords:
Oxyura jamaicensis

99.1.7.1 Taxonomic Keywords:
Ruddy Duck

99.1.7.1 Taxonomic Keywords:
Cathartes aura

99.1.7.1 Taxonomic Keywords:
Turkey Vulture

99.1.7.1 Taxonomic Keywords:
Pandion haliaetus

99.1.7.1 Taxonomic Keywords:
Osprey

99.1.7.1 Taxonomic Keywords:
Haliaeetus leucocephalus

99.1.7.1 Taxonomic Keywords:
Bald Eagle

99.1.7.1 Taxonomic Keywords:
Circus cyaneus

99.1.7.1 Taxonomic Keywords:
Northern Harrier

99.1.7.1 Taxonomic Keywords:
Accipiter striatus

99.1.7.1 Taxonomic Keywords:
Sharp-shinned Hawk

99.1.7.1 Taxonomic Keywords:
Accipiter cooperii

99.1.7.1 Taxonomic Keywords:
Cooper's Hawk

99.1.7.1 Taxonomic Keywords:
Accipiter gentilis

99.1.7.1 Taxonomic Keywords:
Northern Goshawk

99.1.7.1 Taxonomic Keywords:
Buteo jamaicensis

- 99.1.7.1 Taxonomic Keywords:
Red-tailed Hawk
- 99.1.7.1 Taxonomic Keywords:
Buteo lagopus
- 99.1.7.1 Taxonomic Keywords:
Rough-legged Hawk
- 99.1.7.1 Taxonomic Keywords:
Aquila chrysaetos
- 99.1.7.1 Taxonomic Keywords:
Golden Eagle
- 99.1.7.1 Taxonomic Keywords:
Falco sparverius
- 99.1.7.1 Taxonomic Keywords:
American Kestrel
- 99.1.7.1 Taxonomic Keywords:
Falco columbarius
- 99.1.7.1 Taxonomic Keywords:
Merlin
- 1.7 Access Constraints:
CWS/BSC internal access/use only
- 1.8 Use Constraints:
Dataset credit required
- 1.9 Point of Contact
 - 10.1 Contact Person Primary
 - 10.1.1 Contact Person:
Stephanie Hazlitt
 - 10.1.2 Contact Organization:
Bird Studies Canada, Canadian Wildlife Service
 - 10.3 Contact Position:
BC Coastal Waterbird Survey Coordinator
 - 10.4 Contact Address
 - 10.4.1 Address Type:
mailing address
 - 10.4.2 Address:
5421 Robertson Road, RR1
 - 10.4.3 City:
Delta
 - 10.4.4 State or Province:
British Columbia
 - 10.4.5 Postal Code:
V4K 3N2
 - 10.4.6 Country:
Canada
 - 10.5 Contact Voice Telephone:
604-940-4696
 - 10.7 Contact Facsimile Telephone:
604-946-7022
- 1.11 Data Set Credit:
Many thanks to the volunteers, BSC and CWS employees who donated their time and skills in the participation of the BC Coastal Waterbird Survey.
- 1.13 Native Data Set Environment:
MS Access; MS Excel; Arcview/GIS
- 2 Data Quality Information

2.1 Attribute Accuracy

2.1.1 Attribute Accuracy Report:

The BC Coastal Waterbird data were collected by volunteer naturalists who followed a standardized protocol, which was developed by researchers, biologists and local naturalists. However, because of varying degrees of experience in bird identification and censusing, until Report 2004, it is recommended that these data not be used for trend analyses.

2.2 Logical Consistency Report:

Problematic forms and suspicious data were not entered.

2.3 Completeness Report:

If a range had been recorded then the median of the range was entered (ie 100 to 200 GWGU was entered as 150 GWGU); signs such as +, -, ?, <, >, c were omitted (ie 200+ SUSC was entered as 200 SUSC); totals for multispecies were entered as UNSPECIES (ie 1000 BLSC, SUSC & WWSC was entered as 1000 UNSC); corvids and passerines were not entered; hybrid birds were entered as UNSP (ie Hybrid gulls entered as UNGU); two one's (ie 11) were entered as eleven, unless obvious that observer recorded bird numbers using slash system; each pair was entered as two birds; sp #'s recorded in the title row were entered as UNSP (ie Gulls 1, entered as UNGU 1); birds seen after survey time were not entered; dead birds were not entered. Flying birds were entered in the habitat in which they were recorded; flying birds mentioned in the comments sheet were entered and if there was no habitat recorded they were entered in the unknown habitat. If Precipitation was blank then it was entered as none; if more than one state was circled for seastate, weather, precipitation or visibility then the worse condition was entered (ie if calm during 1st half of survey and choppy during second enter choppy); if more than one reason was circled for poor visibility: if one was glare then glare was entered, if weather and sea-conditions were circled then weather was entered. If binos and scope were circled then scope was entered. Joggers/runners were entered as walkers; all boats were entered (ie fish boats, ships, tugs, sail boats under power) in power boat section; sailboats, anchored or floating power boats (ie engine turned off during the survey) were entered as an unpowered boat in the data base; if activity boxes were checked, but observer had not written any numbers incomplete was entered under no activity.

2.4 Positional Accuracy

2.4.1 Horizontal Positional Accuracy

2.4.1.1 Horizontal Positional Accuracy Report:

In general, the geographical coverage of the survey was from as far north and west as the Queen Charlottes, to the southern tip of Vancouver Island, and as far east as Abbotsford. Survey sites were named and coded, please refer to Section 5 - "Entity and Attribute Information" for a breakdown of regions and sites. Habitats were generalized based on estimated distance from shore - on shore, in fields, on inland bodies of water; <500 metres from shore; >500 metres from shore, or unknown if the distance/habitat was unable to be determined. There were no formal estimates on habitat/distance accuracy or precision; within-observer precision was assumed to be consistent, but between-observer precision to be quite variable. The shape files are polygons sketched onto 1:250,000 basemaps (at a 1:50,000 zoom). The polygons represent survey site locations from the shoreline to ~1km out. There is an associated table in the shapefiles with the site codes that match those in the MS Access database (ie. LMVN10 etc.).

2.4.2.1 Vertical Positional Accuracy Report:

not applicable

2.5 Lineage

99.2.5.1 Methodology

99.2.5.1.1 Methodology Type:

Field

99.2.5.1.3 Methodology Description:

Volunteers were designated specific sites along the coast of BC, and aided by binoculars and/or spotting scopes, identified and recorded all waterbirds and raptors. All information was recorded on data sheets provided by Bird Studies Canada. Time, estimated distance/habitat, stage and movement of tide, weather conditions, visibility, sea state, amount and type of human activity were also recorded. The surveys were conducted on the second Sunday of every month.

99.2.5.1.4 Methodology Citation:

8.1 Originator:

not applicable

3 Spatial Data Organization Information

3.1 Indirect Spatial Reference:

Bamfield, Bella Bella, Black Creek, Bowen Island, Campbell River, Comox and Courtney, Cortes Island, Cowichan Valley, Nanaimo, Parksville and Qualicum Beach, Denman Island, Hornby Island, Jordan River, Lasqueti Island, Malcolm Island, Mayne Island, Porcher Island, Port Alberni, Port McNeill, Powell River, the Queen Charlotte Islands, Saltspring Island, Saturna Island, Squamish Estuary, Sunshine

Coast, Telegraph Cove, Texada Island, Tofino and Ucluelet, Vancouver, Victoria, Sooke and the Saanich Peninsula, White Rock and Zeballos.

3.2 Direct Spatial Reference Method:
Vector

4 Spatial Reference Information

4.1 Horizontal Coordinate System Definition

4.1.2 Planar

4.1.2.1 Map Projection

4.1.2.1.1 Map Projection Name:

Albers Conical Equal Area

4.1.2.1.2.1 Standard Parallel:

50

4.1.2.1.2.1 Standard Parallel:

58.5

4.1.2.1.2.2 Longitude Of Central Meridian:

-126

4.1.2.1.2.3 Latitude Of Projection Origin:

45

4.1.2.1.2.4 False Easting:

1000000

4.1.2.1.2.5 False Northing:

0

4.1.4 Geodetic Model

4.1.4.1 Horizontal Datum Name:

North American Datum of 1983

4.1.4.2 Ellipsoid Name:

Geodetic Reference System 80

5 Entity and Attribute Information

5.2 Overview Description

5.2.1 Entity and Attribute Overview:

The following are the entities with their associated attributes in brackets immediately following each entity. Entities include REGION CODE - 4-digit code composed of a 2-digit Area Code + 2-digit Region - followed by the SITE NUMBER and its local name (CCBB Central Coast Bella Bella - 1 Bella Bella, CCBC Central Coast Bella Coola, GICI Gulf Islands Cortes Island - 1 Cortes Island, GIDE Gulf Islands Denman Island - 1 Longbeak Point 2 Komas North 3 Denman Point 4 Glen Gorm 5 Lacon-Mallard 6 Lacon South 7 Reginald 8 McFarlane&East 9 East Road North 10 Fillongley, GIGA Gulf Islands Galiano Island, GIGB Gulf Islands Gabriola Island, GIHO Gulf Islands Hornby Island - 1 Helliwell Park -North Side 2 Whaling Station Bay 3 Middle Bay 4 Tralee Point East 5 Tralee Point West/Apple Orchard Farm 6 Grassy Point 7 Fossil Beach/Georges Farm 8 Phipps Point 9 Shingle Spit 10 Ford Cove 11 Ford Cove South 12 Heron Rocks 13 Downes Point - South 14 Downes Point and Sandpiper Beach 15 Dunlop Point to Little Tribune Bay 16 Little Tribune Bay 17 Big Tribune Bay 18 Mushroom Beach

19 Helliwell Park -Southwest 20 Beaver Lake,
GILA Gulf Islands Lasqueti Island - 1 2 3,
GIMA Gulf Islands Mayne Island - 1
Village&Miners&Bennet Bay, GIPE Gulf Islands
Pender Islands, GIQU Gulf Islands Quadra Island,
GISA Gulf Islands Saturna Island - 1 Winter Cove
Provincial Park 2 East Point Lighthouse 3
Narvaez Bay 4 Taylor Point 5 Breezy Bay 6 Boot
Cove 7 Lyall Harbour, GISS Gulf Islands
Saltspring Island - 1 Goat Island, Ganges Inner
Harbour 2 Prevost Island/Annette Inlet, GITE Gulf
Islands Texada Island - 1 Gillies Bay, GIVA Gulf
Islands Valdes Island - 1, LMSQ Lower Mainland
Squamish - 1 Outer Estuary (OE) 2 West Delta (WD)
3 Squamish River (SR) 4 Training Dyke 1 (TD1) 5
Training Dyke2 (TD2) 6 Training Dyke 3 (TD3) 7
East of Fill 1 (EF1) 8 Central Channel (CC) 9
East of Fill 2 (EF2) 10 Crescent Slough (CS) 11
East Channel (EC) 12 East Marsh (EM) 13 Bridge
Pond (BP) 14 North Field1 (NF1) 15 North Field2
(NF2) 16 Site A (SA) 17 Isolated Marsh (IM) 18
Mamquam Channel1 (MC1) 19 Mamquam Channel2 (MC2)
20 Dentville Wetland (DW) 21 Woodfibre Ferry
Route (WF), LMVN Lower Mainland Vancouver - 1 Mud
Bay 2 Boundary Bay 112th St. 3 Boundary Bay
88th-104th 4 Boundary Bay 72nd - 88th St. 5
Boundary Bay 12th-72nd 6 Centennial Beach 7
Tsawwassen SW 8 Roberts Bank S 9 Roberts Bank
N/Brunswick Pt. 10 Reifel 11 Lulu South 12 Lulu
North 13 YVR 14 Iona 15 Musqueam 16 UBC
Booming Grounds 17 Wreck Beach 18 Tower Beach
19 Spanish Banks 20 Locarno Beach 21 Jericho
Beach 22 Kitsilano West 23 Kitsilano East 24
Kitsilano Point 25 False Creek 26 English Bay
Beach 27 Ferguson Point - 3rd Beach 28 Prospect
Point 29 Ambleside 30 Stanley Park East 31 Coal
Harbour 32 Vancouver Harbour West 33 Vancouver
Harbour East 34 Vancouver 2nd Narrows 35 Burnaby
2nd Narrows 36 Burnaby refineries 37 Barnet West
38 Barnet East 39 Rocky Point - Port Moody 40
Ioco 41 Belcara Park 42 Belcara 43 Woodlands
44 Deep Cove 45 Dollarton East 46 Dollarton West
47 Maplewood 48 Neptune 49 Lonsdale East 50
Lonsdale West 51 West Vancouver 52 Dundarave 53
West Bay 54 Cypress 55 Lighthouse East 56
Lighthouse West 57 Grebe Islets 58 Eagle Harbour
59 Batchelor Pt. - Gleneagles 60 Whytecliff 61
Whytecliff North 62 Horseshoe Bay 63 Sunset
Beach 64 Lost Lagoon 65 Tsawwassen NW 66 Noons
Creek to Ioco Community Ctr, LMWR Lower Mainland
White Rock - 1 Little Campbell River to East Pier
2 East Pier to West Promenade 3 West Promenade to
131st Street 4 131st Street to 1001 steps 5 1001
steps to Beecher Street 6 Beecher Street to

Blackie Spit, NCKI North Coast Kitimat, NCPO North Coast Porcher Island - 1, NCPR North Coast Prince Rupert - 1, QCMA Queen Charlottes Masset - 1 North Beach/Rose Spit, QCSK Queen Charlottes Skidegate-Sandspit - 1 Sandspit, SCEG Sunshine Coast Egmont, SCGI Sunshine Coast Gibsons - 1 Chaster Beach 2 Gospil Rock 3 Wakefield Creek 4 Roberts Creek - South 5 Roberts Creek - North 6 Davis Bay and Mission Point, SCPH Sunshine Coast Pender Harbour - 1 Middlepoint Bight, SCPR Sunshine Coast Powell River - 1 Westview (Barge Dock) to Grief Point, SCSE Sunshine Coast Sechelt - 1 Porpoise Bay 2 Sargeant Bay 3 Halfmoon Bay - Outer 4 Halfmoon Bay - Inner, VIAB Vancouver Island Alert Bay, VIBC Vancouver Island Black Creek - 1 Oyster Bay 2 Oyster River Estuary 3 Black Creek Estuary, VIBM Vancouver Island Bamfield - 1 Aguilar Point 2 Government Dock - Bamfield Inlet, VICH Vancouver Island Chemainus - 1 Bear Pt. To Chemainus River Estuary, VICR Vancouver Island Campbell River - 1 Campbell River Estuary, VICV Vancouver Island Cowichan Valley - 1 Cherry Point 2 Mill Bay 3 Verdier Point 4 Duncan Sewage Lagoons 5 Quamachan Lake, VICX Vancouver Island Comox Valley - 1 Little River 2 Goose Spit - Inside 3 Kye Bay 4 Dyke Road 5 Courtenay Air Park 6 Millard Creek/Piercy Estuary 7 Wrecks Beach to Trent Beach 8 Gartley Beach 9 Union Bay and Log Sort 10 Edgewater Bay 11 Comox Bay Farm 12 Beach Drive 13 Kitty-Coleman Beach/Seal Bay 14 Kilmarnock Road 15 Point Holmes, VIJR Vancouver Island Jordon River - 1 Jordan River, VIMA Vancouver Island Malcolm Island - 1 Malcolm Point, VINN Vancouver Island Nanaimo - 1 Nanoose Estuary 2 Nanoose Bay 3 Entrance Rocks to Blunden Pt. 4 Blunden Pt. To Trailer Park 5 Icarus Point 6 Nanaimo Waterfront 7 Neck Point 8 Page Lagoon/Lagoon Head 9 Horswell Bluff 10 Departure Bay 11 Newcastle Island Passage 12 McKay Channel 13 Nanaimo River Estuary - West 14 Protection Island - Outer 15 Nanaimo River Estuary - East, VIPA Vancouver Island Port Alberni - 1 China Creek 2 Somas Estuary 3 Cous Cous Creek, VIPM Vancouver Island Port McNeill - 1 M&B Breakwater 2 Viner River Estuary, VIPQ Vancouver Island Parksville-Qualicum - 1 Englishman River Estuary 2 Craig Bay to Rath Trevor 3 French Creek to Eaglecrest Beach 4 Deep Bay 5 Big Qualicum River Estuary 6 Madronna Point to Wall Beach, VIPR Vancouver Island Pacific Rim - 1 Stockham Island 2 Tofino 3 Browning Passage 4 Chesterman Bay 5 Long Beach North 6 Long Beach South 7 Quisitis Point 8 Grice Bay 9 Kvarno Island 10 Olsen Bay - West Ucluelet Inlet 11 Ittatsoo

Indian Reserve 12 Spring Cove 13 Amphitrite Point, VITC Vancouver Island Telegraph Cove, VITS Vancouver Island Tahsis, VIVI Vancouver Island Victoria - 1 French Beach 2 Sooke Bay 3 Whiffin Spit 4 Sooke Harbour 5 Sooke Basin North 6 Sooke Basin South 7 Iron Mine Bay 8 Beechey Head 9 Becher Bay 10 Whirl Bay 11 Rocky Pt./Eemdyk Pass 12 Race Rocks 13 Pedder Bay inner 14 Pedder Bay outer 15 Parry Bay 16 Witty's Lagoon 17 Albert Head Lagoon 18 Esquimalt Lagoon 19 Esquimalt Harbour 20 Portage Inlet 21 The Gorge 22 Victoria Harbour 23 Ogden Pt. - Clover Pt. 24 Clover Pt. - Harling Pt. 25 Harling Pt. - Gonzales Pt. 26 Gonzales Pt. - Mary Tod I. 27 Mary Tod I. - Cattle Pt. 28 Cattle Pt. - Flower I. 29 Ten-mile Pt. - Telegraph Cove 30 Queenswood - Gordon Head 31 Gordon Head - Mt. Douglas 32 Cordova Bay 33 Sayward Beach 34 Martindale 35 Island View Beach - North 36 Saanichton Bay 37 Bazan Bay 38 Sidney - Roberts Pt. 39 Roberts Bay 40 Tsehum Harbour 41 Canoe Bay 42 Swartz Bay 43 Deep Cove 44 Pat Bay 45 Ardmore/Coles Bay 46 Brentwood Bay 47 Tod Inlet 48 Willis Pt. - Squally Rch. 49 Goldstream 50 Bamberton 51 Elk Lake/Beaver Lake 52 Point No Point 53 Island View Beach - South, VIZE Vancouver Island Zeballos - 1 Zeballos Bay/Inlet); YEAR; MONTH; DAY; SPECIES CODES (AMBI American Bittern, AMCO American Coot, AMDI American Dipper, AMKE American Kestrel, AMWI American Wigeon, ANMU Ancient Murrelet, BAEA Bald Eagle, BAGO Barrow's Goldeneye, BBPL Black-bellied Plover, BCNH Black-crowned Night Heron, BEKI Belted Kingfisher, BFAL Black-footed Albatross, BLOY Black Oystercatcher, BLSC Black Scoter, BLTU Black Turnstone, BOGU Bonaparte's Gull, BRAN Brant, BRCO Brandt's Cormorant, BUFF Bufflehead, CAAU Cassin's Auklet, CAGO Canada Goose, CAGU California Gull, CANV Canvasback, CATE Caspian Tern, CITE Cinnamon Teal, CMTE Common Tern, COGO Common Goldeneye, COHA Cooper's Hawk, COLO Common Loon, COME Common Merganser, COMU Common Murre, COSN Common Snipe, DCCO Double-crested Cormorant, DUNL Dunlin, EAGR Eared Grebe, EUWI Eurasian Wigeon, FRGU Franklin's Gull, GADW Gadwall, GBHE Great Blue Heron, GLGU Glaucous Gull, GOEA Golden Eagle, GRSC Greater Scaup, GRYE Greater Yellowlegs, GWFG Greater White-fronted Goose, GWGU Glaucous-winged Gull, GWTE Green-winged Teal, GYRF Gyrfalcon, HADU Harlequin Duck, HEGU Herring Gull, HMGU Heermann's Gull, HOGH Horned Grebe, HOME Hooded Merganser, ICGU Iceland Gull, KIEI King Eider, KILL Killdeer, LBCU Long-billed Curlew, LBDO Long-billed Dowitcher, LESA Least Sandpiper, LESC Lesser

Scaup, LEYE Lesser Yellowlegs, MAGO Marbled Godwit, MALL Mallard, MAMU Marbled Murrelet, MEGU Mew Gull, MERL Merlin, MUSW Mute Swan, NOGO Northern Goshawk, NOHA Northern Harrier, NOPI Northern Pintail, NOSL Northern Shoveler, OLDS Oldsquaw, OSPR Osprey, PALO Pacific Loon, PBGR Pied-billed Grebe, PECO Pelagic Cormorant, PEFA Peregrine Falcon, PIGU Pigeon Guillemot, RBGU Ring-billed Gull, RBME Red-breasted Merganser, REDH Redhead, REPH Red Phalarope, RHAU Rhinoceros Auklet, RLHA Rough-legged Hawk, RNDU Ring-necked Duck, RNGR Red-necked Grebe, ROSA Rock Sandpiper, RTHA Red-tailed Hawk, RTLO Red-throated Loon, RUDU Ruddy Duck, RUTU Ruddy Turnstone, SAND Sanderling, SBDO Short-billed Dowitcher, SDSA Spotted Sandpiper, SEOW Short-eared Owl, SEPL Semipalmated Plover, SNGO Snow Goose, SORA Sora, SOSA Solitary Sandpiper, SSHA Sharp-shinned Hawk, SURF Surfbird, SUSC Surf Scoter, THGU Thayer's Gull, TRUS Trumpeter Swan, TUVU Turkey Vulture, UNAL Unidentified Alcid, UNCO Unidentified Cormorant, UNDA Unidentified Dabbler, UNDO Unidentified Dowitcher, UNDU Unidentified Duck, UNGE Unidentified Goldeneye, UNGO Unidentified Goose, UNGR Unidentified Grebe, UNGU Unidentified Gull, UNLO Unidentified Loon, UNME Unidentified Merganser, UNRA Unidentified Raptor, UNSC Unidentified Scoter, UNSH Unidentified Shorebird, UNSW Unidentified Swan, UNYE Unidentified Yellow Legs, USCA Unidentified Scaup, VIRA Virginia Rail, WEGR Western Grebe, WEGU Western Gull, WESA Western Sandpiper, WHIM Whimbrel, WODU Wood Duck, WWSC White-winged Scoter, YBLO Yellow-billed Loon); Habitat Types INLAND, NEAR-SHORE, OFF-SHORE, UNKNOWN HABITAT. In a separate table in the database is further information on the survey conditions: REGION and SITE NUMBER (see above), OBSERVER, DAY, MONTH, YEAR, TIME START, TIME FINISH, WEATHER (clear, partly cloudy, overcast, fog), PRECIPITATION (rain, snow, none), SEA STATE (calm, rippled, choppy, wavy, rough), TIDE (high-tide, mid-tide, low-tide, unknown), TIDE MOVEMENT (rising, falling, unknown), POOR VISIBILITY CAUSE (glare, sea-conditions, weather, other, which are specific conditions in capitol letters), EQUIPMENT (binoculars, scope), WALKERS, DOGS, POWERBOATS, UNPOWERED BOATS, OTHER ACTIVITY NAME, OTHER ACTIVITY NUMBER, NO ACTIVITY (yes, no, incomplete)

5.2.2 Entity and Attribute Detail Citation:

American Ornithologists' Union. 1983. Check-list of North American Birds, 6th ed. Allen Press, Lawrence, Kansas. 877 pp.

6 Distribution Information

6.1 Distributor

10.1 Contact Person Primary

10.1.1 Contact Person:

Stephanie Hazlitt

10.1.2 Contact Organization:

Bird Studies Canada, Canadian Wildlife Service

10.3 Contact Position:

BC Coastal Waterbird Survey Coordinator

10.4 Contact Address

10.4.1 Address Type:

mailing address

10.4.2 Address:

5421 Robertson Road, RR1

10.4.3 City:

Delta

10.4.4 State or Province:

British Columbia

10.4.5 Postal Code:

V4K 3N2

10.4.6 Country:

Canada

10.5 Contact Voice Telephone:

604-940-4696

10.7 Contact Facsimile Telephone:

604-946-7022

6.4 Standard Order Process

6.4.2 Digital Form

6.4.2.1.1 Format Name:

MS Access

6.4.2.1.2 Format Version Number:

9.0.2720

6.4.2.1.3 Format Version Date:

2000

6.4.2.2 Digital Transfer Option

7 Metadata Reference Information

7.1 Metadata Date:

20001120

7.4 Metadata Contact:

10.1 Contact Person Primary

10.1.1 Contact Person:

Kathleen Moore

10.1.2 Contact Organization:

Environment Canada, Canadian Wildlife Service

10.4 Contact Address

10.4.1 Address Type:

mailing address

10.4.2 Address:

5421 Robertson Road, RR#1

10.4.3 City:

Delta

10.4.4 State or Province:

BC

10.4.5 Postal Code:

V4K 3N2

10.4.6 Country:

Canada

10.5 Contact Voice Telephone:

(604)940-4700

7.5 Metadata Standard Name:

NBII Content Standard for National Biological
Information Infrastructure Metadata

7.7 Metadata Time Convention:

local time

7.8 Metadata Access Constraints:

None

7.9 Metadata Use Constraints:

None