Caribbean Waterbird Census (CWC)
Site Description Form

COUNTRY:	**DATE:** DY:	MO:	YR:	**ALTITUDE (m):**
NAME OF SITE:		**SITE CODE:**		
PROVINCE/PARISH:				**AREA (ha):**
NEAREST LARGE TOWN:				
COORDINATES at centre of site	deg.	min.	sec.	N/S
	deg.	min.	sec.	E/W
NAME OF RECORDER:				
CONTACT INFORMATION	E-MAIL:		TELEPHONE:	

HABITAT TYPES	**EXTENT**	**NOTES (Include notes on habitats, special features and species)**
Saline		
Hyper-saline/ saline lagoon, or salt pond		
Mangrove swamp, pond, lagoon, island		
Sandy beach, berm, shoreline		
Coral reef		
Seagrass bed		
Salt flat, salina		
Intertidal mudflat, sandflat		
Sand bank		
Tidal creek		
Estuary, estuarine lagoon		
Sand cay		
Rocky strand		
Open sea, bay, strait		
Other		
Brackish		
Brackish lagoon, pond		
Brackish marsh		
Brackish lake		
Other		
Freshwater		
Herbaceous freshwater marsh		
Stock/farm pond		
River, stream, canal, ditch		
Seasonal pools on flooded grassland		
Rice field		
Lake, reservoir, tank		
Sewage pond		
Swamp forest (Royal Palm, *Pterocarpus*)		

Other		

PROVIDE A BRIEF DESCRIPTION OF YOUR SITE (include main habitats, physical features and dominant plant species (if known).

MEASUREMENTS (Please fill in information from your index point or circle a category)

GPS COORDINATES	deg.	min.	sec	N/S
	deg.	min.	sec	E/W

Water depth at index point (cm)		Distance of sample point from water edge (m)		
Width of beach (m)				
Salinity (note units)	Bottom	Mid-column	Surface	
Salinity (circle if no salinometer)	Fresh	Brackish	Saline	
Turbidity (Secchi disc depth)		pH		
Tidal range (cm)				

% of wetland covered with water:	None	1-25%	26-50%	51-75%	76-100%
% of wetland covered with plants:	None	1-25%	26-50%	51-75%	76-100%
Vegetation status:	Dry	New growth	Flowering	Fruiting	Burnt

Food: Low, medium, high (describe indicators used

HYDROLOGY (circle those that apply to your site)

Principal hydrology: tidal, fed by spring, stream, connection to sea, local rainwater, run-off from watershed, blue hole

Water permanence: permanently wet, semi-permanently wet, seasonally flooded, ephemeral, tidal

Water level management: controlled water level, inactive controlled water level, no water level control, unknown

Notes:

PROTECTION STATUS (circle those that apply to your site)

Land Protection: protected site, partially protected site, no protection, unknown

If protected, state the type of protection: marine protected area, national park, reserve, conservation area, fish sanctuary, other (state which)

Land tenure: government owned, private owned, mix of government and private ownership

Name of organization(s) or agency(ies) responsible for management and conservation:

Organizations, agencies, or groups involved in conservation activities or projects (describe briefly):

LAND USE AND HUMAN ACTIVITIES (circle all that apply)

Aquaculture: fish, lobsters, shrimp, seamoss Other (list)	Outdoor recreation: picnicking, hiking, photography Other (list)
Agriculture: livestock, small farming, marijuana	Bird watching, wildlife watching
Fishing: subsistence, sport, commercial	Tourism: nature, culture, heritage
Shrimping: pots, trawls	Aquatic recreation: swimming, sun-bathing, snorkeling, diving, kayaking, sailing, canoeing, wind surfing, kite surfing, speed boats, paddle boats, boat tours

Crabbing: land crabs, swimming crabs	Dredging, sand mining
Salt production	Solid waste disposal, waste water treatment
Production of honey	
Hunting: (list species)	Research: (list main categories)
Harvest of craft materials, e.g., reed/thatch cutting for basket making	Other: (please list)
Cutting of mangroves or other wood for timber, charcoal production, fodder, production of tannin	

OTHER IMPORTANT FAUNA AND FLORA: (e.g., threatened or economically important species - please list)

THREATS - Rank all that apply 0 = None, 1 = Little, 2 = Moderate, 3 = Large-scale, 4 = Unknown

AGRICULTURE

Livestock gazing [ ], marijuana cultivation [ ], Small cultivation [ ], forestry [ ], fuelwood [ ], orchards [ ]

Aquaculture: fish [ ], shrimp [ ]. Mariculture [ ]

Other (state)

RESIDENTIAL & COMMERCIAL DEVELOPMENT

Housing [ ], commercial [ ], industrial [ ], hotels [ ], villas [ ], marina [ ], squatting [ ], golf course [ ]
Other (state) [ ]

ENERGY PRODUCTION AND MINING

Mining: sand [ ], clay [ ], limestone quarrying [ ]

Power stations [ ], LNG plants [ ], other (state) [ ] Other: (state) [ ]

Utility and service lines [ ] cell towers [ ]

Other (state)

TRANSPORTATION & UTILITIES

Roads [ ], off-road traffic [ ]

Shipping channels [ ], heavy boat traffic [ ]

Other (state)

OVER-EXPLOITATION, PERSECUTION AND CONTROL OF SPECIES

Hunting: commercial [ ], subsistence [ ], sport [ ]

Fishing: commercial [ ], subsistence [ ], sport [ ]

By-catch [ ]

Cutting, harvesting or destruction of mangroves or other species (state which) [ ]; firewood collection [ ], charcoal production [ ], selective harvest [ ], extraction of sticks for fish pots [ ]; other (state) [ ]

Egg collection: subsistence [ ] state species , commercial [ ] state species

Harvest of protected/threatened species (state which) [ ]

Other (state) [ ]

HUMAN INTRUSION AND DISTURBANCE

Land tours [ ], boat tours [ ]

Other (state) [ ]

MODIFICATION OF NATURAL ECOSYSTEMS

Excessive fire [ ], fire control [ ]

Dredging [ ], draining [ ], filling in for development [ ]
Describe briefly:

Shoreline encroachment: housing [ ], roads [ ], agriculture[ ], tourism [ ]

Natural hydrology changed by development: roads [ ], dykes [ ], dams [ ], filling for construction [ ]
diversion of water for other uses [ ], interruption of natural circulation patterns and currents [ ]

Deforestation of watershed [ ]
Other (state) [ ]
INVASIVE SPECIES
Feral animals: cats [ ], dogs [ ], goats [ ], cattle [ ], pigs [ ]
Invasive mammals: rats [ ], raccoons [ ], mongoose [ ], monkeys [ ] other (state) [ ]
Invasive aquatic animals: Tilapia [ ], catfish [ ], carp [ ], shrimp [ ], lionfish [ ], other (state)
Overgrowth by invasive plants, e.g., water hyacinth [ ], *Typha* spp [ ], vines [ ], other (state) [ ]
Predation of adult birds [ ], young [ ], eggs [ ] By introduced rats [ ], feral cats [ ], dogs [ ], mongoose [ ] other (state) [ ]
POLLUTION
Domestic sewage [ ], solid waste [ ], industrial waste [ ], pesticides [ ], fertilizers [ ], oil [ ], agricultural wastes [ ], bathing [ ], washing [ ], siltation [ ], noise [ ], air-bourne pollutants [ ], thermal pollution [ ], light pollution [ ], eutrophication [ ]
Other (state) [ ]
GEOLOGICAL EVENTS
Volcanic eruptions [ ], earthquakes [ ], mudslides) [ ], tsunamis [ ]
CLIMATE CHANGE AND SEVERE WEATHER
Hurricanes [ ], drought [ ], floods [ ], rising sea level [ ], high temperatures [ ], fire [ ], coral bleaching [ ], other (state) [ ]
PROVIDE A SKETCH MAP OF YOUR SITE SHOWING MAIN PHYSICAL AND NATURAL FEATURES (e.g. trails, nesting colonies) AND LOCATION OF AREA SEARCH ROUTE OR SURVEY POINTS, ON A TOPOGRAPHIC MAP OR GOOGLE EARTH IMAGE ON A SEPARATE SHEET or SKETCH IT BELOW

Notes on how to complete the Site Description Form

COORDINATES	The site coordinates should be from the approximate geographic centre of your study area. You can generate them from a Google Earth image of your area.

HABITAT TYPES	**EXTENT**	**NOTES**
HABITAT TYPES	This is a list of the most common habitat types in Caribbean wetlands. Please rank all those that occur in your study area under the "Extent" column. Add other types if these ones do not work well for your wetland.	
EXTENT	Rank the habitats that are present in your wetland according to your best estimate of the % of the total area they cover according to the scale below.	
	0	Not present
	1	Not very extensive, covers less than 25% of wetland
	2	Fairly extensive, covers 26-50% of wetland
	3	Very extensive covers >51% of wetland
NOTES	Make notes about any aspects of the habitat type that may influence bird distribution or numbers	

PROVIDE A BRIEF DESCRIPTION OF YOUR SITE (include main habitats, physical features and dominant plant species (if known)

Provide a very brief description of the site.

MEASUREMENTS (Please fill in whatever information you can provide from your index point)

INDEX POINT	The index point is a single point at which you will take measurements every time you survey the wetland. It should be convenient (possibly the first place you get to) and representative.
COORDINATES	Coordinates of index point.

Water depth at index point: Measure water depth at a predetermined point (e.g., GPS location mapped and described).

Distance of sample point from water edge: measure or estimate the distance of the sample point from the water's edge.

Width of beach: Measure or estimate the exposed unvegetated area between water and high water mark.

Salinity (note units and depth of samples): Measure salinity at the bottom, middle, and top of the water column. Remember to note whether you are measuring in ppt or %. OR take samples and label them clearly.

Turbidity: Optional, can be measured with a secchi disk

Tidal range (cm): Include the difference between mean high and low water marks here if you know it or can estimate it.

pH: Optional, can be measured with a pH meter or pH paper.

Other habitat covariates: Water level, extent of vegetative cover, vegetation status, and estimates of food abundance may provide an index of habitat availability/quality. These can be assessed for your site from habitat at your index point (which may be one of your point count stations or area search locations), and also at each of your CWC survey sites (record data on CWC count forms), if desired. The data provided here will provide a baseline. First, decide on you potential habitat at the site. If you have reached your point by canoe or have walked (possibly on a dike) or waded out to your point and have wetland all around you, then your potential habitat is a full circle with a radius of 400m around you. If you are standing on the edge of the wetland, then the potential habitat is a ½ circle (with radius up to 400m). Be sure to record on a map what part of the wetland you are including in your measurements.

Water Level: % of wetland area covered with water: Can give an estimate or circle a category corresponding to the level or amount of water available in the wetland, with zero indicating no water (severe drought) and 4 indicating flooded/maximum water levels.

Vegetation: % of wetland area covered with plants: Can give an estimate or circle a category based on your best estimate.

Vegetation status: Describe the general condition of the vegetation, e.g., dry, new growth, flowering, fruiting, burnt, etc.

Food: Estimate if levels are low, medium, or high (circle one) and describe indicators used (e.g., water levels, observation of aquatic invertebrates, fish, crabs, frogs and/or seeds or algae in the water, flowering and fruiting trees and bushes around the area, birds actively feeding, etc.)

HYDROLOGY (circle those that apply to your site)

Use this section to describe aspects of the water regime in your study site that might affect ecosystem function, waterbirds and their habitats.

LAND USE AND HUMAN ACTIVITIES (circle all that apply)

Use this section to describe human activities at your study site.

OTHER IMPORTANT FAUNA AND FLORA: (e.g. threatened, endemic or economically important species - please list)

Use this section to describe other important biodiversity at the site (e.g. endemic or threatened plants or animals or ecosystems). Might include nesting sea turtles, crocodiles, Royal Palms, bats, iguanas, etc.)

THREATS – Rank all that apply, 0 = None, 1 = Little, 2 = Moderate, 3 = Large-scale, 4 = Unknown

Use this section to list and rank the threats to your wetland and its birds.
Score each threat using the following scale (which combines scope (extent), severity (how bad the effects are), and duration (time period over which impacts occur) into one score:

0 = Threat not present
1 = Threat present but impact is small
2 = Threat present and impact is moderate (i.e., felt only in a limited area, not very severe)
3 = Threat and impact is severe (i.e., felt in more than half of the wetland or by more than half of the population of waterbirds or very severe in the area where it is having an impact)
4 = Unknown (i.e., there is no available information about this threat).

AGRICULTURE: Includes all types of agriculture that occur in your study area.

RESIDENTIAL AND COMMERCIAL DEVELOPMENT: Threats from human settlements that result in habitat destruction and degradation. Note that aspects that relate to pollution should be included in that section.

ENERGY PRODUCTION AND MINING: Threats from the production of minerals and energy.

TRANSPORTATION AND UTILITIES: Threats from long-narrow corridors of disturbance from roads, utility lines. Also cell towers.

OVER-EXPLOITATION, PERSECUTION AND CONTROL: Threats from consumption of wild biological resources, including deliberate and unintentional harvest, persecution and hunting, as well as control activities. Note that cutting and harvesting includes firewood collection.

HUMAN INTRUSIONS AND DISTURBANCE: Threats from human activities that alter, destroy or disturb habitats and species or ecological functions.

NATURAL SYSTEM MODIFICATIONS: Threats that alter the natural functions of wetlands and associated ecosystems, by interfering with their hydrology, filling, dredging or changing water levels.

INVASIVE SPECIES: Threats from introduced and native plants, animals or pathogens that harm biodiversity (by killing them or destroying habitats) following introduction, spread or excessive increase.

POLLUTION: Threats from point and non-point sources of materials that damage animals and plants and their habitats.

GEOLOGICAL EVENTS: Threats from natural catastrophes that can damage wetlands and their biota.

CLIMATE CHANGE AND SEVERE WEATHER: Threats from long and short-term events, and the increase of such events as a result of climate change.

PROVIDE A SKETCH MAP OF YOUR SITE SHOWING MAIN PHYSICAL AND NATURAL FEATURES (e.g., nesting colonies) AND LOCATION OF SURVEY POINTS, ON A TOPOGRAPHIC MAP OR GOOGLE EARTH IMAGE ON A SEPARATE SHEET

This map should indicate your study area, survey points and the area that is being surveyed from each point. If you wish, you may also show the above information on the map (e.g., major habitat types, locations for human activities, location of threats).

What to do with this form

Check and enter the data into our online form - bit.ly/CWCSiteForm - as soon as possible after collecting it, thereby contributing to our on-line directory of Caribbean wetlands of importance for birds. Data entered into this site will be returned to you as an Excel spreadsheet.

If you have questions about filling out the Site Description Form, contact Alex Sansom (Alex.Sansom@BirdsCaribbean.org) or Lisa Sorenson (Lisa.Sorenson@BirdsCaribbean.org)