Table A2. Overview of the structure of the RCSC et al's Remote Camera Metadata Template (2023) including both the data fields recommended by the Remote Camera Survey Guidelines: Guidelines for Western Canada (RCSC et al., 2023) and these metadata standards.

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
Project ID	**Project ID**	Visit Metadata	Both	proj_id	[alphanumeric]	[Ideally recorded as: "abbreviated organization name"_" brief project name"_"project start year"]	UofA_WildEdmonton-Urban-Wildlife-Monitoring_2018
Project Coordinator	Project Coordinator	-	-	proj_coord	[text]	-	John Smith
Project Coordinator Email	Project Coordinator Email	-	-	proj_coord_email	[text]	-	John.Smith@telus.net
Project Description	Project Description	-	-	proj_desc	[text]	-	The objective of this project is to compare wolf occupancy in the oil sands region of north-eastern Alberta using two study areas with high energy development and two reference areas with little to no industrial footprint
Study Area ID	**Study Area ID**	-	-	study_area_id	[alphanumeric]	-	OILSANDS-REF001
Study Area Description	Study Area Description	-	-	study_area_desc	[text]	-	The study area OILSANDS-REF001 was located in the south-east corner of the Birch Mountains Wildland Provincial Park in the Boreal Highlands subregion. The area consisted primarily of bogs, patches of pine, aspen and birch forest as well as riparian meadow habitats. There was no land use disturbance in the study area.

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
Survey ID	**Survey ID**	-	-	surv_id	[alphanumeric]	-	FORTMC_001
Survey Objectives	Survey Objectives	-	-	surv_obj	[text]	-	Our survey objective was to monitor trends in wolf occupancy at 5-year intervals from January – December 2020 to 2023 in the Oilsands region in the northern boreal forest of Alberta.
Target Species	Target Species	-	-	target_species	categorical; one-to-many	[Refer to "species" in "species_crosswalk"]	COYOTE, WHITE-TAILED DEER
Survey Design	Survey Design	-	-	surv_design	categorical; one-to-one	Simple Random, Systematic, Stratified, Clustered, Paired, Targeted, Convenience, Hierarchical (Multiple)¶, Other¶, Unknown	Hierarchical (multiple)¶
*Survey Design Description	*Survey Design Description	-	-	surv_design_desc	[text]	-	survey_design[Systematic, Convenience]; Our Systematic, Convenience design consisted of one camera location within each township in our study area; each location was within 100m of a secondary road or cutline; lure dispensers with Gorman's Gumbo (long line) were set-up at each camera location during initial camera deployment and not revisited during the survey period.
Event Type	Event Type	-	-	event_type	categorical; one-to-one	Tag, Image, Sequence	Tag
Sample Station ID	**Sample Station ID**	Visit Metadata	Both	samp_st_id	[alphanumeric]	["NULL" if NA]	SS1
Camera Location ID	**Camera Location ID**			cam_loc_id	[alphanumeric]	-	BH1

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
Latitude Camera Location	Latitude Camera Location		Deployment	cam_loc_lat	[numeric]	[5 decimal places]	53.78136
Longitude Camera Location	Longitude Camera Location			cam_loc_long	[numeric]	[5 decimal places]	-113.46067
Northing Camera Location	Northing Camera Location			cam_loc_north	[numeric]	[no decimal places]	5962006
Easting Camera Location	Easting Camera Location			cam_loc_east	[numeric]	[no decimal places]	337875
UTM Zone Camera Location	UTM Zone Camera Location			cam_loc_utm_zone	[alphanumeric]	[zone # / hemisphere; e.g., "12 N"]	12 N
GPS Unit Accuracy (m)	GPS Unit Accuracy (m)			gps_accuracy_m	[numeric]	[metres]	5
*Access Method	-			-	categorical; one-to-one	Foot, ATV, Argo, Truck, Snowmobile, Horse, Boat, Helicopter, NULL	Foot
*Camera Location Comments	*Camera Location Comments		Both	cam_loc_comments	[text]	-	Snowmobile trail, aspen-dominated
Deployment ID	**Deployment ID**	Visit Metadata	Deployment	deploy_id	[alphanumeric]	[ideally recorded as: “Camera Location ID”_“Deployment Start Date” (or …_”Deployment End Date”)] (e.g., “BH1_17-JUL-2018" or “BH1_17-JUL-2018_21-JAN-2019”	BH1_17-JUL-2018
Purpose of Visit	-		Service/ Retrieval	-	categorical; one-to-one	Deployment, Service, Retrieval	Deployment
Deployment Crew	Deployment Crew		Both	deploy_crew	[text]	-	Susie Smith
Service/Retrieval Crew	Service/Retrieval Crew		Service/ Retrieval	service_retrieval_crew	[text]	-	John Smith
Deployment Start Date Time (DD-MMM-YYYY HH:MM:SS)	Deployment Start Date Time (DD-MMM-YYYY HH:MM:SS)		Both	deploy_start_date_time	date/time	[DD-MMM-YYYY HH:MM:SS]	43298.44053
Deployment End Date Time (DD-	Deployment End Date Time (DD-			deploy_end_date_time	date/time	[DD-MMM-YYYY HH:MM:SS]	43673.95833

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
MMM-YYYY HH:MM:SS)	MMM-YYYY HH:MM:SS)						
*Visit Comments	*Visit Comments			visit_comments	[text]	-	
*Deployment Comments	-		Deployment	-	[text]	-	applied Gorman's Gumbo lure
*Service/Retrieval Comments	-		Service/ Retrieval	-	[text]	-	reapplied Gorman's Gumbo lure
Camera ID	Camera ID	Equipment Information	Deployment	cam_id	[alphanumeric]	-	RECONPC900-1
Camera Make	Camera Make			cam_make	[text]	-	Reconyx
Camera Model	Camera Model			cam_model	[text]	-	PC900
Camera Serial Number	Camera Serial Number			cam_serial	[text]	-	P900FF04152022
*SD Card ID	-		Both	-	[alphanumeric]	-	CMU-100
*Key ID	-		Deployment	-	[alphanumeric]	-	Python#1
*Security	-			-	categorical; one-to-one	Security Box, Bracket, None	Security Box
*Camera Active On Arrival	-		Service/ Retrieval	-	categorical; one-to-one	Y, N	Y
*Camera Damaged	-			-	categorical; one-to-one	Physical‡, Mechanical‡, None	Physical
*Card Status (% Full)	-			-	[numeric]	[seconds]	56
*# Of Images	-			-	[numeric]	[count]	1567
*SD Card Replaced	-			-	categorical; one-to-one	Y, N	Y
*Remaining Battery (%)	-			-	[numeric]	[%]	99
*Batteries Replaced	-			-	categorical; one-to-one	Y, N	Y
New Camera ID	-			-	[alphanumeric]	["NULL" if NA]	-
New Camera Make	-			-	[text]	["NULL" if NA]	-

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
New Camera Model	-			-	[text]	["NULL" if NA]	-
New Camera Serial Number	-			-	[text]	["NULL" if NA]	-
*New SD Card ID	-			-	[alphanumeric]	["NULL" if NA]	-
Trigger Mode(s)	Trigger Mode(s)	Camera Settings	Deployment	set_trig_modes	categorical; one-to-one	Motion Image, Time-lapse Image, Video, Motion Image + Time-lapse Image, Motion Image + Time-lapse Image + Video, Time-lapse Image + Video, Motion Image + Video	Motion Image + Time-lapse image
*Video Length (seconds)	*Video Length (seconds)			set_video_length_s	[numeric]	[seconds; "NULL" if NA]	NULL
Trigger Sensitivity	Trigger Sensitivity			set_trig_sensitivity	categorical; one-to-one	Low, Low/Med, Med, Med/High, High, Very High, NULL	High
Photos Per Trigger	Photos Per Trigger			set_photos_per_trig	[numeric]	[count]	3
Motion Image Interval (seconds)	Motion Image Interval (seconds)			set_motion_img_int_s	[numeric]	[seconds; "0" if not set]	0
Quiet Period (seconds)	Quiet Period (seconds)			set_quiet_period_s	[numeric]	[seconds; "0" if not set]	30
Camera Height (m)	Camera Height (m)	Placement		cam_ht_m	[numeric]	[metres, recorded to the nearest 0.05 m]	1
*Camera Direction (degrees)	*Camera Direction (degrees)			cam_dir_deg	[numeric]	[degrees]	0 (i.e. North)
*Camera Attachment	-			-	categorical; one-to-one	Tree, Post, Tree + Bungee/Strap, Tree + Screws, Post + Bungee/Strap, Post + Screws, Other†	Tree + Screws
*Stake Distance (m)	*Stake Distance (m)			stake_dist_m	[numeric]	[metres, recorded to the nearest 0.05 m; "NULL" if NA]	4.95
FOV Target Feature	FOV Target Feature			fov_target	categorical; one-to-one	Game Trail, Hiking Trail, Off-Highway Vehicle Trail, Paved Road, Dirt/Gravel Road, Road Crossing,	Off-Highway Vehicle Trail

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
						Railway, Cutline/Seismic Line, Transmission Line, Pipeline, Wellsite, Culvert, Beaver Dam, Burrow/Den, Nest, Carcass, Natural Mineral Lick, Rub Post, Other, None, NULL	
*FOV Target Feature Distance (m)	*FOV Target Feature Distance (m)			fov_target_dist_m	[numeric]	[metres, recorded to the nearest 0.05 m; "NULL" if NA]	10
Bait/Lure Type	Bait/Lure Type			bait_lure_type	categorical; one-to-one	Scent, Meal, Bait Tree, Visual, Acoustic, Other‡, None, NULL	Scent
*Camera Location Characteristic(s)	*Camera Location Characteristic(s)	Site Characteristics		cam_loc_chars	categorical; one-to-many	Trail, Road, Railway/Pipeline/Transmission Line, Cutline/Seismic Line, Wellsite, Clearcut, Building, Forest - Deciduous, Forest - Coniferous, Forest - Mixedwood, Forest - Undefined, Meadow, Burn, Agriculture, Shrubland, Beaver Dam, Wetland, Lentic, Lotic, Other†, NULL	Building, Forest - Mixedwood, Road, Trail
*Deployment Area Photos Taken	-			-	categorical; one-to-one	Y, N	Y
*Deployment Area Photo Numbers	-			-	[text]	["NULL" if NA]	4
*Test Image Taken	-	Equipment Checks	Both	-	categorical; one-to-one	Y, N	Y
*Walktest Complete	-			-	categorical; one-to-one	Y, N	Y
*Walktest Distance (m)	*Walktest Distance (m)			walktest_dist_m	[numeric]	[metres, recorded to the nearest 0.05 m; "NULL" if NA]	4.95
*Walktest Height (m)	*Walktest Height (m)			walktest_ht_m	[numeric]	[metres, recorded to the nearest 0.05 m; "NULL" if NA]	0.75
Image Set Start Date Time (DD-	Image Set Start Date Time (DD-	Image Set	-	img_set_start_date_time	date/time	[DD-MMM-YYYY HH:MM:SS]	43298.50002

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
MMM-YYYY HH:MM:SS)	MMM-YYYY HH:MM:SS)						
*Camera Active On Departure	-	Equipment Checks	Deployment	-	categorical; one-to-one	Y, N	Y
Image Set End Date Time (DD-MMM-YYYY HH:MM:SS)	Image Set End Date Time (DD-MMM-YYYY HH:MM:SS)	Image Set	-	img_set_end_date_time	date/time	[DD-MMM-YYYY HH:MM:SS]	43663.92367
*Deployment Image Count	*Deployment Image Count	Image Set	-	deploy_img_count	[numeric]	[count]	1567
Image ID	**Image ID**	-	-	img_id	[alphanumeric]	[Ideally recorded as: ”Deployment ID”_“Camera_Serial Number”_”Image_Sequence_Date_Time”_”Image Number” - OR - ”Deployment ID”_”Image_Sequence_Date_Time”_” Image Number”]	BH1_17-JUL-2018_22-JUL-2018 10:34:22_IMG_100
Sequence ID	**Sequence ID**	-	-	seq_id	[alphanumeric]	[Ideally recorded as: "Deployment ID"_"IMG_#[name of first image in sequence]"_"IMG_#[name of last image in sequence]"; "NULL" if NA]	BH1_22-JUL-2018 IMG_001-IMG_005
Analyst	Analyst	-	-	Analyst	[text]	-	Susie Smith
Species	Species	-	-	species	categorical; one-to-one	[Refer to "species" in "species_crosswalk"; "NONE" if no species]	COYOTE
Individual Count	Individual Count	-	-	individual_count	[numeric]	[count]	2
Age Class	Age Class	-	-	age_class	categorical; one-to-one	Adult, Juvenile, Subadult - Young of Year, Subadult - Yearling, Subadult, Unknown	Adult
Sex Class	Sex Class	-	-	sex_class	categorical; one-to-one	Male, Female, Unknown	Male
*Behaviour	*Behaviour	-	-	behaviour	categorical; one-to-one	Travelling, Standing, Running, Bedding, Drinking, Feeding/Foraging,	Travelling

Survey Guidelines	Metadata Standards	Data Group	Visit Type	Field Code	Data Type	Data Format[1]	Example
						Territorial Display, Rutting/Mating, Vigilant, Inspecting Camera, Inspecting (Non-Specified), Unknown, Other§, Multiple§, NULL	
*Animal ID	*Animal ID	-	-	animal_id	[alphanumeric]	["NULL" if NA]	NULL
*Human Transport Mode/Activity	*Human Transport Mode/Activity	-	-	human_tpt_mode_activity	categorical; one-to-one	Activity - Walking, Activity - Hiking, Activity - Running, Activity - Cycling, Activity - Skiing, Activity - Snowshoeing, Activity - Fishing, Activity - Hunting, Activity - Unspecified, Transport - Horse/Mule, Transport - Off-Road/All-Terrain Vehicle, Transport - Passenger Vehicle, Transport - Large Commercial Vehicle/Heavy Equipment, Transport - Unspecified, Activity/Transport - Other§, NULL	Activity - Walking
*Image/Sequence Comments	*Image/Sequence Comments	-	-	img_seq_comments	[text]	-	Behaviour[Inspecting Camera,Travelling]
*Image Trigger Mode	*Image Trigger Mode	-	-	img_trig_mode	categorical; one-to-one	Motion Detection, Time Lapse, CodeLoc Not Entered, External Sensor, Unknown	Motion Detection
*Image Sequence	*Image Sequence	-	-	img_sequence	[text]	[e.g., "0 of 0", "1 of 1", "0 of 0"; "Unknown" if not known]	1 of 3
*Image Infrared Illuminator	*Image Infrared Illuminator	-	-	img_infrared_illum	categorical; one-to-one	On, Off, Unknown	On
*Image Flash Output	*Image Flash Output	-	-	img_flash	[text]	[e.g., "Flash did not fire, Auto"; "Unknown" if not known]	Flash did not fire, Auto
Image/Sequence Date Time (DD-MMM-YYYY HH:MM:SS)	Image/Sequence Date Time (DD-MMM-YYYY HH:MM:SS)	-	-	img_seq_date_time	date/time	[DD-MMM-YYYY HH:MM:SS]	43303.45975

[1] The symbols refer to the field in which to provide additional information. I.e., † = in Camera Location Comments; ‡ = deployment OR service/retrieval comments; § = Image/Sequence Comments; ¶ = Survey Design Description