



Bird Surveys at Klondike Gold Rush NHP

2017 Summary

Natural Resource Report NPS/KLGO/NRR—2019/1968



ON THE COVER

A rare sighting of an adult Tufted Puffin (*Fratercula cirrhata*) in breeding plumage floating amongst a raft of Surf Scoters (*Melanitta perspicillata*) at the mouth of the Skagway River on July 11th, 2017 (© CAMERON ECKERT), used with permission

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Abstract

Coastal Waterbird Surveys (loons, grebes, cormorants, herons, ducks, and geese, plovers and sandpipers, gulls, alcids, and kingfishers) were conducted at Klondike Gold Rush National Historic Park in 2017. The surveys serve to document coastal waterbird distribution and abundance throughout the park. Fifteen surveys were conducted from April 15th to September 11th and 43 waterbird species were detected. The North American Breeding Bird Survey (BBS) and Alaska Landbird Monitoring Survey (ALMS) were conducted as part of a continuous monitoring program to document the diversity and abundance of avian species breeding in the area. Conducted in mid-June, BBS surveyors detected 36 species and ALMS surveyors detected 36 species, for a combined total of 43 species. Bald eagle nest monitoring was conducted at six historically active nests, and one newly constructed nest, none of which were observed to successfully produce a fledgling.

Acknowledgments

The Coastal Waterbird Survey (CWS) at KLGO was born out of the vision and work of Meg Hahr, former KLGO Natural Resource Manager. Her initial protocol, research, and survey efforts led to creation of the CWS at KLGO, which has now been conducted seasonally for the last 14 years.

The fieldwork conducted this year would not have been possible without the support of many dedicated volunteers, particularly Elaine Furbish, Mike Konsler and Nora Zimmerly of the Skagway Bird Club. Additional thanks go to NPS Staff Anne Matsov, and Christy Mog who all assisted with Coastal Waterbird Surveys this season. A special thanks to volunteer Deb Rudis for conducting the annual Breeding Bird Survey and Alaska Landbird Monitoring Survey, and to Bob Finke of Skagway Hike and Float for his diligent natural history observations and documentation of Bald Eagle nest activity. Lastly, thanks to Jami Belt, our Natural Resource Program Manager, for her endless support in the office and in the field.

We would also like to acknowledge all of the former wildlife technicians who carried out, expanded, and improved the bird monitoring program at Klondike Gold Rush NHP and whose research and data are reflected in this report.

Introduction

Klondike Gold Rush National Historical Park (KLGO) is located at the northern terminus of Alaska's Inside Passage. KLGO was established in 1976 to preserve the historic structures and trails associated with the Klondike Gold Rush of 1898-99. The Park also contains dynamic and diverse natural resources. The Park is relatively small by Alaska standards with scattered landholdings in three separate units totaling 53 km² (13,191 acres). Despite its size, the Park's unique geographic setting and climate make it one of the most biologically diverse areas in Alaska (Pojar and Mackinnon 1994, MacDonald and Cook 1999).

Although KLGO is located within the Northern Pacific Rainforest Bird Conservation Region (BCR), it also borders the Northwestern Interior Forest BCR, placing the park in a transition zone between two ecologically divergent geographic regions with distinct associations of avifauna (NABCI 2000). The Northern Pacific Rainforest BCR is characterized by a temperate maritime climate and extensive coniferous forests dominated by western hemlock (*Tsuga heterophylla*) and Sitka spruce (*Picea sitchensis*). The predominantly steep, rocky coastline is periodically interrupted by river valleys and estuarine and freshwater wetlands that provide critically important breeding, migration, and wintering habitat for populations of both waterbirds and landbirds (NABCI 2000). The Northwestern Interior Forest BCR is an ecologically diverse region with an array of habitats, including boreal forests dominated by black spruce (*Picea mariana*), white spruce (*Picea glauca*), paper birch (*Betula papyrifera*), and poplars (*Populus* spp.). There are also extensive areas of non-forest including tall shrub, alpine dwarf scrub, and shrub-graminoid communities. This BCR supports internationally significant populations of breeding shorebirds, waterfowl, and passerines (NABCI 2000). The portion of the Northwestern Interior Forest BCR bordering KLGO is characterized by high-elevation, mountainous terrain and alpine plant communities. These areas provide breeding habitat for several landbird species that rarely breed in the cool, wet, coastal rainforests of Southeast Alaska.

Long-term monitoring and baseline inventories help managers to make decisions that meet the National Park Service goal to maintain intact ecosystems in their natural state (Hahr and Trapp 2004). Base funding from KLGO was used to conduct Coastal Waterbird Surveys (CWS), targeting loons (*Gaviidae*), grebes (*Podicipedidae*), cormorants (*Phalacrocoracidae*), herons (*Ardeidae*), ducks and geese (*Anatidae*), and members of the order Charadriiformes (which includes shorebirds, skuas, jaegers, gulls, terns, skimmers, and alcids) along the coastline from Skagway to Dyke, covering the Skagway and Taiya River mouths and Nahku Bay. Additional species were documented as opportunistic sightings when observed by NPS biologists and other knowledgeable birders.

The North American Breeding Bird Survey (BBS) route and two Alaska Landbird Monitoring Survey (ALMS) routes were sampled as part of state and nation-wide efforts to collect annual data of breeding bird abundance during the peak of the breeding season.

Lastly, the monitoring of six previously documented Bald Eagle nests in the Skagway, Dyke, and lower Chilkoot Trail areas continued this season. Additionally, we monitored one newly documented

nest in the Chilkoot Trail area. To enhance the data of future bald eagle nest monitoring, a nest book depicting locations of Bald Eagle Nests and Observation points was prepared in the 2017 season.

Methods

Coastal Waterbird Survey

During the 2017 field season, eight survey areas, previously defined by Hahr and Trapp (2004), were assessed according to the Waterbird Monitoring Protocol for Klondike Gold Rush NHP (KLGO 2019a). Surveys were conducted once per week from April 15 to May 12, once every two weeks from May 26 to July 31, and again weekly from August 14 to September 11, with a total of 15 surveys. All waterbirds detected by sight or sound within the survey area were recorded. Occasionally during previous years, Census Unit 1 (CU1) was only partially surveyed or dropped altogether due to cruise ship traffic. In 2017, the entire area of CU1 was surveyed completely during every CWS.

Counts of waterbirds were made by scanning each survey area with Bushnell 10 x 50 binoculars and a Swarovski 25 x 60 mm spotting scope until all waterbirds had been counted. Surveys were scheduled around a rising tide at Census Unit 7 such that the survey began two hours prior to high tide. This allowed for the maximum number of feeding shorebirds and waterfowl while keeping them relatively concentrated for identification and counting. All data were recorded in a field notebook or field note pages, then transcribed to standardized data sheets adapted from Collins et al. (2001) back in the office. All data were entered into the Coastal Waterbird Microsoft Access database (T:\NRM\Birds\CoastalWaterbirdSurveys\Data\Coastal_Waterbird_Database). The methods are described in greater detail by Hahr and Trapp (2004).

North American Breeding Bird Survey & Alaska Landbird Monitoring Survey

The North American Breeding Bird Survey (BBS) was conducted on June 16, 2017. The standard BBS route is approximately 25 miles long with stops at half mile intervals (Appendix A). As per the breeding bird SOP (NPS 2019c), a three minute point count was conducted at each of the 50 designated survey points and all birds seen and heard within a quarter mile radius were recorded. The survey began ½ hour before sunrise. Additional information on the standardized methods for conducting this survey can be found at <http://www.pwrc.usgs.gov/BBS>. The completed datasheets from 2017 are digitally archived on the KLGO network at T:\NRM\Birds\ORBBS&ALMS\ORBBS Data.

There are two Alaska Landbird Monitoring Survey (ALMS), routes in and around the Park. The Alaska Landbird Monitoring Survey (ALMS) is also called the Off-Road Breeding Bird Survey, in 2017, they were surveyed on June 14 and 15. Each survey consisted of 12 stops located at least 250 m apart. Each point was surveyed for ten minutes (divided into three, five, eight, and ten minute time intervals) and all species detected were recorded. The survey began ½ hour before sunrise. The completed datasheets from 2017 are digitally archived on the KLGO network at T:\NRM\Birds\ORBBS&ALMS\ORBBS Data.

Bald Eagle Nest Monitoring

No standardized protocol had been established for monitoring bald eagle nests in the Park. Six historically known nests (CT01, DY01, DY02, SK02, TR02, and TR03) were located again and monitored in 2017. A new nest constructed in the spring of 2017 (CT02) was also mapped and added

to the list for monitoring. A nest book of all known nest locations and observation points was prepared in the 2017 season and a new map of Bald Eagle Nests in and around the park was created (Appendix A. Maps: Bald Eagle Nests). In addition to the new nest book, the document containing all known bald eagle nest locations and observation points for Bald Eagle Nest Monitoring (BENM) is Standard Operating Procedure 2 (NPS 2019b), and is part of an overall SOP for BENM that is under development. It describes each site's location with UTM coordinates, photos descriptions and directions. The current draft of SOP 2 is available in IRMA and is located at the following:
T:\NRM\Birds\Eagles\BENM SOP Drafts.

During nest spot checks, which were usually carried out opportunistically during Coastal Waterbird Surveys, the number and age of visible birds at Bald Eagle nests and any behavioral observations were recorded in a field notebook. The data were then entered into a Microsoft Access Database (T:\NRM\Birds\Eagles\Eagle_Nests).

Results

Coastal Waterbird Surveys

A total of 15 surveys were conducted from April 15 to September 11, 2017. A total of 16,388 waterbirds, comprising 43 species from 9 families, were documented (Table 1). The peak spring waterbird migration (greatest abundance and species richness) occurred between April 15 and May 26, 2017 (Figure 1). Additionally, 17 species of non-waterbirds were detected during surveys (Figure 2). The total number of individuals for each waterbird species observed during the 2017 monitoring season, maximum number observed of each species during a single survey, date of survey during which the maximum number was observed, and the number of surveys during which each species was observed is reported in Table 1.

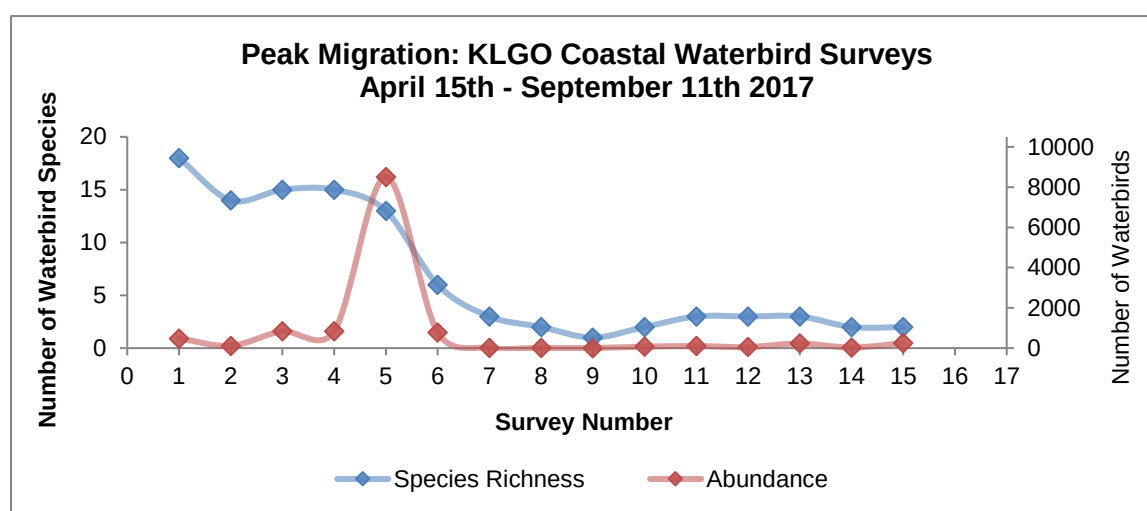


Figure 1. Number of waterbird species identified per survey (blue) and number of individual waterbirds counted per survey (red) during the 2017 monitoring season: Survey1 = 15 April, 2017 Survey15 = 11 Sept, 2017.

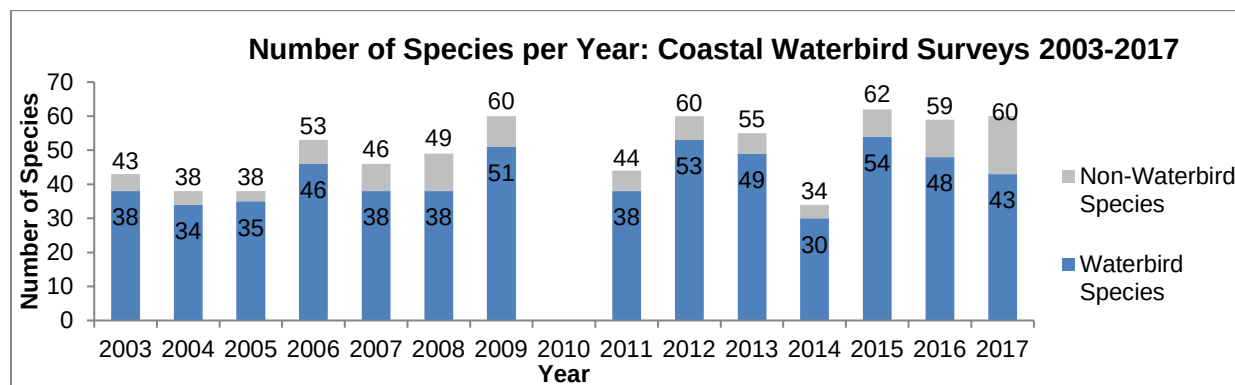


Figure 2. Number of waterbird species identified per year (blue with white labels), number of non-waterbird species identified per year (gray), and total number of species identified per year (black labels). The data from 2010 is omitted from this graph because there was no technician on staff that season responsible for the Coastal Waterbird Survey, and thus surveys were only conducted sporadically.

The Natural Resource Condition Assessment prepared for KLGO by Bernatz et al. (2011) provides a summary analysis of various observer bias that may influence trends in CWS data from 2003-2009. Linear regression of CWS data from 2003-2017 (prepared by the authors of this report) showed no significant association between species richness and year of survey (Figure 3). However, when 2014 data was excluded from the analysis (surveys began one month later than usual that year) we see a positive trend, R-squared value = 0.4106 (Figure 4).

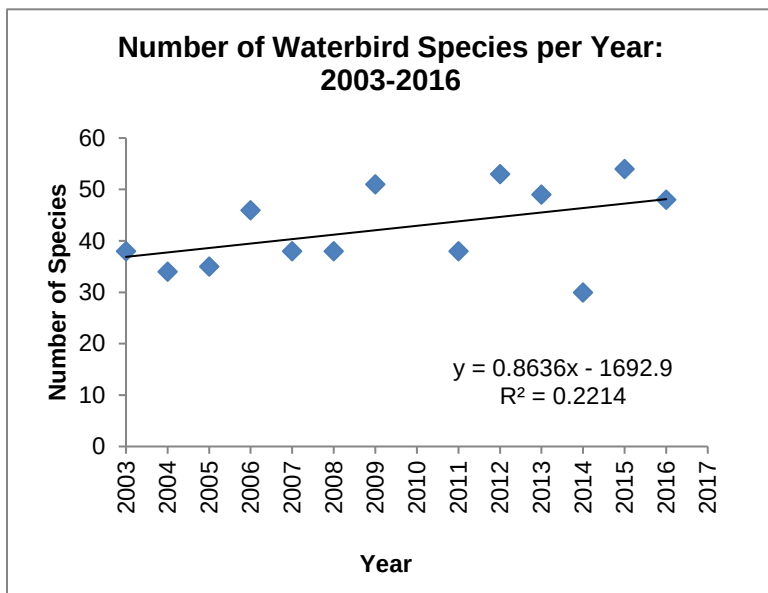


Figure 3. Number of waterbird species detected during each year of KLGO's CWS 2003-2017.

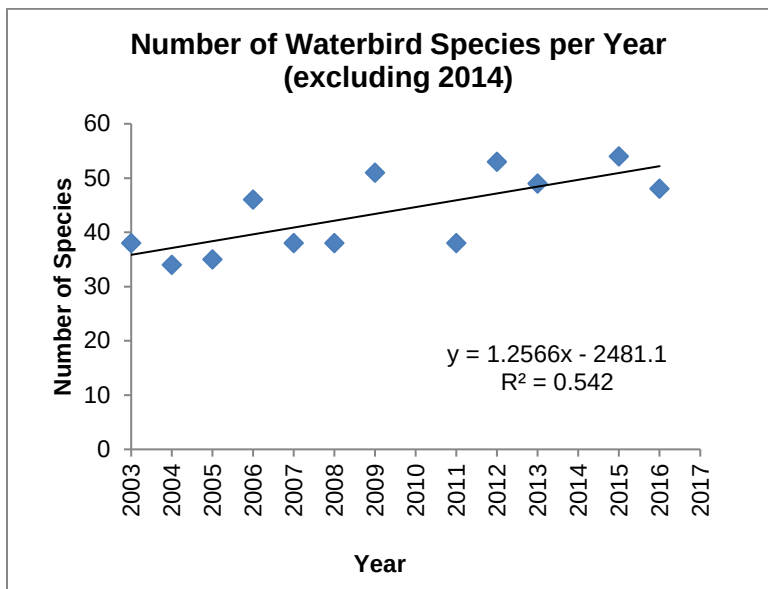


Figure 4. Number of waterbird species detected during each year of KLGO's CWS 2003-2017, excluding 2014.

Table 1. Waterbird species observed during the 2017 Upper Taiya Inlet Coastal Waterbird Surveys.

Order	Family	Subfamily	Scientific Name	Common Name	Individuals Observed	Max. Number	Date of Max.	# Surveys Detected
Anseriformes	Anatidae	Anserinae	<i>Cygnus buccinator</i>	Trumpeter Swan	5	3	4/20/2017	4
	Anatidae	Anatinae	<i>Spatula discors</i>	Blue-winged Teal	41	16	4/26/2017	5
	Anatidae	Anatinae	<i>Spatula clypeata</i>	Northern Shoveler	101	52	5/12/2017	3
	Anatidae	Anatinae	<i>Mareca americana</i>	American Wigeon	95	22	6/26/2017	4
	Anatidae	Anatinae	<i>Anas platyrhynchos</i>	Mallard	411	70	8/14/2017	12
	Anatidae	Anatinae	<i>Anas acuta</i>	Northern Pintail	44	20	5/5/2017	2
	Anatidae	Anatinae	<i>Anas crecca</i>	Green-winged Teal	240	37	5/5/2017	11
	Anatidae	Anatinae	<i>Aythya collaris</i>	Ring-necked Duck	10	6	5/5/2017	2
	Anatidae	Anatinae	<i>Aythya marila</i>	Greater Scaup	N/A	–	–	–
	Anatidae	Anatinae	<i>Aythya affinis</i>	Lesser Scaup	5	2	5/5/2017	1
	Anatidae	Anatinae	<i>Histrionicus histrionicus</i>	Harlequin Duck	79	8	5/12/2017	8
	Anatidae	Anatinae	<i>Melanitta perspicillata</i>	Surf Scoter	8563	3000	5/12/2017	9
	Anatidae	Anatinae	<i>Melanitta fusca</i>	White-winged Scoter	50	10	5/26/2017	2
	Anatidae	Anatinae	<i>Melanitta nigra</i>	Black Scoter	–	–	–	–
	Anatidae	Anatinae	<i>Clangula hyemalis</i>	Long-tailed Duck	7	5	5/26/2017	3
	Anatidae	Anatinae	<i>Bucephala albeola</i>	Bufflehead	178	19	5/12/2017	5
	Anatidae	Anatinae	<i>Bucephala clangula</i>	Common Goldeneye	17	15	4/15/2017	2
	Anatidae	Anatinae	<i>Bucephala islandica</i>	Barrow's Goldeneye	257	31	5/12/2017	6
	Anatidae	Anatinae	<i>Lophodytes cucullatus</i>	Hooded Merganser	2	2	5/5/2017	1
	Anatidae	Anatinae	<i>Mergus merganser</i>	Common Merganser	135	30	4/20/2017	9
	Anatidae	Anatinae	<i>Mergus serrator</i>	Red-breasted Merganser	348	35	5/26/2017	7

* Species listed in Table 1 have been organized in taxonomic sequence according to the 2017 American Ornithological Society's Checklist Supplement.

Table 1 (continued). Waterbird species observed during the 2017 Upper Taiya Inlet Coastal Waterbird Surveys.

Order	Family	Subfamily	Scientific Name	Common Name	Individuals Observed	Max. Number	Date of Max.	# Surveys Detected
<i>Podicipediformes</i>	<i>Podicipedidae</i>	–	<i>Podiceps auritus</i>	Horned Grebe	62	38	5/5/2017	2
	<i>Podicipedidae</i>	–	<i>Podiceps grisegena</i>	Red-necked Grebe	19	16	5/26/2017	2
<i>Charadriiformes</i>	<i>Charadriidae</i>	<i>Charadriinae</i>	<i>Charadrius semipalmatus</i>	Semipalmated Plover	24	12	5/12/2017	4
	<i>Scolopacidae</i>	–	<i>Calidris melanotos</i>	Pectoral Sandpiper	2	2	7/31/2017	1
	<i>Scolopacidae</i>	<i>Arenariinae</i>	<i>Arenaria melanocephala</i>	Black Turnstone	–	–	–	–
	<i>Scolopacidae</i>	<i>Arenariinae</i>	<i>Calidris minutilla</i>	Least Sandpiper	15	15	8/21/2017	1
	<i>Scolopacidae</i>	<i>Arenariinae</i>	<i>Calidris pusilla</i>	Semipalmated Sandpiper	4	3	5/12/2017	1
	<i>Scolopacidae</i>	<i>Tringinae</i>	<i>Actitis macularius</i>	Spotted Sandpiper	19	3	6/26 & 8/21/2017	8
	<i>Scolopacidae</i>	<i>Tringinae</i>	<i>Tringa incana</i>	Wandering Tattler	25	4	5/12, 5/26, & 7/10/2017	4
	<i>Scolopacidae</i>	<i>Tringinae</i>	<i>Tringa flavipes</i>	Lesser Yellowlegs	10	4	7/31/2017	4
	<i>Scolopacidae</i>	<i>Tringinae</i>	<i>Tringa melanoleuca</i>	Greater Yellowlegs	–	–	–	–
	<i>Alcidae</i>	–	<i>Brachyramphus marmoratus</i>	Marbled Murrelet	168	11	6/26/2017	11
	<i>Alcidae</i>	–	<i>Cephus columba</i>	Pigeon Guillemot	45	23	5/5/2017	7
	<i>Alcidae</i>	–	<i>Fratercula cirrhata</i>	Tufted Puffin	2	2	7/10/2017	1
	<i>Laridae</i>	<i>Larinae</i>	<i>Chroicocephalus philadelphia</i>	Bonaparte's Gull	525	170	5/12/2017	10
	<i>Laridae</i>	<i>Larinae</i>	<i>Larus canus</i>	Mew Gull	1843	288	5/5/2017	15
	<i>Laridae</i>	<i>Larinae</i>	<i>Larus argentatus</i>	Herring Gull	522	91	8/14, 8/28/2017	13
	<i>Laridae</i>	<i>Larinae</i>	<i>Larus glaucoides thayeri</i>	Thayer's Gull	8	5	4/26/2017	3

* Species listed in Table 1 have been organized in taxonomic sequence according to the 2017 American Ornithological Society's Checklist Supplement.

Table 1 (continued). Waterbird species observed during the 2017 Upper Taiya Inlet Coastal Waterbird Surveys.

Order	Family	Subfamily	Scientific Name	Common Name	Individuals Observed	Max. Number	Date of Max.	# Surveys Detected
<i>Charadriiformes</i> (continued)	<i>Laridae</i>	<i>Larinae</i>	<i>Larus glaucescens</i>	Glaucous-winged Gull	24	8	4/15/2017	4
	<i>Laridae</i>	<i>Larinae</i>	<i>Larus hyperboreas</i>	Glaucous Gull	1	1	4/26/2017	1
	<i>Laridae</i>	<i>Sterninae</i>	<i>Sterna paradisaea</i>	Arctic Tern	157	29	5/26/2017	8
<i>Gaviiformes</i>	<i>Gaviidae</i>	–	<i>Gavia immer</i>	Common Loon	3	2	6/26/2017	1
	<i>Gaviidae</i>	–	<i>Gavia pacifica</i>	Pacific Loon	2	1	5/26, 6/26/2017	2
	<i>Gaviidae</i>	–	<i>Gavia stellata</i>	Red-throated Loon	13	4	6/26/2017	4
<i>Pelicaniformes</i>	<i>Ardeidae</i>	–	<i>Ardea herodias</i>	Great Blue Heron	42	5	5/26/2017	11
<i>Coraciiformes</i>	<i>Alcedinidae</i>	–	<i>Megaceryle alcyon</i>	Belted Kingfisher	17	2	5/12, 8/28/2017	8

* Species listed in Table 1 have been organized in taxonomic sequence according to the 2017 American Ornithological Society's Checklist Supplement.

North American Breeding Bird Survey & Alaska Landbird Monitoring Survey

The North American Breeding Bird Survey (BBS) documented the presence of 36 species (Table 2) and the Alaska Landbird Monitoring Survey (ALMS) documented the presence of 36 species (Table 3). A total of 43 species were documented between the two surveys.

Table 2. Species detected during the Breeding Bird Survey conducted on June 16, 2017.

Order	Family	Scientific Name	Common Name
<u>Anseriformes</u>	<u>Anatidae</u>	<u><i>Histrionicus histrionicus</i></u>	Harlequin Duck
<u>Galliformes</u>	<u>Phasianidae</u>	<u><i>Dendragapus fuliginosus</i></u>	Sooty Grouse
<u>Apodiformes</u>	<u>Trochilidae</u>	<u><i>Selasphorus rufus</i></u>	Rufous Hummingbird
<u>Charadriiformes</u>	<u>Laridae</u>	<u><i>Larus canus</i></u>	Mew Gull
	<u>Laridae</u>	<u><i>Larus argentatus</i></u>	Herring Gull
	<u>Laridae</u>	<u><i>Larus glaucescens</i></u>	Glaucous-winged Gull
	<u>Laridae</u>	<u><i>Sterna paradisaea</i></u>	Arctic Tern
<u>Accipitriformes</u>	<u>Accipitridae</u>	<u><i>Haliaeetus leucocephalus</i></u>	Bald Eagle
<u>Piciformes</u>	<u>Picidae</u>	<u><i>Sphyrapicus ruber</i></u>	Red-breasted Sapsucker
<u>Passeriformes</u>	<u>Tyrannidae</u>	<u><i>Empidonax difficilis</i></u>	Pacific-slope Flycatcher
	<u>Vireonidae</u>	<u><i>Vireo gilvus</i></u>	Warbling Vireo
	<u>Corvidae</u>	<u><i>Corvus caurinus</i></u>	Northwestern crow
	<u>Corvidae</u>	<u><i>Corvus corax</i></u>	Common Raven
	<u>Paridae</u>	<u><i>Poecile rufescens</i></u>	Chestnut-backed Chickadee
	<u>Troglodytidae</u>	<u><i>Troglodytes pacificus</i></u>	Pacific Wren
	<u>Regulidae</u>	<u><i>Regulus satrapa</i></u>	Golden-crowned Kinglet
	<u>Regulidae</u>	<u><i>Regulus calendula</i></u>	Ruby-crowned Kinglet
	<u>Turdidae</u>	<u><i>Catharus ustulatus</i></u>	Swainson's Thrush
	<u>Turdidae</u>	<u><i>Catharus guttatus</i></u>	Hermit Thrush
	<u>Turdidae</u>	<u><i>Turdus migratorius</i></u>	American Robin
	<u>Turdidae</u>	<u><i>Ixoreus naevius</i></u>	Varied Thrush
	<u>Fringillidae</u>	<u><i>Loxia curvirostra</i></u>	Red Crossbill
	<u>Fringillidae</u>	<u><i>Loxia leucoptera</i></u>	White-winged Crossbill
	<u>Fringillidae</u>	<u><i>Spinus pinus</i></u>	Pine Siskin
	<u>Passerellidae</u>	<u><i>Spizelloides arborea</i></u>	American Tree Sparrow
	<u>Passerellidae</u>	<u><i>Spizella passerina</i></u>	Chipping Sparrow
	<u>Passerellidae</u>	<u><i>Passerculus sandwichensis</i></u>	Savannah Sparrow
	<u>Passerellidae</u>	<u><i>Melospiza melodia</i></u>	Song Sparrow
	<u>Passerellidae</u>	<u><i>Melospiza lincolnii</i></u>	Lincoln's Sparrow
	<u>Passerellidae</u>	<u><i>Zonotrichia atricapilla</i></u>	Golden-crowned Sparrow
	<u>Passerellidae</u>	<u><i>Junco hyemalis</i></u>	Dark-eyed Junco
	<u>Parulidae</u>	<u><i>Oreothlypis celata</i></u>	Orange-crowned Warbler
	<u>Parulidae</u>	<u><i>Setophaga coronata</i></u>	Yellow-rumped Warbler

Table 2 (continued). Species detected during the Breeding Bird Survey conducted on June 16, 2017.

Order	Family	Scientific Name	Common Name
Passeriformes (continued)	<u>Parulidae</u>	<u><i>Setophaga townsendi</i></u>	Townsend's Warbler
	<u>Parulidae</u>	<u><i>Cardellina pusilla</i></u>	Wilson's Warbler
	<u>Cardinalidae</u>	<u><i>Piranga ludoviciana</i></u>	Western Tanager

Table 3. Species detected during the Alaska Landbird Monitoring Survey (ALMS) conducted on June 14 and 15, 2017.

Order	Family	Scientific Name	Common Name
<u>Anseriformes</u>	<u>Anatidae</u>	<u><i>Anas platyrhynchos</i></u>	Mallard
<u>Galliformes</u>	<u>Phasianidae</u>	<u><i>Dendragapus fuliginosus</i></u>	Sooty Grouse
<u>Charadriiformes</u>	<u>Scolopacidae</u>	<u><i>Actitis macularius</i></u>	Spotted Sandpiper
	<u>Scolopacidae</u>	<u><i>Tringa incana</i></u>	Wandering Tattler
	<u>Laridae</u>	<u><i>Sterna paradisaea</i></u>	Arctic Tern
<u>Pelecaniformes</u>	<u>Ardeidae</u>	<u><i>Ardea herodias</i></u>	Great Blue Heron
<u>Piciformes</u>	<u>Picidae</u>	<u><i>Sphyrapicus ruber</i></u>	Red-breasted Sapsucker
Passeriformes	<u>Tyrannidae</u>	<u><i>Empidonax difficilis</i></u>	Pacific-slope Flycatcher
	<u>Vireonidae</u>	<u><i>Vireo gilvus</i></u>	Warbling Vireo
	<u>Corvidae</u>	<u><i>Corvus caurinus</i></u>	Northwestern crow
	<u>Corvidae</u>	<u><i>Corvus corax</i></u>	Common Raven
	<u>Hirundinidae</u>	<u><i>Tachycineta thalassina</i></u>	Violet-green Swallow
	<u>Paridae</u>	<u><i>Poecile rufescens</i></u>	Chestnut-backed Chickadee
	<u>Troglodytidae</u>	<u><i>Troglodytes pacificus</i></u>	Pacific Wren
	<u>Regulidae</u>	<u><i>Regulus satrapa</i></u>	Golden-crowned Kinglet
	<u>Regulidae</u>	<u><i>Regulus calendula</i></u>	Ruby-crowned Kinglet
	<u>Turdidae</u>	<u><i>Catharus ustulatus</i></u>	Swainson's Thrush
	<u>Turdidae</u>	<u><i>Catharus guttatus</i></u>	Hermit Thrush
	<u>Turdidae</u>	<u><i>Turdus migratorius</i></u>	American Robin
	<u>Turdidae</u>	<u><i>Ixoreus naevius</i></u>	Varied Thrush
	<u>Fringillidae</u>	<u><i>Spinus pinus</i></u>	Pine Siskin
	<u>Passerellidae</u>	<u><i>Spizella passerina</i></u>	Chipping Sparrow
	<u>Passerellidae</u>	<u><i>Passerculus sandwichensis</i></u>	Savannah Sparrow
	<u>Passerellidae</u>	<u><i>Melospiza lincolnii</i></u>	Lincoln's Sparrow
	<u>Passerellidae</u>	<u><i>Junco hyemalis</i></u>	Dark-eyed Junco
	<u>Parulidae</u>	<u><i>Oreothlypis celata</i></u>	Orange-crowned Warbler
	<u>Parulidae</u>	<u><i>Geothlypis trichas</i></u>	Common Yellowthroat
	<u>Parulidae</u>	<u><i>Setophaga petechia</i></u>	Yellow Warbler
	<u>Parulidae</u>	<u><i>Setophaga coronata</i></u>	Yellow-rumped Warbler
	<u>Parulidae</u>	<u><i>Setophaga townsendi</i></u>	Townsend's Warbler
	<u>Parulidae</u>	<u><i>Cardellina pusilla</i></u>	Wilson's Warbler
	<u>Cardinalidae</u>	<u><i>Piranga ludoviciana</i></u>	Western Tanager

Bald Eagle Nest Monitoring

In 2017, spot check observations were made of six historically active Bald Eagle nests (CT01, DY01, DY02, SK02, TR02, and TR03) and one newly constructed nest (CT02) periodically between May 26th and August 21st, 2017. Additionally, nest observations were submitted by Bob Finke of Skagway Hike & Float, and by archeology staff. The total number of nest observation records for the 2017 season is 53.

Of all of the nests monitored in 2017, nest initiation was detected only at the newly constructed nest (CT02) on May 7th. However, no BAEA were detected at nest CT02 during any following spot check, and the nest is assumed to have been abandoned, inactive, and unoccupied in 2017. Bald Eagles were not detected at four nests (CT01, DY01, SK02, and TR02) during any spot check observation during the 2017 season, and were assumed to be uninitiated, inactive, and unoccupied. Adult BAEA were occasionally detected in or near nest DY02 between June 12-26th, however no BAEA were detected at that nest during any observations in May, July, or August, so the nest is assumed to be uninitiated, inactive, and unoccupied. Beginning in late July, two adult BAEA were occasionally observed in or near nest TR03, however no BAEA were detected in the nest during spot checks in May or June, and no evidence of breeding or young were observed. A table of all Bald Eagle nest observation records from 2017 are included in Appendix B.



Photos. Two adult BAEA adding nesting material to a newly constructed nest (CT02) on May 7th, 2017 (left) (NPS/ JENN RICHARDS). One adult BAEA sitting low in nest (TR03) and one adult BAEA perched on nest tree (right) (NPS/ SHELBY SURDYK).

Discussion

Coastal Waterbird Surveys

The Coastal Waterbird Survey (CWS) has been conducted every year at KLGO from 2003 to the present. However, there has been variation in the number of surveys and length of monitoring season between years. In 2009, surveys were conducted during every month of the year, as opposed to only April through September for most other years. In 2010, surveys were only conducted sporadically, because there was no seasonal technician on staff whose duty was to conduct the surveys. In 2014, the first surveys did not occur until May 22nd (about one month later than usual) and thus the diversity and abundance of the spring migration was not captured in the data. These examples demonstrate ways in which the date of earliest survey, length of monitoring season, frequency of surveys, and other measures of observer “effort” have varied between years, making comparative analysis of the waterbird data difficult. The high turnover rate of observers and variation in level of experience identifying birds further complicate multi-year analyses. Species detection tends to increase as observers gain knowledge of local species and their habitat use. All of these factors may have influenced the 2017 results.

Since the CWS began in 2003, it has been suspected that peak spring waterbird migration occurs in tandem with the spring eulachon (*Thaleichthys pacificus*) run (Hahr and Trapp 2004). This year, a new monitoring program was implemented in the Taiya River to develop a baseline population estimate for eulachon. The new program, combined with additional wildlife surveys during the run, may help researchers to better understand the relationship between waterbird migration and spring eulachon runs. Preliminary results show that the 2017 spring eulachon run in the Skagway and Taiya Rivers, which started on approximately May 2, corresponded with the peak abundance of waterbirds recorded on May 12.

North American Breeding Bird Survey & Alaska Landbird Monitoring Survey

Klondike Gold Rush NHP does not systematically analyze the results of the BBS or ALMS. However, this year USGS conducted an analysis of all BBS and ALMS data from two Bird Conservation Regions (BCRs) in Alaska from 1993-2015. They found negative population trends for 11 species, and positive trends for 17 species for which they had long-term data (Handel 2017). A copy of the USGS publication (Handel 2017) is saved at this file path: T:\NRM\Birds\BBS\Handel 2017 combined analysis roadside off-road breeding bird survey data Alaska + Supp Mat.pdf

Conclusions & Recommendations

Coastal Waterbird Surveys should continue for further baseline data on the occurrence, distribution, abundance, and habitat association of species. National Park Service Alaska region Wildlife Biologist, Mary Hake, and Biometrician, Joel Reynolds will conduct a review of the CWS protocols in 2018 through a Technical Assistance Request. The objective of this review is to determine what changes need to be made to meet desired program objectives for monitoring trends in abundance and species richness. Recommendations developed during this review may inform changes to survey design discussed below, as well as additional changes that may improve consistency and precision.

Surveys should be conducted weekly from April 15 to May 15 and from August 10 to September 30 to best document the spring and fall migrations. If a technician is not available late season, surveys can discontinue in mid-September. We also recommend that a future technician and the Natural Resource Program Manager review the protocol for assigning “Breeding Status” for birds counted during CWS. There are inconsistencies over the years, particularly when assigning the status of “possible” (O) or “probable” (X). See page 32 for reference to this that needs correction.

In previous reports, inconsistencies and difficulties in gull identification have been cited as a problem for the CWS. In 2017, we adopted two strategies for identifying gulls. First, during the spring migration, when “mega-flocks” of thousands of gulls were present in Dyea and Skagway, we adopted a strategy of estimating entire flock size and recording proportions of unidentified “large adult *Larus* gulls,” “small adult *Larus* gulls,” “large immature gulls,” and “small immature gulls.” Outside of the spring migration mega-flocks, gulls were only identified to species when in close range for a long enough time to achieve a confident look at key features (size, head shape, wing tips, legs, beak, and eyes), otherwise they were recorded as ULGU (unidentified *Larus* gull), such as in the case of fly-overs or when too far away. We recommend that this strategy continue to be employed in the future. Furthermore, prior to conducting surveys, participants in the CWS should become familiar with all gull species that are observed in the park. This is especially true for Thayer’s gulls, which may have been misidentified in the past.

Currently there is no protocol established for recording passerine species detected at Coastal Waterbird Survey points. In past years, it has been recommended that if observers are reliably experienced, they could conduct brief point-count surveys in conjunction with the CWS to begin establishing baseline passerine data across the entire season for the Skagway area. We recommend that future technicians review this idea with the Natural Resource Program Manager. Before implementing a new passerine monitoring effort, the following questions should be considered: How much of a time commitment would it add to field work (including the time spent reviewing reference materials for unsure identifications) and office work (data entry, management, reporting)?; Where would the data be stored (a new access database?) and how would it be shared or reported?; Would the turnover rate of seasonal technicians allow for meaningful analysis of the data in the long-term?

In 2015, the preparation of a draft protocol for Bald Eagle monitoring was initiated and in 2017 a “Nest Book” of Bald Eagle nest locations and observation points was prepared for SOP2. The current draft of SOP2 is in IRMA and is located at the following: T:\NRM\Birds\Eagles\BENM SOP Drafts

Ideally, this protocol would contain 6 parts:

- SOP 1. Field Methods and Routine Spot Checks
- SOP 2. Bald Eagle Nest Locations and Observation Points
- SOP 3. Field Preparation
- SOP 4. Data Entry, Verification, and Editing
- SOP 5. Database Management
- SOP 6. Data Analysis and Reporting.

In addition to finishing the remaining SOPs, it is recommended that a future technician populate the nest characteristic fields in the Nest ID table in the database (Eagle_Nest.mdb). Further, a regional Bald Eagle biologist with USFWS should be contacted to review the draft SOPs and establish a plan for sharing data/results of Bald Eagle monitoring efforts in KLGO.

It is probable that there are undocumented Bald Eagle nests in the Skagway/Dyea area. In 2015, a local river guide from Skagway Float Tours reported that he had seen Bald Eagles carrying nesting material (branches) into the trees on the hill south of the raft take-out in Dyea on three separate occasions, and he suspects that there is a nest somewhere near there. If searches for new Bald Eagle nests are conducted in the future, the hillsides around Nahku Bay, Sturgill's Landing, and the Dyea road might be good places to start.

Literature Cited

- Bernatz, G. C., A. G. Robertson, and B. W. Dratzkowski. 2011. Klondike Gold Rush National Historical Park: Natural resource condition assessment. Natural Resource Report NPS/NRPC/WRD/NRR—2010/288. National Park Service, Fort Collins, Colorado.
- Collins, W.B., D. Williams, T. Trapp. 2001. Spruce beetle effects on wildlife, 1 July 1997 – 30 June 2001. Alaska Dept. of Fish and Game. Federal aid in wildlife restoration research final performance report, grants W-27-1 through W-27-4, study 1.53. Juneau, Alaska.
- Hahr, M., and T.W. Trapp. 2004. Waterbird and breeding landbird inventories in Klondike Gold Rush National Historical Park, SE Alaska Inventory and Monitoring Network, National Park Service, Alaska Region. Inventory and Monitoring Program Final Report, Klondike Gold Rush National Historical Park, Skagway, Alaska. 44 pp.
- Handel, C. M., & Sauer, J. R. 2017. Combined analysis of roadside and off-road breeding bird survey data to assess population change in Alaska. *The Condor*, 119(3), 557-575.
- Klondike Gold Rush National Historical Park. 2019. Waterbird Monitoring Protocol. <https://irma.nps.gov/DataStore/Reference/Profile/2265080>
- Klondike Gold Rush National Historical Park. 2019. Bald Eagle Monitoring Protocol. <https://irma.nps.gov/DataStore/Reference/Profile/2265105>
- Klondike Gold Rush National Historical Park. 2019. Off-Road Breeding Bird Protocol. <https://irma.nps.gov/DataStore/Reference/Profile/2265077>
- MacDonald, S. O. and J. A. Cook. 1999. The mammal fauna of Southeast Alaska. University of Alaska Museum, Fairbanks, AK. 141 pp.
- NABCI. 2000. North American Bird Conservation Initiative (NABCI) Bird Conservation Region Map and Descriptions. USDI, U.S. Fish and Wildlife Service, Arlington, VA.
- Pojar, J. and A. MacKinnon. 1994. Plants of the Pacific Northwest Coast: Washington, Oregon and Alaska. Lone Pine Press, British Columbia, Canada. 527 pp.

Appendix A. Maps

BBS Route

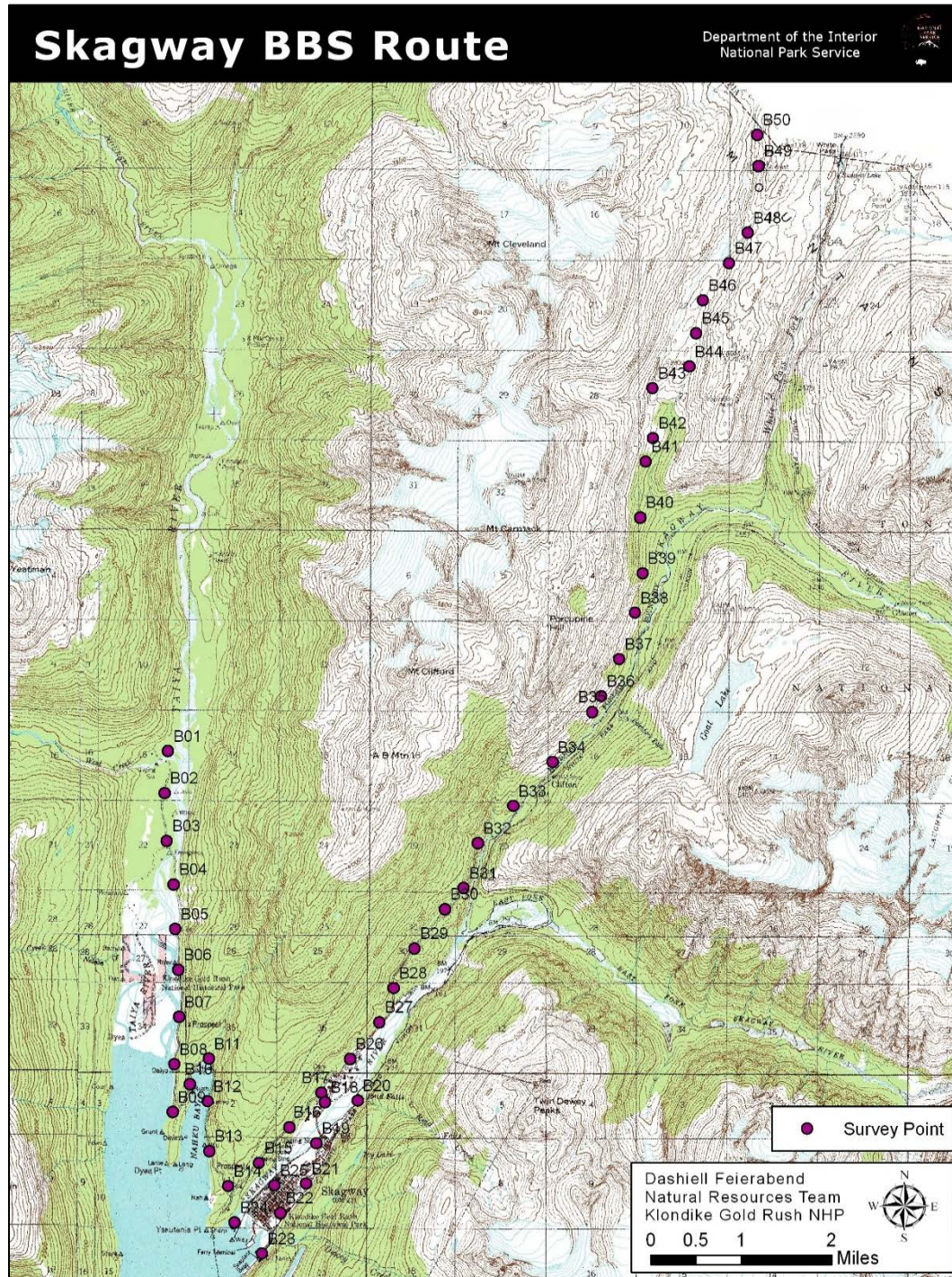


Figure A-1. BBS Route map.

ALMS Dyea Route



Figure A-2. ALMS Dyea Route map.

ALMS Chilkoot Route

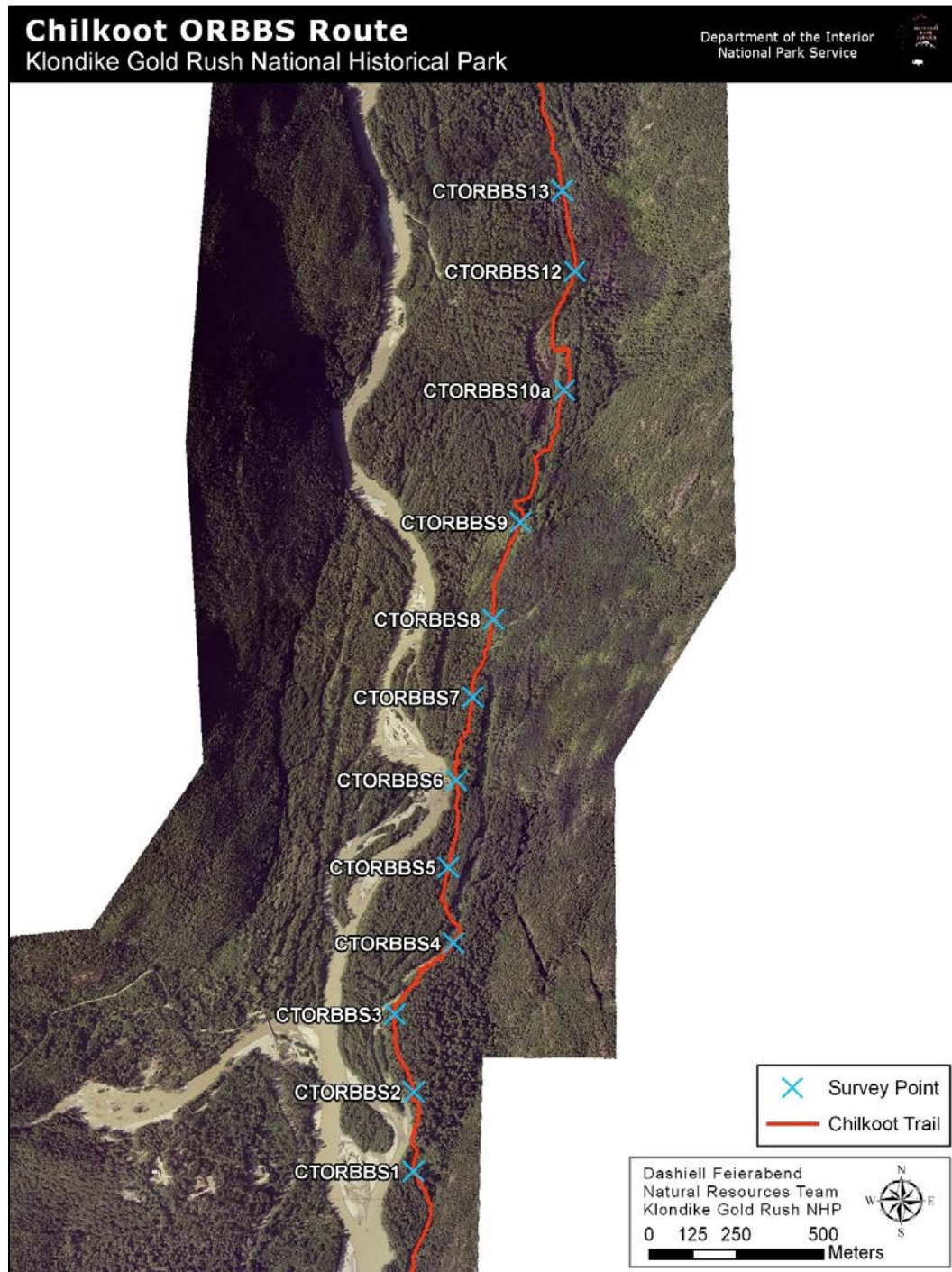


Figure A-3. ALMS Chilkoot Route map.

Bald Eagle Nests and Observation Points

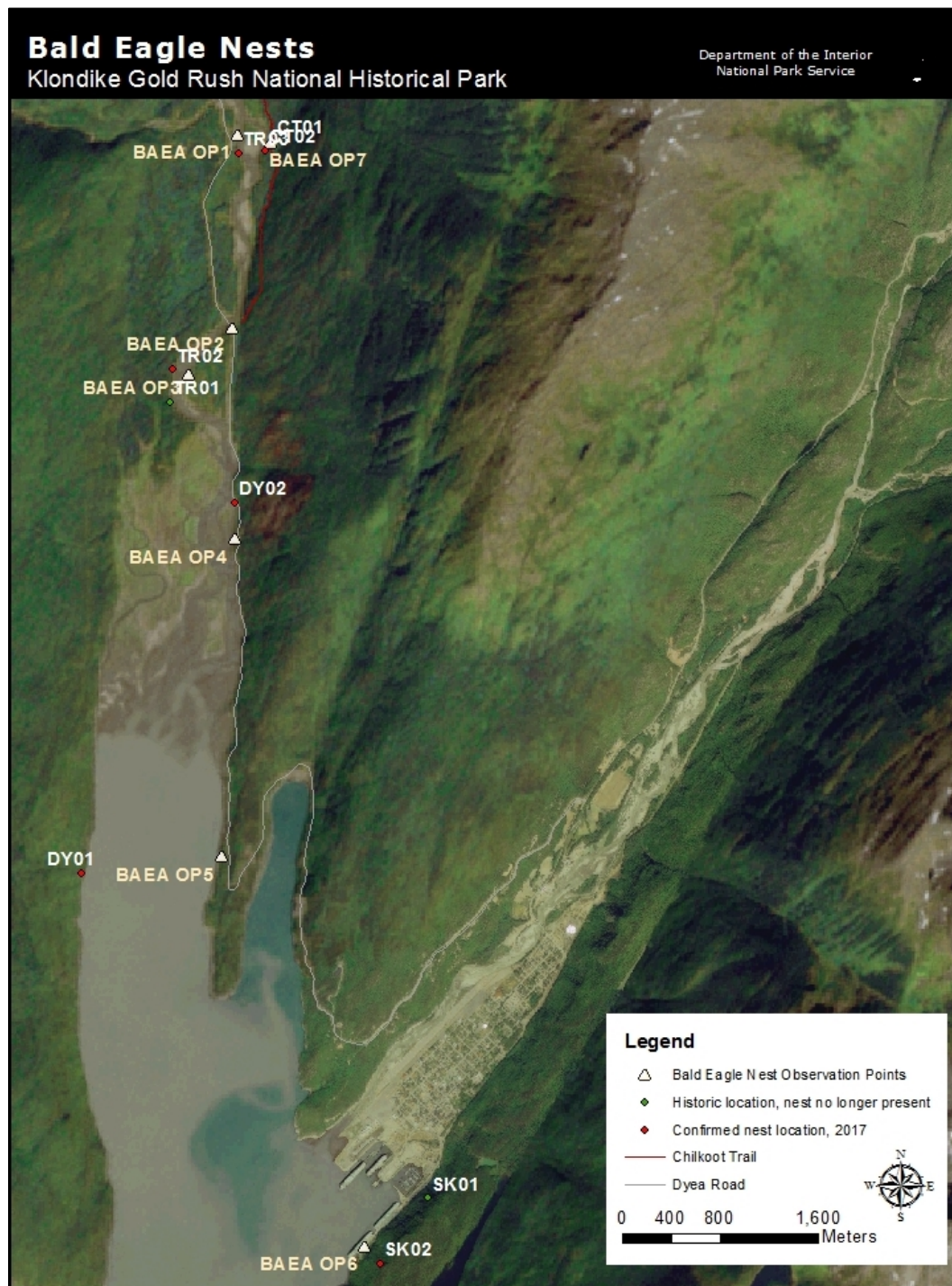


Figure A-4. Bald Eagle Nests and Observation Points map.

Appendix B. 2017 Bald Eagle Nest Observation Records

Nest_ID	Date	Survey Method	Observer Location	Nest Status	Individual1	Sex1	Individual2	Sex2	Activity
CT01	31-May-17	Foot	Chilkoot Trail	Unknown	–	–	–	–	Viewed nest from three different points on the Chilkoot trail, near the second wooden bridge after Saintly Hill. Difficult to see into nest. No BAEA seen.
CT02	07-May2017	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	A1	U	A2	U	2 adults seen adding nesting material to newly constructed nest by KLGO archeologists
CT02	31-Jul-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	–	–	–	–	No BAEA seen on nest.
CT02	06-Aug-17	Foot	OP1	Unknown	–	–	–	–	No BAEA seen on nest.
CT02	08-Aug-17	Foot	OP1	Unknown	–	–	–	–	No BAEA seen on nest.
CT02	11-Aug-17	Boat	Taiya River	Unknown	–	–	–	–	No BAEA seen on nest during river float at about 10:30am.
DY01	26-May-17	Foot	Yakutania Point	Unknown	–	–	–	–	No BAEA seen on nest
DY01	13-Jun-17	Foot	Yakutania Point	Unknown	–	–	–	–	No BAEA seen on nest
DY01	13-Jun-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest/nest tree.
DY01	26-Jun-17	Foot	Yakutania Point	Unknown	–	–	–	–	No BAEA seen on nest. 1 ad BAEA seen perched in tree near nest DY01.
DY01	26-Jun-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest.
DY01	03-Jul-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	2 ad BAEA seen flying over nest when we first arrived at the observation point (flying south). No other BAEA seen in the area, and no BAEA see on nest.
DY01	10-Jul-17	Foot	Yakutania Point	Unknown	–	–	–	–	No BAEA seen on nest.
DY01	10-Jul-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest.

Nest_ID	Date	Survey Method	Observer Location	Nest Status	Individual1	Sex1	Individual2	Sex2	Activity
DY01	31-Jul-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest, but 1 ad BAEA perched in tree just south of nest tree. Adult was no longer present at 3:44pm.
DY01	31-Jul-17	Foot	Yakutania Point	Unknown	–	–	–	–	No BAEA seen on nest. Time of observation not recorded in field notebook, but observation was made during CWS survey of CU2 between 4:54pm and 5:23pm.
DY01	06-Aug-17	Foot	OP5	Unknown	–	–	–	–	No BAEA seen on nest.
DY01	14-Aug-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest.
DY01	21-Aug-17	Foot	Waterbird Pt#5	Unknown	–	–	–	–	No BAEA seen on nest.
DY02	26-May-17	Foot	Dyea Road, Hacket Hill Pull-out	Unknown	–	–	–	–	No BAEA seen on nest
DY02	13-Jun-17	Road	Dyea Road	Unknown	A1	U	–	–	1 Ad BAEA seen on nest
DY02	13-Jun-17	Foot	Dyea Road, Hacket Hill pull-out	Unknown	A1	U	–	–	1 ad BAEA still on nest. Perched with head high, chest up. Does not appear to be incubating, no brood patch.
DY02	13-Jun-17	Foot	Dyea Road, Hacket Hill pull-out	Unknown	–	–	–	–	Looked back at nest once more after finishing survey of CU8 for CWS. BAEA no longer on nest. 1 ad BAEA in flight above nest, circled twice, and disappeared behind east hillside.
DY02	26-Jun-17	Foot	Dyea Road, Hacket Hill pull-out	Unknown	A1	U	–	–	1 ad BAEA seen in nest. Appeared to be bobbing head as if feeding young. Not sitting low in nest as if incubating. Ad BAEA still perched in nest when leaving CWS observation point at 5:05pm
DY02	03-Jul-17	Foot	Dyea Road, Hackett Hill pull-out	Unknown	–	–	–	–	No BAEA seen on nest or in surrounding area.
DY02	31-Jul-17	Foot	Dyea Road, Hackett Hill pull-out	Unknown	–	–	–	–	No BAEA seen on nest.
DY02	06-Aug-17	Foot	OP4	Unknown	–	–	–	–	No BAEA seen on nest.

Nest_ID	Date	Survey Method	Observer Location	Nest Status	Individual1	Sex1	Individual2	Sex2	Activity
DY02	14-Aug-17	Foot	Dyea Road, Hackett Hill pull-out	Unknown	–	–	–	–	No BAEA seen on nest.
DY02	21-Aug-17	Foot	Dyea Road, Hackett Hill pull-out	Unknown	–	–	–	–	No BAEA seen on nest.
SK02	06-Aug-17	Foot	OP6	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	26-May-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest
TR02	06-Jun-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest or in surrounding area
TR02	13-Jun-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest
TR02	16-Jun-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	Nest checked at around 4pm, no BAEA seen on nest.
TR02	26-Jun-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	03-Jul-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	Nest is now half hidden by a cottonwood branch. No BAEA seen on nest or in surrounding area. Two float tours passed by during spot check.
TR02	10-Jul-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	31-Jul-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	06-Aug-17	Foot	OP2	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	06-Aug-17	Foot	OP3	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	14-Aug-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest.
TR02	21-Aug-17	Foot	Taiya River Bridge	Unknown	–	–	–	–	No BAEA seen on nest.

Nest_ID	Date	Survey Method	Observer Location	Nest Status	Individual1	Sex1	Individual2	Sex2	Activity
TR03	06-Jun-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	–	–	–	–	No BAEA seen on nest
TR03	13-Jun-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	–	–	–	–	No BAEA seen on nest
TR03	16-Jun-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	–	–	–	–	Nest checked at around 4pm, no BAEA seen on nest.
TR03	03-Jul-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	–	–	–	–	No BAEA on nest, or in surrounding area.
TR03	31-Jul-17	Foot	West bank of Taiya River, just South of West Creek confluence.	Unknown	A1	U	A2	U	2 ad BAEA seen perched in nest. Bob Finke of Skagway Hike and Float reported seeing 2 ad BAEA in nest TR03 on the same day. He reported that the adults appeared to be feeding young (although no young were seen).
TR03	06-Aug-17	Foot	OP1	Unknown	–	–	–	–	No BAEA seen on nest.
TR03	08-Aug-17	Foot	OP1	Unknown	–	–	–	–	No BAEA seen on nest. 1 ad BAEA seen perched in nest tree, east of the nest. Bob Finke of Skagway Hike and Float reports seen 2 ad BAEA in the nest on the same day.

Nest_ID	Date	Survey Method	Observer Location	Nest Status	Individual1	Sex1	Individual2	Sex2	Activity
TR03	10-Aug-17	Unknown	Unknown	Unknown	A1	U	A2	U	On 8/11/2017 Bob Finke of Skagway Hike and Float reported seeing 2 ad BAEA perched in nest TR03 the day before (8/10/2017), suspected that their bobbing heads meant that they were feeding young, although no young were seen.
TR03	11-Aug-17	Boat	Taiya River	Unknown	–	–	–	–	No BAEA seen on nest during river float at about 10:30am.
TR03	16-Aug-17	Unknown	Unknown	Unknown	–	–	–	–	"2 eagles in the nest tree south of west creek and a black bear on rivers edge by townsite river right" observation by Bob Finke of Skagway Hike & Float
TR03	17-Aug-17	Unknown	Unknown	Unknown	–	–	–	–	"2 eagles in the nest tree, river right, below West Creek" Observation submitted by Bob Finke of Skagway Hike & Float

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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National Park Service
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