

# Species of Federal Concern

Thorndyke Operations Complex

## Bald Eagle Assessment

*Haliaeetus leucocephalus*



Prepared for Fred Hill Materials

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## Introduction

The objective of the following biological assessment is to determine the potential impacts that the proposed pier/single-conveyor system (referred here to as the TOC) will have on bald eagles, a federally listed species.

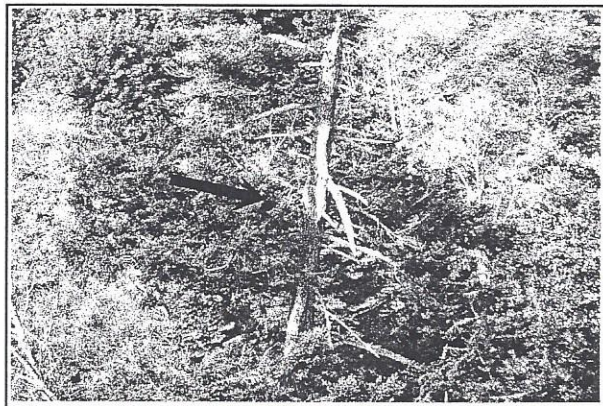
## Methods:

Assessments involved documenting eagle activity from stationary and roving vantage points on both the bluff and beach areas. Observation periods ranged from 15 minutes to 3.5 hours during which time roosting sites, foraging behavior, and activity budgets of adults were recorded. Prey species were to be determined by visual observations of predation events, food deliveries to the nest, inspection of plucking posts and examining discarded remains below nest sites.

## Results:

Approximately 5 hours <sup>at</sup> per month were spent surveying for eagles between mid-February 2004 and mid-January 2005. A total of 46 visits were made to the bluff and/or beach site in the vicinity of the TOC/Pier, resulting in 63.3 hours of observations. Bald Eagles were found to be common at the TOC/Pier site, with at least one bird being noted on 33 of the 48 visits (Fig. 1). Most of these sightings were made of 1 or 2 birds of an adult pair found in association with the traditional nest site (WDFW # 382). The nest site (Figure 2) is situated in a mature stand of Douglas fir, grand fir and red alder in a low density residential area. WDFW documents indicate that the stand possesses two traditional nest trees that lie approximately 2,000 feet to the northeast of the TOC/Pier site (distance measured from USGS Quadrangel 4712276). The most recent nest tree to be utilized (nest # 2) is characterized by WDFW in the following manner:

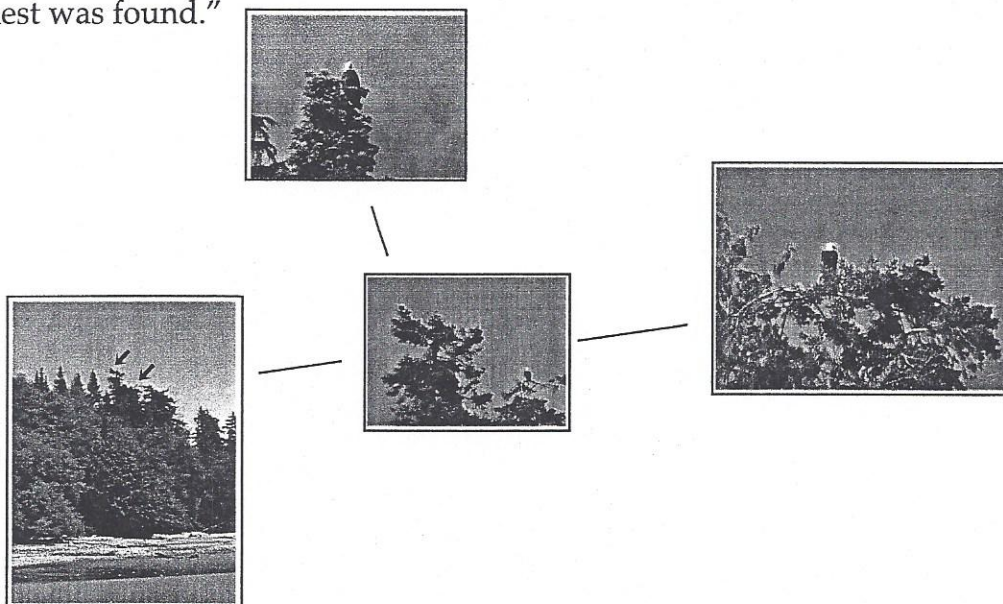
"The bald eagle nest is located in a leaning, exposed, broken top tree, 10 feet down from the top, NW of a tan A-frame house."



**Figure 2.** Nest platform number 2 photographed on 20 June 2004. Note that nest is unused and sloughing.

Nesting did not appear to be attempted this year, as there were no observations of birds engaging in courtship flights, carrying nesting material, or provisioning young. In addition, the birds were rarely observed to engage in the direct, purposeful hunting flights indicative of adults provision dependent birds. The absence of nesting was corroborated by WDFW, which conducted a helicopter observation of the site on 20 June 2004. Biologist Shelly Ament reported that:

“Adults were present perching in the stand, although the traditional platform on the nest tree was sloughing and unused (Fig 4). The stand was searched from the air but no new nest was found.”



**Figure 5.** Photographs of roosting adults on 2 June in flagged grand fir patch.

Of the 43 detections made in the immediate vicinity of the TOC/Pier site, 28 individuals were observed at stationary locations and 15 were noted flying past. Of the 28 stationary detections, 17 could be assigned to a specific tree and 11 were recorded in a general sector (Fig ). Several trees on the bluff of the TOC/Pier site served as daytime roosts and hunting perches (Fig 5-8). One tree accounted for 13 of the 17 specific perch sites (Fig. 8).

From early June to mid September eagle use of the TOC/Pier site decreased with adults noted on only 1 of eight visits. Transient sub-adult birds were temporarily present during this time (28 July & 4 August), but appeared to move through the area uncontested by the territory holders. Since mid-September, the birds appeared to using the TOC/Pier site at an intermediate level (adults noted on 6 of 8 visits: 4 roosting/2 flybys). Time/activity budgets included roosting 93%, flying/soaring 6%, and foraging 1%. When the birds were perched in trees (that) relatively low on bluff (within 25 m of mean high water) the birds tended to flush (N=5) at the approach of a human. In contrast, birds perched higher in trees (<25 m) rarely flushed in response to human presence.



**Figure 6.** Adult perched maples on lower TOC/Pier face on 26 November 2004

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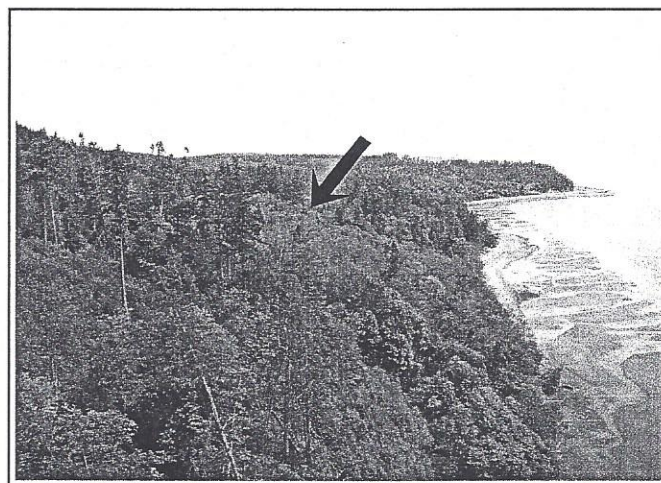
Figure 1. Annotated list of eagle observations

13-Feb	0.25	12:15	SouthPoint	1	Juv	Fly by
13-Feb	3.25	13:45	Pier	1	Juv	Fly by to east
14-Feb	2.5	11:00	Pier	1	Juv	Hovering above beach, stoop on crow, no succ.
14-Feb	0.25	13:05	Pier	2	Ads	Birds fly to west, past site, no perching noted
21-Feb	0.5	7:50	Pier	1		Detected calling from stand
23-Feb	0.25	12:30	Thorndyke	1	Ad	Circling over water
1-Mar	3.5	13:20	Pier	1	Juv	Bird flying to NW, no perch
1-Mar	0.25	16:36	Thorn Head	1	Ad	Flying in distance to SW
5-Mar	0.25	17:20	Thorn Head	1	Ad	Flying SE
7-Mar	0.25	12:24	Barrier	1	Juv	Rosting in alder, flush and fly north
19-Mar	0.6	9:15	Pier	1	Juv	Fly to SE, perch in fir on bluff
20-Mar	0.25	11:15	Bulked	1	Ad	Flying past station to east
20-Mar	0.25	11:42	Pier	1	Ad	Bird perched for duration in primary fir
23-Mar	1.4	14:20	Pier	2	Ad	Perched in primary tree
23-Mar	0.5	15:30	Bluff	1	Ad	Perched in primary tree
20-Apr	1	17:20	Bluff	1	Ad	Perched in primary tree
21-Apr	0.25	12:00	Squamish	1	Juv	Soaring, circling, flying to west
21-Apr	1	13:10	Pier	2	Ad	Fly from W, perch on bluff conifers
21-Apr	0.5	10:20	Bluff	2	Ad	Perching in primary tree
29-Apr	2	11:30	Pier	1	Ad	Perched in primary tree 45 min
29-Apr	1.5	3:10	Pier	1	Ad	Perched continuously in primary tree
29-Apr	0.3	18:45	Bulk	1	Ad	Noted perched then flew to NE
9-May	2.6	3:25	Pier	2		Birds detected calling to east
9-May	0.5		Bluff			No observations
10-May	0.5	10:15	Bluff			No observations
10-May	2.3	15:00	Pier	2		Pair in main tree, stoop on crow, no kill
17-May	0.5	12:30	Bluff	1	Ad	1 adult flyby @ 12:56
17-May	0.25	2:42	Pier	1	Ad	1 adult perched in primary tree
26-May	0.25	10:15	Bluff			No observations
27-May	3	5:45	Pier	2	Ad	Perching, calling in stand, flying north
2-Jun	1.5	9:20	Pier	2	Ad	Pair flushed from low maples, fly to grand firs
2-Jun	0.25	17:00	Barrier	1	Juv	Juv chasing osprey
2-Jun	2.2	18:55	Bluff			No observations
23-Jun	2.5	19:00	Bluff			No observations
24-Jul	2.6	17:30	Pier	1	Ad	Flying past to east
25-Jul	1.8	10:35	Bluff			No observations
27-Jul	0.25	10:15	Bluff	1		No observations
28-Jul	2.5	9:30	Pier	1	Sub Ad	Fly to SW, perch Conifers 20 m near bulked, W
4-Aug	2	15:10	Pier		Sub Ad	Fly shore, perch, head out to sea, Bangor @ Bulked
4-Aug	0.25	17:30	Bluff			No observations
31-Aug	2.5	11:15	Beach			No observations
31-Aug	0.8	17:35	Bluff			No observations
20-Sep	0.25	13:45	Bluff			No observations
21-Sep	2.5	14:24	Bluff	1		One individual detected calling below on bluff face

**Figure 1.** Annotated list of eagle observations continued

5-Oct	2	11:00	Bluff			Flying along below bluff face
22-Oct	1	11:00	Pier	1	Ad	Flying west along treeline 11:49
27-Oct	2	5:15	Bluff			No detections
28-Oct	1	5:30	Bluff	1		Single in snag for one hour, remaining
17-Nov	1	15:02	Bluff	3	Ad	One in flatop, 1 Juv & HY bird thermalling NE shore
24-Nov	0.25	15:25	Bluff			No observations
26-Nov	3	13:00	Pier	1	Ad	Flushed from low on maples at dead seal, to SW
23-Dec	0.25	14:45	Bluff	2	Ad	One fly above treeline, one below, both west
7-Jan	0.25	15:10	Bluff			No obser, dog carcass noted, scavenged

Two hunting events were observed. On 4 Feb 04 an adult bird stooped on a prey item that was believed to be a crow; the outcome of this predation attempt was unknown. Another hunting attempt on a crow was observed on 5 May 2004, but no kill made. A dead seal showing evidence of scavenging was observed on the beach at the TOC/Pier site on 17 November 2004. At this time, a sub adult eagle was observed perched in a maple tree approximately 15 feet above the carcass. Other potential food items noted during visits to the beach included a carcasses of chum salmon found on the TOC/Pier beach on 17 & 24 November 04. A carcass of a dog was found on the TOC bluff overlook on 7 January 05. The carcass was heavily scavenged, although it was unclear if it had been consumed by eagles, coyotes, or some other species. The dog appeared to have been shot, as was evinced by an empty box of shot gun shells at the nearby parking site. Searches for prey remains below the traditional nests and nearby roost trees were not possible as a verbal warning was issued by a local landowner not to enter private lands.



**Figure 7.** WDFW photo showing bluff area. Dark arrow denotes location of roosting pair. Deciduous vegetation in foreground is part of TOC and the tall cluster of trees to the left of the roosting bird is the "flagged" grand fir stand

GOES HERE

Figure8. Photograph of eagle roosting in central tree.

### **Federal Species of Concern: Additional Species Noted**

Northern Goshawk: 1 Observation, Thorndyke Bay, 5 March 2004.

Peregrine Falcon: 1 Observation, South Point, 20 Sept 2004

Olive-Sided Flycatcher: No Detections

### **State Monitor Species**

Great Blue Heron: 52 detections. Most observations (37) were made at Thorndyke Bay where the birds were noted foraging along the outer beach. No roost trees or nest colony noted.

Osprey: 3 detections, one each at Thorndyke Bay, Pier/ TOC and Squamish.