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December 19, 2005

Ms. Denise Behr
Maine Department of Environmental Protection
Bureau of Land & Water Quality
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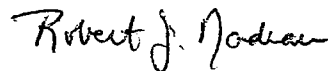
Re: MEPDES Permit #ME0021521
WDL #W000385-5N-G-R

Dear Ms. Behr:

Enclosed is the annual report for Somerset's 2005 Biological Monitoring Program as required by Special Condition L.3 of the facilities MEPDES Permit. Copies are also being sent to the other entities identified in the permit.

If you have any questions or require additional information please contact me.

Sincerely,



Robert J. Nadeau
Sr. Process Engineer
Environmental

cc: Tom Griffin - Sappi
Steven Mierzykowski - USF&W
Charlie Todd - MEIF&W
Anne Herrick - EPA

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W2300

**FINAL REPORT FOR THE COLLECTION OF EGGS AND CARCASSES
FROM BALD EAGLES ASSOCIATED WITH THE KENNEBEC RIVER
NEAR SKOWHEGAN, MAINE**

December 2005



Submitted to:

Thomas Griffin
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Submitted by:

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1.0 INTRODUCTION

The Sappi Fine Paper Mill (Mill) is located on the Kennebec River in Skowhegan and Fairfield, Maine. A biological monitoring program is required as part of permit W000385-5N-G-R, issued for discharge of wastewater into the Kennebec River. The focus species for this monitoring program is the bald eagle (*Haliaeetus leucocephalus*). When available and observed during eagle surveys, non-viable eggs from osprey (*Pandion haliaetus*), great blue heron (*Ardea herodias*), and common loon (*Gavia immer*) may be collected. This report documents the 2005 monitoring activities.

1.1 Project Objectives

The primary objective of the monitoring program is to assess environmental contamination in bald eagle and other fish-eating birds that are nesting in the vicinity of the Mill for the duration of the permit. This objective includes field sampling, ensuring that samples are laboratory tested to U.S. Environmental Protection Agency (USEPA) standards, and annual reporting of the results.

The primary study objectives are to:

- identify active bald eagle nests within a 25-mile radius of the Mill on the main stem of the Kennebec River, on the major tributaries, and on all other drainages;
- periodically monitor occupied eagle nests at 10 to 14 day intervals to track the onset of incubation and nest failures;
- collect non-viable eggs and dead sub-adults or adults from bald eagle nests for contaminant analysis; and,
- process and ship bald eagle egg and dead bird samples to the appropriate labs for chemical analysis.

The secondary study objectives are to:

- band surviving eagle chicks that are at least five weeks old encountered during sample collection;
- collect and identify food remains from nest bowls and on the ground in the vicinity of nests (separately) during site visits; and,
- opportunistically collect non-viable osprey, great blue heron, and common loon eggs found during eagle surveys and submit these eggs for chemical analysis.

1.2 Bald Eagle Reproduction

While bald eagles lay between one and three eggs, nests are most commonly observed with two eggs (Herrick 1932). One egg is laid per day, but not always on successive days, and the entire clutch is usually laid within three to six days (Stalmaster 1987). Eagles will start to incubate after the first egg is laid, and incubation will continue for approximately 35 days until hatching (Herrick 1932). The female does most of the incubation, but the male will also contribute

(Gerrard *et al.* 1979). During incubation, the adult will assume a very low posture in the nest and position the brood patch over the eggs (Gerrard and Bortolotti 1988).

The hatching time varies between eggs due to asynchronous incubation, which begins with the first egg. The first chick to hatch usually dominates subsequent chicks when competing for food, and will occasionally kill the smaller chick (Bortolotti 1986). When brooding of the chicks begins, the adult eagle will change its posture in the nest from a low-lying incubating position to a more upright brooding position. This change in posture is an important indicator of the transition from incubating to brooding, and is most easily viewed from aerial surveys of eagle nests. Eagles remaining in the incubating posture after 35 to 40 days may be incubating non-viable eggs.

Brooding of the eagle chicks is usually constant for a four-week period after hatching. After this initial period, the adults will start leaving the nest more often (Stalmaster 1987). Bald eagle chicks in Maine tend to stay in the nest for 11 to 13 weeks after hatching (McCollough 1986). For several weeks before the nestlings fledge, they will flap their wings in preparation for flight (Herrick 1924).

2.0 METHODS

Details of the methods used to monitor bald eagle nests in the vicinity of the Mill are contained in the *Work Plan for the Collection of Eggs and Carcasses from Bald Eagles Associated with the Kennebec River near Skowhegan, Maine* (Woodlot 2004). This report also contains details of the egg processing procedures, and lab techniques for analyzing collected eggs.

3.0 RESULTS

3.1 Literature Search

Prior to initiation of the bald eagle surveys in 2004, scientific and technical literature were reviewed to determine natural history and nesting cycle details of the bald eagle. Known bald eagle nesting locations within a 25-mile radius of the Mill were determined using Essential Habitat maps for bald eagles in Maine from the Maine Department of Inland Fisheries and Wildlife (MDIFW). Existing nest histories from registered bald eagle nests in the study area were also obtained from the MDIFW, and nests with poor success in previous years were identified. MDIFW nesting histories are contained in Appendix A of the *Work Plan for the Collection of Eggs and Carcasses from Bald Eagles Associated with the Kennebec River near Skowhegan, Maine* (Woodlot 2004).

3.2 Aerial Nest Monitoring

Eagle nests were observed from the air. Frank Craig, who is based in Old Town, Maine in the spring, was contracted to run the flights in a Cessna 172. Eagle monitoring flights began in early April and continued approximately every 10 to 14 days. MDIFW provided guidance on the onset of the flight schedule based on nesting phenology observed during an initial survey at the end of March. Charlie Todd from MDIFW accompanied Woodlot and Mr. Craig during several flights to review methodology, orient the contractor to known nest locations, and assist the

searching efforts. Table 1 contains the bald eagle nesting status for each of the eagle nests that were monitored. Bald eagle nest monitoring field data forms are contained in Appendix A. No non-viable eggs from osprey, great blue heron, or common loon were observed during the eagle monitoring.

Table 1. Summary of 2005 Bald Eagle Nesting Status

Nest # and Territory	Township	2005 Status
159- Sebasticook Lake/Stetson Stream	Newport	Active/failure. No eggs or carcasses recovered.
382- Plymouth Pond	Plymouth	Active. Two eaglets observed.
270- Unity Pond/Sandy Stream	Unity	Active/failure. No eggs or carcasses recovered.
203- Sebasticook River/Beartrap Brook	Burnham	Inactive/false start. Eagles observed near and on nest.
251- Sebasticook River/Pattee Pond Brook	Winslow	Active. Two eaglets observed.
278- Kennebec River	Goodwin Center	Active. Two eaglets observed.
262- Kennebec River/Lily Pond	Sidney	Active. Two eaglets observed.
308- Webber Pond	Vassalboro	Active. One eaglet observed.
383- Threemile Pond	China	Active. At least one eaglet in nest.
317- Lower Togus pond	Augusta	Inactive. Nest in fair condition.
244- Messalonskee Lake/Belgrade Stream	Belgrade	Active. One eaglet observed.
001- Great Pond/Hatch Cove	Belgrade	Inactive. Historic site.
341- Parker Pond	Mount Vernon	Inactive. Nest in good condition.
287- North Pond/East Pond	Rome	Inactive. New nest location.
291- Kennebec River/Sandy River	Starks	Active. At least one eaglet in nest.
112- Mill Stream	Concord	Inactive. Historic site.
380- Kennebec River/Johnson Brook	Bingham	Inactive. Historic site.
231- Great Moose lake/The Narrows	Harmony	Inactive. Nest in good condition.
275- Fay Scott Bog	Dexter	Active. At least one eaglet in nest.
423- Sandy Pond	Freedom	Active. At least one eaglet in nest.
443- Sevenmile Island	Vassalboro	Active/failure. No eggs or carcasses recovered.
414- Kennebec River	Skowhegan	Active. At least one eaglet in nest.
411- China Lake	China	Active. Two eaglets observed.
415- Kennebec River	Embden	Active. Two eaglets observed.
416- Ellis Pond	Oakland	Active. At least one eaglet in nest.

The fifth and last monitoring flight was completed on June 3, 2005. In total, twenty-five current and past nest sites were monitored within 25-miles of the Mill. Searches were also conducted for new nests on most major ponds, lakes and rivers. Of these twenty-five nest sites, three were historic nesting locations where eagles did not nest in 2004 or 2005. There were no new nesting sites recorded during the 2005 surveys, though three new nests were built adjacent to existing nests. These newly constructed nests included nest 270 in Unity Pond, nest 262 on the Kennebec River in Sydney, and nest 287 in North Pond. The new nest 287 in North Pond appears to have been constructed this year, but it was not used to lay eggs.

Seventeen eagle nests in the study area were used for reproduction in 2005. Of these seventeen nests, three nests failed during the monitoring period. Nests failures included nest 443 on Sevenmile Island in Vassalboro, nest 270 on Unity Pond in Unity, and nest 159 on Sebasticook Lake in Newport. No eggs or carcasses were observed from the air in these nests, though an unidentified white object was observed in nest 270.

3.3 Ground Surveys

Each failed nest site observed during the aerial surveys was investigated from the ground, after obtaining landowner permission, to determine if eggs or carcasses remained in the nests. On May 20, 2005, the nest tree at Seabasticook Lake was climbed. No eggs or carcasses were found within the nest bowl (See Appendix B, Photos 1 and 2). On June 15, 2005 the failed nests at Unity Pond and Sevenmile Island were climbed. The nest at Unity pond was empty and no eggs or carcasses were recovered. Some small eggshell fragments were observed in the nest bowl. The unidentified object in the nest was a piece of Styrofoam (See Appendix B, Photo 3). Following the visit to Unity Pond, the nest tree in Sevenmile Island was climbed. No eggs or carcasses were observed within the nest or on the ground, but some small eggshell fragments were observed in the nest bowl (See Appendix B, Photos 4 and 5).

No eagle food remains from the nest bowls or the ground in the vicinity of nests were observed during the ground surveys.

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Appendix A
Flight Data Forms

SAPPI Survey Route 2005-Flight
Flight 1 3/31/05

	Location	EH#	Tree	2004	Status of Nest						2005 Observations							
				Status	Intact?		Condition?				Number		Age		Incub?		Comments	
1 1 1 1	Sevenmile Island Vassalboro	443		New 2004 Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
2 2 2 2	Kennebec River/ Lily Pond Sidney	262A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine along tributary to River.
3 3 3 3	Messalonskee Lake Belgrade Stream Belgrade	244B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A only trace.
4 4 4 4	Ellis Pond Oakland	416	Pine	New 2004 Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
5 5 5 5	Great Pond/ Hatch Cove Belgrade	001A	Down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site with potential for nests on Oak Island. Old nest on north end of island.
6 6 6 6	Parker Pond Mount Vernon	341A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest on small islet. 2 adults on adjacent tree.
7 7 7 7	North Pond/ East Pond Rome	287A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	New nest location?
8 8 8 8	Kennebec River Skowhegan	414	Pine	New 2004 Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
9 9 9 9	Kennebec River/ Sandy River Starks	291A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine of field edge adjacent to power line crossing Kenn. river, just upriver of Sandy river confluence.
10 10 10 10	Kennebec River Embden	415	Pine	New 2004 Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	

11 11 11 11	Mill Stream Concord	112A	down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site. Not searched.
12 12 12 12	Kennebec River/ Johnson Brook Bingham	380A	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine on upland ridge adjacent to harvest. Not searched.
13 13 13 13	Great Moose Lake/ The Narrows Harmony	231B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Remnant nest A.
14 14 14 14	Fay Scott Bog Dexter	275B	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A down.
15 15 15 15	Sebasticook Lake/ Stetson Stream Newport	159A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Near camps on mid-E shore of lake. Nests B + C in pines, only traces.
16 16 16 16	Plymouth Pond Plymouth	382A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
17 17 17 17	Sebasticook River/ Beartrap Brook Burnham	203B	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	203A in pine near floodplain area of river, S of airport.
18 18 18 18	Sebasticook River/ Pattee Pond Brook Winslow	251A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Upland pines near fields and Pattee Pond Brook

[illegible]

SAPPI Survey Route 2005-Flight

Flight 2 4/13/05

	Location	EH#	Tree	2004	Status of Nest		2005 Observations		
				Status	Intact?	Condition?	Number	Age	Incub?
1 1 1 1	Sevenmile Island Vassalboro	443		New 2004 Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N
2 2 2 2	Kennebec River/ Lily Pond Sidney	262A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N
3 3 3 3	Messalonskee Lake Belgrade Stream Belgrade	244B	Pine	Active 1 fledgling	Y	N G F P D	0 1 2	Ad Juv.	Y N
4 4 4 4	Ellis Pond Oakland	416	Pine	New 2004 Active 1 fledgling	Y	N G F P D	0 1 2	Ad Juv.	Y N
5 5 5 5	Great Pond/ Hatch Cove Belgrade	001A	Down	Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N
6 6 6 6	Parker Pond Mount Vernon	341A	Pine	Active/failure	Y	N G F P D	0 1 2	Ad Juv.	Y N
7 7 7 7	North Pond/ East Pond Rome	287A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N
8 8 8 8	Kennebec River Skowhegan	414	Pine	New 2004 Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N
9 9 9 9	Kennebec River/ Sandy River Starks	291A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N
10 10 10 10	Kennebec River Embden	415	Pine	New 2004 Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N

11 11 11 11	Mill Stream Concord	112A	down	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	Historic site. Searched
12 12 12 12	Kennebec River/ Johnson Brook Bingham	380A	Pine	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	Pine on upland ridge adjacent to harvest. Searched
13 13 13 13	Great Moose Lake/ The Narrows Harmony	231B	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	Remnant nest A. Searched
14 14 14 14	Fay Scott Bog Dexter	275B	Pine	Active/failure	Y N G F P D	0 1 2	Ad Juv.	Y N	Nest A down.
15 15 15 15	Sebasticook Lake/ Stetson Stream Newport	159A	Pine	Active/failure	Y N G F P D	0 1 2	Ad Juv.	Y N	Near camps on mid-E shore of lake. Nests B + C in pines, only traces. Charlie observed eagle on nest 4/8/05
16 16 16 16	Plymouth Pond Plymouth	382A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	
17 17 17 17	Sebasticook River/ Beartrap Brook Burnham	203B	Pine	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	203A in pine near floodplain area of river, S of airport.

18 18 18 18	Sebasticook River/ Pattee Pond Brook Winslow	251A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Upland pines near fields and Pattee Pond Brook
19 19 19 19	Kennebec River Goodwin Center	278B	pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Small pine grove between power line crossings of River Two eggs observed in nest.
20 20 20 20	Unity Pond/ Sandy Stream Unity	270C	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	Tall pine in grove amongst camps on E side of pond. Former nests in pines along S shore of pond.
21 21 21 21	Sandy Pond Freedom	423		New 2004 Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	
22 22 22 22	China Lake China	411	Pine	New 2004 Active/failure	Y N G F P D	0 1 2	Ad Juv.	Y N	
23 23 23 23	Webber Pond Vassalboro	308A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	
24 24 24 24	Threemile Pond China	383A	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	In pine in center of large island.
25 25 25 25	Lower Togus Pond Augusta	317A	Pine	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	Eagle observed perched near nest.

SAPPI Survey Route 2005-Flight

Flight 3 4/25/05

	Location	EH#	Tree	2004	Status of Nest						2005 Observations							
				Status	Intact?	Condition?					Number	Age		Incub?	Comments			
1 1 1 1	Sevenmile Island Vassalboro	443		New 2004 Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
2 2 2 2	Kennebec River/ Lily Pond Sidney	262A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine along tributary to River. This is new nest 262 B.
3 3 3 3	Messalonskee Lake Belgrade Stream Belgrade	244B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A only trace.
4 4 4 4	Ellis Pond Oakland	416	Pine	New 2004 Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	
5 5 5 5	Great Pond/ Hatch Cove Belgrade	001A	Down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site with potential for nests on Oak Island. Searched pond.
6 6 6 6	Parker Pond Mount Vernon	341A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest on small islet. No eagles observed Searched Pond
7 7 7 7	North Pond/ East Pond Rome	287A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	New nest location No eagles observed
8 8 8 8	Kennebec River Skowhegan	414	Pine	New 2004 Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Hatched?
9 9 9 9	Kennebec River/ Sandy River Starks	291A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine of field edge adjacent to power line crossing Kenn. river, just upriver of Sandy river confluence.
10 10 10 10	Kennebec River Embsden	415	Pine	New 2004 Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	

11 11 11	Mill Stream Concord	112A	down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site. Not searched
12 12 12	Kennebec River/ Johnson Brook Bingham	380A	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine on upland ridge adjacent to harvest. Searched
13 13 13	Great Moose Lake/ The Narrows Harmony	231B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Remnant nest A. Searched
14 14 14	Fay Scott Bog Dexter	275B	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A down. Hatched-Chick
15 15 15	Sebasticook Lake/ Stetson Stream Newport	159A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Near camps on mid-E shore of lake. Nests B + C in pines, only traces. Charlie observed eagle on nest 4/8/05
16 16 16	Plymouth Pond Plymouth	382A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Hatched?
17 17 17	Sebasticook River/ Beartrap Brook Burnham	203B	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	203A in pine near floodplain area of river, S of airport.

18 18 18 18	Sebasticook River/ Pattee Pond Brook Winslow	251A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Upland pines near fields and Pattee Pond Brook
19 19 19 19	Kennebec River Goodwin Center	278B	pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Small pine grove between power line crossings of River Two eggs observed in nest.
20 20 20 20	Unity Pond/ Sandy Stream Unity	270C	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	New nest on island adjacent to old nest.
21 21 21 21	Sandy Pond Freedom	423		New 2004 Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	
22 22 22 22	China Lake China	411	Pine	New 2004 Active/failure	Y N G F P D	0 1 2	Ad Juv.	Y N	Hatch?
23 23 23 23	Webber Pond Vassalboro	308A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	
24 24 24 24	Threemile Pond China	383A	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	In pine in center of large island.
25 25 25 25	Lower Togus Pond Augusta	317A	Pine	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	No eagles observed.
	Seached East Pond								

SAPPI Survey Route 2005-Flight

Flight 4 5/10/05

	Location	EH#	Tree	2004	Status of Nest		2005 Observations			
				Status	Intact?	Condition?	Number	Age	Incub?	Comments
1 1 1 1	Sevenmile Island Vassalboro	443		New 2004 Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N	Brooding?
2 2 2 2	Kennebec River/ Lily Pond Sidney	262A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N	Pine along tributary to River. This is new nest 262 B. Brooding
3 3 3 3	Messalonskee Lake Belgrade Stream Belgrade	244B	Pine	Active 1 fledgling	Y	N G F P D	0 1 2	Ad Juv.	Y N	Nest A only trace. Brooding
4 4 4 4	Ellis Pond Oakland	416	Pine	New 2004 Active 1 fledgling	Y	N G F P D	0 1 2	Ad Juv.	Y N	Brooding, at least one eaglet.
5 5 5 5	Great Pond/ Hatch Cove Belgrade	001A	Down	Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N	Historic site with potential for nests on Oak Island. Not searched
6 6 6 6	Parker Pond Mount Vernon	341A	Pine	Active/failure	Y	N G F P D	0 1 2	Ad Juv.	Y N	Nest on small islet. No eagles observed
7 7 7 7	North Pond/ East Pond Rome	287A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N	New nest location No eagles observed
8 8 8 8	Kennebec River Skowhegan	414	Pine	New 2004 Inactive	Y	N G F P D	0 1 2	Ad Juv.	Y N	Brooding, at least one eaglet.
9 9 9 9	Kennebec River/ Sandy River Starks	291A	Pine	Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N	Pine of field edge adjacent to power line crossing Kenn. river, just upriver of Sandy river confluence. Brooding, feeding chick(s)
10 10 10 10	Kennebec River Embden	415	Pine	New 2004 Active 2 fledglings	Y	N G F P D	0 1 2	Ad Juv.	Y N	Brooding, two eaglets?

11 11 11 11	Mill Stream Concord	112A	down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site. Not searched
12 12 12 12	Kennebec River/ Johnson Brook Bingham	380A	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine on upland ridge adjacent to harvest. Not Searched
13 13 13 13	Great Moose Lake/ The Narrows Harmony	231B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Remnant nest A. Still empty.
14 14 14 14	Fay Scott Bog Dexter	275B	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A down. Hatched-Chick
15 15 15 15	Sebasticook Lake/ Stetson Stream Newport	159A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Near camps on mid-E shore of lake. Nests B + C in pines, only traces. Charlie observed eagle on nest 4/8/05 Nest empty. Failure.
16 16 16 16	Plymouth Pond Plymouth	382A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Brooding.
17 17 17 17	Sebasticook River/ Beartrap Brook Burnham	203B	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	203A in pine near floodplain area of river, S of airport. Nest empty. May be failure or nonstart.

18 18 18 18	Sebasticook River/ Pattee Pond Brook Winslow	251A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Upland pines near fields and Pattee Pond Brook Brooding, 2 eaglets.
19 19 19 19	Kennebec River Goodwin Center	278B	pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Small pine grove between power line crossings of River Brooding
20 20 20 20	Unity Pond/ Sandy Stream Unity	270C	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	New nest on island adjacent to old nest. Brooding
21 21 21 21	Sandy Pond Freedom	423		New 2004 Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	Brooding, at least one eaglet.
22 22 22 22	China Lake China	411	Pine	New 2004 Active/failure	Y N G F P D	0 1 2	Ad Juv.	Y N	Brooding, two eaglets.
23 23 23 23	Webber Pond Vassalboro	308A	Pine	Active 2 fledglings	Y N G F P D	0 1 2	Ad Juv.	Y N	Brooding, one eaglet.
24 24 24 24	Threemile Pond China	383A	Pine	Active 1 fledgling	Y N G F P D	0 1 2	Ad Juv.	Y N	In pine in center of large island. Brooding, at least one eaglet.
25 25 25 25	Lower Togus Pond Augusta	317A	Pine	Inactive	Y N G F P D	0 1 2	Ad Juv.	Y N	No eagles observed. Not searched
	Seached Kennebec and Sebasticook Rivers Wesserunsett Lake Flying Pond			Indian Pond Carlton Pond					

SAPPI Survey Route 2005-Flight
Flight 5 6/ 3 /05

	Location	EH#	Tree	2004	Status of Nest					2005 Observations				
				Status	Intact?			Condition?		Number	Age	Incub?	Comments	
1 1 1 1	Sevenmile Island Vassalboro	443		New 2004 Inactive	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Empty nest. Failure. No visible eggs.
2 2 2	Kennebec River/ Lily Pond Sidney	262A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	MDIFW surveyed. Two eaglets?
3 3 3	Messalonskee Lake Belgrade Stream Belgrade	244B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Brooding. Two eaglets
4 4 4 4	Ellis Pond Oakland	416	Pine	New 2004 Active 1 fledgling	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Not surveyed.
5 5 5 5	Great Pond/ Hatch Cove Belgrade	001A	Down	Inactive	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Historic site with potential for nests on Oak Island. Not surveyed.
6 6 6 6	Parker Pond Mount Vernon	341A	Pine	Active/failure	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Nest on small islet. Not surveyed.
7 7 7 7	North Pond/ East Pond Rome	287A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	New nest location Not surveyed.
8 8 8 8	Kennebec River Skowhegan	414	Pine	New 2004 Inactive	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Not surveyed.
9 9 9 9	Kennebec River/ Sandy River Starks	291A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Pine of field edge adjacent to power line crossing Kenn. river, just upriver of Sandy river confluence. Not surveyed.
10 10 10 10	Kennebec River Emden	415	Pine	New 2004 Active 2 fledglings	Y	N	G	F	P	D	0 1 2	Ad Juv.	Y N	Not surveyed.

11 11 11 11	Mill Stream Concord	112A	down	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Historic site. Not surveyed.
12 12 12 12	Kennebec River/ Johnson Brook Bingham	380A	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Pine on upland ridge adjacent to harvest. Not surveyed.
13 13 13 13	Great Moose Lake/ The Narrows Harmony	231B	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Remnant nest A. Not surveyed.
14 14 14 14	Fay Scott Bog Dexter	275B	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Nest A down. Not surveyed.
15 15 15 15	Sebasticook Lake/ Stetson Stream Newport	159A	Pine	Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Near camps on mid-E shore of lake. Nests B + C in pines, only traces. Charlie observed eagle on nest 4/8/05 Not surveyed.
16 16 16 16	Plymouth Pond Plymouth	382A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Brooding. Two large eaglets.
17 17 17 17	Sebasticook River/ Beartrap Brook Burnham	203B	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	203A in pine near floodplain area of river, S of airport. Not surveyed.

18 18 18 18	Sebasticook River/ Pattee Pond Brook Winslow	251A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Upland pines near fields and Pattee Pond Brook Not surveyed.
19 19 19 19	Kennebec River Goodwin Center	278B	pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Small pine grove between power line crossings of River Brooding. Two eaglets.
20 20 20 20	Unity Pond/ Sandy Stream Unity	270C	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	New nest on island adjacent to old nest. Empty nest. No visible egg. Unidentified whitish object (Styrofoam) in nest.
21 21 21 21	Sandy Pond Freedom	423		New 2004 Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Not surveyed.
22 22 22 22	China Lake China	411	Pine	New 2004 Active/failure	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Not surveyed.
23 23 23 23	Webber Pond Vassalboro	308A	Pine	Active 2 fledglings	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Not surveyed.
24 24 24 24	Threemile Pond China	383A	Pine	Active 1 fledgling	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	In pine in center of large island. Not surveyed.
25 25 25 25	Lower Togus Pond Augusta	317A	Pine	Inactive	Y	N	G	F	P	D	0	1	2	Ad	Juv.	Y	N	Not surveyed.

Appendix B

Photos



Photo 1. Sebasticook eagle nest 159.
Woodlot Alternatives, Inc. 2005.



Photo 2. Sebasticook eagle nest bowl.
Woodlot Alternatives, Inc. 2005.



Photo 3. Unity Pond eagle nest 270 with Styrofoam debris.
Woodlot Alternatives, Inc. 2005.



Photo 4. Sevenmile Island eagle nest 443.
Woodlot Alternatives, Inc. 2005.



Photo 5. Sevenmile Island eagle nest bowl.
Woodlot Alternatives, Inc. 2005.

