

**RESULTS OF WILDLIFE MOVEMENT MONITORING
USING AN INFRARED SENSING REMOTE CAMERA LOCATED
UNDER WIND TURBINE 7, SEARSBURG WIND PROJECT
April-November, 2006**

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BACKGROUND

A remote camera to document wildlife movement at or near the existing Searsburg Wind Facility was installed and operated during the month of October, 2005 at the request of the Black Bear Sub-Group of the Green Mountain National Forest Deerfield Wind Project. Since fourteen wildlife events were documented, the decision was made to reinstall the camera at the same location for the 2006 season (April-November).

Each photo frame is time- and date-stamped for correlation to operating records of Wind Turbine 7 (WT7) at the existing Searsburg Project. The attached table provides the date, time, species photographed, and operating status of WT7. When the wind turbine is not generating, the blades are often left to spin as if in generation mode, consequently, the rpm of the blades is provided for generating and non-generating periods. A series of photos documenting each species (except the songbirds) is also attached. Date and time from the photo can be matched to the table.

METHODS

An old logging road which crosses in the saddle of the Searsburg Wind Facility access road has been considered an active game trail since the project was built in the mid 1990's. The same camera location on this trail 40m southeast of the north access road and 80 m south of WT7 was used throughout the period. The turbine blades of WT7 are visible from the camera location even with the foliage in place, and the access road can be seen in the daylight photos.

The Reconyx Silent Image digital camera with infrared illuminator, passive infrared motion detector and date/time stamp capabilities was mounted approximately 3m above ground in a balsam fir tree. The camera lens was positioned with a slight downward angle, and in a general northwest direction toward the target area. The camera was focused on a wide opening in the log road/game trail ("woods road") next to a small palustrine open water wetland. The camera was programmed to take 5 consecutive photos one second apart, pause 5 seconds, and repeat the series. This offers a near-video sequence of the wildlife movement through the area.

RESULTS

During this 2006 photo period, 87 different wildlife targets were recorded representing 9 different species: moose (23 occasions), deer (22), wild turkey (1), black bear (7), fisher (8), raccoon (6), red fox (1), coyote (17) and a songbird on 2 occasions (see Table). Of the 87 photo events, 25 were during diurnal or crepuscular periods and involved all 9 species photographed; the remaining 62 photos were taken at night. WT7 was generating electricity on 50 of the 87 photo events (57%), however, the blades on WT7 were spinning in 76% of the photo events.

Vegetation grew rapidly in the focal area of the camera in early June. By mid-June, a striped maple seedling gained approximately 3 feet in height and caused the camera to shoot continuous frames as it swayed in the wind. The compact flash card became overloaded with more than 7,900 frames and the camera shut down. Approximately 10 days were lost at the end of June. Seedling growth and tall herbaceous vegetation were cut at the focal location to cure the problem. This, however, encouraged new growth of grasses which caused deer to linger at the site to feed on the lush vegetation, again consuming digital space.

On June 11th and July 4th a black bear passed through the area in mid-day. WT7 was generating on both instances. On June 11th, the bear appeared to enter the brush and proceed around the west side (wind project side) of the open water wetland; on July 4th, the bear appears to proceed towards the access road. A female with a yearling cub passed

through heading for the access road in the early morning hours of July 17th and another single bear did the same thing that very evening; WT7 was not spinning on either of these occasion.

A young bear appears in the woods road opening in early evening on August 27th and may have continued around the west side of the wetlands; turbine 7 was generating at the time. At approximately 8 pm on September 13th a bear appears to come up the road from the southeast and proceed around the west side of the wetland, visible for only 25 seconds. Four minutes later a bull moose meandered through the site and then at 8:14 pm another (or the same) bear appeared from the northwest and spent about 7 minutes sniffing through the grass in front of the camera before heading off around the west side of the wetland; turbine 7 was generating the entire time.

Black bears were photographed on 7 occasions during this 2006 photo period: once in June, three times in July, once in August and twice in September. Turbine 7, 80 meters to the north of the photo site, was generating electricity on 5 of these instances.

WILDLIFE PHOTOGRAPHED ON WOODS ROAD BELOW TURBINE 7

PHOTOS		WIND TURBINE 7				
#	DATE '06	TIME	TEMP °F	SPECIES	GENERATING	BLADE RPM
1	10-Apr	23:24	39	Fisher	YES	29
2	11-Apr	3:24	34	Raccoon	NO	0
3	11-Apr	6:09	33	Raccoon	NO	0
4	11-Apr	6:49	33	Raccoon	NO	0
5	11-Apr	7:06	34	Raccoon	NO	0
6	11-Apr	13:35	62	Fisher	NO	9
7	11-Apr	16:05	65	Songbird	NO	8
8	12-Apr	19:48	54	Deer	YES	30
9	13-Apr	1:01	49	Fisher	YES	30
10	14-Apr	0:44	46	Fisher	YES	29
11	14-Apr	22:20	48	Moose	NO	12
12	15-Apr	0:10	48	Moose	NO	12
13	15-Apr	6:09	48	Moose	NO	11
14	15-Apr	17:43	66	Red Fox	YES	30
15	17-Apr	19:43	38	Moose	YES	30
16	20-Apr	13:50	73	Turkey	YES	10
17	20-Apr	23:44	47	Fisher	YES	29
18	21-Apr	1:30	44	Raccoon	YES	29
19	22-Apr	2:28	37	Raccoon	YES	30
20	26-Apr	21:06	45	Fisher	YES	30
21	27-Apr	21:53	41	Coyote	NO	10
22	28-Apr	1:50	32	Coyote	NO	10
23	28-Apr	2:48	30	Coyote	NO	9
24	28-Apr	5:25	28	Coyote	NO	10
25	28-Apr	19:41	45	Deer (3)	YES	17
26	30-Apr	3:08	37	Coyote	NO	0
27	30-Apr	22:53	45	Coyote	NO	10
28	30-Apr	23:46	44	Coyote	NO	12
29	1-May	17:35	87	Fisher	YES	29
30	1-May	23:06	41	Coyote	YES	13
31	2-May	2:34	40	Coyote	YES	12
32	5-May	20:20	55	Coyote	NO	30
33	7-May	23:54	41	Coyotes (2)	NO	0
34	13-May	17:07	42	Coyote	YES	30
35	14-May	1:58	42	Coyote	YES	29
36	22-May	22:55	37	Coyote	YES	30
37	24-May	1:54	39	Coyote	YES	30
38	9-Jun	21:45	53	Moose	NO	12
39	11-Jun	12:35	51	Bear	YES	30
40	30-Jun	21:01	62	Moose	YES	29
41	30-Jun	21:19	61	Deer	YES	29
42	4-Jul	11:43	73	Bear	YES	29
43	5-Jul	23:17	59	Deer	YES	30

44	7-Jul	20:30	70	Deer	NO	11
45	11-Jul	0:40	66	Moose	YES	30
46	11-Jul	20:57	68	Deer	YES	29
47	14-Jul	21:37	71	Moose	NO	0
48	16-Jul	14:14	87	Songbird	NO	0
49	16-Jul	21:03	74	Moose	NO	0
50	17-Jul	2:19	71	Bears (2)	NO	0
51	17-Jul	21:02	76	Bear	NO	0
52	17-Jul	21:20	75	Moose	NO	0
53	17-Jul	22:01	75	Deer	NO	0
54	18-Jul	1:04	73	Deer	NO	0
55	22-Jul	2:07	64	Deer	NO	0
56	25-Jul	5:37	61	Moose	YES	29
57	25-Jul	20:27	72	Moose	YES	29
58	30-Jul	21:09	66	Moose	YES	29
59	2-Aug	1:50	74	Moose	YES	30
60	10-Aug	0:20	59	Deer	YES	29
61	11-Aug	18:25	74	Moose	YES	29
62	12-Aug	23:45	50	Deer	YES	29
63	13-Aug	23:15	56	Deer	YES	30
64	15-Aug	22:18	61	Deer	YES	30
65	16-Aug	21:42	63	Deer	YES	29
66	17-Aug	21:54	60	Moose	NO	0
67	17-Aug	22:07	60	Deer	NO	0
68	17-Aug	22:33	60	Deer	NO	0
69	27-Aug	19:05	50	Bear	YES	30
70	8-Sep	3:09	55	Moose	YES	29
71	8-Sep	20:56	62	Moose	YES	29
72	12-Sep	3:41	39	Moose	NO	9
73	13-Sep	4:20	49	Moose	YES	29
74	13-Sep	4:57	49	Moose	YES	29
75	13-Sep	20:01	54	Bear	YES	29
76	13-Sep	20:08	54	Moose	YES	29
77	13-Sep	20:14	54	Bear	YES	24
78	17-Sep	6:50	55	Deer	NO	0
79	24-Sep	0:08	61	Deer	YES	29
80	2-Oct	5:34	47	Moose	YES	29
81	6-Oct	3:17	36	Deer	YES	29
82	7-Oct	22:02	40	Deer	NO	0
83	8-Oct	6:51	41	Fisher	NO	7
84	14-Oct	4:14	31	Coyote	n/a	n/a
85	23-Oct	22:14	32	Coyote	YES	30
86	18-Nov	16:39	37	Deer	YES	29
87	18-Nov	16:43	37	Deer	YES	22



2006-04-15 17:44:02 M 1/5 66°F



SEARSBURG, TOWER 7 WWW.RECONYX.COM

2006-04-20 13:50:00 M 2/5 73°F



SEARSBURG, TOWER 7 WWW.RECONYX.COM



2006-06-11 12:35:44 M 1/5 51°F



SEARSBURG, TOWER 7 WWW.RECONYX.COM

2006-06-30 21:01:08 M 4/5 62°F



SEARSBURG, TOWER 7 WWW.RECONYX.COM



2006-07-17 21:02:10 M 1/5 76°F

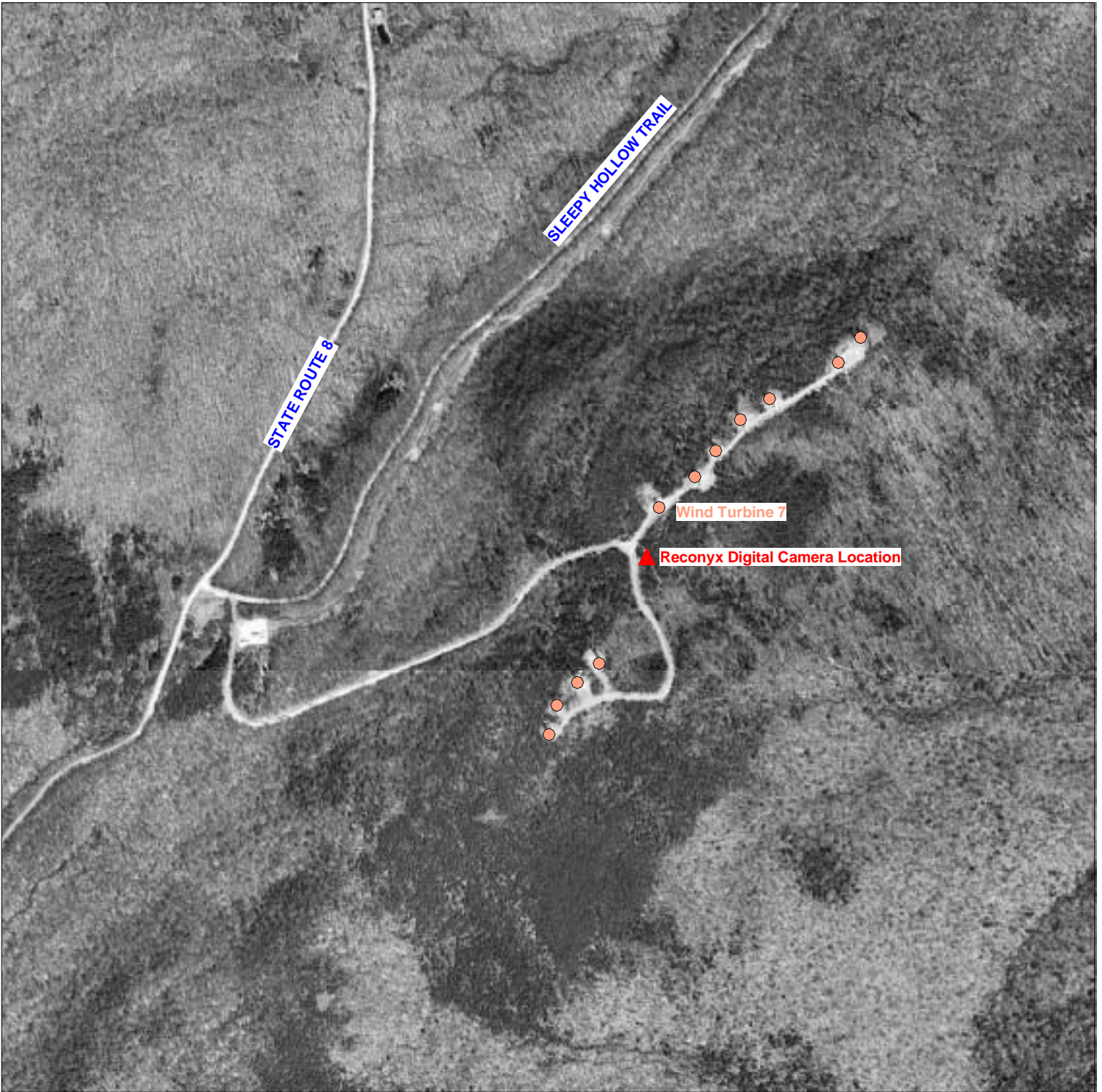


SEARSBURG, TOWER 7 WWW.RECONYX.COM

2006-07-25 05:37:14 M 5/5 61°F



SEARSBURG, TOWER 7 WWW.RECONYX.COM



Map 1: Deerfield Wind Proposal: Wildlife Movement Monitoring Through the Searsburg Wind Facility

- ▲ Location of Reconyx Silent Image Digital Camera
- Existing Searsburg Wind Turbines

